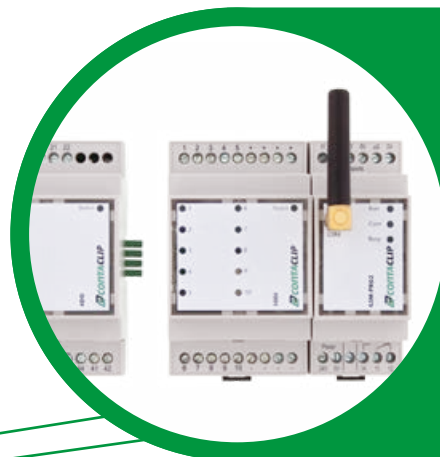


CONTA-ELECTRONICS

Electrical and electronic cabinet components



Catalogue 09

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CONTA-CLIP: thinking ahead for connection systems

CONTA-CLIP was founded in 1977.
We operate globally as an owner-operated
medium-sized company.

Users of electrical and electronic connection
systems rely on our reliable products and our
many years of industrial and global market
expertise.

Our company is now one of the most important
manufacturers in the field.

For over 40 years, our components and solutions
have been used in various process and industrial
automation applications, including: railway
technology, materials handling, building auto-
mation, air conditioning, mechanical and facility
engineering, measurement and control technol-
ogy, control panel construction, shipbuilding,
transformer construction and environmental
technology.

Over the years, we have evolved into an innovator
that sets the tone with new ideas and creative
impulses.

Our employees come from a wide variety of in-
dustries and view themselves as true connectivity
specialists. They understand the specific problems,
requirements and challenges of our customers.
This results in communication among equals.

The profits then flow into the development of
new products as well as into modern, efficient
manufacturing processes.

A high quality standard throughout all
departments is our number one priority.

Our top-class products are supported by this
interplay between top-class men and machinery.
We have also designed our range of services to
align with customer needs.

Our products are divided into six categories:
CONTA-CONNECT for terminal blocks and
accessories, CONTA-ELECTRONICS for electrical
and electronic control cabinet components,
CONTA-LABEL for marking systems, Cable
Management Systems, CONTA-BOX for housings
and CONTA-CON for PCB terminal blocks and
connectors.

We design customer-specific solutions for elec-
tronics, provide completely assembled housings
and assemblies as needed, assemble terminal
blocks for series production, and quickly handle
component labelling tasks.

We greet these challenges with passion and
enthusiasm, because we see each customer as
our partner.

CONTA-CLIP customer representatives are always
ready to offer their support to the customer, be-
cause service and helpfulness are rooted deeply
in our corporate philosophy.

Advantage online: the CONTA-CLIP Online Catalogue

No matter where you are, as long as you're online you can access our digital catalogue to view our service portfolio and quickly identify suitable solutions for your requirements.

Fast results Use the full-text search, enter an order number or use the convenient "step-by-step" feature search function.

Project planning at a glance: After you've selected the products, all the master data for the materials (sales data, technical data, drawings, descriptions, classifications and approvals) are available as a data sheet or export file.

Detailed inquiries about components can be sent via the shopping cart directly to our headquarters. Upon request, you will receive an e-mailed copy of your inquiry.

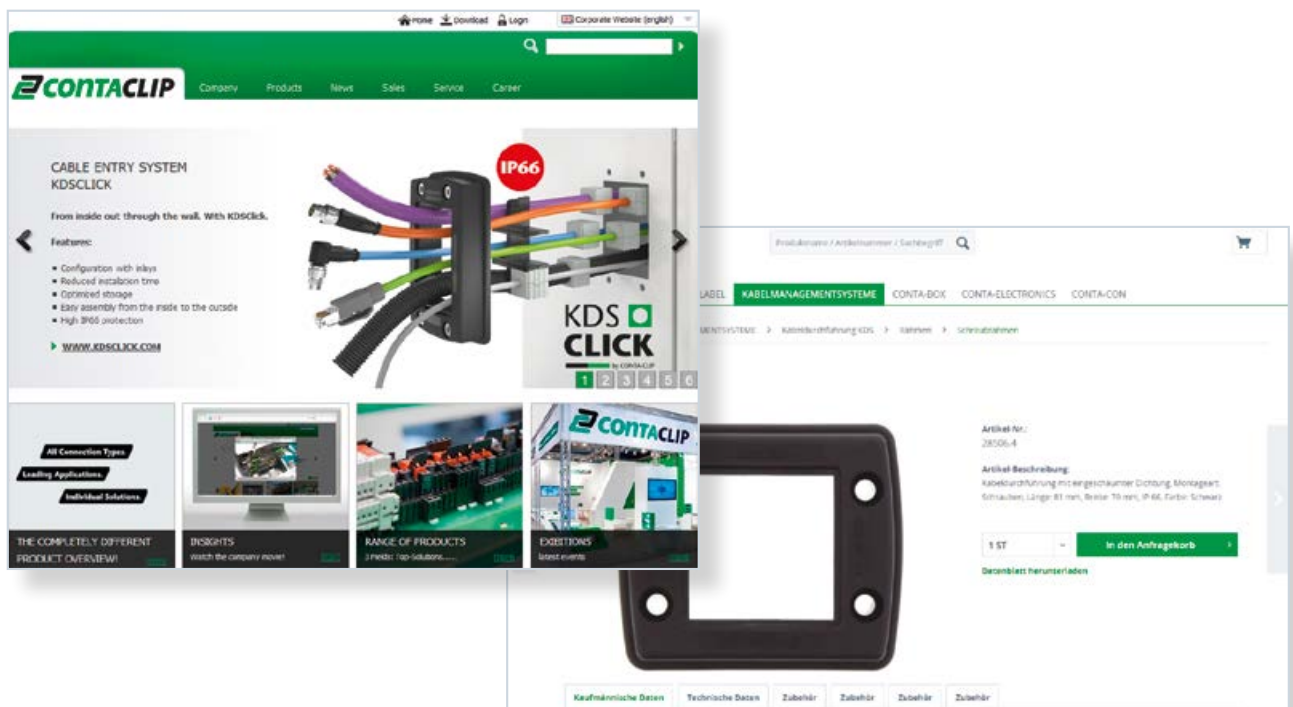
Application films: Complex functions be explained easily and clearly with sounds and images.

Printed catalogue: Would you like an offline overview? Please ask for our free printed catalogues.

Industry-specific: You will find the solutions that are relevant for your industry, according to your expertise.

Newsletter: Do you want to stay up to date? Subscribe to our newsletter! Simply register, confirm our authentication e-mail, and you'll be regularly informed about all CONTA-CLIP news.

Discover how the world of CONTA-CLIP and our website can deliver added value to you and your projects!



Globally available for you

Are you working abroad? No problem. Our worldwide sales and distribution partners help us to be globally networked and provide on-time reliable deliveries. Simply scan the QR code shown and you'll find out on our website about the sales partner responsible for your country.



Our locations in Africa

Algeria
Morocco
South Africa

Our locations in Asia

Bahrain
China
Hong Kong
India
Israel
Jordan
Malaysia
Oman
Pakistan
Qatar
Saudi Arabia
Singapore
South Korea
Taiwan
Turkey
United Arab Emirates

Our locations in Australia

Australia
New Zealand

Our locations in Europe

Austria
Belarus
Belgium
Bosnia and Herzegovina
Bulgaria
Croatia
Czech Republic
Denmark
Finland
France
Germany
Greece
Hungary
Iceland
Ireland
Italy
Latvia
Holland
Norway

Poland
Portugal
Romania
Russia
Serbia
Slovakia
Slovenia
Spain
Sweden
Switzerland
Ukraine
Great Britain

Our locations in North America

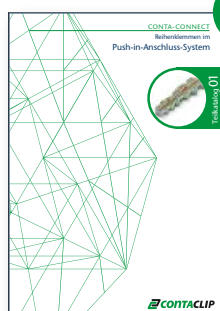
Canada
Mexico
United States

Our locations in South America

Bolivia
Brazil
Chile
Ecuador

A complete line of products for your challenges

The CONTA-CLIP Catalogues



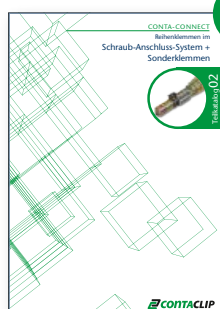
01 CONTA-CONNECT

Terminal blocks with Push-in connection system

Our wide range of innovative PRK and FRK terminal series with the Push-in connection system include feed-through terminals, PE terminals, disconnect terminals, fused terminals, multi-level terminals, installation terminals and initiator terminals, for conductor cross-sections from 0.2 mm² to 25 mm².



Cat. no. 98070.2



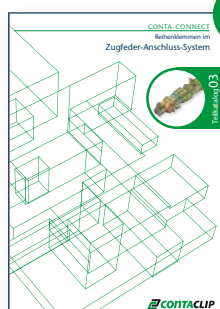
02 CONTA-CONNECT

Terminal blocks with screw connection system and special terminals

Everything for classic wiring with screw connection systems (also for high currents): SRK feed-through and PE terminals, RK high-temperature variants, TK transformer terminals, HSK high-power stud terminals, SVB series screw distributor blocks, and the modular feed-through terminal systems from the SDK series.



Cat. no. 98071.2



03 CONTA-CONNECT

Terminal blocks with tension-spring connection system

Our versatile line of terminals with tension spring connection systems for conductor cross-sections from 0.2 mm² to 16 mm² includes: the ZRK/ZSL series of feed-through and PE terminals, the double-level ZRKD/ZSLD, the ZIKD three-level terminal blocks, motor-connection terminals, (blade-) disconnect terminals, fused terminals, direct-mount terminals, and initiator/actuator terminals for transmitting positioning, encoder and alert signals.



Cat. no. 98072.2



04 CONTA-CONNECT

Installation materials and other accessories for terminal blocks

Our installation products include cabling ducts, assembly tools, cable glands with metric or PG threads, DIN rails, DIN rail cutters and punching tools. The terminal block accessories include different versions of end stops, wire-end ferrules, and connectors.



Cat. no. 98073.2



05 CONTA-LABEL

PC marking components for thermal transfer marking systems

CONTA-CLIP provides the TTPCard thermal-transfer printer and a large selection of PC, PVC and PVCF markers or labels in card format: for professional, permanent labelling of terminals, devices, conductors, cables, facilities and switchgear cabinets.



Cat. no. 98074.2

Our catalogues are available in many languages!

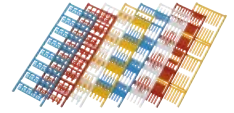


06

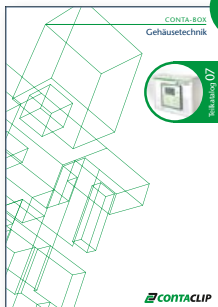
CONTA-LABEL

PA marking components for ink-based marking systems

The CONTA-LABEL products provide polyamide markers for labelling conductors, cables, devices and facilities with ink print. These markers are available in many shapes and colours: in the classic MC Maxicard format for self-printing with the EMS plotter system EMS or other ink-jet systems, or ready-to-use customized printed in the PMC Pocket-Maxicard format.



Cat. no. 98075.2



07

CONTA-BOX

Housings

Our wide variety of housings made of polystyrene, polycarbonate, polyester, ABS and aluminium deliver solutions for protecting electronic circuits, integrated devices and terminal blocks. On request, the housings can be provided with extensive processing and assembled with our CONTA-CONNECT, CONTA-ELECTRONICS and CONTA-CON product lines.



Cat. no. 98076.2



08

CABLE MANAGEMENT SYSTEMS

KDS cable entries, KES cable entries, SAB|SSAB|SABK shielding solutions

The KDS and KES cable entries enable a tool-free, IP66-sealed feed-through for unassembled and assembled cables and hoses. The feed-through openings can be adapted at any time to meet your requirements. The SAB shield-connection clips can be used to provide a reliable shield contact with conductor diameters from 3 mm to 35 mm.



Cat. no. 98077.2



09

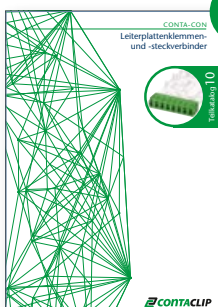
CONTA-ELECTRONICS

Electrical and electronic cabinet components

Our CONTA-ELECTRONICS products provide active and passive components for the transfer and conversion of analogue and digital signals at the coupling level. This product line includes power supplies, multi-function timing relays, coupling relays, digital switching modules, interface modules, opto-couplers, signal converters, GSM communication modules and much more.



Cat. no. 98078.2



10

CONTA-CON

PCB terminals and connectors

This catalogue presents our wide variety of CONTA-CON PCB terminal blocks and connector systems. The modular components can be configured for any required number of poles; They are available in the wire connection types: wire protection, eccentric, clamping yoke, and (for demanding operating conditions) with tension-spring or Push-in wire termination.



Cat. no. 98079.2

DC Power Supplies Single-phase PSPM



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DC Power Supplies Single-phase PSPC



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DC power supplies Single-phase PSPI



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AC/DC rectifier modules GM



Page 20-21

AC/DC converter modules ACDCG



Page 22

DC/DC stabilized convert- er modules VSTAB



Page 23-25

Stabilized DC/DC convert- er modules CML-DCDC



Page 26-28

CONTA-PROTECT overvoltage arresters type 2 (C)



Page 30-32

CONTA-PROTECT overvoltage arresters type 3 (D)



Page 32

Interference-elimination link modules IF-OF



Page 33

Interface relay compact - IRCU relay terminal, 1 CO contact



Page 38-39

Interface relay compact - IRCPU relay terminal, 1 CO contact



Page 40-43

Interface relay compact - IRCIU relay terminal, 1 CO contact



Page 44-45

Interface relay compact - IRCOU relay terminal, 1 CO contact



Page 46-47

Interface relay compact - MFR IRCPU timing relay terminal, 1 CO contact



Page 48-49

Plug relay compact - PRC 1 relay terminal, 1 CO contact



Page 52-55

Plug relay compact - PRC 2 Relay terminal, 2 CO contacts



Page 58-59

Plug relay system PRS XT 1+2 CO contact / screw connection



Page 62-65

Plug relay system PRS 1 Screw-connection 1-CO relays



Page 66-67

Plug relay system PRS 2 Screw-connection 2-CO relays



Page 68-69

Plug relay system PRS 2 G Screw-connection 2-CO relays



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Plug relay system PRS 4 Screw-connection 4-CO relays



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Plug relay system PRS 4 G Screw-connection 4-CO relays



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Plug relay system PRS 4 G eco Screw-connection 4-CO relays

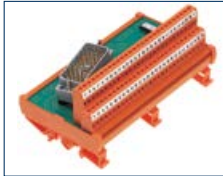


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CONTA-ELECTRONICS

Product overview

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	Voltage and current transformer units CML-UI-UI  Page 159	Multi-functional signal converter units CMS-UI-UI  Page 160-163	Multi-function high-current transformer unit CMS-I10A-UI  Page 164	Multi-functional signal converter units CMS-UI-R  Page 165
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CONTA-ELECTRONICS

Product overview

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DC Power Supplies

The 24 V DC control voltage has come to globally dominate in systems and machines in automation engineering, in the DC power supplies for encoders, input signals, actuators and electronic components. However the voltage range from 6 V DC to 60 V DC is also required for analogue and digital signals in various control schemes.

The functionality of an electronic control is largely dependent on the reliability of its corresponding power supply. A stable and safe power and voltage supply guarantees a trouble-free production process in systems and mechanical engineering.

CONTA-CLIP offers many different components: smoothed or un-smoothed transformers, unstabilized or stabilized mains power supplies, and also primary clocked power supplies.



Primary clocked DC power supplies



DC power supplies PSPM

PSPM DC power supplies are efficient switch-mode power supplies that are encased in slim plastic housings. They are light-weight and compact, yet still versatile and strong in the field. These multi-purpose power supplies can be used in various solar, measurement/control, industrial automation, and building automation applications.

They cover the needs of low- and mid-level power consumption ranging from 25 to 50 W. Many uses are possible: variants are available with 1 and 2 A of output current and an output voltage of 24 V. The output voltage can be easily adjusted using the potentiometer dial located on the front side of the housing.

The primary switch-mode regulators in use ensure that there are reliable connections everywhere to the public power grids. Installation is quick and safe with their DIN rail mounting and the Push-in terminal connections.



DC power supplies PSPC

PSPC DC power supplies combine the basic functionality of an economic switch-mode power supply with the important additional features that ensure high system availability. They are light-weight and compact, yet still versatile and strong in the field. These multi-purpose power supplies can be used in various solar, measurement/control, industrial automation, and building automation applications.

They cover the needs of mid-level power consumption ranging from 120 to 240 W. Many uses are possible: variants are available with 1 and 10 A of output current and an output voltage of 24 V. The output voltage can be easily adjusted using the potentiometer dial located on the front side of the housing.

The primary switch-mode regulators in use ensure that there are reliable connections everywhere to the public power grids. Installation is quick and safe with their DIN rail mounting and the Push-in terminal connections.



PSPI direct current power supplies

The installation-designed **PSPI DC power supplies** are a perfect supply solution for small controllers. Many uses are possible: variants are available with 1.3 A, 2.5 A and 4 A of output current and an output voltage of 24 V DC.

The output voltage can be easily adjusted using the potentiometer dial located on the front side of the housing. These all-purpose power supplies are strong and versatile, yet still small and lightweight. They are well suited for a variety of uses, including solar, measurement and control systems, industrial automation and building automation applications.

The primary switch-mode regulators in use ensure that there are reliable connections everywhere to the public power grids. The DIN rail mount and the tension-spring terminals ensure that they can be mounted quickly and safely.

DC power supplies PSPM

- Primary clocked DC power supply
- Easy to mount on a TS 35 DIN rail
- Wide-range input
- Adjustable output voltage
- No-load and short-circuit safe
- Thermal overload protection
- Ambient temperature: -25 to +70 °C
- IP 20 protection

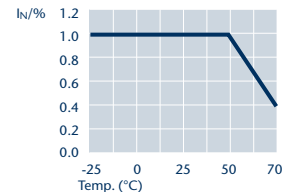
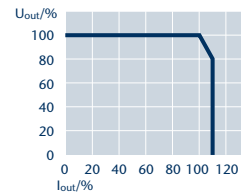
PSPM 230/24-1A



PSPM 230/24-2A



Output characteristic curve



Type	PSPM 230/24-1A	Qty.	PSPM 230/24-2A	Qty.
Cat. no.	16180.2	1	16181.2	1
Size (L x W x H) with TS 35 x 7.5 mm	90 x 22.5 x 97.5		90 x 45 x 97.5	
Weight	130 g		210 g	
Classification	Primary switch-mode power supply		Primary switch-mode power supply	
Rail assembly	TS 35 acc. to EN 60715		TS 35 acc. to EN 60715	
Connection type	Push-in connection		Push-in connection	
Wire connect cross-section	Max. 2.5 mm ²		Max. 2.5 mm ²	
Input data				
Nominal input voltage	100 to 240 Vac		100 to 240 Vac	
Input voltage range	85 to 264 Vac (120 to 372 Vdc)*		85 to 264 Vac (120 to 372 Vdc)*	
Input voltage derating	-2.5 %/Vac < 95 Vac		-2.5 %/Vac < 95 Vac	
Nominal frequency range	47 Hz to 63 Hz / 0 Hz		47 Hz to 63 Hz / 0 Hz	
Input rated current (rated load)	0.43 A (100 Vac) / 0.2 A (240 Vac)		0.73 A (100 Vac) / 0.37 A (240 Vac)	
Inrush current limit	< 30 A, NTC		< 30 A, NTC	
Switch-on time, after mains voltage is applied	2.3 s (100 Vac) / 0.74 s (230 Vac)		0.5 s (100 Vac) / 0.27 s (230 Vac)	
Mains failure bridging (rated load)	20 / 120 ms (100 / 230 Vac)		20 / 120 ms (100 / 230 Vac)	
Recommended power circuit breaker (characteristics)	6 A, 10 A, 16 A (B,C)		6 A, 10 A, 16 A (B,C)	
Transient overvoltage protection	Varistor		√	
Input connections	Push-in, max 2.5 mm ²		Push-in, max 2.5 mm ²	
Output specifications				
Output rated voltage	24 Vdc ± 1%		24 Vdc ± 1%	
Output voltage range	23 to 28.5 Vdc		23 to 28.5 Vdc	
Output current	1 A		2 A	
Output current limit	1.1 A typ.		2.2 A typ.	
Parallel wiring, Series wiring	√ / √		√ / √	
Power loss for no load / rated load	< 1W / 4 W (230 Vac)		< 1W / 6 W (230 Vac)	
Max. power loss	5 W (100 Vac / 24 V / 1 A)		7 W (100 Vac / 24 V / 2 A)	
Efficiency	typ. 86 %		typ. 89 %	
Residual ripple (rated load)	typ. 20 mVss		typ. 20 mVss	
Feedback resistance	Max. 35 Vdc		Max. 35 Vdc	
Internal overvoltage protection (OVP)	Max. 39 Vdc		Max. 37 Vdc	
Output connections	Push-in, max 2.5 mm ²		Push-in, max 2.5 mm ²	
Indicator				
"DC OK" status display	LED continuously lit green		U _{out} > 21.5 V	
"DC OK" signal output	Relay, contact closed:		U _{out} > 21.5 V max. 20 mA @ 24Vdc	
Signal/indicator connections	Push-in, max 2.5 mm ²		Push-in, max 2.5 mm ²	
Surroundings				
Storage temperature	-25 °C to +85 °C		-25 °C to +85 °C	
Ambient temperature	-25 °C to +70 °C		-25 °C to +70 °C	
Derating	-3 %/K > +50 °C		-3 %/K > +50 °C	
Convection cooling	√		√	
Air humidity	No condensation		max. 0.7 A	
Required minimum clearance (side)	---		---	
Required minimum clearance (top/bottom)	50 mm		50 mm	
General specifications				
Protection acc. to IEC 60529	IP 20		IP 20	
Protection class acc. to EN 61140	II		II	
Standards				
Safety	EN 61558-2-16, EN 60950-1		EN 61558-2-16, EN 60950-1	
EMC	EN 61204-3		EN 61204-3	
Protective low voltage (SELV/PELV)	IEC 60364-4-41 (DIN VDE 0100-410)		IEC 60364-4-41 (DIN VDE 0100-410)	
CE acc. to 2004/108/EG and 2006/95/EG	√		√	

* A suitable DC series fuse is required for the DC input voltage.

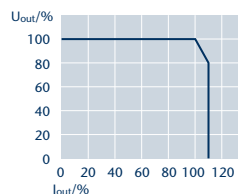
DC power supplies PSPC

- Primary clocked DC power supply
- Easy to mount on a TS 35 DIN rail
- Wide-range input
- Adjustable output voltage
- No-load and short-circuit safe
- Thermal overload protection
- Ambient temperature: -25 to +70 °C
- IP 20 protection

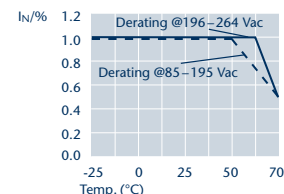
Standards: EN 61558-2-17, EN 60950 (safety); EN 61204-3 (EMC)

Output characteristic curve

PSPC 230/24-5A



PSPC 230/24-10A



Type	PSPC 230/24-5A	Qty.	PSPC 230/24-10A	Qty.
Cat. no.	16183.2	1	16184.2	1
Size (L x W x H) with TS 35 x 7.5 mm	127 x 42 x 126		127 x 55 x 161	
Weight	590 g		930 g	
Classification	Primary switch-mode power supply		Primary switch-mode power supply	
Rail assembly	TS 35 acc. to EN 60715		TS 35 acc. to EN 60715	
Connection type	Push-in connection		Push-in connection	
Wire connect cross-section	Max. 2.5 mm ²		Max. 2.5 mm ²	
Input data				
Nominal input voltage	100 to 240 Vac		100 to 240 Vac	
Input voltage range	85 to 264 Vac (120 to 372 Vdc)*		85 to 264 Vac (120 to 372 Vdc)*	
Input voltage derating	-2.5 %/Vac < 97 Vac		-2.5 %/Vac < 100 Vac	
Nominal frequency range	47 Hz to 63 Hz / 0 Hz		47 Hz to 63 Hz / 0 Hz	
Input rated current (rated load)	2.25 A (100 Vac) / 1.2 A (230 Vac)		2.74 A (100 Vac) / 1.25 A (230 Vac)	
Inrush current limit	< 30 A, NTC		< 30 A, NTC	
Switch-on time, after mains voltage is applied	0.25 s (100 Vac) / 0.2 s (230 Vac)		1.3 s (100 Vac) / 0.25 s (230 Vac)	
Mains failure bridging (rated load)	10 / 80 ms (100 / 230 Vac)		15 / 17 ms (100 / 230 Vac)	
Recommended power circuit breaker (characteristics)	6 A, 10 A, 16 A (B,C)		10 A, 16 A (B,C)	
Transient overvoltage protection	Varistor		Varistor	
Input connections	Push-in, max 2.5 mm ²		Push-in, max 2.5 mm ²	
Output specifications				
Output rated voltage	24 Vdc ± 1%		24 Vdc ± 1%	
Output voltage range	23 to 28.5 Vdc		23 to 28.5 Vdc	
Output current	5 A		10 A	
Output current limit	5.5 A typ.	Constant current	typ. 11 to 13 A	
Parallel wiring, Series wiring	√ / √		√ / √	
Power loss for no load / rated load	1.2 W / 14.6 W (230 Vac)		6.6 W / 24.4 W (230 Vac)	
Max. power loss	19.4 W (100 Vac / 24 V / 5 A)		31.3 W (100 Vac / 24 V / 10 A)	
Efficiency	typ. 89 %		typ. 91 %	
Residual ripple (rated load)	typ. 30 mVss		typ. 50 mVss	
Feedback resistance	Max. 35 Vdc		Max. 35 Vdc	
Internal overvoltage protection (OVP)	Max. 41 Vdc		Max. 40 Vdc	
Output connections	Push-in, max 2.5 mm ²		Push-in, max 2.5 mm ²	
Indicator				
"DC OK" status display	LED continuously lit green		Uout > 21.5 V	
"DC OK" signal output	Relay, contact closed:		Uout > 21.5 V max. 30 V / 1 A	
Signal/indicator connections	Push-in, max 2.5 mm ²		Push-in, max 2.5 mm ²	
Surroundings				
Storage temperature	-25 °C to +85 °C		-25 °C to +85 °C	
Ambient temperature	-25 °C to +70 °C		-25 °C to +70 °C	
Derating	-5 %/K > +60 °C (196 to 264 Vac)		-5 %/K > +60 °C (196 to 264 Vac)	
	2.5 %/K > +50 °C (85 to 195 Vac)		2.5 %/K > +50 °C (85 to 195 Vac)	
Convection cooling	√		√	
Air humidity	30 to 85%	No condensation	30 to 85%	
Required minimum clearance (side)	---		---	
Required minimum clearance (top/bottom)	50 mm		50 mm	
General specifications				
Protection acc. to IEC 60529	IP 20		IP 20	
Protection class acc. to EN 61140	I		I	
Standards				
Safety	EN 61558-2-16, EN 60950-1		EN 61558-2-16, EN 60950-1	
EMC	EN 61204-3		EN 61204-3	
Protective low voltage (SELV/PELV)	IEC 60364-4-41 (DIN VDE 0100-410)		IEC 60364-4-41 (DIN VDE 0100-410)	
CE acc. to 2004/108/EG and 2006/95/EG	√		√	

PSPI direct current power supplies

- Primary clocked switch-mode power supply
- Easy to mount on TS 35 DIN rail
- Wide-range input
- Adjustable output voltage
- No-load and short-circuit safe
- Thermal overload protection
- Ambient temperature: -25 to 55°C
- IP 20 protection
- Step-shaped profile is perfect for small distributor installations
- Standards: EN 61558-2-17, EN 60950 (safety);
EN 61204-3 (EMC)

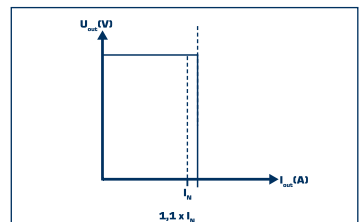
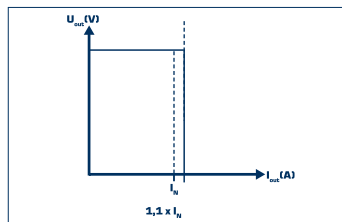
PSPI 230/24-1,3



PSPI 230/24-2,5



Output characteristic curve



Type	PSPI 230/24-1.3	Qty.	PSPI 230/24-2.5	Qty.
Cat. no.	16110.2	1	16111.2	1
Size (L x W x H) with TS 35 x 7.5 mm	89 x 54 x 62		89 x 72 x 62	
Weight	170 g		240 g	
Classification	Primary switch-mode power supply		Primary switch-mode power supply	
Rail assembly	TS 35 acc. to EN 60715		TS 35 acc. to EN 60715	
Connection type	Tension-spring connection		Tension-spring connection	
Wire connect cross-section	Max. 2.5 mm ²		Max. 2.5 mm ²	
Input data				
Nominal input voltage	100 to 240 V AC		100 to 240 V AC	
Input voltage range	85 to 264 V AC (120 to 373 V DC)		85 to 264 V AC (120 to 373 V DC)	
Nominal frequency range	44 to 66 Hz		44 to 66 Hz	
Input current at nominal load (110 / 230 V AC)	0.7 / 0.5 A		1.4 / 0.6 A	
Inrush current limit	< 30 A, NTC		< 30 A, NTC	
Input fuse, internal	2 A (slow-acting)		2 A (slow-acting)	
Recommended series fuse*	6 A, 10 A, 16 A; characteristics B,C		6 A, 10 A, 16 A; characteristics B,C	
Mains failure bridging at nominal load (110 / 230 V AC)	10 / 80 ms		10 / 80 ms	
Output specifications				
Output voltage	24 V DC ± 2%		24 V DC ± 2%	
Output voltage range	22.8 to 26.4 V DC		22.8 to 26.4 V DC	
Output current	1.3 A		2.5 A	
Overload behaviour	Constant current (U/I char. curve)		Constant current (U/I char. curve)	
Parallel wiring, Series wiring	√ / √		√ / √	
Efficiency	typ. 82%		typ. 88%	
Residual ripple (rated load)	typ. 100 mVss		typ. 100 mVss	
Safety and protection				
Protection	IP 20			
Test voltage	4.2 kV DC			
Protection class	II (in a closed electrical cabinet)			
Connection cable	Use copper cable with min. 60 °C or 60/75 °C for connecting			
Intended use	For use in zones with contamination degree 2			
Resistance to feedback current	Max. 30 V DC			
Surroundings				
Indicator	green LED		green LED	
Storage temperature	-25 to +80 °C		-25 to +80 °C	
Ambient temperature	-25 to +55 °C		-25 to +55 °C	
Derating	-3%/K > +45 °C		-3%/K > +45 °C	
Mounting position	Horizontal for TS 35		Horizontal for TS 35	
Permitted air humidity	30 to 85% relative humidity, no condensation permitted		30 to 85% relative humidity, no condensation permitted	
Current capacity at any mounting position	max. 0.9 A		max. 1.6 A	
Cooling	self-cooling		self-cooling	
Distance from adjacent components	15 mm right/left, 70 mm top/bottom		15 mm right/left, 70 mm top/bottom	
Standards				
Safety	EN 61558-2-17		EN 61558-2-17	
	EN 60950 (SELV)		EN 60950 (SELV)	
EMC	EN 61204-3		EN 61204-3	
UL approvals	Pending		Pending	

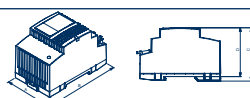
PSPI direct current power supplies

- Primary clocked switch-mode power supply
- Easy to mount on TS35 DIN rail
- Wide-range input
- Adjustable output voltage
- No-load and short-circuit safe
- Thermal overload protection
- Ambient temperature: -25 to 55°C
- IP 20 protection
- Step-shaped profile is perfect for small distributor installations
- Standards: EN 61558-2-17, EN 60950 (safety); EN 61204-3 (EMC)

PSPI 230/24-4

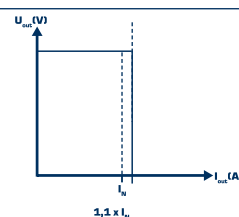


Dimensional drawing



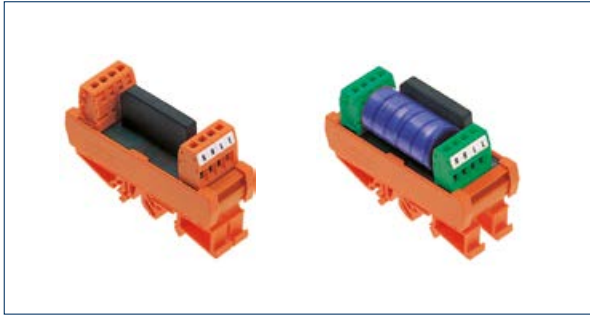
	A	B	C	D
PSPI 230/24-1,3	54	89	59	54
PSPI 230/24-2,5	72	89	59	54
PSPI 230/24-4,0	90	89	59	54

Output characteristic curve



Type	PSPI 230/24-4	Qty.
Cat. no.	16112.2	1
Size (L x W x H) with TS 35 x 7.5 mm	89 x 90 x 62	
Weight	300 g	
Classification	Primary switch-mode power supply	
Rail assembly	TS 35 acc. to EN 60715	
Connection type	Tension-spring connection	
Wire connect cross-section	Max. 2.5 mm ²	
Input data		
Nominal input voltage	100 to 240 V AC	
Input voltage range	85 to 264 V AC (120 to 373 V DC)	
Nominal frequency range	44 to 66 Hz	
Input current at nominal load (110 / 230 V AC)	1.6 / 0.9 A	
Inrush current limit	< 30 A, NTC	
Input fuse, internal	2 A (slow-acting)	
Recommended series fuse*	6 A, 10 A, 16 A; characteristics B,C	
Mains failure bridging at nominal load (110 / 230 V AC)	15 / 100 ms	
Output specifications		
Output voltage	24 V DC ± 2%	
Output voltage range	22.8 to 26.4 V DC	
Output current	4.0 A	
Overload behaviour	Constant current (U/I char. curve)	
Parallel wiring, Series wiring	√ / √	
Efficiency	typ. 88%	
Residual ripple (rated load)	typ. 100 mVss	
Safety and protection		
Protection	IP 20	
Test voltage	4.2 kV DC	
Protection class	II (in a closed electrical cabinet)	
Connection cable	Use copper cable with min. 60 °C or 60/75 °C for connecting	
Intended use	For use in zones with contamination degree 2	
Resistance to feedback current	Max. 30 V DC	
Surroundings		
Indicator	green LED	
Storage temperature	-25 to +80 °C	
Ambient temperature	-25 to +55 °C	
Derating	-3%/K > +45 °C	
Mounting position	Horizontal for TS 35	
Permitted air humidity	30 to 85% relative humidity, no condensation permitted	
Current capacity at any mounting position	max. 2.4 A	
Cooling	self-cooling	
Distance from adjacent components	15 mm right/left, 70 mm top/bottom	
Standards		
Safety	EN 61558-2-17 EN 60950 (SELV) EN 61204-3 Pending	
EMC		
UL approvals		

DC Power Supplies



AC/DC rectifier modules GM

Rectifier modules make possible the simple conversion of existing AC voltage into a buffered or unbuffered DC voltage.



AC/DC converter modules ACDCG

The **ACDCG** power supply modules convert an input-side alternating or DC voltage into an output-side linear-stabilized DC voltage. All modules feature an output which is short-circuit proof. They are available in various output voltages – 5 V, 12 V, 15 V and 24 V – for every application.



VSTAB stabilized DC/DC converter modules

VSTAB power supply modules enable the conversion of a large AC voltage into a smaller one. An extra power supply is no longer necessary. All modules feature a stabilized alternating voltage for output. They are available in various output voltages – 5 V, 10 V, 12 V, 15 V and 24 V – for every application.



DC-DC stabilized DC/DC converter modules

DC/DC converter modules can be used to convert an existing larger DC voltage into a smaller DC voltage. An extra power supply is no longer necessary. All modules offer an output which is short-circuit proof. They are available in various output voltages – 5 V, 12 V, 15 V and 24 V – and also in various current strengths for every application.

DC Power Supplies



DC/DC converter units CML-DCDC

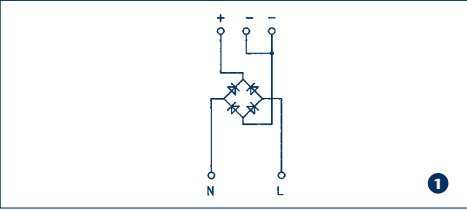
The **CML-DCDC** units can convert an input voltage of up to 65 V DC into a smaller stabilized DC voltage. This provides you with a simple and compact solution for operating sensors or component assemblies which require other operating voltages.

A variety of versions are available for covering different output voltages and also a multi-function unit with adjustable output voltage. All units are designed to be short-circuit safe on the output side. They also have a thermal shut-off feature during overloads. If the input voltage falls below the defined minimal value, then the output voltage is adjusted down to a lower value.

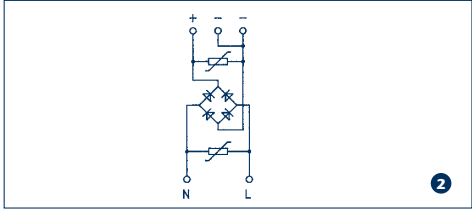
- Mounts on TS 32/TS 35
- Optional varistor circuitry in output and input circuits
- Output side: unbuffered DC voltage



Circuit diagram



Circuit diagram

[illegible]

[illegible]

AC/DC converter modules ACDCG

- Mounts on TS 32/TS 35
- Input: AC or DC
- Linear stabilized DC voltage on output side
- Short-circuit safe output
- Green LED indicator for displaying the operational status
- Other output voltages available on request

ACDCG/5-1.5



ACDCG/12-1.5

ACDCG/15-1.5

ACDCG/24-1.5

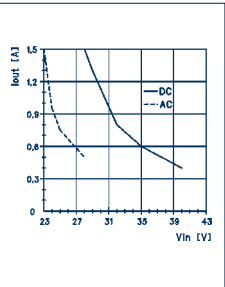
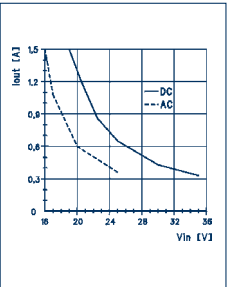
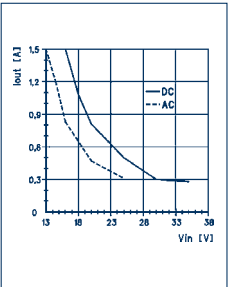
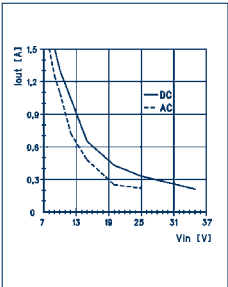


Circuit diagram



Type	ACDCG/5-1.5	ACDCG/12-1.5	ACDCG/15-1.5	ACDCG/24-1.5
Cat. no./Qty.	15024.2/1	15025.2/1	15026.2/1	15027.2/1
Connection type	Screw connection	Screw connection	Screw connection	Screw connection
Size (L x W x H) with TS 35 x 7.5	87 x 54 x 87mm	87 x 54 x 87mm	87 x 54 x 87mm	87 x 54 x 87mm
Weight	150 g	150 g	150 g	150 g
General specifications				
DIN-VDE specifications	DIN EN 50178, DIN VDE 0110, Contamination degree 2, overvoltage category III	DIN EN 50178, DIN VDE 0110, Contamination degree 2, overvoltage category III	DIN EN 50178, DIN VDE 0110, Contamination degree 2, overvoltage category III	DIN EN 50178, DIN VDE 0110, Contamination degree 2, overvoltage category III
Operating voltage indicator (LED)	Green	Green	Green	Green
Operating temperature	-20 to +50 °C	-20 to +50 °C	-20 to +50 °C	-20 to +50 °C
Important notes				
Stripping length	7 mm	7 mm	7 mm	7 mm
Wire connect cross-section	0.2-2.5 mm ² /AWG 22-14	0.2-2.5 mm ² /AWG 22-14	0.2-2.5 mm ² /AWG 22-14	0.2-2.5 mm ² /AWG 22-14
Input data				
DC input voltage	7.5 to 35 V DC	14.5 to 35 V DC	17.5 to 35 V DC	26.5 to 35 V DC
AC input voltage	8 to 25 V AC	13 to 25 V AC	16 to 25 V AC	23 to 28 V AC
Rated power consumption	14 W @ 9 V DC 20 VA @ 8 V AC	25 W @ 16 V DC 31 VA @ 13 V AC	29 W @ 19 V DC 38 VA @ 16 V AC	43 W @ 28 V DC 55 VA @ 23 V AC
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Output specifications				
Output voltage, ± 5%	5 V DC	12 V DC	15 V DC	24 V DC
Max. output current	1.5 A, see diagram	1.5 A, see diagram	1.5 A, see diagram	1.5 A, see diagram
Residual ripple	< 50 mV	< 50 mV	< 50 mV	< 50 mV
Short-circuit resistant	yes	yes	yes	yes
Derating curve				

(Input voltage vs. output current)

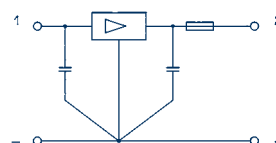


DC/DC stabilized converter modules VSTAB

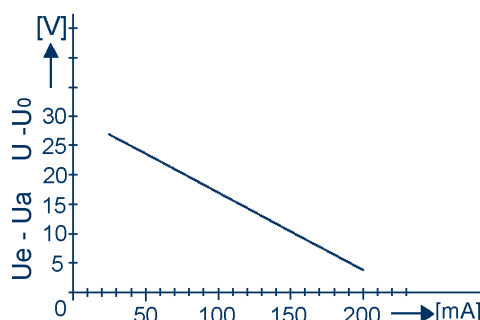
- Mounts on TS 32/TS 35
- Compact design
- DC/DC power supply
- Output voltage: 5, 10, 15, and 24 V DC
- Other output voltages available on request
- VSTAB 24 also available with AC input voltage



Circuit diagram



Type	VSTAB 5	VSTAB 10	VSTAB 12	VSTAB 15	VSTAB 24
Cat. no./Qty.	6139.2/1	6140.2/1	6141.2/1	6142.2/1	6143.2/1
Connection type	Screw connection	Screw connection	Screw connection	Screw connection	Screw connection
Size (L x W x H) with TS 35 x 7.5	87 x 24 x 57mm	87 x 24 x 57mm	87 x 24 x 57mm	87 x 24 x 57mm	87 x 24 x 57mm
Weight	45 g	45 g	45 g	45 g	45 g
General specifications					
DIN-VDE specifications	DIN EN 50178, DIN VDE 0110, Contamination degree 2, overvoltage category III, DIN VDE 0551	DIN EN 50178, DIN VDE 0110, Contamination degree 2, overvoltage category III, DIN VDE 0551	DIN EN 50178, DIN VDE 0110, Contamination degree 2, overvoltage category III, DIN VDE 0551	DIN EN 50178, DIN VDE 0110, Contamination degree 2, overvoltage category III, DIN VDE 0551	DIN EN 50178, DIN VDE 0110, Contamination degree 2, overvoltage category III, DIN VDE 0551
Operating temperature	-20 to +50 °C	-20 to +50 °C	-20 to +50 °C	-20 to +50 °C	-20 to +50 °C
Important notes					
Stripping length	7 mm	7 mm	7 mm	7 mm	7 mm
Wire connect cross-section	0.2-2.5 mm ² /AWG 22-14	0.2-2.5 mm ² /AWG 22-14	0.2-2.5 mm ² /AWG 22-14	0.2-2.5 mm ² /AWG 22-14	0.2-2.5 mm ² /AWG 22-14
Input data					
Input voltage	8 to 35 V DC	13 to 35 V DC	15 to 35 V DC	18 to 35 V DC	27 to 35 V DC
Max. current	0.2 A	0.2 A	0.2 A	0.2 A	0.2 A
Voltage-current diagram					

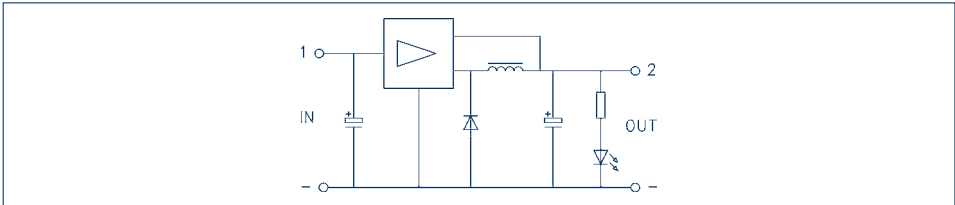


Output specifications					
Output voltage, $\pm 5\%$	5 V DC	10 V DC	12 V DC	15 V DC	24 V DC
Fuse	0.25 A slow-acting (5 x 20mm)	0.25 A slow-acting (5 x 20mm)	0.25 A slow-acting (5 x 20mm)	0.25 A slow-acting (5 x 20mm)	0.25 A slow-acting (5 x 20mm)
Residual ripple	< 50 mV	< 50 mV	< 50 mV	< 50 mV	< 50 mV
Max. output current	0.2 A	0.2 A	0.2 A	0.2 A	0.2 A
Short-circuit resistant	yes	yes	yes	yes	yes

- Mounts on TS 32/TS 35
- DC/DC converter
- Short-circuit safe output
- LED indicator for displaying operational status
- Version available with variable output voltage (DC/DC/ADJ-3) available upon request

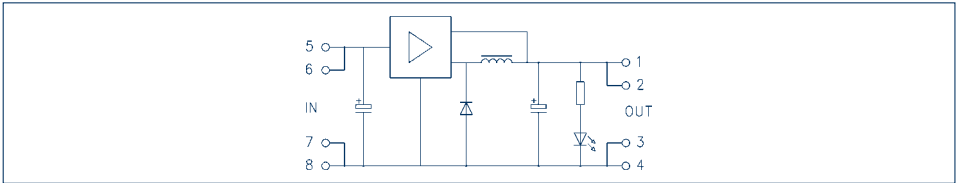


Circuit diagram

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- ### Circuit diagram

Circuit diagram



26

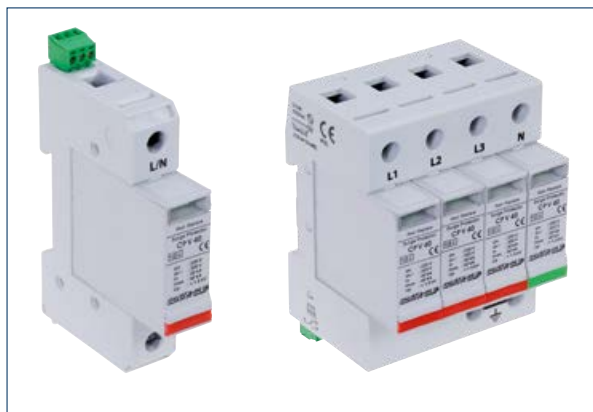
CONTA-PROTECT overvoltage protection

When choosing the correct device for overvoltage protection, it is important to consider the regulations VDE 110-1, IEC 61643-1, EN 61643-11 and VDE 0185 sect. 100. These deal with surge-voltage resistance, insulation, and lightning protection classes.

CONTA-CLIP protection components meet VDE and IEC requirements, and sometimes go beyond them. New solutions from **CONTA-CLIP** offer many advantages for our users.



CONTA-PROTECT overvoltage protection



The CP V 40 and CP VH 40 overvoltage arresters

The **CP V 40** and **CP VH 40** overvoltage arresters, from arrester class 2 (C) are used to reliably protect electrical facilities. The **CP V 40**, with its two-piece design, is also available as the **CP VH 40** with remote signalling with a potential-free CO contact. The integrated monitoring unit signals when an overload occurs. The visible outer label field turns red, thus showing that it must be replaced as soon as possible. The **CP V 40** and **CP VH 40** overvoltage arresters are equipped with a dual-function terminal. This allows them to be connected to live conductors or to comb rails. Two-pole and four-pole versions (e.g. for TT systems) are also available.



The CDS 98 overvoltage arrester

The **CDS 98** overvoltage arrester, from class 3 (D) provide reliable overvoltage protection for supply lines within switchgear and control cabinets. The integrated monitoring unit signals when an overload occurs. The **CDS 98** overvoltage arrester signals the overload with an LED.

CONTA-PROTECT overvoltage protection

Overvoltage arresters for AC use Type 2 (C)

- Type 2 overvoltage protection
- Discharge capacity $I_n = 20 \text{ kA}$; $I_{max} = 40 \text{ kA}$
- Pluggable protective elements
- Remote signalling (optional)
- Complies with IEC 61643-1 and EN61643-11 standards

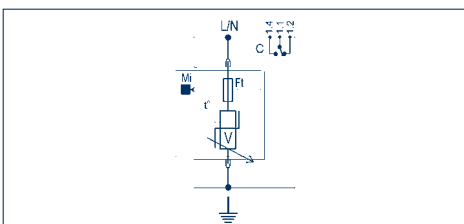
- Mounts on TS 35
- Screw connection

V: High-power varistor
 Ft: Thermal fuse
 C : Remote signalling contact
 t°: Thermal separator
 MI : disconnect display

CP V 40-1



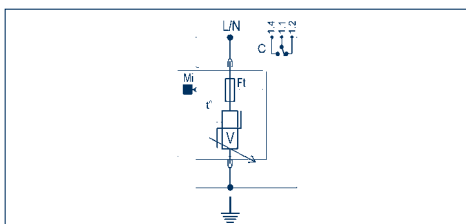
Circuit diagram



CP VH 40-1



Circuit diagram



1-pole type Cat. no./Qty.		CP V 40-1 16002.2	Qty. 1	CP VH 40-1 16003.2	Qty. 1
Size (L x W x H) with TS 35 x 7.5		90 x 18 x 70 mm		100.6 x 18 x 70 mm	
Weight		100 g		108 g	
Arrester Class Technical data		Type 2 class C		Type 2 class C	
Rated voltage	Un	230/400 V AC		230/400 V AC	
Max. continuous voltage	Uc	280 V AC		280 V AC	
Rated frequency	fn	50-60 Hz		50-60 Hz	
Rated discharge surge current (8/20) μs	I_{max}	20 kA		20 kA	
Max. discharge current (8/20) μs	I_n	40 kA		40 kA	
Protection level	Up	< 1.25 kV		< 1.25 kV	
Residual voltage (5 kA)	Ures	< 0.5 kV		< 0.5 kV	
Operating current	I_c	< 1 mA		< 1 mA	
Follow-on current	If	none		none	
Follow-on current suppression capability	Ifi	infinite		infinite	
Response time	tA	< 25 ns		< 25 ns	
TOV voltage L-N	UT	340 V / 5 s		340 V / 5 s	
TOV voltage N-PE	UT	-		-	
Short-circuit resistance	Ip	25 kA		25 kA	
Max. series fuse		125 A gL		125 A gL	
Malfunction display		Mechanical, red		Mechanical, red	
Temperature range		-40 to +85 °C		-40 to +85 °C	
Wire connect cross-section	mm ²	4-25		4-25	
Protection		IP 20		IP 20	
Rail assembly		TS 35 acc. to EN 60715		TS 35 acc. to EN 60715	
Installation dimensions, TE		1 TE, DIN 43880		1 TE, DIN 43880	
Housing material		Thermoplastic UL94-V0		Thermoplastic UL94-V0	
Testing standards					
DIN EN 61643-11	Germany	Arrester type 2		Arrester type 2	
IEC 61643-1	International	Low voltage SPD - Class II test		Low voltage SPD - Class II test	
EN 61643-11	Europe	Low voltage SPD - Class II test		Low voltage SPD - Class II test	
UL1449 ed.2	USA	Low voltage TVSS		Low voltage TVSS	
Type of mains net					
		TNC, TNS		TNC, TNS	
Remote signalling					
Remote signalling		-		Potential-free CO contact	
Switching capacity		-		250 V / 0.5 A (AC) 30V/ 2A (DC)	
Wire connect cross-section		-		max. 1.5 mm ² single or stranded wire	
Accessories			Qty.		Qty.
Replacement plug, L-N		CP V 40-S		CP V 40-S	
Cat. no./Qty.		16007.2	1	16007.2	1
Earth bridges CP E	2-pole	CP E-2		CP E-2	
Cat. no./Qty.		6865.0	1	6865.0	1
Earth bridges CP E	3-pole	CP E-3		CP E-3	
Cat. no./Qty.		6866.0	1	6866.0	1
Earth bridges CP E	4-pole	CP E-4		CP E-4	
Cat. no./Qty.		6867.0	1	6867.0	1

CONTA-PROTECT overvoltage protection

Overvoltage arresters, type 2 (C)

- Mounts on TS 35
- Screw connection
- Discharge currents: I_N : 20 kA/ I_{max} : 40 kA
- Pluggable protective elements
- Remote signalling
- Complies with IEC 61643-1 and EN 61643-11 standards

V: High-energy varistor block

Ft: Thermal fuse

C: Remote signalling contact

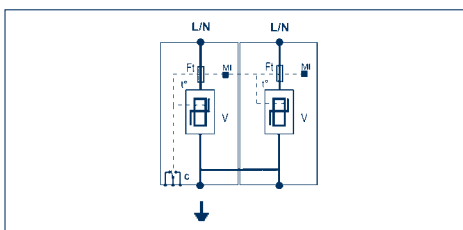
t°: Thermal separator

Mi: disconnect display

CP VH 40-2



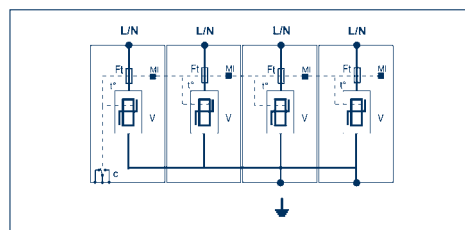
Circuit diagram



CP VH 40-4 TN



Circuit diagram



1-pole type		CP VH 40-2	CP VH 40-4 TN
Cat. no./Qty.		16004.2 / 1	16005.2 / 1
Size (L x W x H) with TS 35 x 7.5		100.6 x 36 x 70 mm	100.6 x 72 x 70 mm
Weight		182 g	323 g
Arrester Class		Type 2 class C	Type 2 class C
Technical data			
Rated voltage	Un	230/400 V AC	230/400 V AC
Max. continuous voltage	Uc	280 V AC	280 V AC
Rated frequency	fn	50-60 Hz	50-60 Hz
Rated discharge surge current (8/20) μ s	I_{max}	40 kA	80 kA
Max. discharge current (8/20) μ s	I_n	80 kA	160 kA
Protection level	Up	< 1.25 kV	< 1.25 kV
Residual voltage (5 kA)	Ures	< 0.5 kV	< 0.5 kV
Operating current	I_c	< 1 mA	< 1 mA
Follow-on current	If	none	none
Follow-on current extinguishing capacity	Ifi	infinite	infinite
Response time	t_A	< 25 ns	< 25 ns
TOV voltage L-N	U_T	340 V / 5 s	340 V / 5 s
TOV voltage N-PE	U_T	-	-
Short-circuit resistance	I_p	25 kA	25 kA
Max. series fuse		125 A	125 A
Malfunction display		Mechanical, red	Mechanical, red
Temperature range		-40 to +85 °C	-40 to +85 °C
Wire connect cross-section	mm ²	4 to 25 mm ²	4 to 25 mm ²
Protection		IP 20	IP 20
Rail assembly		TS 35 acc. to EN 60715	TS 35 acc. to EN 60715
Installation dimensions, TE		2 DIN 43880	4 DIN 43880
Housing material		Thermoplastic UL94-V0	Thermoplastic UL94-V0
Testing standards			
DIN EN 61643-11	Germany	Arrester type 2	Arrester type 2
IEC 61643-1	International	Low voltage SPD - Class II test	Low voltage SPD - Class II test
EN 61643-11	Europe	Low voltage SPD - Class II test	Low voltage SPD - Class II test
UL1449 ed.2	USA	Low voltage TVSS	Low voltage TVSS
Type of mains net			
		For TN systems (2+0)	For TN systems (4+0)
Remote signalling			
Remote signalling		Potential-free CO contact	Potential-free CO contact
Switching capacity		250 V / 0.5 A (AC) 30V / 2A (DC)	250 V / 0.5 A (AC) 30V / 2A (DC)
Wire connect cross-section		max. 1.5 mm ²	max. 1.5 mm ²
Accessories			
Replacement plug, L-N		CP V 40-S	CP V 40-S
Cat. no./Qty.		16007.2 / 1	16007.2 / 1
Earth bridges, CP E			
Cat. no./Qty.			
Earth bridges, CP E			
Cat. no./Qty.			
Earth bridges, CP E			
Cat. no./Qty.			

Überspannungsschutz CONTA-PROTECT

Überspannungsableiter Typ 2 (C) und Typ 3 (D)

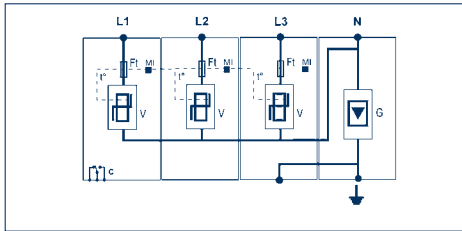
- Mounts on TS 35
- Screw connection
- Discharge currents: I_N : 20 kA/ I_{max} : 40 kA
- Pluggable protective elements
- Remote signalling
- Complies with IEC 61643-1 and EN 61643-11 standards

V: High-energy varistor block
Ft: Thermal fuse
C: Remote signalling contact
t°: Thermal separator
Mi: disconnect display
GDT: Gas-discharge arrester

CP VH 40-4 TT



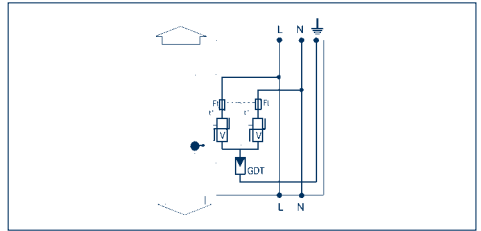
Circuit diagram



CDS 98



Circuit diagram



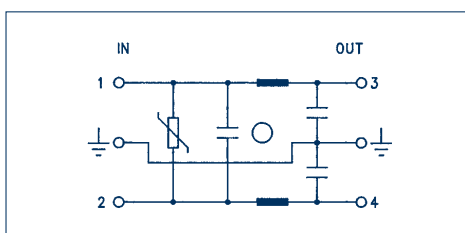
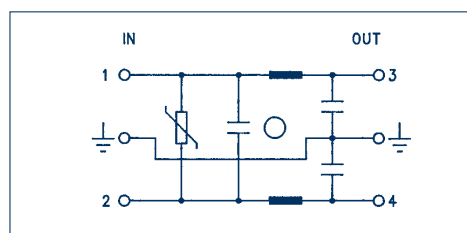
1-pole type Cat. no./Qty.	CP VH 40-4 TT 16006.2 / 1	CDS 98 6471.2 / 1
Size (L x W x H) with TS 35 x 7.5	100.6 x 72 x 70 mm	90 x 18 x 61 mm
Weight	323 g	70 g
Arrester Class Technical data	Type 2 class C	Type 3 Class D
Rated voltage	Un 230/400 V AC	230/400 V AC
Max. continuous voltage	Uc 280 V AC	400 V AC
Rated frequency	fn 50-60 Hz	50-60 Hz
Rated discharge surge current (8/20) μ s	Imax 80 kA	10 kA
Max. discharge current (8/20) μ s	In 150 kA	20 kA
Protection level	Up < 1.25 kV	1.5 kV
Residual voltage (5 kA)	Ures < 0.5 kV	-
Operating current	Ic < 1 mA	< 1 mA
Follow-on current	If none	none
Follow-on current extinguishing capacity	Ifi infinite	infinite
Response time	tA < 25 ns	< 25 ns
TOV voltage L-N	UT 340 V / 5 s	400 V / 5 s
TOV voltage N-PE	UT 1200 V/200 ms/300 A	-
Short-circuit resistance	Ip 25 kA	10 kA
Max. series fuse	125 A	40 A
Malfunction display	Mechanical, red	red LED
Temperature range	-40 to +85 °C	-40 to +85 °C
Wire connect cross-section	mm ² 4 to 25 mm ²	1.5 to 10 mm ²
Protection	IP 20	IP 20
Rail assembly	TS 35 acc. to EN 60715	TS 35 acc. to EN 60715
Installation dimensions, TE	4 DIN 43880	1 DIN 43880
Housing material	Thermoplastic UL94-V0	Thermoplastic UL94-V0
Testing standards		
DIN EN 61643-11	Germany	Arrester type 3
IEC 61643-1	International	Low voltage SPD - Class III test
EN 61643-11	Europe	Low voltage SPD - Class III test
UL1449 ed.2	USA	Low voltage TVSS
Type of mains net		
	For TT systems (3+1)	
Remote signalling		
Remote signalling	Potential-free CO contact	
Switching capacity	250 V / 0.5 A (AC) 30V / 2A (DC)	
Wire connect cross-section	max. 1.5 mm ²	
Accessories		
Replacement plug, L-N	CP V 40-S	
Cat. no./Qty.	16007.2 / 1	
Earth bridges N-PE	CP V 40-S-N-PE	
Cat. no./Qty.	16008.2 / 1	
Earth bridges, CP E		
Cat. no./Qty.		
Earth bridges, CP E		
Cat. no./Qty.		
Earth bridges, CP E		
Cat. no./Qty.		

Interference-elimination link modules IF-OF

- Mounts on TS 35
- Screw connection
- Suppression of symmetrical and asymmetrical interference voltages originating from mains power grid
- Overvoltage protection via integrated varistor circuitry

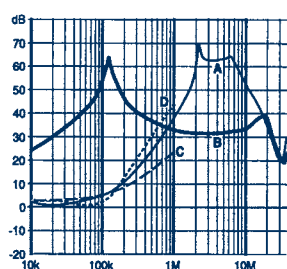
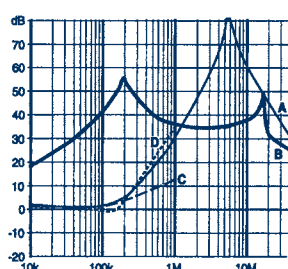
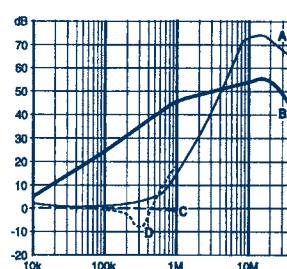
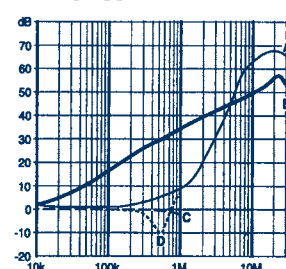
IF-OF/0,5 A

IF-OF / 1 A
IF-OF/3 A
IF-OF/6 A

Circuit diagram

Circuit diagram


Type	IF-OF/0.5 A	IF-OF / 1 A	IF-OF/3 A	IF-OF/6 A
Cat. no./Qty.	6149.2 / 1	6150.2 / 1	6151.2 / 1	6152.2 / 1
Size (L x W x H) with TS 35 x 7.5	87 x 40 x 60 mm	87 x 40 x 60 mm	87 x 40 x 60 mm	87 x 40 x 60 mm
Weight	89 g	89 g	89 g	89 g
General specifications				
DIN-VDE specifications	DIN EN 50178, DIN VDE 0110, Contamination degree 2, overvoltage category III, DIN VDE 0551	DIN EN 50178, DIN VDE 0110, Contamination degree 2, overvoltage category III, DIN VDE 0551	DIN EN 50178, DIN VDE 0110, Contamination degree 2, overvoltage category III, DIN VDE 0551	DIN EN 50178, DIN VDE 0110, Contamination degree 2, overvoltage category III, DIN VDE 0551
Operating temperature	-20 to +50 °C	-20 to +50 °C	-20 to +50 °C	-20 to +50 °C
Important notes				
Stripping length	7 mm	7 mm	7 mm	7 mm
Wire connect cross-section	0.2 to 2.5 mm ²	0.2 to 2.5 mm ²	0.2 to 2.5 mm ²	0.2 to 2.5 mm ²
Screw connection	AWG 22-14	AWG 22-14	AWG 22-14	AWG 22-14
Technical data				
Max. operating voltage	250 V	250 V	250 V	250 V
Max. operating frequency	400 Hz	400 Hz	400 Hz	400 Hz
Max. current	0.5 A	1 A	3 A	6 A
Throttle	24 mH	10 mH	2 mH	0.8 mH
Test voltage for earth phase and neutral earth	2KV/50Hz ≥ 2s	2KV/50Hz ≥ 2s	2KV/50Hz ≥ 2s	2KV/50Hz ≥ 2s
Leakage current	2 x 0.2 mA	2 x 0.2 mA	2 x 0.2 mA	2 x 0.2 mA
Throttling characteristic				

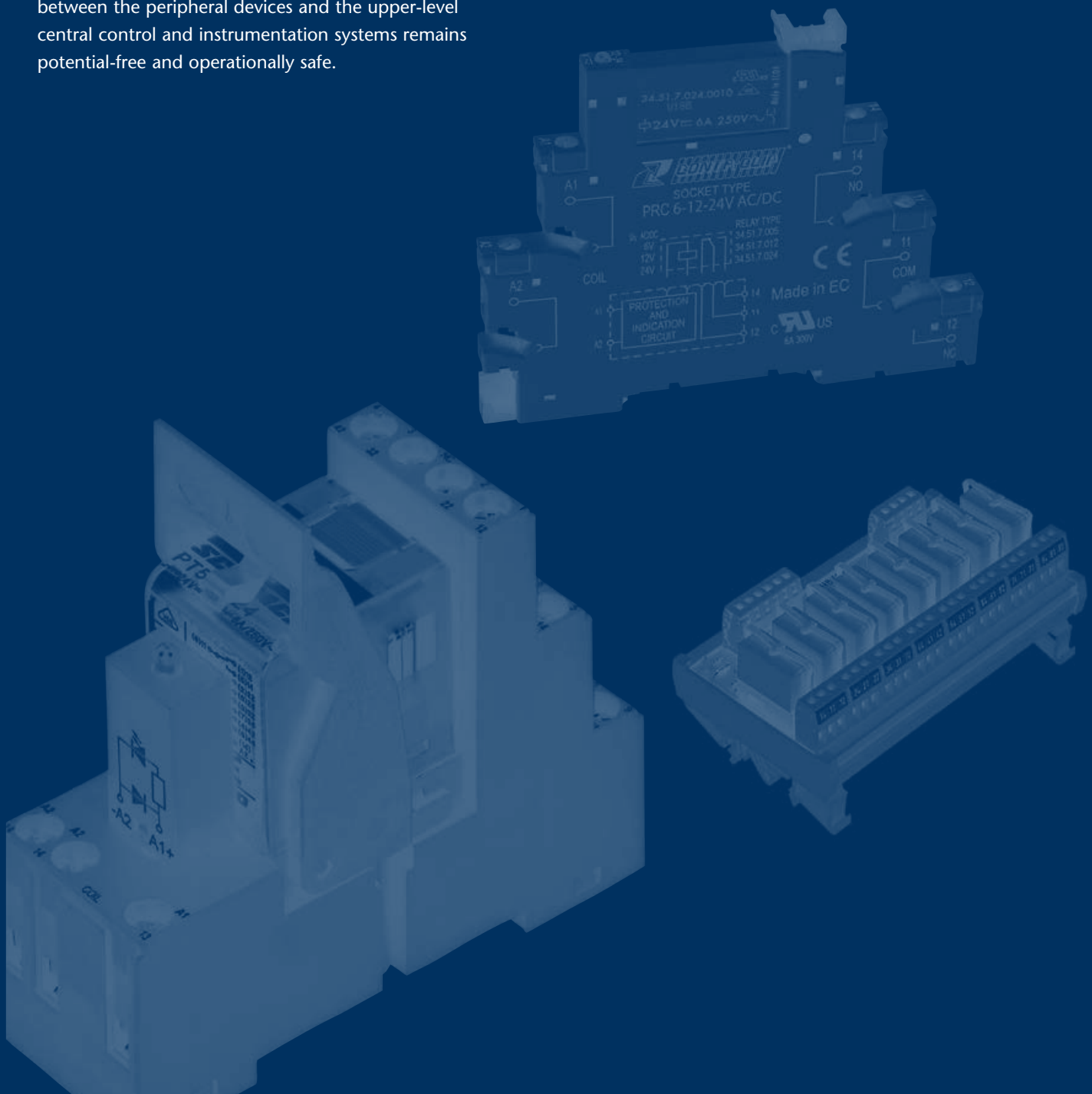
A = 50Ω/50Ω sym, B = 50Ω/50Ω asym, C = 0.1Ω/100Ω sym, D = 100Ω/0.1Ω sym

0.5 amp types

1 amp types

3 amp types

6 amp types


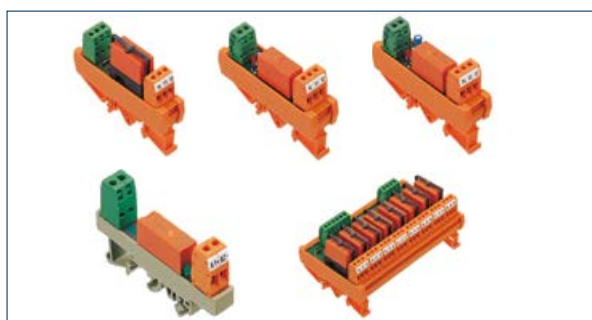
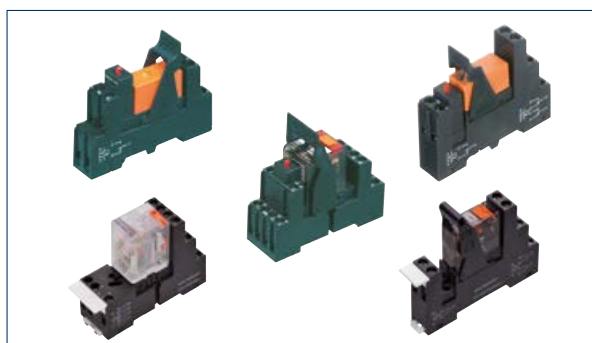
Relay systems

Relay technology continues to play a large role in the reliability of industrial control and automation solutions. Because of their thin design, relay couplers are suitable for use in rail-oriented control designs. CONTA-CLIP relay couplers have features which make them perfect for use in secure electrical isolation of circuits or for the multiplication of contacts.

Whether for manufacturing, electrical machine and plant instrumentation, control engineering, building automation, or process engineering – it is always important to guarantee that the signal exchange between the peripheral devices and the upper-level central control and instrumentation systems remains potential-free and operationally safe.



Relaistechnik



Interface Relay Compact IRC, Multifunction Timing Relay MFR IRC

IRC relay couplers and **MFR-IRCP timing relays** embody a new strategy for 6.2 mm coupling relays. Our five different relay versions provide optimized use of space, simple installations, ease of use, and excellent functionality. They can be adapted for various application requirements because of the interchangeable mechanical relays and optocouplers (SSRs). The different coloured cross-connection combs help minimize the installation effort. The basic version of the **IRC** is the well-known coupling relay that can be used in all systems.

Similar to the basic version, the **IRCP** with the integrated **SM-IRC** fuse module can be used in all systems. It is unique in the way it meets the requirement that each coupling relay output must be protected by a replaceable 5x20 mm standard micro-fuse. This limits the effects of over-currents (surges) – such as those caused by cable short circuits, short circuit to the controlled devices, blocked AC control valves, AC contactors or motors – to the area up to the fuse.

The **IRCP** and **IRCP** provide the advantage of an additional wire connection that can be cross-connected. All three wires of a sensor in a PLC input or all wires of an output-side power relay or contactor can be connected directly to the coupling relay. This saves space and provides for a clear, user-friendly installation.

The **MFR-IRCP** is a time-function coupler component with four time ranges and eight time functions. It features an innovative receptacle for holding additional 5 x 20 mm **SM-IRC** fuse modules. This component functions as a timer relay with a fuse, in a width of 6.2 mm.

All five types of relays in the **IRC relay system** are available with our innovative pressure spring connection system (Push-in) or the established screw connect system.

Plug relay compact PRC

Our **PRC** relay couplers are distinguished by their compact shape in their terminal block design. With a width of only 6.2 mm (for 1 CO relay) and 14 mm (for 2 CO relays), they can be used in a wide variety of applications. The basis relay offers 28 versions, including screw and tension-spring connections, and available coil voltages from 6 to 24 VDC and from 12 to 240 VAC/DC. With the AQI cross-connection system, mutual potentials can be carried out over the coil or contact sides.

Plug relay system PRS

PRS relay couplers are available with one, two, or four CO contacts. The relay plug-in modules are designed for a rated voltage of 300 V. They can be combined with relays (in the coil-voltage range of 12 to 220 VDC and 12 to 230 VAC) and the appropriate insert modules or status displays. In order to guarantee that the relay is mechanically snug in the frame, a relay holding clamp can be mounted. The switchable continuous current is 12 amps for the one- and two-CO versions, and 6 amps for the four-CO versions. The **PRS...G** types have electrical contacts which are designed so that the coil side and the contact side are arranged separately from another. The relay frame, relay insert module and holding clamp can be modularly assembled and combined.

Relay modules RM and RIM

The **RM** and **RIM** are relay interfaces which offer an advantage over the single-relay base systems. On a PCB, the circuit track can be pre-wired, such as the shared plus, minus, and neutral wire potentials on the coil side. The **RIM S** versions also feature a toggle switch in the input/coil circuit. This enables switching to MANUAL, OFF, or AUTOMATIC.

Interface Relay Compact IRC

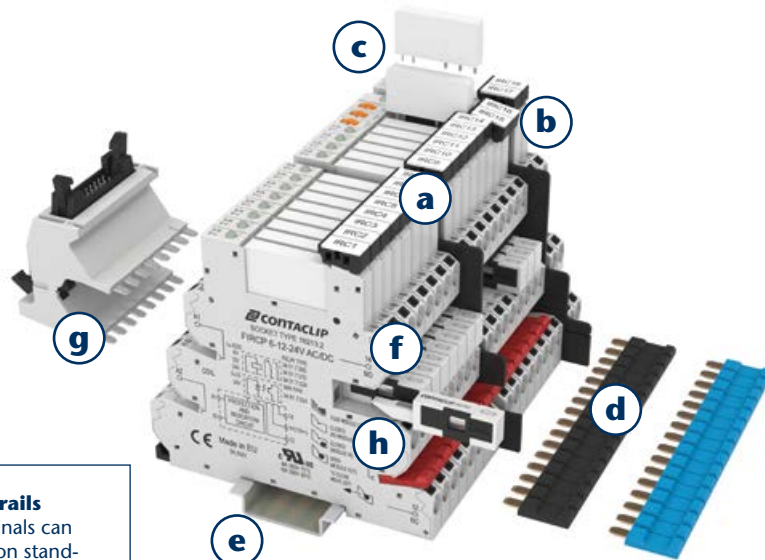
Relay terminals

1. Overview

a Labelling | Marking
The socket bases have a labelling surface which is optimally suited for our standard marking system **MC Maxi Card** (MC GS 6 x 12 R). **Conta-Clip** can also provide "just in time" labelling for you.

b Using the mount/dismount lever
The mounting and dismounting mechanism forms a reliable connection by latching the relay with the socket base. The fitted relay can be removed, easily and without force, from the socket base by using the dismount function of the lever!

c Pluggable relay
Pluggable relays are also available with AgSNO and gold contacts, to fit with the many functions of your individual requirements!



d Pluggable external cross-connections
The AQI/IRC pluggable cross-connection system helps you to save time when distributing potentials. The AQI/IRC is constructed so that it is protected against accidental touch. It is available as a 16-pole unit, in either red, blue or black. The cross-connection can be shortened to fewer poles in order to fit the required interface. Insulation plating can be used to insulate the ends.

e Mounts on TS 35 DIN rails
CONTA-CLIP relay terminals can be arranged as required on standard TS 35 DIN rails in accordance with EN 60715.

g The IRC/FCA adapter connects eight IRC interface relays via a two-wire cable with 24 V operating voltage and with a 14-pole cable from the PLC.

f Connection types
All IRC relay terminals are optionally available with screw connections or Push-in connection system.



h A version with fuse insert module is also available. Thus the coupling relay output can be protected using an individual, replaceable standard micro-fuse (5 x 20 mm) within the available width of 6.2 mm.

2. Relay types



IRCU and FRCU Basic
All-purpose use as coupling relay in the PLC input or in the PLC output for controlling actuators.



IRCPU and FRCPU Plus
All-purpose use as coupling relay in the PLC input or in the PLC output for controlling actuators. With the option for holding a micro-fuse (5x20) in the relay contact.



IRCIU and FRCIU Input
In addition to their well-known coupling relay functionality, these components also have an additional advantage: all three lines from a sensor can be connected in the input to the PLC, or the lines from the output-side power relay or contactor can be connected directly to the corresponding coupling relay. This saves space and provides for a clear, user-friendly installation.



IRCOU and FRCOU Output
In addition to their well-known coupling relay functionality, these components also have an additional advantage: the three lines from a sensor can be connected in the input to the PLC, or the lines from the output-side power relay or contactor can be connected to the corresponding coupling relay. This saves space and provides for a clear, user-friendly installation.

3. Approvals (details upon request)



Interface Relay Compact IRC

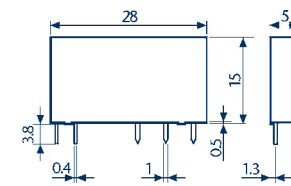
Relay terminals

4. Features:

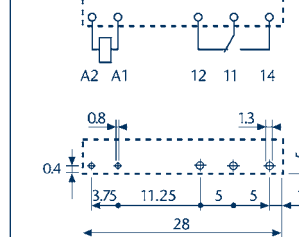
I. Relay

- 5 mm width, extremely narrow monitoring relay
- Sensitive DC coil, 170 mW
- Secure isolation between the coil and the contacts, according to VDE 0160/EN 50178
- 6 mm clearance and creepage distance
- 6 kV (1.2/50 μ s)
- Protection class II, according to VDE 0631/EN 60730

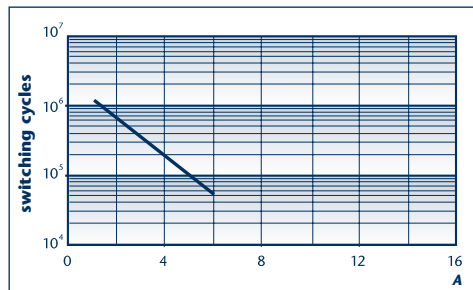
Relay - complete view



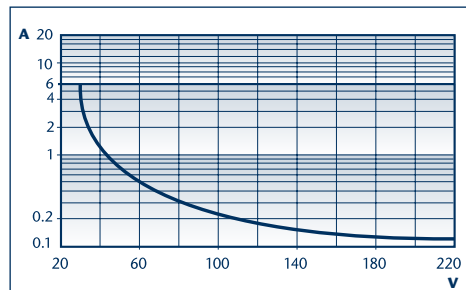
Connection diagram



5. Contact data



Service life of contact under AC 1 load



Switching capacity under DC 1 load

- Under resistive load (DC 1) and with an intersection of current and voltage that lies under the curve: this is an indication of an electrical service life greater or equal to 100,000 switching cycles.
- Under inductive load (DC 13), a free-wheel diode should be switched parallel to the load.
Note: the return time increases.

Ratings for the FCA/IRC adapter

Max. continuous current per signal
Min. power rating for eight coupling relays
Rated voltage (UN)
Operating range
Control logic

Connection for signal level: 24 V

Connection type

Connection for 24 V power supply

Stripping length

Torque

Max. wire cross-section, solid | finely stranded

Max. wire cross-section, solid | finely stranded

1A

3W

24V DC

(0.8-1.1) Un

Positive switching (+ at A1)

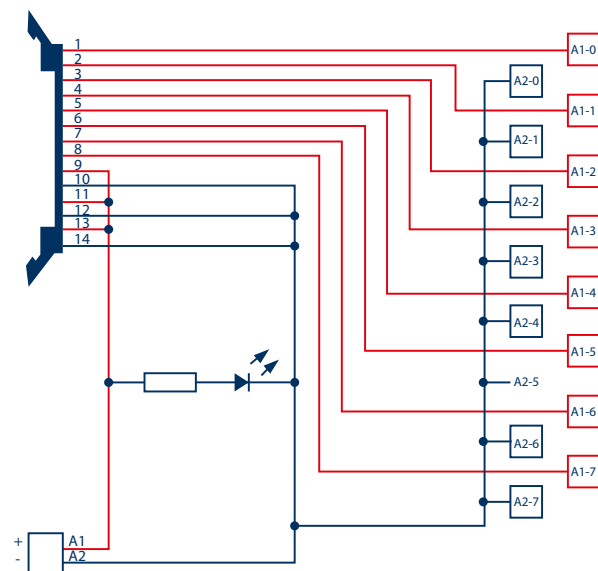
Flat-ribbon cable plug-in connector, 14-poles acc. to IEC 60603-13

9.5 mm

0.5 Nm

1 x 4 mm² / 1 x 2.5 mm²

1 x 12 AWG / 1 x 14 AWG



Interface Relay Compact IRC

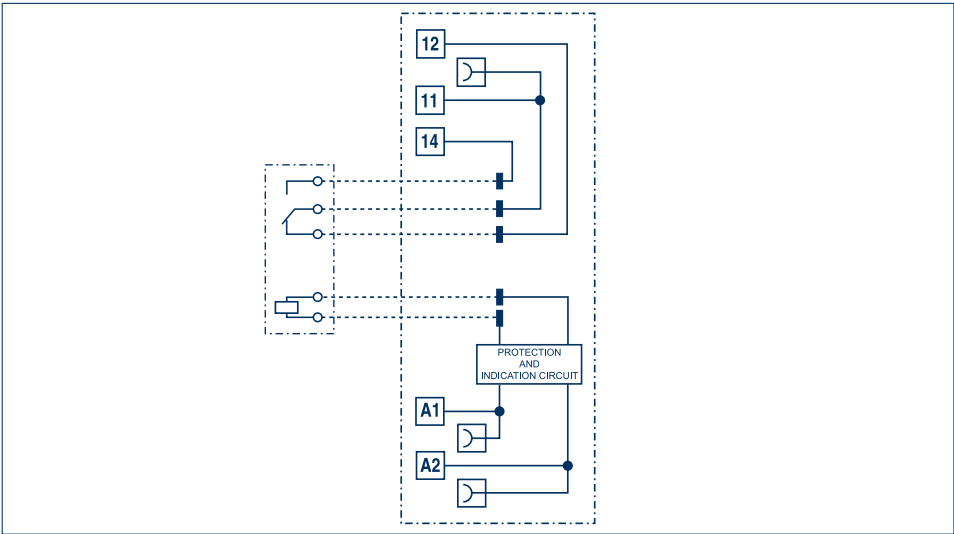
IRC Basic series

Consisting of:

- Base terminal and pluggable relay
- Mounts on TS 35

- All-purpose use as coupling relay at PLC input, or in the output of the PLC for controlling actuators
- Internal EMC coil circuitry and LED display
- Pluggable cross-connection (blue, black, red) makes installations easier
- Screw or Push-in connection

(F)IRC



General specifications:

Mech. service life AC/DC switching cycles	10 x 10 ⁶
Electrical service life AC 1 switching cycles	60 x 10 ³
Response time/Release time	5/6 ms
Ambient temperature	- 40 °C – + 70 °C
Relay protection type	IP 20
Bounce time at the NO of the NO/NC contact	1 ms / 6 ms
Vibration resistance (10-55) Hz NO/NC contact	10 g / 5 g
Ambient heat dissipation without contact current	0.2 W (24 V) – 0.4 W (230 V)
Ambient heat dissipation under continuous current	0.6 W (24 V) – 0.9 W (230 V)

Insulation properties acc. to EN 61810-1

Rated voltage of power supply system	230 / 400 V AC
Rated insulation voltage / contamination degree	250 V AC / 3 400 V AC / 2

Insulation between coil and contact set

Overvoltage category	III
Rated impulse voltage	6 kV (1.2/50 µs)
Dielectric strength	4,000 V AC

Insulation at open contact

Dielectric strength	1,000 V AC / 1.5 kV (1.2/50 µs)
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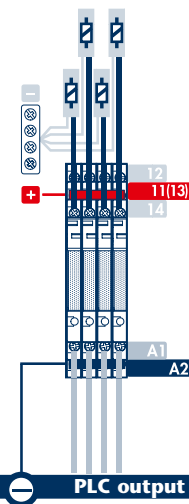
EMC - interference immunity of the input circuit

	UN ≤ 60 V	UN = 125 V	UN = 230 V
Burst (5/50 ns, 5 kHz) on A1 - A2 according to EN 61000-4-4	4 kV	4 kV	4 kV
Surge (1.2/50 µs) on A1 - A2 according to EN 61000-4-5 (differential mode)	0.8 kV	2 kV	4 kV

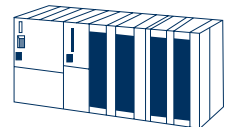
Rated data for the base

	Screw connection IRC	Push-in connection
Stripping length	10 mm	8 mm
Torque	0.5 Nm	-
Max. wire cross-section, solid finely stranded	1 x 2.5 1 x 2.5 mm ²	1 x 2.5 1 x 2.5 mm ²
Min. wire cross-section, solid finely stranded	1 x 0.2 1 x 2.5 mm ²	1 x 0.2 1 x 2.5 mm ²
Max. wire cross-section, solid finely stranded	1 x 14 AWG 1 x 14 AWG	1 x 14 AWG 1 x 14 AWG
Min. wire cross-section, solid finely stranded	1 x 24 AWG 1 x 24 AWG	1 x 24 AWG 1 x 24 AWG

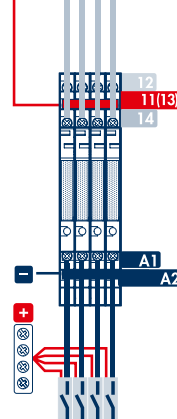
Actuator level



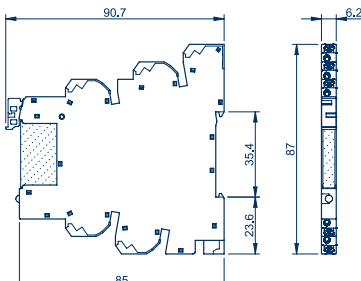
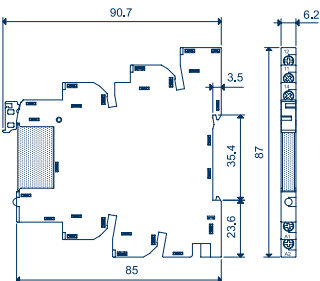
PLC output



PLC input



Sensor level



Interface Relay Compact IRC

IRC Basic series

IRCU



FIRCU



Screw connection	IRCU 1/6 V AC/DC Cat. no./Qty. 16230.2 / 10	IRCU 1/12 V AC/DC Cat. no./Qty. 16231.2 / 10	IRCU 1/24 V AC/DC Cat. no./Qty. 16232.2 / 10	IRCU 1/125 V AC/DC Cat. no./Qty. 16233.2 / 10	IRCU 1/240V AC Cat. no./Qty. 16234.2 / 10
Size (L x W x H) with TS35 x 7.5	87 x 6.2 x 95.4 mm	87 x 6.2 x 95.4 mm	87 x 6.2 x 95.4 mm	87 x 6.2 x 95.4 mm	87 x 6.2 x 95.4 mm
Weight	33 g	33 g	33 g	33 g	33 g
Operating voltage	6 V AC / DC	12 V AC / DC	24 V A C/ DC	125 V AC / DC	240 V AC
Input data					
Rated voltage (Un)	6 V AC / DC	12 V AC / DC	24 V AC / DC	110-125 V AC / DC	220-240 V AC (50/60 Hz)
Power rating AC / DC	0.2 VA / 0.2 W	0.2 VA / 0.2 W	0.25 VA / 0.25 W	0.7 VA / 0.7 W	1 VA / 0.4 W
Operating range	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un
Holding current	0.6 Un	0.6 Un	0.6 Un	0.6 Un	0.6 Un
Drop-out voltage	0.1 Un	0.1 Un	0.1 Un	0.1 Un	0.1 Un
Output specifications					
Number of contacts	1 CO contact	1 CO contact	1 CO contact	1 CO contact	1 CO contact
Max. continuous current Max. inrush current	6/10 A	6/10 A	6/10 A	6/10 A	6/10 A
Rated voltage Max. switching voltage	250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC
Max. switching capacity AC 1	1,500 VA	1,500 VA	1,500 VA	1,500 VA	1,500 VA
Max. switching capacity AC 15 (230 V AC)	300 VA	300 VA	300 VA	300 VA	300 VA
1-phase motor load, AC 3-mode (230 V AC)	0.185 kW	0.185 kW	0.185 kW	0.185 kW	0.185 kW
Max. switching current DC 1:30/110/220 V	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A
Min. switching load	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)
Standard contact material	AgNi	AgNi	AgNi	AgNi	AgNi
Component, screw socket base					
Type	IRC 6-12-24 V AC/DC	IRC 6-12-24 V AC/DC	IRC 6-12-24 V AC/DC	IRC 110-125 V AC/DC	IRC 230-240 V AC
Cat. no./Qty.	16190.2 / 10	16190.2 / 10	16190.2 / 10	16191.2 / 10	16192.2 / 10
Components, plug relays					
Type	PRC 1/5 V DC	PRC 1/12 V DC	PRC 1/24 V DC	PRC 1/60 V DC	PRC 1/60 V DC
Cat. no./Qty.	15500.2 / 10	15501.2 / 10	15502.2 / 10	15503.2 / 10	15503.2 / 10

Push-in connection	FIRCU 1/6 V AC/DC Cat. no./Qty. 16260.2 / 10	FIRCU 1/12 V AC/DC Cat. no./Qty. 16261.2 / 10	FIRCU 1/24 V AC/DC Cat. no./Qty. 16262.2 / 10	FIRCU 1/125 V AC/DC Cat. no./Qty. 16263.2 / 10	FIRCU 1/240 V AC Cat. no./Qty. 16264.2 / 10
Size (L x W x H) with TS 35 x 7.5	87 x 6.2 x 95.4 mm	87 x 6.2 x 95.4 mm	87 x 6.2 x 95.4 mm	87 x 6.2 x 95.4 mm	87 x 6.2 x 95.4 mm
Weight	33 g	33 g	33 g	33 g	33 g
Operating voltage	6 V AC / DC	12 V AC / DC	24 V AC / DC	125 V AC / DC	240 V AC
Input data					
Rated voltage (Un)	6 V AC / DC	12 V AC / DC	24 V AC / DC	110-125 V AC / DC	220-240 V AC (50/60 Hz)
Power rating AC / DC	0.2 VA / 0.2 W	0.2 VA / 0.2 W	0.25 VA / 0.25 W	0.7 VA / 0.7 W	1 VA / 0.4 W
Operating range	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un
Holding current	0.6 Un	0.6 Un	0.6 Un	0.6 Un	0.6 Un
Drop-out voltage	0.1 Un	0.1 Un	0.1 Un	0.1 Un	0.1 Un
Output specifications					
Number of contacts	1 CO contact	1 CO contact	1 CO contact	1 CO contact	1 CO contact
Max. continuous current Max. inrush current	6/10 A	6/10 A	6/10 A	6/10 A	6/10 A
Rated voltage Max. switching voltage	250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC
Max. switching capacity AC 1	1,500 VA	1,500 VA	1,500 VA	1,500 VA	1,500 VA
Max. switching capacity AC 15 (230 V AC)	300 VA	300 VA	300 VA	300 VA	300 VA
1-phase motor load, AC 3-mode (230 V AC)	0.185 kW	0.185 kW	0.185 kW	0.185 kW	0.185 kW
Max. switching current DC 1:30/110/220 V	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A
Min. switching load	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)
Standard contact material	AgNi	AgNi	AgNi	AgNi	AgNi
Component, Push-in socket base					
Type	FIRC 6-12-24 V AC/DC	FIRC 6-12-24 V AC/DC	FIRC 6-12-24 V AC/DC	FIRC 110-125 V AC/DC	FIRC 230-240 V AC
Cat. no./Qty.	16210.2 / 10	16210.2 / 10	16210.2 / 10	16211.2 / 10	16212.2 / 10
Components, plug relays					
Type	PRC 1/5 V DC	PRC 1/12 V DC	PRC 1/24 V DC	PRC 1/60 V DC	PRC 1/60 V DC
Cat. no./Qty.	15500.2 / 10	15501.2 / 10	15502.2 / 10	15503.2 / 10	15503.2 / 10

Accessories	Type	Cat. no./Qty.
Partition plate	TW/IRC	16228.2 / 10
External cross-connector, blue	AQI/IRC/16 BU	16209.5 / 10
External cross-connector, black	AQI/IRC/16 BK	16209.4 / 10
External cross-connector, red	AQI/IRC/16 RD	16209.9 / 10
Ribbon cable adapter	FCA/IRC	16229.2 / 10
Tool / screwdriver	SDB 0.6 x 3.5	1086.0 / 10
Labelling/markers, blank	MC GS 6x12 R WH	3884.7 / 600
Labelling/markers, special print	MC GS 6x12 R So WH	3885.7 / 600

Interface Relay Compact IRC

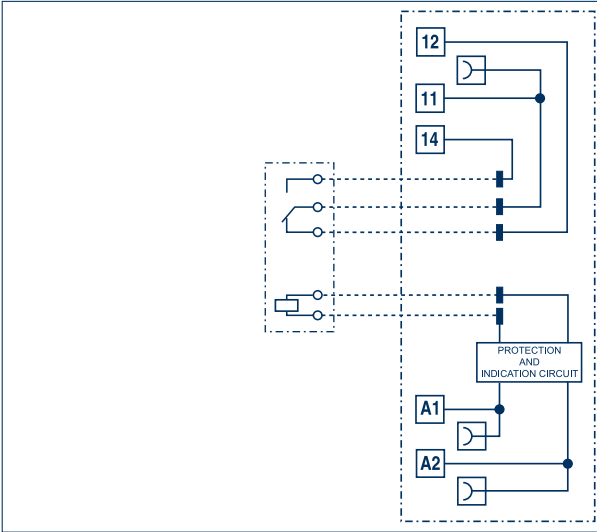
IRC Basic series

Consisting of:

- Base terminal and pluggable relay
- Mounts on TS 35

- All-purpose use as coupling relay at PLC input, or in the output of the PLC for controlling actuators
- Internal EMC coil circuitry and LED display
- Pluggable cross-connection (blue, black, red) makes installations easier
- Screw or Push-in connection

(F)IRC



General specifications:

Mech. service life AC/DC switching cycles	10 x 10 ⁶
Electrical service life AC 1 switching cycles	60 x 10 ³
Response time/Release time	5/6 ms
Ambient temperature	- 40 °C – + 70 °C
Relay protection type	IP 20
Bounce time at the NO of the NO/NC contact	1 ms / 6 ms
Vibration resistance (10-55) Hz NO/NC contact	10 g / 5 g
Ambient heat dissipation without contact current	0.2 W (24 V) – 0.4 W (230 V)
Ambient heat dissipation under continuous current	0.6 W (24 V) – 0.9 W (230 V)

Insulation properties acc. to EN 61810-1

Rated voltage of power supply system	230 / 400 V AC
Rated insulation voltage / contamination degree	250 V AC / 3 400 V AC / 2

Insulation between coil and contact set

Overvoltage category	III
Rated impulse voltage	6 kV (1.2/50 µs)
Dielectric strength	4,000 V AC

Insulation at open contact

Dielectric strength	1,000 V AC / 1.5 kV (1.2/50 µs)
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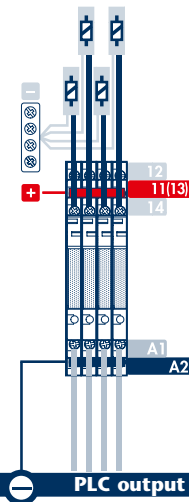
EMC - interference immunity of the input circuit

	UN ≤ 60 V	UN = 125 V	UN = 230 V
Burst (5/50 ns, 5 kHz) on A1 - A2 according to EN 61000-4-4	4 kV	4 kV	4 kV
Surge (1.2/50 µs) on A1 - A2 according to EN 61000-4-5 (differential mode)	0.8 kV	2 kV	4 kV

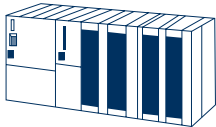
Rated data for the base

	Screw connection IRC	Push-in connection
Stripping length	10 mm	8 mm
Torque	0.5 Nm	-
Max. wire cross-section, solid finely stranded	1 x 2.5 1 x 2.5 mm ²	1 x 2.5 1 x 2.5 mm ²
Min. wire cross-section, solid finely stranded	1 x 0.2 1 x 2.5 mm ²	1 x 0.2 1 x 2.5 mm ²
Max. wire cross-section, solid finely stranded	1 x 14 AWG 1 x 14 AWG	1 x 14 AWG 1 x 14 AWG
Min. wire cross-section, solid finely stranded	1 x 24 AWG 1 x 24 AWG	1 x 24 AWG 1 x 24 AWG

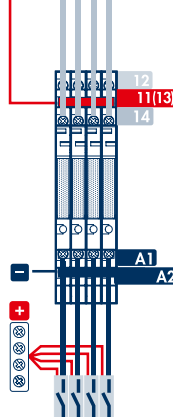
Actuator level



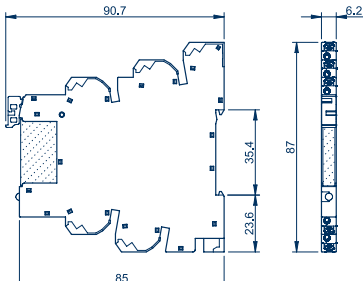
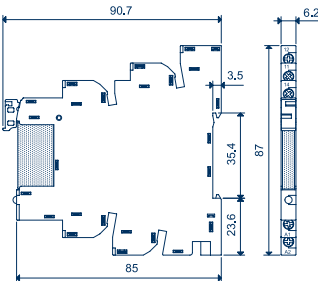
PLC output



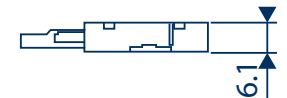
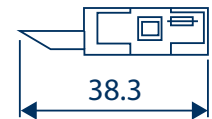
PLC input



Sensor level



Interface Relay Compact IRC



Similar to the IRCU version, the IRCPU with the fuse insert module can be used in all systems. It is unique in the way it meets the requirement that each coupling relay output must be protected by a replaceable 5x20 mm standard micro-fuse within the available 6.2 mm width.

It is delivered with a dummy plug inserted in the frame. The connections for the fuse are bridged internally, so that it can be used without a fuse module. The indicator pin is not visible when the product is delivered.

When the fuse module is plugged in with an inserted fuse (dummy plug has been removed), the fuse is in series with the CO of the output connection (11).

When the fuse module is pulled out (e.g. due to a failed fuse), the output remains cut off so that the cause of the blown fuse can be found (security logistics).

In order to reactivate the output, either the fuse module must be fitted with a functional fuse and plugged in again, or the indicator pin must be moved gently in the direction of the arrow, as shown initially.



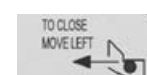
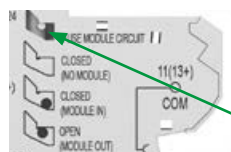
The indicator pin is not visible when the product is delivered.



Status of the indicator pin



Status of the indicator pin



Moving the indicator pin

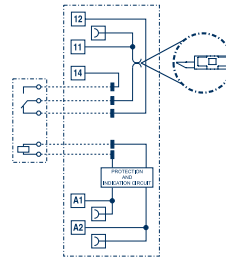
Rated data for the fuse module

Size (L x W)	38.3 x 6.1 mm
Rated voltage of fuse	250 V
Rated current of fuse	6 A
Size of fuse	5 x 20 mm

Interface Relay Compact IRC

IRC Plus series

(F)IRCPU



Screw connection	IRCPU 1/6 V AC/DC 16235.2 / 10	IRCPU 1/12 V AC/DC 16236.2 / 10	IRCPU 1/24 V AC/DC 16237.2 / 10	IRCPU 1/60 V AC/DC 16238.2 / 10	IRCPU 1/125 V AC/DC 16239.2 / 10
Cat. no./Qty.					
Size (LxWxH) with TS 35 x 7.5	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm
Weight	33 g	33 g	33 g	33 g	33 g
Operating voltage	6 V AC / DC	12 V AC / DC	24 V AC / DC	60 V AC / DC	125 V AC / DC
Input data					
Rated voltage (Un)	6 V AC / DC	12 V AC / DC	24 V AC / DC	60 V AC / DC	110-125 V AC / DC
Power rating AC / DC	0.2 VA / 0.2 W	0.2 VA / 0.2 W	0.25 VA / 0.25 W	0.35 VA / 0.35 W	0.7 VA / 0.7 W
Operating range	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un
Holding current	0.6 Un	0.6 Un	0.6 Un	0.6 Un	0.6 Un
Drop-out voltage	0.1 Un	0.1 Un	0.1 Un	0.1 Un	0.1 Un
Output specifications					
Number of contacts	1 CO contact	1 CO contact	1 CO contact	1 CO contact	1 CO contact
Max. continuous current Max. inrush current	6/10 A	6/10 A	6/10 A	6/10 A	6/10 A
Rated voltage Max. switching voltage	250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC
Max. switching capacity AC 1	1,500 VA	1,500 VA	1,500 VA	1,500 VA	1,500 VA
Max. switching capacity AC 15 (230 V AC)	300 VA	300 VA	300 VA	300 VA	300 VA
1-phase motor load, AC 3-mode (230 V AC)	0.185 kW	0.185 kW	0.185 kW	0.185 kW	0.185 kW
Max. switching current DC 1:30/110/220 V	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A
Min. switching load	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)
Standard contact material	AgNi	AgNi	AgNi	AgNi	AgNi

Component, screw socket base					
Type	IRCP 6-12-24 V AC/DC	IRCP 6-12-24 V AC/DC	IRCP 6-12-24 V AC/DC	IRCP 60 V AC/DC	IRCP 110-125 V AC/DC
Cat. no./Qty.	16193.2 / 10	16193.2 / 10	16193.2 / 10	16194.2 / 10	16195.2 / 10
Components, plug relays					
Type	PRC 1/5 V DC	PRC 1/12 V DC	PRC 1/24 V DC	PRC 1/60 V DC	PRC 1/60 V DC
Cat. no./Qty.	15500.2 / 10	15501.2 / 10	15502.2 / 10	15503.2 / 10	15503.2 / 10
Push-in connection					
Cat. no./Qty.	FIRCPU 1/6 V AC/DC 16265.2 / 10	FIRCPU 1/12 V AC/DC 16266.2 / 10	FIRCPU 1/24 V AC/DC 16267.2 / 10	FIRCPU 1/60 V AC/DC 16268.2 / 10	FIRCPU 1/125 V AC/DC 16269.2 / 10
Size (L x W x H) with TS 35 x 7.5	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm
Weight	33 g	33 g	33 g	33 g	33 g
Operating voltage	6 V AC / DC	12 V AC / DC	24 V AC / DC	60 V AC / DC	125 V AC / DC
Input data					
Rated voltage (Un)	6 V AC / DC	12 V AC / DC	24 V AC / DC	60 V AC / DC	110-125 V AC / DC
Power rating AC / DC	0.2 VA / 0.2 W	0.2 VA / 0.2 W	0.25 VA / 0.25 W	0.35 VA / 0.35 W	0.7 VA / 0.7 W
Operating range	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un
Holding current	0.6 Un	0.6 Un	0.6 Un	0.6 Un	0.6 Un
Drop-out voltage	0.1 Un	0.1 Un	0.1 Un	0.1 Un	0.1 Un
Output specifications					
Number of contacts	1 CO contact	1 CO contact	1 CO contact	1 CO contact	1 CO contact
Max. continuous current Max. inrush current	6/10 A	6/10 A	6/10 A	6/10 A	6/10 A
Rated voltage Max. switching voltage	250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC
Max. switching capacity AC 1	1,500 VA	1,500 VA	1,500 VA	1,500 VA	1,500 VA
Max. switching capacity AC 15 (230 V AC)	300 VA	300 VA	300 VA	300 VA	300 VA
1-phase motor load, AC 3-mode (230 V AC)	0.185 kW	0.185 kW	0.185 kW	0.185 kW	0.185 kW
Max. switching current DC 1:30/110/220 V	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A
Min. switching load	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)
Standard contact material	AgNi	AgNi	AgNi	AgNi	AgNi
Component, Push-in socket base					
Type	FIRCPU 6-12-24 V AC/DC	FIRCPU 6-12-24 V AC/DC	FIRCPU 6-12-24 V AC/DC	FIRCP 60 V AC/DC	FIRCPU 110-125 V AC/DC
Cat. no./Qty.	16213.2 / 10	16213.2 / 10	16213.2 / 10	16214.2 / 10	16215.2 / 10
Components, plug relays					
Type	PRC 1/5 V DC	PRC 1/12 V DC	PRC 1/24 V DC	PRC 1/60 V DC	PRC 1/60 V DC
Cat. no./Qty.	15500.2 / 10	15501.2 / 10	15502.2 / 10	15503.2 / 10	15503.2 / 10
Accessories	Type	Cat. no./Qty.			
Partition plate	TW/IRC	16228.2 / 10			
External cross-connector, blue	AQI/IRC/16 BU	16209.5 / 10			
External cross-connector, black	AQI/IRC/16 BK	16209.4 / 10			
External cross-connector, red	AQI/IRC/16 RD	16209.9 / 10			
Ribbon cable adapter	FCA/IRC	16229.2 / 10			
Fuse module	SM-IRC	16208.2 / 10			
Tool / screwdriver	SDB 0.6 x 3.5	1086.0 / 10			
Labelling/markers, blank	MC GS 6x12 R WH	3884.7 / 600			
Labelling/markers, special print	MC GS 6x12 R So WH	3885.7 / 600			

Interface Relay Compact IRC

IRCPU



FIRCPU



Screw connection	IRCPU 1/240 V AC 16240.2 / 10	IRCPU 1/125 V DC 16241.2 / 10	IRCPU 1/220 V DC 16242.2 / 10	IRCPU LW 1/125 V AC/DC 16243.2 / 10	IRCPU LW 1/240 V AC 16244.2 / 10
Cat. no./Qty.					
Size (L x W x H) with TS35 x 7.5	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm
Weight	33 g	33 g	33 g	33 g	33 g
Operating voltage	240 V AC	125 V DC	220 V DC	125 V AC / DC	240 V AC
Input data					
Rated voltage (Un)	220-240 V AC (50/60 Hz)	125 V DC	220 V DC	110-125 V AC / DC	220-240 V AC (50/60 Hz)
Power rating AC / DC	1 VA / 0.4 W	- / 0.6 W	- / 0.6 W	1.1 VA / 1 W	1.4 VA / 0.5 W
Operating range	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un
Holding current	0.6 Un	0.6 Un	0.6 Un	0.6 Un	0.6 Un
Drop-out voltage	0.1 Un	0.1 Un	0.1 Un	0.3 Un	0.3 Un
Output specifications					
Number of contacts	1 CO contact	1 CO contact	1 CO contact	1 CO contact	1 CO contact
Max. continuous current Max. inrush current	6/10 A	6/10 A	6/10 A	6/10 A	6/10 A
Rated voltage Max. switching voltage	250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC
Max. switching capacity AC 1	1,500 VA	1,500 VA	1,500 VA	1,500 VA	1,500 VA
Max. switching capacity AC 15 (230 V AC)	300 VA	300 VA	300 VA	300 VA	300 VA
1-phase motor load, AC 3-mode (230 V AC)	0.185 kW	0.185 kW	0.185 kW	0.185 kW	0.185 kW
Max. switching current DC 1:30/110/220 V	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A
Min. switching load	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)
Standard contact material	AgNi	AgNi	AgNi	AgNi	AgNi
Component, screw socket base					
Type	IRCP 230-240 V AC	IRCP 110-125 V DC	IRCP 220 V DC	IRCP LW 110-125 V AC/DC	IRCP LW 230-240 V AC
Cat. no./Qty.	16196.2 / 10	16197.2 / 10	16198.2 / 10	16199.2 / 10	16200.2 / 10
Components, plug relays					
Type	PRC 1/60 V DC	PRC 1/60 V DC	PRC 1/60 V DC	PRC 1/60 V DC	PRC 1/60 V DC
Cat. no./Qty.	15503.2 / 10	15503.2 / 10	15503.2 / 10	15503.2 / 10	15503.2 / 10
Push-in connection					
Cat. no./Qty.					
Size (L x W x H) with TS 35 x 7.5	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm
Weight	33 g	33 g	33 g	33 g	33 g
Operating voltage	240 V AC	125 V DC	220 V DC	125 V AC / DC	240 V AC
Input data					
Rated voltage (Un)	220-240 V AC (50/60 Hz)	125 V DC	220 V DC	110-125 V AC / DC	220-240 V AC (50/60 Hz)
Power rating AC / DC	1 VA / 0.4 W	- / 0.6 W	- / 0.6 W	1.1 VA / 1 W	1.4 VA / 0.5 W
Operating range	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un
Holding current	0.6 Un	0.6 Un	0.6 Un	0.6 Un	0.6 Un
Drop-out voltage	0.1 Un	0.1 Un	0.1 Un	0.3 Un	0.3 Un
Output specifications					
Number of contacts	1 CO contact	1 CO contact	1 CO contact	1 CO contact	1 CO contact
Max. continuous current Max. inrush current	6/10 A	6/10 A	6/10 A	6/10 A	6/10 A
Rated voltage Max. switching voltage	250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC
Max. switching capacity AC 1	1,500 VA	1,500 VA	1,500 VA	1,500 VA	1,500 VA
Max. switching capacity AC 15 (230 V AC)	300 VA	300 VA	300 VA	300 VA	300 VA
1-phase motor load, AC 3-mode (230 V AC)	0.185 kW	0.185 kW	0.185 kW	0.185 kW	0.185 kW
Max. switching current DC 1:30/110/220 V	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A
Min. switching load	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)
Standard contact material	AgNi	AgNi	AgNi	AgNi	AgNi
Component, Push-in socket base					
Type	FIRCP 230-240 V AC	FIRCP 110-125 V DC	FIRCP 220 V DC	FIRCP LW 110-125 V AC/DC	FIRCP LW 230-240 V AC
Cat. no./Qty.	16216.2 / 10	16217.2 / 10	16218.2 / 10	16219.2 / 10	16220.2 / 10
Components, plug relays					
Type	PRC 1/60 V DC	PRC 1/60 V DC	PRC 1/60 V DC	PRC 1/60 V DC	PRC 1/60 V DC
Cat. no./Qty.	15503.2 / 10	15503.2 / 10	15503.2 / 10	15503.2 / 10	15503.2 / 10
Accessories	Type	Cat. no./Qty.			
Partition plate	TW/IRC	16228.2 / 10			
External cross-connector, blue	AQI/IRC/16 BU	16209.5 / 10			
External cross-connector, black	AQI/IRC/16 BK	16209.4 / 10			
External cross-connector, red	AQI/IRC/16 RD	16209.9 / 10			
Ribbon cable adapter	FCA/IRC	16229.2 / 10			
Fuse module	SM-IRC	16208.2 / 10			
Tool / screwdriver	SDB 0.6 x 3.5	1086.0 / 10			
Labelling/markers, blank	MC GS 6x12 R WH	3884.7 / 600			
Labelling/markers, special print	MC GS 6x12 R So WH	3885.7 / 600			

Interface Relay Compact IRC

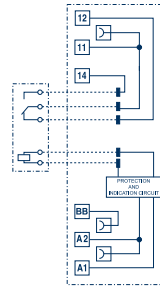
IRC Input series

Consisting of:

- Base terminal and pluggable relay
- Mounts on TS 35

- Advantageous for connecting sensors to the PLC input, and the sensor power supply can be connected to the same coupling relay
- Internal EMC coil circuitry and LED display
- Pluggable cross-connection (blue, black, red) makes installations easier
- Screw or Push-in connection

(F)IRCIU



General specifications:

Mech. service life AC/DC switching cycles	10 x 10 ⁶
Electrical service life AC 1 switching cycles	60 x 10 ³
Response time/Release time	5/6 ms
Ambient temperature	- 40 °C – + 70 °C
Relay protection type	IP 20
Bounce time at the NO of the NO/NC contact	1 ms/6 ms
Vibration resistance (10-55) Hz NO/NC contact	10 g / 5 g
Ambient heat dissipation without contact current	0.2 W (24 V) – 0.4 W (230 V)
Ambient heat dissipation under continuous current	0.6 W (24 V) – 0.9 W (230 V)

Insulation properties acc. to EN 61810-1

Rated voltage of power supply system	230 / 400 V AC
Rated insulation voltage / contamination degree	250 V AC / 3 400 V AC / 2

Insulation between coil and contact set

Overvoltage category	III
Rated impulse voltage	6 kV (1.2/50 µs)
Dielectric strength	4,000 V AC

Insulation at open contact

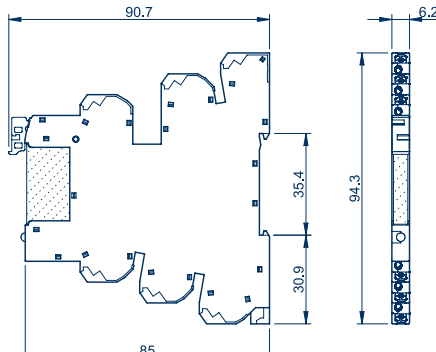
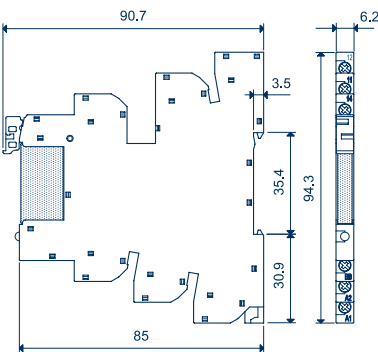
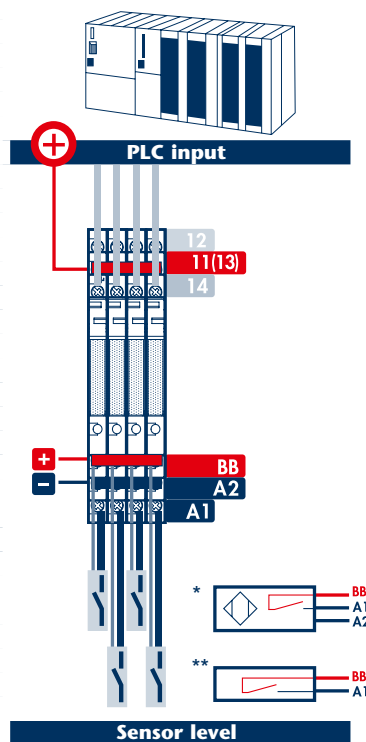
Dielectric strength	1,000 V AC / 1.5 kV (1.2/50 µs)
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EMC - interference immunity of the input circuit

	UN ≤ 60 V	UN = 125 V	UN = 230 V
Burst (5/50 ns, 5 kHz) on A1 - A2 according to EN 61000-4-4	4 kV	4 kV	4 kV
Surge (1.2/50 µs) on A1 - A2 according to EN 61000-4-5 (differential mode)	0.8 kV	2 kV	4 kV

Rated data for the base

	Screw connection IRC	Push-in connection
Stripping length	10 mm	8 mm
Torque	0.5 Nm	-
Max. wire cross-section, solid finely stranded	1 x 2.5 1 x 2.5 mm ²	1 x 2.5 1 x 2.5 mm ²
Min. wire cross-section, solid finely stranded	1 x 0.2 1 x 2.5 mm ²	1 x 0.2 1 x 2.5 mm ²
Max. wire cross-section, solid finely stranded	1 x 14 AWG 1 x 14 AWG	1 x 14 AWG 1 x 14 AWG
Min. wire cross-section, solid finely stranded	1 x 24 AWG 1 x 24 AWG	1 x 24 AWG 1 x 24 AWG



For sensors with 2 connections or for control via the NO contact:

BB = + (plus) for multiple sensors / NO contact is bridgeable
A1 = individual sensor / NO-contact output

For sensors with 3 connections:

BB = + (plus) for multiple sensors Bridgeable
A2 = - (minus) for multiple sensors Bridgeable
A1 = individual sensor output/

* Sensor with 3 connections (PNP output)

** Sensor with 2 connections or for control via NO contact

Interface Relay Compact IRC

IRCIU



FIRCIU



Screw connection	IRCIU 1/6 V AC/DC 16245.2 / 10	IRCIU 1/12 V AC/DC 16246.2 / 10	IRCIU 1/24 V AC/DC 16247.2 / 10	IRCIU 1/125 V AC/DC 16248.2 / 10	IRCIU 1/240 V AC 16249.2 / 10
Cat. no./Qty.					
Size (L x W x H) with TS 35 x 7.5	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm
Weight	33 g	33 g	33 g	33 g	33 g
Operating voltage	6 V AC / DC	12 V AC / DC	24 AC / DC	125 V AC / DC	240 V AC
Input data					
Rated voltage (Un)	6 V AC / DC	12 V AC / DC	24 AC / DC	110-125 V AC / DC	220-240 V AC (50/60 Hz)
Power rating AC / DC	0.2 VA / 0.2 W	0.2 VA / 0.2 W	0.25 VA / 0.25 W	0.7 VA / 0.7 W	1 VA / -
Operating range	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un
Holding current	0.6 Un	0.6 Un	0.6 Un	0.6 Un	0.6 Un
Drop-out voltage	0.1 Un	0.1 Un	0.1 Un	0.1 Un	0.1 Un
Output specifications					
Number of contacts	1 CO contact	1 CO contact	1 CO contact	1 CO contact	1 CO 1 CO contact
Max. continuous current Max. inrush current	6/10 A	6/10 A	6/10 A	6/10 A	6/10 A
Rated voltage Max. switching voltage	250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC
Max. switching capacity AC 1	1,500 VA	1,500 VA	1,500 VA	1,500 VA	1,500 VA
Max. switching capacity AC 15 (230 V AC)	300 VA	300 VA	300 VA	300 VA	300 VA
1-phase motor load, AC 3-mode (230 V AC)	0.185 kW	0.185 kW	0.185 kW	0.185 kW	0.185 kW
Max. switching current DC 1:30/110/220 V	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A
Min. switching load	50 mW (5 V / 2 mA)	50 mW (5 V / 2 mA)	50 mW (5 V / 2 mA)	50 mW (5 V / 2 mA)	50 mW (5 V / 2 mA)
Standard contact material	AgNi + Au	AgNi + Au	AgNi + Au	AgNi + Au	AgNi + Au
Component, screw socket base					
Type	IRCI 6-12-24 V AC/DC	IRCI 6-12-24 V AC/DC	IRCI 6-12-24 V AC/DC	IRCI 110-125 V AC/DC	IRCI 230-240 V AC
Cat. no./Qty.	16201.2 / 10	16201.2 / 10	16201.2 / 10	16202.2 / 10	16203.2 / 10
Components, plug relays					
Type	PRC 1/5 V DC Au	PRC 1/12 V DC Au	PRC 1/24 V DC Au	PRC 1/60 V DC Au	PRC 1/60 V DC Au
Cat. no./Qty.	15557.2 / 10	15558.2 / 10	15559.2 / 10	15568.2 / 10	15568.2 / 10

Push-in connection	FIRCIU 1/6 V AC/DC 16275.2 / 10	FIRCIU 1/12 V AC/DC 16276.2 / 10	FIRCIU 1/24 V AC/DC 16277.2 / 10	FIRCIU 1/125 V AC/DC 16278.2 / 10	FIRCIU 1/240 V AC 16279.2 / 10
Cat. no./Qty.					
Size (L x W x H) with TS 35 x 7.5	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm	94.3 x 6.2 x 95.4 mm
Weight	33 g	33 g	33 g	33 g	33 g
Operating voltage	6 V AC / DC	12 V AC / DC	24 AC / DC	125 V AC / DC	240 V AC
Input data					
Rated voltage (Un)	6 V AC / DC	12 V AC / DC	24 AC / DC	110-125 V AC / DC	220-240 V AC (50/60 Hz)
Power rating AC / DC	0.2 VA / 0.2 W	0.2 VA / 0.2 W	0.25 VA / 0.25 W	0.7 VA / 0.7 W	1 VA / -
Operating range	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un
Holding current	0.6 Un	0.6 Un	0.6 Un	0.6 Un	0.6 Un
Drop-out voltage	0.1 Un	0.1 Un	0.1 Un	0.1 Un	0.1 Un
Output specifications					
Number of contacts	1 CO contact	1 CO contact	1 CO contact	1 CO contact	1 CO contact
Max. continuous current Max. inrush current	6/10 A	6/10 A	6/10 A	6/10 A	6/10 A
Rated voltage Max. switching voltage	250/400 VAC	250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC
Max. switching capacity AC 1	1,500 VA	1,500 VA	1,500 VA	1,500 VA	1,500 VA
Max. switching capacity AC 15 (230 V AC)	300 VA	300 VA	300 VA	300 VA	300 VA
1-phase motor load, AC 3-mode (230 V AC)	0.185 kW	0.185 kW	0.185 kW	0.185 kW	0.185 kW
Max. switching current DC 1:30/110/220 V	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A
Min. switching load	50 mW (5 V / 2 mA)	50 mW (5 V / 2 mA)	50 mW (5 V / 2 mA)	50 mW (5 V / 2 mA)	50 mW (5 V / 2 mA)
Standard contact material	AgNi + Au	AgNi + Au	AgNi + Au	AgNi + Au	AgNi + Au
Component, Push-in socket base					
Type	FIRCI 6-12-24 V AC/DC	FIRCI 6-12-24 V AC/DC	FIRCI 6-12-24 V AC/DC	FIRCI 110-125 V AC/DC	FIRCI 230-240 V AC
Cat. no./Qty.	16221.2 / 10	16221.2 / 10	16221.2 / 10	16222.2 / 10	16223.2 / 10
Components, plug relays					
Type	PRC 1/5 V DC Au	PRC 1/12 V DC Au	PRC 1/24 V DC Au	PRC 1/60 V DC Au	PRC 1/60 V DC Au
Cat. no./Qty.	15557.2 / 10	15558.2 / 10	15559.2 / 10	15568.2 / 10	15568.2 / 10

Accessories	Type	Cat. no./Qty.
Partition plate	TW/IRC	16228.2 / 10
External cross-connector, blue	AQI/IRC/16 BU	16209.5 / 10
External cross-connector, black	AQI/IRC/16 BK	16209.4 / 10
External cross-connector, red	AQI/IRC/16 RD	16209.9 / 10
Ribbon cable adapter	FCA/IRC	16229.2 / 10
Tool / screwdriver	SDB 0.6 x 3.5	1086.0 / 10
Labelling/markers, blank	MC GS 6x12 R WH	3884.7 / 600
Labelling/markers, special print	MC GS 6x12 R So WH	3885.7 / 600

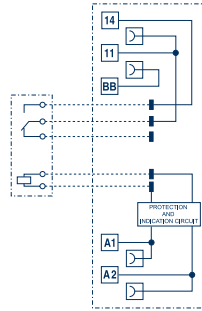
Interface Relay Compact IRC

IRC output series

Consisting of:

- Base terminal and pluggable relay
- Mounts on TS 35
- Advantageous for connecting actuators to the PLC output
- Control and power supply for the actuator can be connected to the same coupling relay
- Internal EMC coil circuitry and LED display
- Pluggable cross-connection (blue, black, red) makes installations easier
- Screw or Push-in connection

(F)IRCOU



General specifications:

Mech. service life AC/DC switching cycles	10 x 10 ⁶
Electrical service life AC 1 switching cycles	60 x 10 ³
Response time/Release time	5/6 ms
Ambient temperature	- 40 °C – + 70 °C
Relay protection type	IP 20
Bounce time at the NO of the NO/NC contact	1 ms/6 ms
Vibration resistance (10-55) Hz NO/NC contact	10 g / 5 g
Ambient heat dissipation without contact current	0.2 W (24 V) – 0.4 W (230 V)
Ambient heat dissipation under continuous current	0.6 W (24 V) – 0.9 W (230 V)

Insulation properties acc. to EN 61810-1

Rated voltage of power supply system	230 / 400 V AC
Rated insulation voltage / contamination degree	250 V AC / 3

Insulation between coil and contact set

Overvoltage category	III
Rated impulse voltage	6 kV (1.2/50 µs)
Dielectric strength	4,000 V AC

Insulation at open contact

Dielectric strength	1,000 V AC / 1.5 kV (1.2/50 µs)
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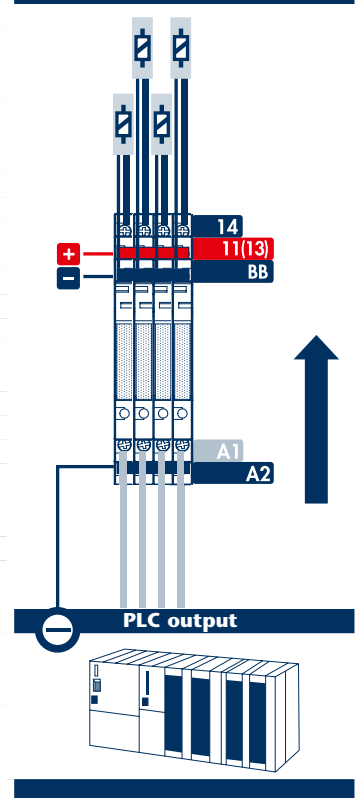
EMC - interference immunity of the input circuit

	UN ≤ 60 V	UN = 125 V	UN = 230 V
Burst (5/50 ns, 5 kHz) on A1 - A2 according to EN 61000-4-4	4 kV	4 kV	4 kV
Surge (1.2/50 µs) on A1 - A2 according to EN 61000-4-5 (differential mode)	0.8 kV	2 kV	4 kV

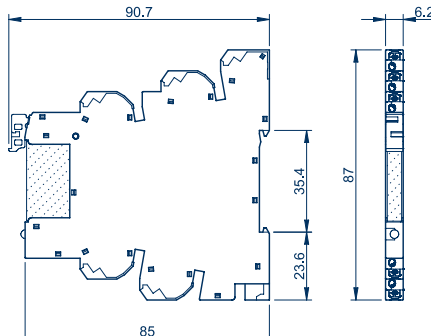
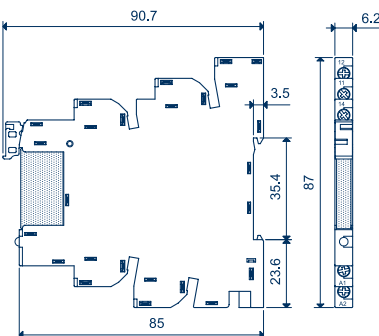
Rated data for the base

	Screw connection IRC	Push-in connection
Stripping length	10 mm	8 mm
Torque	0.5 Nm	-
Max. wire cross-section, solid finely stranded	1 x 2.5 1 x 2.5 mm ²	1 x 2.5 1 x 2.5 mm ²
Min. wire cross-section, solid finely stranded	1 x 0.2 1 x 2.5 mm ²	1 x 0.2 1 x 2.5 mm ²
Max. wire cross-section, solid finely stranded	1 x 14 AWG 1 x 14 AWG	1 x 14 AWG 1 x 14 AWG
Min. wire cross-section, solid finely stranded	1 x 24 AWG 1 x 24 AWG	1 x 24 AWG 1 x 24 AWG

Actuator level



Apply the operating voltage for actuators to BB - 11 (polarity insensitive)
BB = bridgeable for multiple actuators
11 = bridgeable for multiple actuators
14 = individual control of the actuators



Interface Relay Compact IRC

IRCOU



FIRCOU



Screw connection	IRCOU 1/6 V AC/DC 16250.2 / 10	IRCOU 1/12 V AC/DC 16251.2 / 10	IRCOU 1/24 V AC/DC 16252.2 / 10	IRCOU 1/125 V AC/DC 16253.2 / 10	IRCOU 1/240 V AC 16254.2 / 10
Cat. no./Qty.					
Size (L x W x H) with TS 35 x 7.5	87 x 6.2 x 95.4 mm	87 x 6.2 x 95.4 mm	87 x 6.2 x 95.4 mm	87 x 6.2 x 95.4 mm	87 x 6.2 x 95.4 mm
Weight	33 g	33 g	33 g	33 g	33 g
Operating voltage	6 V AC / DC	12 V AC / DC	24 AC / DC	125 V AC / DC	240 V AC
Input data					
Rated voltage (Un)	6 V AC / DC	12 V AC / DC	24 AC / DC	110-125 V AC / DC	220-240 V AC (50/60 Hz)
Power rating AC / DC	0.2 VA / 0.2 W	0.2 VA / 0.2 W	0.25 VA / 0.25 W	0.7 VA / 0.7 W	1 VA / -
Operating range	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un
Holding current	0.6 Un	0.6 Un	0.6 Un	0.6 Un	0.6 Un
Drop-out voltage	0.1 Un	0.1 Un	0.1 Un	0.1 Un	0.1 Un
Output specifications					
Number of contacts	1 CO contact	1 CO contact	1 CO contact	1 CO contact	1 CO contact
Max. continuous current Max. inrush current	6/10 A	6/10 A	6/10 A	6/10 A	6/10 A
Rated voltage Max. switching voltage	250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC
Max. switching capacity AC 1	1,500 VA	1,500 VA	1,500 VA	1,500 VA	1,500 VA
Max. switching capacity AC 15 (230 V AC)	300 VA	300 VA	300 VA	300 VA	300 VA
1-phase motor load, AC 3-mode (230 V AC)	0.185 kW	0.185 kW	0.185 kW	0.185 kW	0.185 kW
Max. switching current DC 1:30/110/220 V	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A
Min. switching load	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)
Standard contact material	AgNi	AgNi	AgNi	AgNi	AgNi
Component, screw socket base					
Type	IRCO 6-12-24 V AC/DC	IRCO 6-12-24 V AC/DC	IRCO 6-12-24 V AC/DC	IRCO 110-125 V AC/DC	IRCO 230-240 V AC
Cat. no./Qty.	16204.2 / 10	16204.2 / 10	16204.2 / 10	16205.2 / 10	16206.2 / 10
Components, plug relays					
Type	PRC 1/5 V DC	PRC 1/12 V DC	PRC 1/24 V DC	PRC 1/60 V DC	PRC 1/60 V DC
Cat. no./Qty.	15500.2 / 10	15501.2 / 10	15502.2 / 10	15503.2 / 10	15503.2 / 10

Push-in connection	FIRCOU 1/6 V AC/DC 16280.2 / 10	FIRCOU 1/12 V AC/DC 16281.2 / 10	FIRCOU 1/24 V AC/DC 16282.2 / 10	FIRCOU 1/125 V AC/DC 16283.2 / 10	FIRCOU 1/240 V AC 16284.2 / 10
Cat. no./Qty.					
Size (L x W x H) with TS 35 x 7.5	87 x 6.2 x 90.7 mm	87 x 6.2 x 90.7 mm	87 x 6.2 x 90.7 mm	87 x 6.2 x 90.7 mm	87 x 6.2 x 90.7 mm
Weight	33 g	33 g	33 g	33 g	33 g
Operating voltage	6 V AC / DC	12 V AC / DC	24 AC / DC	125 V AC / DC	240 V AC
Input data					
Rated voltage (Un)	6 V AC / DC	12 V AC / DC	24 AC / DC	110-125 V AC / DC	220-240 V AC (50/60 Hz)
Power rating AC / DC	0.2 VA / 0.2 W	0.2 VA / 0.2 W	0.25 VA / 0.25 W	0.7 VA / 0.7 W	1 VA / -
Operating range	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un	(0.8-1.1) Un
Holding current	0.6 Un	0.6 Un	0.6 Un	0.6 Un	0.6 Un
Drop-out voltage	0.1 Un	0.1 Un	0.1 Un	0.1 Un	0.1 Un
Output specifications					
Number of contacts	1 CO contact	1 CO contact	1 CO contact	1 CO contact	1 CO contact
Max. continuous current Max. inrush current	6/10 A	6/10 A	6/10 A	6/10 A	6/10 A
Rated voltage Max. switching voltage	250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC
Max. switching capacity AC 1	1,500 VA	1,500 VA	1,500 VA	1,500 VA	1,500 VA
Max. switching capacity AC 15 (230 V AC)	300 VA	300 VA	300 VA	300 VA	300 VA
1-phase motor load, AC 3-mode (230 V AC)	0.185 kW	0.185 kW	0.185 kW	0.185 kW	0.185 kW
Max. switching current DC 1:30/110/220 V	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A
Min. switching load	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)	500 mW (12 V / 10 mA)
Standard contact material	AgNi	AgNi	AgNi	AgNi	AgNi
Component, Push-in socket base					
Type	FIRCO 6-12-24 V AC/DC	FIRCO 6-12-24 V AC/DC	FIRCO 6-12-24 V AC/DC	FIRCO 110-125 V AC/DC	FIRCO 230-240 V AC
Cat. no./Qty.	16224.2 / 10	16224.2 / 10	16224.2 / 10	16225.2 / 10	16226.2 / 10
Components, plug relays					
Type	PRC 1/5 V DC	PRC 1/12 V DC	PRC 1/24 V DC	PRC 1/60 V DC	PRC 1/60 V DC
Cat. no./Qty.	15500.2 / 10	15501.2 / 10	15502.2 / 10	15503.2 / 10	15503.2 / 10

Accessories	Type	Cat. no./Qty.
Partition plate	TW/IRC	16228.2 / 10
External cross-connector, blue	AQI/IRC/16 BU	16209.5 / 10
External cross-connector, black	AQI/IRC/16 BK	16209.4 / 10
External cross-connector, red	AQI/IRC/16 RD	16209.9 / 10
Ribbon cable adapter	FCA/IRC	16229.2 / 10
Tool / screwdriver	SDB 0.6 x 3.5	1086.0 / 10
Labelling/markers, blank	MC GS 6x12 R WH	3884.7 / 600
Labelling/markers, special print	MC GS 6x12 R So WH	3885.7 / 600

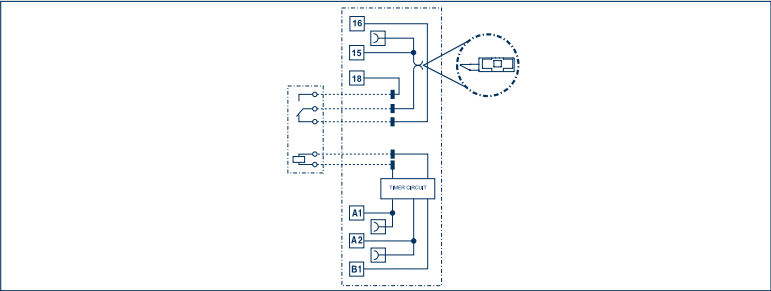
Multifunction timing relay compact MFR-IRCPU

Interface Relay Compact IRC

MFR IRCPU series

- Consisting of:
- Base terminal and pluggable relay
 - Mounts on TS 35
 - Multifunction timing relay with eight time functions and four time ranges – configurable with DIP switch up to six hours
 - Output fuse holder for individual standard micro-fuse (5x20 mm) available as accessory
 - Internal EMC coil circuitry and LED display
 - Pluggable cross-connection (blue, black, red) makes installations easier
 - Screw or Push-in connection

MFR (F)IRCPU circuit diagram



General specifications:

Mech. service life	AC/DC switching cycles	10 x 10 ⁶
Electrical service life	AC 1 switching cycles	60 x 10 ³
Response time/Release time		5/6 ms
Relay protection type		IP 20
Bounce time at the NO of the NO/NC contact		1 ms/6 ms
Vibration resistance (10 – 55 Hz) NO/NC contact		10 g / 5 g
Ambient heat dissipation without contact current		0.2 W (24 V) – 0.4 W (230 V)
Ambient heat dissipation under continuous current		0.6 W (24 V) – 0.9 W (230 V)

Time delay range



Control without a control contact

(A) ON delay

The start is triggered by applying the operating voltage (U). The relay switches to the working position after the adjustable time delay.



(GI) Fixed pulse (0.5 s) delayed

When the operating voltage (U) is applied and the set delay time has expired, the relay switches for 0.5 seconds in the working position.



Control with a control contact

(BE) OFF delay with control contact

The operating voltage (U) is connected. The relay switches immediately to the working position when the start contact (S) is closed. The adjustable OFF delay begins when the start contact opens.



(DE) Impulse-ON with control contact

The operating voltage (U) is connected. The relay switches immediately to the working position when the start contact (S) is closed. The adjustable Impulse-ON time begins when the start contact closes.



(DI) ON pulse

The start is triggered by applying the operating voltage (U). The relay switches immediately to the working position. The relay switches to the rest position after the adjustable wipe time interval.



(SW) Blinker ON beginning

The relay switches to the working position when the operating voltage (U) is applied. The relay switches to the rest position after the pulse time interval, and then switches back to the working position (pulse time = pause time).



(CE) ON and OFF delay with control contact

The operating voltage (U) is connected. The start contact (S) closes. The relay switches to the working position after the adjustable time delay. The relay switches to the rest position after the start contact opens and the delay time has expired.



(EE) Impulse-OFF via opened start contact

The operating voltage (U) is connected. The relay switches immediately to the working position when the start contact (S) opens. The adjustable impulse-OFF time begins when the start contact opens.



EMC specifications Standard	Test		Voltage
EN 61000-4-2	Electrostatic discharge	Contact discharge Air discharge	4 kV 8 kV
EN 61000-4-3	Radio frequency, electromagnetic field (80-1000 MHz)		10 V/m
	Radio frequency, electromagnetic field (1400-2700 MHz)		10 V/m
EN 61000-4-4	Quick transients (bursts) (5-50 nS, 5 kHz) at input terminals		4 kV
EN 61000-4-5	Surge (1.2/50 µs) on input terminals	common mode differential mode	2 kV 0.8 kV
EN 61000-4-6	Radio frequency common mode (0.15 ÷ 80 MHz at input terminals)		10 V
EN 55022	Emissions class		Class B

Interface Relay Compact IRC

MFR IRCPU



MFR FIRCPU



Type	MFR IRCPU 1/12 V AC/DC		MFR FIRCPU 1/12 V AC/DC	
Cat. no./Qty.	16255.2 / 10		16256.2 / 10	
Size (L x W x H) with TS 35 x 7.5	94.3 x 6.2 x 95.4 mm		94.3 x 6.2 x 95.4 mm	
Weight	33 g		33 g	
Operating voltage	12 V AC / DC		24 V AC / DC	
Input data				
Rated voltage (Un)	12 V AC / DC		24 V AC / DC	
Power rating AC / DC	0.3 VA / 0.2 W		0.4 VA / 0.3 W	
Operating range	(0.8 to 1.1) Un		(0.8 to 1.1) Un	
Holding current	0.6 Un		0.6 Un	
Drop-out voltage	0.1 Un		0.1 Un	
Functions				
	AI: ON delay		AI: ON delay	
	DI: ON pulse		DI: ON pulse	
	GI: Fixed pulse (0.5 s) delayed		GI: Fixed pulse (0.5 s) delayed	
	SW: Blinker ON beginning		SW: Blinker ON beginning	
	BE: OFF delay with control contact		BE: OFF delay with control contact	
	CE: ON and OFF delay with control contact		CE: ON and OFF delay with control contact	
	DE: Impulse-ON with control contact		DE: Impulse-ON with control contact	
	EE: Impulse-OFF with control contact		EE: Impulse-OFF with control contact	
Time delay range				
	(0.1-3) s, (3-60) s, (1-20) min, (0.3-6) h		(0.1-3) s, (3-60) s, (1-20) min, (0.3-6) h	
Displays				
	LED = Position of output relay		LED = Position of output relay	
Connection data				
Connection type	Screw connection		Push-in connection	
Stripping length	10 mm		8 mm	
Torque	0.5 Nm		-	
Max. wire cross-section, solid finely stranded	1 x 2.5 1 x 2.5 mm ²		1 x 2.5 1 x 2.5 mm ²	
Min. wire cross-section, solid finely stranded	1 x 0.2 1 x 2.5 mm ²		1 x 0.2 1 x 2.5 mm ²	
Max. wire cross-section, solid finely stranded	1 x 14 AWG 1 x 14 AWG		1 x 14 AWG 1 x 14 AWG	
Min. wire cross-section, solid finely stranded	1 x 24 AWG 1 x 24 AWG		1 x 24 AWG 1 x 24 AWG	
Technical data				
Time delay range	(0.1-3) s, (3-60) s, (1-20) min, (0.3-6) h		(0.1-3) s, (3-60) s, (1-20) min, (0.3-6) h	
Repeat accuracy	± 1 %		± 1 %	
Recovery time	< 50 ms		< 50 ms	
Setting tolerance to end value	± 5 %		± 5 %	
Ambient temperature	-40 to +50 °C		-40 to +50 °C	
Output specifications				
Number of contacts	1 CO contact		1 CO contact	
Max. continuous current Max. inrush current	6/10 A		6/10 A	
Rated voltage Max. switching voltage	250/400 V AC		250/400 V AC	
Max. switching capacity AC 1	1,500 VA		1,500 VA	
Max. switching capacity AC 15 (230 V AC)	300 VA		300 VA	
1-phase motor load, AC 3-mode (230 V AC)	0.185 kW		0.185 kW	
Max. switching current DC 1:30/110/220 V	6/0.2/0.12 A		6/0.2/0.12 A	
Min. switching load	500 mW (12 V / 10 mA)		500 mW (12 V / 10 mA)	
Standard contact material	AgNi		AgNi	
Components, socket base				
Type	MFR IRCP 12-24 V AC/DC		MFR IRCP 12-24 V AC/DC	
Cat. no./Qty.	16207.2 / 10		16207.2 / 10	
Components, plug relays				
Type	PRC 1/12 V DC		PRC 1/24 V DC	
Cat. no./Qty.	15501.2 / 10		15502.2 / 10	

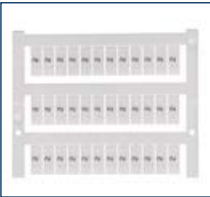
Accessories	Type	Cat. no./Qty.
Partition plate	TW/IRC	16228.2 / 10
External cross-connector, blue	AQI/IRC/16 BU	16209.5 / 10
External cross-connector, black	AQI/IRC/16 BK	16209.4 / 10
External cross-connector, red	AQI/IRC/16 RD	16209.9 / 10
Ribbon cable adapter	FCA/IRC	16229.2 / 10
Fuse modules	SM-IRC	16208.2 / 10
Tool / screwdriver	SDB 0.6 x 3.5	1086.0 / 10
Labelling/markers, blank	MC GS 6x12 R WH	3884.7 / 600
Labelling/markers, special print	MC GS 6x12 R So WH	3885.7 / 600

Plug relay compact PRC

Relay terminals with 1 CO relay

1. Overview

a Labelling | Marking
The socket bases have a labelling surface which is optimally suited for our **PMC Pocket-Maxicard (PMC BSTR 6/30)** standard marking systems. In addition to our large variety of standard labels, **CONTA-CLIP** can also provide "just-in-time" individual labelling for you.



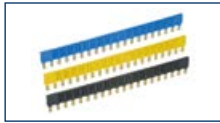
b Using the mount/dismount lever
The mounting and dismounting mechanism forms a reliable connection by latching the relay with the socket base. The fitted relay can be removed, easily and without force, from the socket base by using the dismount function of the lever!



c Pluggable relay
Pluggable relays are also available with AgSNO and gold contacts, to fit with the many functions of your individual requirements!



d Pluggable external cross-connections
The AQI/PRC pluggable cross-connection system enables a time-saving distribution of potentials. The AQI/PRC is constructed so that it is protected against accidental touch. It is available as a 20-pole unit, in either yellow, blue or black. The cross-connection can be shortened to fewer poles in order to fit the required interface. Insulation plating can be used to insulate the ends.



e Mounts on standard TS 35 rail
CONTA-CLIP relay terminals can be arranged as required on standard TS 35 DIN rails in accordance with EN 60715.

f Connection types
All of our relay terminals are optionally available with screw or tension-spring connection systems.



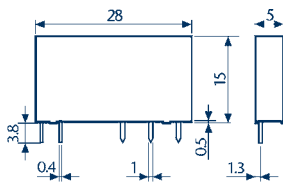
2. Approvals (details upon request)



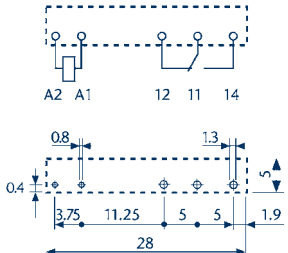
3. Features

- 1. Relay**
- 5 mm width, extremely narrow monitoring relay
 - Sensitive DC coil, 170 mW
 - Secure isolation between the coil and the contacts, according to VDE 0160/EN 50178
 - 6 mm clearance distance, 8 mm creepage distance
 - 6 kV (1.2/50 μ s)
 - Protection class II, according to VDE 0631/EN 60730

Relay - complete view



Connection diagram

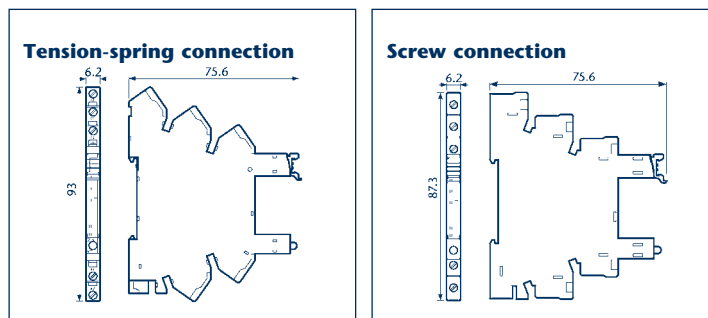


Plug relay compact PRC

Relay terminals with 1 CO relay

II. Socket base

- Mounts on TS 35
- Very versatile and modular construction of individual relay bases
- User-friendly, because the relays can be easily replaced
- High-quality connection terminals (Tension-spring or screw connection system)
- Integrated EMC coil circuitry, and LED
- High-quality innovative mount/dismount lever
- All versions are optionally available with screw or tension-spring connection system

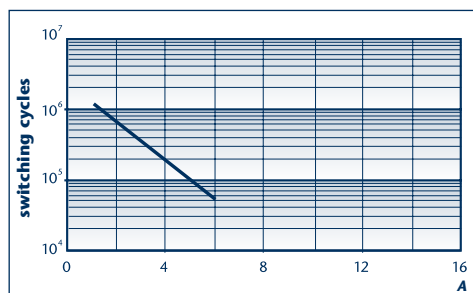


4. General specifications

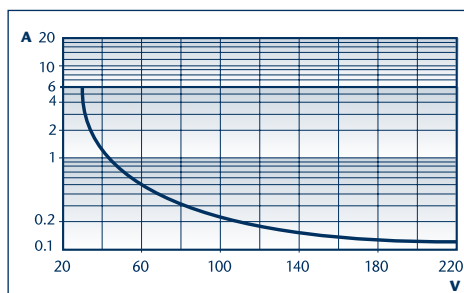
Electro-mechanical relay

Insulation properties			
Insulation coordination, according to EN 61810-1, VDE 0435 T 201.		Rated insulation voltage	250
		Rated surge voltage, kV	4
		Contamination degree	3
		Overvoltage category	III
EMC - interference immunity of the control circuit (coil)			
BURST (5 to 50) ns, 5 kHz, on A 1-A 2		EN 61000-4-4	Class 4 (4 kV)
SURGE (1.2/50) µs on A 1-A 2 (differential mode)		EN 61000-4-5	Class 3 (2 kV)
Additional data			
Bounce time at close of the NO/NC contact		ms	1/6
Resistance to vibration (10 to 55 Hz, max. ± 1 mm):			
Ambient heat dissipation		NO/NC contact g/g without contact current W with continuous current W	10/5 flux density 0.2 (12 V) to 0.9 (240 V) 0.5 (12 V) to 1.5 (240 V)

5. Contact data



Service life of contact under AC 1 load

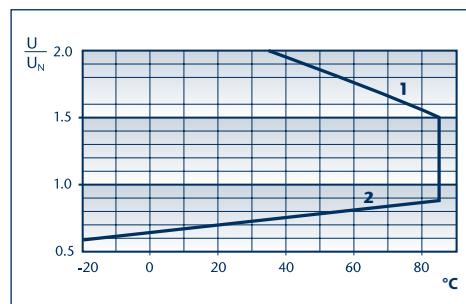


Switching capacity under DC 1 load

- Under resistive load (DC 1) and with an intersection of current and voltage that lies under the curve: this is an indication of an electrical lifespan greater or equal to 100,000 switching cycles.
- Under inductive load (DC 13), a free-wheel diode should be switched parallel to the load. Note: the return time increases.

6. Coil data

DC version				
Rated	Operating range		Resistance	Rated voltage current
U_N V	U_{min} V	U_{max} V	R Ω	I mA
5	3.5	7.5	130	38.4
12	8.4	18	840	14.2
24	16.8	36	3,350	7.1
48	33.6	72	12,300	3.9
60	42	90	19,700	3



Reliable range of operating voltage

1 Max. permitted coil voltage

2 Response voltage, when coil temperature is equal to ambient temperature

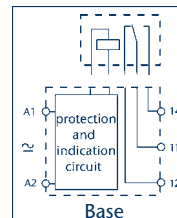
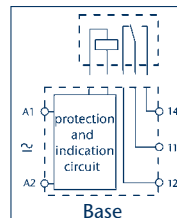
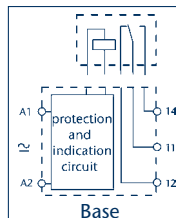
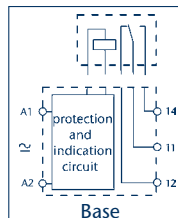
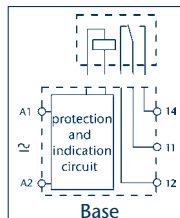
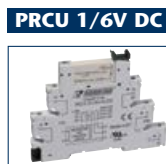
Plug relay compact PRC

Screw-connection relay terminals

- Consisting of:
Base terminal and pluggable relay
- Mounts on TS 35

Connection diagram

- Internal EMC coil circuitry and LED display
- LW version:
Internal AC residual current suppression and LED display



Type	PRCU 1/6 V DC	PRCU 1/12 V DC	PRCU 1/24 V DC	PRCU 1/12 V AC/DC	PRCU 1/24 V AC/DC
Cat. no./Qty. Type/Colour grey (RAL 7032)	15513.2/10	15514.2/10	15515.2/10	15569.2/10	15508.2/10
Size (L x W x H) with TS 35 x 7.5	87.3 x 6.2 x 79.9 mm	87.3 x 6.2 x 79.9 mm	87.3 x 6.2 x 79.9 mm	87.3 x 6.2 x 79.9 mm	87.3 x 6.2 x 79.9 mm
Weight	36 g	36 g	36 g	36 g	36 g
Rated operating voltage	6 V DC	12 V DC	24 V DC	12 V AC/DC	24 V AC/DC
General specifications					
Mech. lifespan AC/DC switching cycles	–/10 x 10 ⁶	–/10 x 10 ⁶	–/10 x 10 ⁶	10 x 10 ⁶ /10 x 10 ⁶	10 x 10 ⁶ /10 x 10 ⁶
Electrical lifespan AC 1 switching cycles	60 x 10 ³	60 x 10 ³	60 x 10 ³	60 x 10 ³	60 x 10 ³
Response time/Release time	5/6 ms	5/6 ms	5/6 ms	5/6 ms	5/6 ms
Insulation coordination, EN 61810-5	4 kV/3	4 kV/3	4 kV/3	4 kV/3	4 kV/3
Dielectric strength coil/contacts (1.2/50 µs)	6 kV	6 kV	6 kV	6 kV	6 kV
Dielectric strength of open contacts	1,000 V AC	1,000 V AC	1,000 V AC	1,000 V AC	1,000 V AC
Ambient temperature	–40 to +70 °C	–40 to +70 °C	–40 to +70 °C	–40 to +70 °C	–40 to +70 °C
Relay protection type	RT II	RT II	RT II	RT II	RT II
Ratings for socket base					
Ambient temperature	–40 to +70 °C	–40 to +70 °C	–40 to +70 °C	–40 to +70 °C	–40 to +70 °C
Stripping length	10 mm	10 mm	10 mm	10 mm	10 mm
Max. wire cross-section, solid finely stranded	1x2.5 1x2.5 mm ²	1x2.5 1x2.5 mm ²	1x2.5 1x2.5 mm ²	1x2.5 1x2.5 mm ²	1x2.5 1x2.5 mm ²
	1x14 1x14 AWG	1x14 1x14 AWG	1x14 1x14 AWG	1x14 1x14 AWG	1x14 1x14 AWG
Ratings for plug-relays combined with socket base					
Contacts					
Number of contacts	1 CO contact	1 CO contact	1 CO contact	1 CO contact	1 CO contact
Max. continuous current Max. inrush current	6/10 A	6/10 A	6/10 A	6/10 A	6/10 A
Rated voltage Max. switching voltage	250/400 VAC*	250/400 VAC*	250/400 VAC*	250/400 VAC*	250/400 VAC*
Max. switching capacity AC 1	1,500 VA	1,500 VA	1,500 VA	1,500 VA	1,500 VA
Max. switching capacity AC 15 (230 V AC)	300 VA	300 VA	300 VA	300 VA	300 VA
1-phase motor load, AC 3-mode (230 V AC)	0.185 kW	0.185 kW	0.185 kW	0.185 kW	0.185 kW
Max. switching current DC 1:30/110/220 V	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A
Min. switching load	300 (5/5) mW (V/mA)	300 (5/5) mW (V/mA)	300 (5/5) mW (V/mA)	300 (5/5) mW (V/mA)	300 (5/5) mW (V/mA)
Standard contact material	AgNi	AgNi	AgNi	AgNi	AgNi
Coil					
Rated voltage (U _N)	5 V DC – AC	12 V DC – AC	24 V DC – AC	12 V DC 12 AC	24 V DC 24 AC
Power rating AC/DC	0.2 W	0.2 W	0.2 W	0.2 W	0.2 W
Operating range	-	-	-	(0.8 to 1.1) U _N AC (50/60 Hz)	(0.8 to 1.1) U _N AC (50/60 Hz)
	(0.8 to 1.2) U _N DC	(0.8 to 1.2) U _N DC	(0.8 to 1.2) U _N DC	(0.8 to 1.2) U _N DC	(0.8 to 1.2) U _N DC
Holding current	0.6 U _N DC	0.6 U _N DC	0.6 U _N DC	0.6 U _N AC/0.6 U _N DC	0.6 U _N AC/0.6 U _N DC
Drop-out voltage	0.05 U _N DC	0.05 U _N DC	0.05 U _N DC	0.1 U _N AC/0.05 U _N DC	0.1 U _N AC/0.05 U _N DC

Components, socket base

Type/Colour grey (RAL 7032)	PRC 6-12-24V DC	PRC 6-12-24V DC	PRC 6-12-24V DC	PRC 6-12-24V AC/DC	PRC 6-12-24V AC/DC
Cat. no./Qty.	15490.2/10	15490.2/10	15490.2/10	15488.2/10	15488.2/10
Components, plug relays					
Type/Rated voltage	PRC 1/5V DC	PRC 1/24V DC	PRC 1/24V DC	PRC 1/12V DC	PRC 1/24V DC
Cat. no./Qty.	15500.2/10*3	15501.2/10*3	15502.2/10*3	15501.2/10*3	15502.2/10*3
Accessories for AQI/PRC ext. insulated cross-connection					
AQI/PRC/20	15545.8/1	15545.8/1	15545.8/1	15545.8/1	15545.8/1
Cat. no./Qty. yellow	15545.5/1	15545.5/1	15545.5/1	15545.5/1	15545.5/1
Cat. no./Qty. blue	15545.4/1	15545.4/1	15545.4/1	15545.4/1	15545.4/1
Cat. no./Qty. black	15545.4/1	15545.4/1	15545.4/1	15545.4/1	15545.4/1
Partition plate TW/PRC					
TW/PRC	15546.2/1	15546.2/1	15546.2/1	15546.2/1	15546.2/1
Cat. no./Qty.	15546.2/1	15546.2/1	15546.2/1	15546.2/1	15546.2/1
Labelling/markers PMC					
PMC BSTR 6/30	PMC BSTR 6/30	PMC BSTR 6/30	PMC BSTR 6/30	PMC BSTR 6/30	PMC BSTR 6/30
Cat. no./Qty. standard print, see catalogue	9106.7/300	9106.7/300	9106.7/300	9106.7/300	9106.7/300
Cat. no./Qty. blank	9107.7/300	9107.7/300	9107.7/300	9107.7/300	9107.7/300
Cat. no./Qty. special print	9107.7/300	9107.7/300	9107.7/300	9107.7/300	9107.7/300
Screwdriver SDB					
SDB 0.6 x 3.5	SDB 0.6 x 3.5	SDB 0.6 x 3.5	SDB 0.6 x 3.5	SDB 0.6 x 3.5	SDB 0.6 x 3.5
Cat. no./Qty.	1086.0/1	1086.0/1	1086.0/1	1086.0/1	1086.0/1

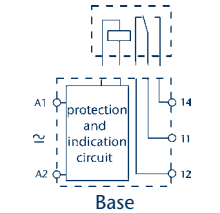
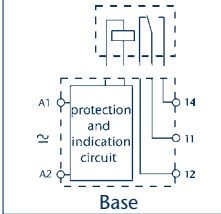
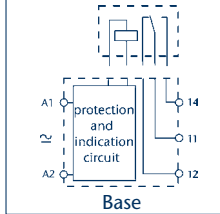
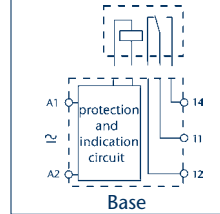
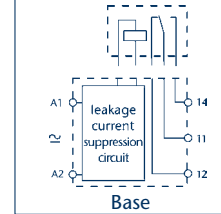
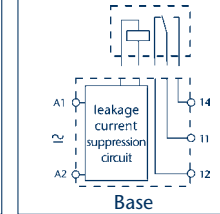
* The conditions of contamination degree 2 are fulfilled at 400 V.

*1 In order for the relay to de-energise, the residual current can be suppressed/controlled via the SPS-230V semiconductor outputs, long control lines (LW), thyristors, and an inductive proximity switch!

*2 Since this relay is only produced for DC at a max. 60 V, the adjustment to the operating voltage occurs via the internal resistance and bridge rectifiers!

*3 Relay available with gold contact upon request!

Plug relay compact PRC

PRCU 1/48V AC/DC	PRCU 1/60V AC/DC	PRCU 1/125V AC/DC	PRCU 1/240V AC/DC	PRCU LW 1/125V AC/DC	PRCU LW 1/240V AC
					
					
PRCU 1/48 V AC/DC 15509.2/10 87.3 x 6.2 x 79.9 mm 36 g 48 V AC/DC	PRCU 1/60 V AC/DC 15510.2/10 87.3 x 6.2 x 79.9 mm 36 g 60 V AC/DC	PRCU 1/125 V AC/DC 15511.2/10*2 87.3 x 6.2 x 79.9 mm 36 g 125 V AC/DC	PRCU 1/240 V AC/DC 15512.2/10*2 87.3 x 6.2 x 79.9 mm 36 g 230 V AC/DC	PRCU LW 1/125 V AC/DC 15553.2/10*2 87.3 x 6.2 x 79.9 mm 36 g 125 V AC/DC	PRCU LW 1/240 V AC 15554.2/10*2 87.3 x 6.2 x 79.9 mm 36 g 230 V AC
10 x 10 ⁶ /10 x 10 ⁶ 60 x 10 ³ 5/6 ms 4 kV/3 6 kV 1,000 V AC -40 to +70 °C RT II	10 x 10 ⁶ /10 x 10 ⁶ 60 x 10 ³ 5/6 ms 4 kV/3 6 kV 1,000 V AC -40 to +70 °C RT II	10 x 10 ⁶ /10 x 10 ⁶ 60 x 10 ³ 5/6 ms 4 kV/3 6 kV 1,000 V AC -40 to +70 °C RT II	10 x 10 ⁶ /10 x 10 ⁶ 60 x 10 ³ 5/6 ms 4 kV/3 6 kV 1,000 V AC -40 to +70 °C RT II	10 x 10 ⁶ /10 x 10 ⁶ 60 x 10 ³ 5/6 ms 4 kV/3 6 kV 1,000 V AC -40 to +70 °C RT II	10 x 10 ⁶ /10 x 10 ⁶ 60 x 10 ³ 5/6 ms 4 kV/3 6 kV 1,000 V AC -40 to +70 °C RT II
-40 to +70 °C 10 mm 1x2.5 1x2.5 mm ² 1x14 1x14 AWG	-40 to +70 °C 10 mm 1x2.5 1x2.5 mm ² 1x14 1x14 AWG	-40 to +70 °C 10 mm 1x2.5 1x2.5 mm ² 1x14 1x14 AWG	-40 to +70 °C 10 mm 1x2.5 1x2.5 mm ² 1x14 1x14 AWG	-40 to +70 °C 10 mm 1x2.5 1x2.5 mm ² 1x14 1x14 AWG	-40 to +70 °C 10 mm 1x2.5 1x2.5 mm ² 1x14 1x14 AWG
1 CO contact 6/10 A 250/400 VAC* 1,500 VA 300 VA 0.185 kW 6/0.2/0.12 A 300 (5/5) mW (V/mA) AgNi	1 CO contact 6/10 A 250/400 VAC* 1,500 VA 300 VA 0.185 kW 6/0.2/0.12 A 300 (5/5) mW (V/mA) AgNi	1 CO contact 6/10 A 250/400 VAC* 1,500 VA 300 VA 0.185 kW 6/0.2/0.12 A 300 (5/5) mW (V/mA) AgNi	1 CO contact 6/10 A 250/400 VAC* 1,500 VA 300 VA 0.185 kW 6/0.2/0.12 A 300 (5/5) mW (V/mA) AgNi	1 CO contact 6/10 A 250/400 VAC* 1,500 VA 300 VA 0.185 kW 6/0.2/0.12 A 300 (5/5) mW (V/mA) AgNi	1 CO contact 6/10 A 250/400 VAC* 1,500 VA 300 VA 0.185 kW 6/0.2/0.12 A 300 (5/5) mW (V/mA) AgNi
48 V DC 48 AC	60 V DC 60 AC	110 to 125 V DC 110 to 125 AC	220 to 240 V DC 220 to 240 AC	110 to 125 V DC 110 to 125 AC	- V DC 220 to 240 VAC
0.2 W (0.8 to 1.1) U _N AC (50/60 Hz) (0.8 to 1.2) U _N DC 0.6 U _N AC/0.6 U _N DC 0.1 U _N AC/0.05 U _N DC	0.2 W (0.8 to 1.1) U _N AC (50/60 Hz) (0.8 to 1.2) U _N DC 0.6 U _N AC/0.6 U _N DC 0.1 U _N AC/0.05 U _N DC	0.2 W (0.8 to 1.1) U _N AC (50/60 Hz) (0.8 to 1.2) U _N DC 0.6 U _N AC/0.6 U _N DC 0.1 U _N AC/0.05 U _N DC	0.2 W (0.8 to 1.1) U _N AC (50/60 Hz) (0.8 to 1.2) U _N DC 0.6 U _N AC/0.6 U _N DC 0.1 U _N AC/0.05 U _N DC	1.0 W (0.8 to 1.1) U _N AC (50/60 Hz) (0.8 to 1.2) U _N DC 0.6 U _N AC/0.6 U _N DC 0.1 U _N AC/0.05 U _N DC	0.5 W (0.8 to 1.1) U _N AC (50/60 Hz) (0.8 to 1.2) U _N DC 0.6 U _N AC/- U _N DC 0.1 U _N AC/- U _N DC
PRC 48-60V AC/DC 15496.2/10	PRC 48-60V AC/DC 15496.2/10	PRC 110... 125V AC/DC 15497.2/10	PRC 220... 240V AC/DC 15489.2/10	PRC LW 110... 125V AC/DC 15555.2/10	PRC LW 220... 240V AC 15491.2/10
PRC 1/48V DC 15547.2/10*3	PRC 1/60V DC 15503.2/10*3	PRC 1/60V DC 15503.2/10*3	PRC 1/60V DC 15503.2/10*3	PRC 1/60V DC 15503.2/10*	PRC 1/60V DC 15503.2/10*3
AQI/PRC/20 15545.8/1 15545.5/1 15545.4/1	AQI/PRC/20 15545.8/1 15545.5/1 15545.4/1	AQI/PRC/20 15545.8/1 15545.5/1 15545.4/1	AQI/PRC/20 15545.8/1 15545.5/1 15545.4/1	AQI/PRC/20 15545.8/1 15545.5/1 15545.4/1	AQI/PRC/20 15545.8/1 15545.5/1 15545.4/1
TW/PRC 15546.2/1	TW/PRC 15546.2/1	TW/PRC 15546.2/1	TW/PRC 15546.2/1	TW/PRC 15546.2/1	TW/PRC 15546.2/1
PMC BSTR 6/30 CONTA-CONNECT 9106.7/300 9107.7/300	PMC BSTR 6/30 CONTA-CONNECT 9106.7/300 9107.7/300	PMC BSTR 6/30 CONTA-CONNECT 9106.7/300 9107.7/300	PMC BSTR 6/30 CONTA-CONNECT 9106.7/300 9107.7/300	PMC BSTR 6/30 CONTA-CONNECT 9106.7/300 9107.7/300	PMC BSTR 6/30 CONTA-CONNECT 9106.7/300 9107.7/300
SDB 0.6 x 3.5 1086.0/1	SDB 0.6 x 3.5 1086.0/1	SDB 0.6 x 3.5 1086.0/1	SDB 0.6 x 3.5 1086.0/1	SDB 0.6 x 3.5 1086.0/1	SDB 0.6 x 3.5 1086.0/1

Plug relay compact PRC

Tension-spring relay terminals

- Consisting of:
Base terminal and pluggable relay
- Mounts on TS 35

Connection diagram

- Internal EMC coil circuitry and LED display
- LW version:
Internal AC residual current suppression and LED display

ZPRCU 1/6V DC



ZPRCU 1/12V DC



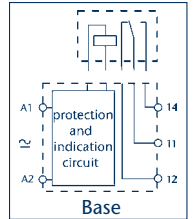
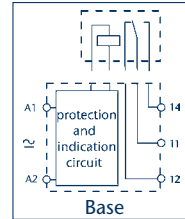
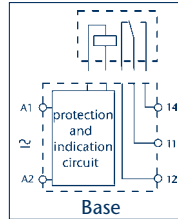
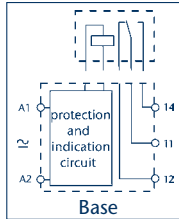
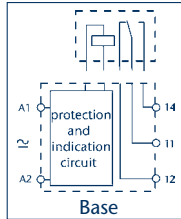
ZPRCU 1/24V DC



ZPRCU 1/12V AC/DC



ZPRCU 1/24V AC/DC



Type	ZPRCU 1/6V DC	ZPRCU 1/12V DC	ZPRCU 1/24V DC	ZPRCU 1/12V AC/DC	ZPRCU 1/24V AC/DC
Cat. no./Qty. Type/Colour grey (RAL 7032)	15524.2/10	15525.2/10	15526.2/10	15518.2/10	15519.2/10
Size (L x W x H) with TS 35 x 7.5	93 x 6.2 x 79.9 mm	93 x 6.2 x 79.9 mm	93 x 6.2 x 79.9 mm	93 x 6.2 x 79.9 mm	93 x 6.2 x 79.9 mm
Weight	36 g	36 g	36 g	36 g	36 g
Rated operating voltage	6 V DC	12 V DC	24 V DC	12 V AC/DC	24 V AC/DC
General specifications					
Mech. lifespan AC/DC	Switching cycles	–/10 x 10 ⁶	–/10 x 10 ⁶	–/10 x 10 ⁶ /10 x 10 ⁶	–/10 x 10 ⁶ /10 x 10 ⁶
Electrical lifespan AC 1	Switching cycles	60 x 10 ³	60 x 10 ³	60 x 10 ³	60 x 10 ³
Response time/Release time		5/6 ms	5/6 ms	5/6 ms	5/6 ms
Insulation coordination, EN 61810-5		4 kV/3	4 kV/3	4 kV/3	4 kV/3
Dielectric strength coil/contacts (1.2/50 µs)		6 kV	6 kV	6 kV	6 kV
Dielectric strength of open contacts		1,000 V AC	1,000 V AC	1,000 V AC	1,000 V AC
Ambient temperature		–40 to +70 °C	–40 to +70 °C	–40 to +70 °C	–40 to +70 °C
Relay protection type		RT II	RT II	RT II	RT II
Ratings for socket base					
Ambient temperature		–40 to +70 °C	–40 to +70 °C	–40 to +70 °C	–40 to +70 °C
Stripping length		10 mm	10 mm	10 mm	10 mm
Max. wire cross-section, solid finely stranded	mm ²	1x2.5/2x1.5 1x2.5/2x1.5	1x2.5/2x1.5 1x2.5/2x1.5	1x2.5/2x1.5 1x2.5/2x1.5	1x2.5/2x1.5 1x2.5/2x1.5
	AWG	1x14/2x16 1x14/2x16	1x14/2x16 1x14/2x16	1x14/2x16 1x14/2x16	1x14/2x16 1x14/2x16
Ratings for plug-relays combined with socket base					
Contacts					
Number of contacts		1 CO contact	1 CO contact	1 CO contact	1 CO contact
Max. continuous current Max. inrush current		6/10 A	6/10 A	6/10 A	6/10 A
Rated voltage Max. switching voltage		250/400 V AC	250/400 V AC	250/400 V AC	250/400 V AC
Max. switching capacity AC 1		1,500 VA	1,500 VA	1,500 VA	1,500 VA
Max. switching capacity AC 15 (230 V AC)		300 VA	300 VA	300 VA	300 VA
1-phase motor load, AC 3-mode (230 V AC)		0.185 kW	0.185 kW	0.185 kW	0.185 kW
Max. switching current DC 1:30/110/220 V		6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A	6/0.2/0.12 A
Min. switching load		300 (5/5) mW (V/mA)	300 (5/5) mW (V/mA)	300 (5/5) mW (V/mA)	300 (5/5) mW (V/mA)
Standard contact material		AgNi	AgNi	AgNi	AgNi
Coil					
Rated voltage (U _N)		5 V DC – AC	12 V DC – AC	24 V DC – AC	12 V DC 12 AC
Power rating AC/DC		0.2 W	0.2 W	0.2 W	0.2 W
Operating range		–	–	–	(0.8 to 1.1) U _N AC (50/60 Hz)
		(0.8 to 1.2) U _N DC	(0.8 to 1.2) U _N DC	(0.8 to 1.2) U _N DC	(0.8 to 1.2) U _N DC
Holding current		0.6 U _N DC	0.6 U _N DC	0.6 U _N DC	0.6 U _N AC/0.6 U _N DC
Drop-out voltage		0.05 U _N DC	0.05 U _N DC	0.05 U _N DC	0.1 U _N AC/0.05 U _N DC
Components, socket base					
Type/Colour grey (RAL 7032)		ZPRC 6-12-24V DC	ZPRC 6-12-24V DC	ZPRC 6-12-24V DC	ZPRC 6-12-24V AC/DC
Cat. no./Qty.		15494.2/10	15494.2/10	15494.2/10	15492.2/10
Components, plug relays					
Type/Rated voltage		PRC 1/5V DC	PRC 1/12V DC	PRC 1/24V DC	PRC 1/12V DC
Cat. no./Qty.		15500.2/10*3	15501.2/10*3	15502.2/10*3	15501.2/10*3
Accessories for AQI/PRC ext. insulated cross-connection					
Cat. no./Qty. yellow		AQI/PRC/20	AQI/PRC/20	AQI/PRC/20	AQI/PRC/20
Cat. no./Qty. blue		15545.8/1	15545.8/1	15545.8/1	15545.8/1
Cat. no./Qty. black		15545.5/1	15545.5/1	15545.5/1	15545.5/1
Cat. no./Qty.		15545.4/1	15545.4/1	15545.4/1	15545.4/1
Partition plate TW/PRC					
Cat. no./Qty.		TW/PRC	TW/PRC	TW/PRC	TW/PRC
		15546.2/1	15546.2/1	15546.2/1	15546.2/1
Labelling/markers PMC					
Cat. no./Qty. standard print, see catalogue		PMC BSTR 6/30	PMC BSTR 6/30	PMC BSTR 6/30	PMC BSTR 6/30
		CONTA-CONNECT	CONTA-CONNECT	CONTA-CONNECT	CONTA-CONNECT
Cat. no./Qty. blank		9106.7/300	9106.7/300	9106.7/300	9106.7/300
Cat. no./Qty. special print		9107.7/300	9107.7/300	9107.7/300	9107.7/300
Metal actuating tool BWMA					
Cat. no./Qty.		BWMA 1	BWMA 1	BWMA 1	BWMA 1
		3808.0/1	3808.0/1	3808.0/1	3808.0/1

* The conditions of contamination degree 2 are fulfilled at 400 V.

*1 In order for the relay to de-energise, the residual current can be suppressed/controlled via the SPS-230V semiconductor outputs, long control lines (LW), thyristors, and an inductive proximity switch!

*2 Since this relay is only produced for DC at a max. 60 V, the adjustment to the operating voltage occurs via the internal resistance and bridge rectifiers!

*3 Relay available with gold contact upon request!

Plug relay compact PRC

Relay terminals with 2 CO relay

The new **PRC 2W** relay bases enable the integration of relays with two CO contacts into our proven **PRC** relay system. This base also features the well-known advantages of this system, including simple bridging with jumpers and a thin design. They are available either with tension-spring or screw connection. Dependable functionality is ensured because of this combination with our established line of PRS relays.

1. Overview

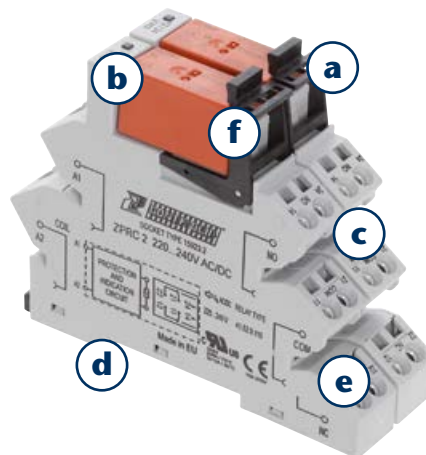
a Using the mount/dismount lever
The mounting and dismounting mechanism forms a reliable connection by latching the relay with the socket base. The fitted relay can be removed, easily and without force, from the socket base by using the dismount function of the lever!



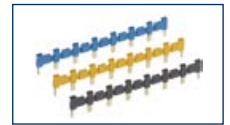
b Pluggable relay
Pluggable relays are also available with AgSNO and gold contacts, to fit with the many functions of your individual requirements!



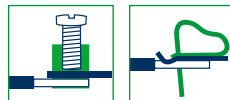
d Mounts on standard TS 35 rail
CONTA-CLIP relay terminals can be arranged as required on standard TS 35 DIN rails in accordance with EN 60715.



c Pluggable external cross-connections
The **AQI/PRC** pluggable cross-connection system enables a time-saving distribution of potentials. The **AQI/PRC** is constructed so that it is protected against accidental touch. It is available as a 8-pole unit, in either yellow, blue or black. The cross-connection can be shortened to fewer poles in order to fit the required interface. Insulation plating can be used to insulate the ends.



e Connection types
All of our relay terminals are optionally available with screw or tension-spring connection systems.



f Labelling | Marking
The socket bases have a labelling surface which is optimally suited for our MC Maxicard standard marking systems (**MC GS 6x12 R**). **CONTA-CLIP** will custom-label your markers for "just in time" delivery.

2. Approvals (details upon request)

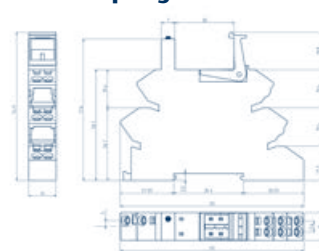


3. Features

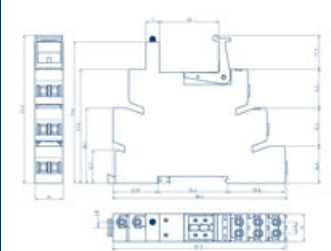
1. Socket base

- Mounts on TS 35
- Very versatile and modular construction of individual relay bases
- User-friendly, because the relays can be easily replaced
- High-quality connection terminals (Tension-spring or screw connection system)
- Integrated EMC coil circuitry, and LED
- High-quality innovative mount/dismount lever
- All versions are optionally available with screw or tension-spring connection system

Tension-spring connection



Screw connection



Plug relay compact PRC

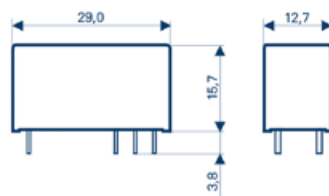
Relay terminals with 2 CO relay

II. Relay

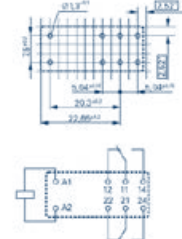
· PLUG RELAY SYSTEM relay 2 CO contacts

- Load-independent switching
- Direct control via the PLC outputs
- High interference immunity
- Electrical isolation of control and load circuits
- Minimal contact resistance, and high insulation resistance

Relay - complete view



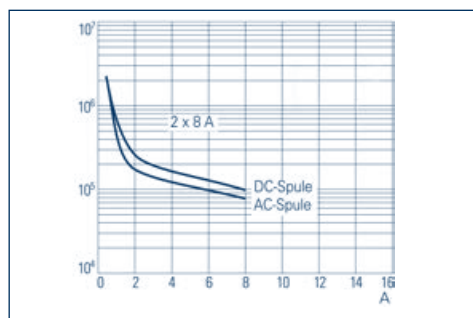
Pin layout | circuit diagram



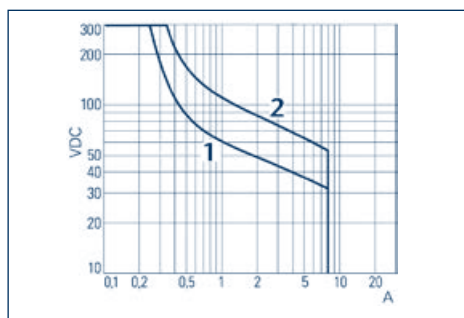
4. General specifications

Insulation data				
Dielectric strength	Coil - contact	5000 Veff	Flammability class per UL94	
	Opened contact	1000 Veff	V0	
	Adjacent contacts	2500 Veff	Ambient temperature range	
Clearance / creepage distances	Coil - contact	≤ 10 / 10 mm	-40 to +85 °C	
	Adjacent contacts	≤ 3 / 4 mm	Response/release time of DC coil	
			typ. 7 / 2 ms	
Insulating material group			Bounce time of DC spool, NO/NC	
Creep resistance of carrier			typ. 1 / 3 ms	
Insulation acc. to IEC 60664-1			Fatigue strength (functional), NO/NC	
Type of insulation	Coil - contact	Strengthened insul.	20 / 5 g, 30 to 500 Hz	
	Opened contact	Functional insul.	Shock resistance (destructive)	
	Adjacent contacts	Basic insul.	100 g	
Rated voltage			Protection	
Contamination degree			RTII	
Nom. voltage of the supply system			Mounting interval	
Overvoltage category			0 mm, densely packaged	
			Weight	
			14 g	

5. Contact data



Contact lifespan under 250 V AC resistive load

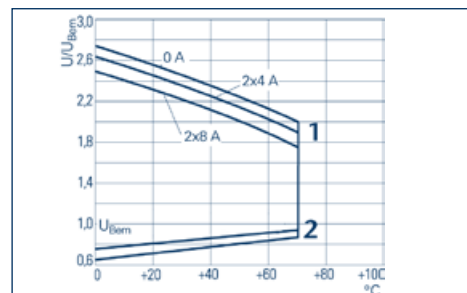


Switching capacity under DC load
Resistive load

- 1** One contact
2 Two contacts in series

6. Coil data

DC version				
Rated	Operating range		Resistance	Rated voltage current
U_N V	U_{min} V	U_{max} V	R Ω	I mA
5	3.5	0.5	$62 \pm 10\%$	403
6	4.20	0.6	$90 \pm 10\%$	400
12	8.4	1.2	$360 \pm 10\%$	400
24	16.80	2.4	$1440 \pm 10\%$	400
48	33.60	4.8	$5520 \pm 10\%$	417
60	42.00	6.0	$8570 \pm 12\%$	420
110	77.0	11.0	$28800 \pm 13\%$	420



Reliable range of operating voltage

- 1** Max. permitted coil voltage
2 Response voltage, when coil temperature is equal to ambient temperature

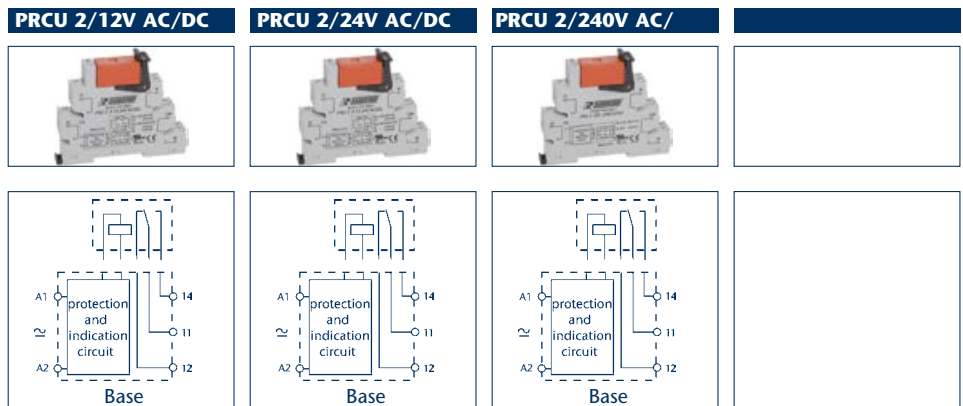
Plug relay compact PRC

Relay terminal screw/tension-spring connection

- consisting of:
- Base terminal and pluggable relay
- Mounts on TS 35

Connection diagram

- Internal EMC coil circuitry and LED display



Type	PRCU 2/12V AC/DC	PRCU 2/24V AC/DC	PRCU 2/240V AC/DC	
Cat. no./Qty.	15924.2/1	15925.2/1	15926.2/1	
Size (L x W x H) with TS 35	92 x 14 x 82 mm	92 x 14 x 82 mm	92 x 14 x 82 mm	
Weight	68 g	68 g	68 g	
Type	PRS 2/12 V DC	PRS 2/24 V DC	PRS 2/110 V DC	
Cat. no./Qty.	6482.2/1	6483.2/1	15541.2/1	
Weight	15 g	15 g	15 g	
General specifications				
DIN-VDE specifications	Insulation IEC 664/VDE 0110, rated voltage 250 V, contamination degree 3, overvoltage category III, flammability class UL 94 V-0			
Test voltage coil/contact	5 kV	5 kV	5 kV	
Pinning	5 mm	5 mm	5 mm	
Operating temperature	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	
Input data				
Input voltage	12 V DC	24 V DC	110 V DC	
Power consumption	0.40 W	0.40 W	0.40 W	
Output specifications				
Contacts	2 CO contact	2 CO contact	2 CO contact	
Switching voltage/Max. Switching voltage	240 V AC/400 V AC	240 V AC/400 V AC	240 V AC/400 V AC	
Max. continuous current/inrush current	8 A / 15 A	8 A / 15 A	8 A / 15 A	
Typical response time/release time	7 ms/2 ms	7 ms/2 ms	7 ms/2 ms	
Contact material	AgNi 90/10	AgNi 90/10	AgNi 90/10	
Electrical lifespan	1.5 x 10 ⁵	1.5 x 10 ⁵	1.5 x 10 ⁵	
at contact load	4 A @ 230 V AC	4 A @ 230 V AC	4 A @ 230 V AC	
Mechanical lifespan	> 30 x 10 ⁶	> 30 x 10 ⁶	> 30 x 10 ⁶	
Type	PRC 2 6-12-24V AC/DC	PRC 2 6-12-24V AC/DC	PRC 2 220 to 240V AC/DC	
Cat. no./Qty.	15920.2/10	15920.2/10	15921.2/10	
Weight	53 g	53 g	53 g	
General				
Mounting foot for DIN rails	TS 35	TS 35	TS 35	
Plug-in base for	5 mm pinning	5 mm pinning	5 mm pinning	
Connection type	Screw connection	Screw connection	Screw connection	
Technical data				
Rated current	10 A	10 A	10 A	
Rated voltage	250 V	250 V	250 V	
Dielectric strength coil/contact	6 kv (1.2/50 µs)	6 kv (1.2/50 µs)	6 kv (1.2/50 µs)	
Ambient temperature	-40 to +70 °C	-25 to +70 °C	-40 to +55 °C	
Protection degree, enclosure	IP 20	IP 20	IP 20	
Flammability class UL 94	V-0	V-0	V-0	
Torque	0.5 Nm	0.5 Nm	0.5 Nm	
Connection cross-section, solid, max.	1 x 6/2 x 2.5 mm ² 1 x 10/2 x 14 AWG	1 x 6/2 x 2.5 mm ² 1 x 10/2 x 14 AWG	1 x 6/2 x 2.5 mm ² 1 x 10/2 x 14 AWG	
Connection cross-section, stranded, max.	1 x 4/2 x 2.5 mm ² 1 x 12/2 x 14 AWG	1 x 4/2 x 2.5 mm ² 1 x 12/2 x 14 AWG	1 x 4/2 x 2.5 mm ² 1 x 12/2 x 14 AWG	
Stripping length	8 mm	8 mm	8 mm	
Approvals	UL/CUL	UL/CUL	UL/CUL	
Accessories for AQI/PRC ext. insulated cross-connection	AQI/PRC/8	AQI/PRC/8	AQI/PRC/8	
Cat. no./Qty. yellow	15930.8/1	15930.8/1	15930.8/1	
Cat. no./Qty. blue	15930.5/1	15930.5/1	15930.5/1	
Cat. no./Qty. black	15930.4/1	15930.4/1	15930.4/1	
Partition plate TW/PRC	TW/PRC	TW/PRC	TW/PRC	
Cat. no./Qty.	15546.2/1	15546.2/1	15546.2/1	
Tool/screwdriver	SDB 0.6 x 3.5	SDB 0.6 x 3.5	SDB 0.6 x 3.5	
Cat. no./Qty.	1086.0/1	1086.0/1	1086.0/1	
Labelling/markers MC	MC GS 6x12 R	MC GS 6x12 R	MC GS 6x12 R	
Cat. no./Qty. blank	3884.7/600	3884.7/600	3884.7/600	
Cat. no./Qty. special print	3885.7/600	3885.7/600	3885.7/600	

Plug relay compact PRC

ZPRCU 2/12V AC/DC	ZPRCU 2/24V AC/DC	ZPRCU 2/240V AC/DC			
ZPRCU 2/12V AC/DC 15927.2/1	ZPRCU 2/24V AC/DC 15928.2/1	ZPRCU 2/240V AC/DC 15929.2/1			
93 x 14 x 82 mm	93 x 14 x 82 mm	93 x 14 x 82 mm			
63 g	63 g	63 g			
PRS 2/12 V DC 6482.2/1	PRS 2/24 V DC 6483.2/1	PRS 2/110 V DC 15541.2/1			
15 g	15 g	15 g			
Insulation IEC 664/VDE 0110, Rated voltage 250 V, contamination degree 3, overvoltage category III, flammability class UL 94 V-0					
5 kV	5 kV	5 kV			
5 mm	5 mm	5 mm			
-40 to +70 °C	-40 to +70 °C	-40 to +70 °C			
12 V DC	24 V DC	110 V DC			
0.40 W	0.40 W	0.40 W			
2 CO contact	2 CO contact	2 CO contact			
240 V AC/400 V AC	240 V AC/400 V AC	240 V AC/400 V AC			
8 A / 15 A	8 A / 15 A	8 A / 15 A			
7 ms/2 ms	7 ms/2 ms	7 ms/2 ms			
AgNi 90/10	AgNi 90/10	AgNi 90/10			
1.5 x 10 ⁵	1.5 x 10 ⁵	1.5 x 10 ⁵			
4 A @ 230 V AC	4 A @ 230 V AC	4 A @ 230 V AC			
> 30 x 10 ⁶	> 30 x 10 ⁶	> 30 x 10 ⁶			
ZPRC 2 6-12-24V AC/DC 15922.2/10	ZPRC 2 6-12-24V AC/DC 15922.2/10	ZPRC 2 220-240V AC/DC 15923.2/10			
48 g	48 g	48 g			
TS 35	TS 35	TS 35			
5 mm pinning	5 mm pinning	5 mm pinning			
Tension-spring connection	Tension-spring connection	Tension-spring connection			
10 A	10 A	10 A			
250 V	250 V	250 V			
6 kv (1.2/50 µs)	6 kv (1.2/50 µs)	6 kv (1.2/50 µs)			
-40 to +70 °C	-40 to +70 °C	-40 to +55 °C			
IP 20	IP 20	IP 20			
V-0	V-0	V-0			
-	-	-			
1 x 2.5 mm ²	1 x 2.5 mm ²	1 x 2.5 mm ²			
1 x 14 AWG	1 x 14 AWG	1 x 14 AWG			
1 x 2.5 mm ²	1 x 2.5 mm ²	1 x 2.5 mm ²			
1 x 14 AWG	1 x 14 AWG	1 x 14 AWG			
8 mm	8 mm	8 mm			
UL/CUL	UL/CUL	UL/CUL			
AQI/PRC/8	AQI/PRC/8	AQI/PRC/8			
15930.8/1	15930.8/1	15930.8/1			
15930.5/1	15930.5/1	15930.5/1			
15930.4/1	15930.4/1	15930.4/1			
TW/PRC	TW/PRC	TW/PRC			
15546.2/1	15546.2/1	15546.2/1			
BWMA 1	BWMA 1	BWMA 1			
3808.0/1	3808.0/1	3808.0/1			
MC GS 6x12 R	MC GS 6x12 R	MC GS 6x12 R			
3884.7/600	3884.7/600	3884.7/600			
3885.7/600	3885.7/600	3885.7/600			

Plug relay system PRS

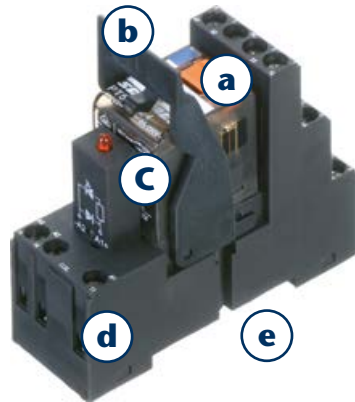
Screw connection

1. Overview

- a Pluggable relay**
Pluggable relays are also available with AgSNO and gold contacts, to fit with the many functions of your individual requirements!



- b Using the mount/dismount lever**
The mounting and dismounting mechanism forms a reliable connection by latching the relay with the socket base. The fitted relay can be removed, easily and without force, from the socket base by using the dismount function of the lever!



- c Pluggable LED and protective modules**
Pluggable modules allow easy insertion into the base, with reverse-connect protection. The module circuitry is effective in parallel to the coil of the deployed relay.



- d AQI/PRS external cross-connection**
The AQI/PRS external cross-connection system enables a time-saving distribution of potentials. With this system, you can save time when coupling multiple relay components.

- e Mounts on standard TS 35 DIN rails**
CONTA-CLIP relay bases can be mounted as needed on standard TS 35 DIN rails, according to EN 50035 and EN 50022.

2. Features

1. Relay

- **PLUG RELAY SYSTEM** (Relay with 1, 2 or 4 CO contacts)
- Load-independent switching
- Direct control via the PLC outputs
- High interference immunity
- Electrical isolation of control and load circuits
- Minimal contact resistance, and high insulation resistance
- The PRS XT relay features a switch/button for MANUAL/AUTOMATIC switching, and an integrated LED for signalling the switching status
- The PRS 4 relay with a switch/button for MANUAL/AUTOMATIC switching
- The PRS 4 eco relay features switch/button for MANUAL/AUTOMATIC switching, and an integrated LED for signalling the switching status DC relay with integrated free-wheel diode.

Technical data for the available relays can be found on the following product pages.

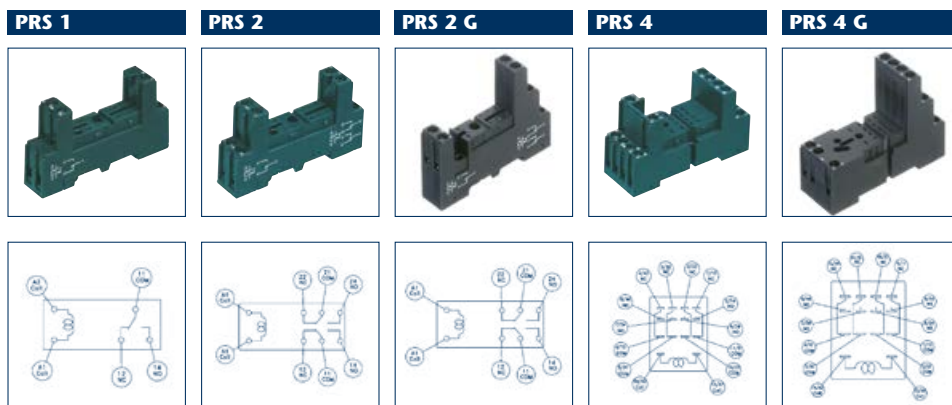


Plug relay system PRS

Screw connection

II. Socket base

- Mounts on TS 35
- Very versatile and modular construction of individual relay bases
- User-friendly, because the relays can be easily replaced
- High-quality connection terminals
- Wire strands protected against false insertion
- Terminal screws retention prevents loss
- Pluggable LED display with additional protective circuitry
- Holding clamp made of high-quality plastic

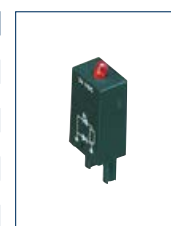


Type	PRS 1	PRS 2	PRS 2 G	PRS 4	PRS 4 G
Cat. no./Qty.	15135.2/1	15136.2/1	15320.2/1	15137.2/1	15324.2/1
Size (L x W x H) with TS 35	76 x 15.7 x 46 mm	76 x 15.7 x 46 mm	76 x 15.7 x 65 mm	76 x 27.1 x 47 mm	76 x 27.1 x 66 mm
Size with holding clamp (L x W x H) with TS 35	76 x 15.7 x 71 mm	76 x 15.7 x 71 mm	76 x 15.7 x 71 mm	76 x 27.1 x 85 mm	76 x 27.1 x 87 mm
Weight	33 g	38 g	43 g	63 g	65 g
General					
Mounting foot for DIN rails	TS 35	TS 35	TS 35	TS 35	TS 35
Plug-in base for	3.5 mm pinning	5 mm pinning	5 mm pinning	2.8 mm Faston	2.8 mm Faston
Connection type	Screw connection	Screw connection	Screw connection	Screw connection	Screw connection
Technical data					
Rated current	12 A	10 A	10 A	10 A	10 A
Rated voltage	300 V	300 V	300 V	300 V	300 V
Dielectric strength coil/contact	4000 Veff	4000 Veff	4000 Veff	2400 Veff	2400 Veff
Insulation group (VDE 0110 b)	C/250 V	C/250 V	C/250 V	C/250 V	C/250 V
Ambient temperature	-25 to +80 °C	-25 to +80 °C	-25 to +80 °C	-25 to +80 °C	-25 to +80 °C
Protection degree, enclosure	IP 20	IP 20	IP 20	IP 20	IP 20
Flammability class UL 94	V-0	V-0	V-0	V-0	V-0
Touch protection, acc. to	VBG 4	VBG 4	VBG 4	VBG 4	VBG 4
Wire connect cross-section	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²
With ferrules	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²
Screw torque	max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm
Approvals	UL/CSA	UL/CSA	UL/CSA	UL/CSA	UL/CSA

III. Insert modules

- Plugs simply into the base, reverse-connect protection
- Circuitry parallel to coil

Cat. no./Qty.	Type	Voltage range	
15141.2/1	PRS LED(RD) 24 V DC	12 to 24 V DC	Status display with free-wheel diode
15142.2/1	PRS LED(RD) 230 V DC	110 to 230 V AC	Status display
15175.2/1	PRS LED(RD) 24 V DC	12 to 48 V AC/DC	Status display
15422.2/1	PRS LED(RD) 110 V DC	60 to 110 V DC	Status display with free-wheel diode
15810.2/1	PRS LED(RD) 230 V UC Var.	230 V AC/DC	Status display with varistor
16070.2/1	PRS LED(GN) 24 V UC Var.	24 V AC/DC	Status display with varistor
15808.2/1	PRS RC 24 V AC	24 V AC	Plug-in module with RC element
15809.2/1	PRS RC 240 V AC	240 V AC	Plug-in module with RC element



IV. Holding clamp

The mount/dismount clamp forms a reliable connection by latching the relay with the socket base. The fitted relay can be removed, easily and without force, from the socket base by using the dismount function of the lever.

Cat. no./Qty.	Type	Weight	
15138.2/1	PRS C 1/C 2	2 g	15 mm relay height
15140.2/1	PRS C 4	4 g	
15628.2/1	PRS C 4 eco	4 g	
16016.2/1	PRSXT C1/2	4 g	25 mm relay height



V. Contact bridge

- A simple and quick bridge to multiple relay blocks

Cat. no./Qty.	Type	Weight
15778.2/1	AQI PRS/5	A contact bridge, for bridging of five PRS 4 4 CO frames 4 g
15779.2/1	AQI PRS/8	A contact bridge, for bridging of 8 PRS 1 or PRS 2 1 and 2 CO frames 4 g



Relay 1-CO PRS 1 XT

Complete unit, screw connection

consisting of:

- Relay
- Socket base
- Holding clamp

PRSXT 1/24V DC



PRSXT 1/24V AC



PRSXT 1/230V AC



PRSXT 1G/24V DC



Type	PRSXT 1/24V DC	PRSXT 1/24V AC	PRSXT 1/230V AC	PRSXT 1G/24V DC
Cat. no./Qty.	16086.2/1	16087.2/1	16088.2/1	16089.2/1
Size (L x W x H) with TS 35 x 7.5	76 x 15.7 x 76 mm	76 x 15.7 x 76 mm	76 x 15.7 x 76 mm	76 x 15.7 x 76 mm
Weight	56 g	56 g	56 g	56 g
Components				
Relay 1W, open design, with switch and status display				
Type	PRSXT 1/24V DC	PRSXT 1/24V AC	PRSXT 1/230V AC	PRSXT 1/24V DC
Cat. no./Qty.	16083.2/1	16084.2/1	16085.2/1	16083.2/1
Size (L x W x H)	29 x 13 x 30.55 mm	29 x 13 x 30.55 mm	29 x 13 x 30.55 mm	29 x 13 x 30.55 mm
Weight	16 g	16 g	16 g	16 g
General specifications				
DIN-VDE specifications	Insulation IEC 664/VDE 0110, Rated voltage 250 V, contamination degree 3, overvoltage category III, flammability class UL 94 V-0			
Test voltage coil/contact	2.5 KV	2.5 KV	2.5 KV	2.5 KV
Operating temperature	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C
Lockable test button	yes	yes	yes	yes
Indicators	red LED	red LED	red LED	red LED
Mechanical indicator	yes	yes	yes	yes
Free-wheel diode	yes	no	no	yes
Input data				
Input voltage	24 V DC	24 V AC	230 V AC	24 V DC
Power consumption	0.4 W	0.76 VA	0.74 VA	0.4 W
Frequency	-	50 / 60 Hz	50 / 60 Hz	-
Output specifications				
Contacts	1 CO contact	1 CO contact	1 CO contact	1 CO contact
Switching voltage/Max. Switching voltage	240 V AC/400 V AC	240 V AC/400 V AC	240 V AC/400 V AC	240 V AC/400 V AC
Max. continuous current	16 A / 240 V AC	16 A / 240 V AC	16 A / 240 V AC	16 A / 240 V AC
Max. inrush current 4s / 30 ms	30 A / 300 A	30 A / 300 A	30 A / 300 A	30 A / 300 A
Max. contact load	4000 VA	4000 VA	4000 VA	4000 VA
Min. suggested contact load	12 V at 10 mA	12 V at 10 mA	12 V at 10 mA	12 V at 10 mA
Voltage drop	30 mV at 100 mA/6 VDC	30 mV at 100 mA/6 VDC	30 mV at 100 mA/6 VDC	30 mV at 100 mA/6 VDC
Max. switching frequency at operating load	360 cycles per hour	360 cycles per hour	360 cycles per hour	360 cycles per hour
Max. switching frequency without load	36000 cycles per hour	36000 cycles per hour	36000 cycles per hour	36000 cycles per hour
Typical response time/release time	8 ms / 6 ms	8 ms / 6 ms	8 ms / 6 ms	8 ms / 6 ms
Contact material	AgNi 90/10	AgNi 90/10	AgNi 90/10	AgNi 90/10
Electrical lifespan	50 x 10 ³	50 x 10 ³	50 x 10 ³	50 x 10 ³
Mechanical lifespan	10 x 10 ⁶	5 x 10 ⁶	5 x 10 ⁶	10 x 10 ⁶
Socket base				
Type	PRS 2	PRS 2	PRS 2	PRS 2 G
Cat. no./Qty.	15136.2/1	15136.2/1	15136.2/1	15320.2/1
General				
Mounting foot for DIN rails	TS 35	TS 35	TS 35	TS 35
Plug-in base for	5 mm pinning	5 mm pinning	5 mm pinning	5 mm pinning
Connection type	Screw connection	Screw connection	Screw connection	Screw connection
Technical data				
Rated current	10 A	10 A	10 A	10 A
Rated voltage	300 V	300 V	300 V	300 V
Dielectric strength	4000 Veff	4000 Veff	4000 Veff	4000 Veff
Insulation group (VDE 0110b)	C/250 V	C/250 V	C/250 V	C/250 V
Ambient temperature	-25 to +80 °C	-25 to +80 °C	-25 to +80 °C	-25 to +80 °C
Protection degree, enclosure	IP 20	IP 20	IP 20	IP 20
Flammability class UL 94	V-0	V-0	V-0	V-0
Touch protection, acc. to	VBG 4	VBG 4	VBG 4	VBG 4
Wire connect cross-section	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²
With ferrules	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²
Screw torque	max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm
Stripping length	7 mm	7 mm	7 mm	7 mm
Approvals	UL/CSA	UL/CSA	UL/CSA	UL/CSA
Holding clamp				
Type	PRSXT C1/2	PRSXT C1/2	PRSXT C1/2	PRSXT C1/2
Cat. no./Qty.	16016.2/20	16016.2/20	16016.2/20	16016.2/20

Relay 1-CO PRS 1 XT

PRSUXT 1G/24V AC	PRSUXT 1G/230V AC				
					
PRSUXT 1G/24V AC 16090.2 /1 76 x 15.7 x 76 mm 56 g	PRSUXT 1G/230V AC 16091.2/1 76 x 15.7 x 76 mm 56 g				
PRSXT 1/24V AC 16084.2/1 29 x 13 x 30.55 mm 16 g	PRSXT 1/230V AC 16085.2/1 29 x 13 x 30.55 mm 16 g				
Insulation IEC 664/VDE 0110, rated voltage 250 V, contamination degree 3, overvoltage category III, flammability class UL 94 V-0					
2.5 KV	2.5 KV				
-40 to +70 °C	-40 to +70 °C				
yes	yes				
red LED	red LED				
yes	yes				
no	no				
24 V AC	230 V AC				
0.76 VA	0.74 VA				
50 / 60 Hz	50 / 60 Hz				
1 CO contact	1 CO contact				
240 V AC/400 V AC	240 V AC/400 V AC				
16 A / 240 V AC	16 A / 240 V AC				
30 A / 300 A	30 A / 300 A				
4000 VA	4000 VA				
12 V at 10 mA	12 V at 10 mA				
30 mV at 100 mA/6 VDC	30 mV at 100 mA/6 VDC				
360 cycles per hour	360 cycles per hour				
36000 cycles per hour	36000 cycles per hour				
8 ms / 6 ms	8 ms / 6 ms				
AgNi 90/10	AgNi 90/10				
50 x 10 ³	50 x 10 ³				
5 x 10 ⁶	5 x 10 ⁶				
PRS 2 G 15320.2/1	PRS 2 G 15320.2/1				
TS 35	TS 35				
5 mm pinning	5 mm pinning				
Screw connection	Screw connection				
10 A	10 A				
300 V	300 V				
4000 Veff	4000 Veff				
C/250 V	C/250 V				
-25 to +80 °C	-25 to +80 °C				
IP 20	IP 20				
V-0	V-0				
VBG 4	VBG 4				
2 x 2.5 mm ²	2 x 2.5 mm ²				
2 x 1.5 mm ²	2 x 1.5 mm ²				
max. 0.8 Nm	max. 0.8 Nm				
7 mm	7 mm				
UL/CSA	UL/CSA				
PRSXT C1/2 16016.2/20	PRSXT C1/2 16016.2/20				

Relay 2-CO PRS 2 XT

Complete unit, screw connection

consisting of:

- Relay
- Socket base
- Holding clamp

PRSUXT 2/24V DC



PRSUXT 2/24V AC



PRSUXT 2/230V AC



PRSUXT 2G/24V DC

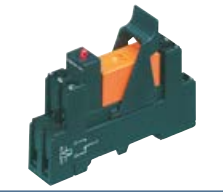


Type	PRSUXT 2/24V DC	PRSUXT 2/24V AC	PRSUXT 2/230V AC	PRSUXT 2G/24V DC
Cat. no./Qty.	16017.2/1	16018.2/1	16019.2/1	16020.2/1
Size (L x W x H) with TS 35 x 7.5	76 x 15.7 x 76 mm	76 x 15.7 x 76 mm	76 x 15.7 x 76 mm	76 x 15.7 x 76 mm
Weight	56 g	56 g	56 g	56 g
Components				
Relay 2W, open design, with switch and status display				
Type	PRSXT 2/24V DC	PRSXT 2/24V AC	PRSXT 2/230V AC	PRSXT 2/24V DC
Cat. no./Qty.	16013.2/1	16014.2/1	16015.2/1	16013.2/1
Size (L x W x H)	29 x 13 x 30.55 mm	29 x 13 x 30.55 mm	29 x 13 x 30.55 mm	29 x 13 x 30.55 mm
Weight	16 g	16 g	16 g	16 g
General specifications				
DIN-VDE specifications	Insulation IEC 664/VDE 0110, Rated voltage 250 V, contamination degree 3, overvoltage category III, flammability class UL 94 V-0			
Test voltage coil/contact	2.5 kV	2.5 kV	2.5 kV	2.5 kV
Operating temperature	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C
Lockable test button	yes	yes	yes	yes
Indicators	red LED	red LED	red LED	red LED
Mechanical indicator	yes	yes	yes	yes
Free-wheel diode	yes	no	no	yes
Input data				
Input voltage	24 V DC	24V AC	230V AC	24 V DC
Power consumption	0.4 W	0.76 VA	0.74 VA	0.4W
Frequency	-	50 / 60 Hz	50 / 60 Hz	-
Output specifications				
Contacts	2 CO contact	2 CO contact	2 CO contact	2 CO contact
Switching voltage/Max. Switching voltage	240 V AC/400 V AC	240 V AC/400 V AC	240 V AC/400 V AC	240 V AC/400 V AC
Max. continuous current	8 A / 240 V AC	8 A / 240 V AC	8 A / 240 V AC	8 A / 240 V AC
Max. inrush current 4s / 30 ms	15 A / 300 A	15 A / 300 A	15 A / 300 A	15 A / 300 A
Max. contact load	2000 VA	2000 VA	2000 VA	2000 VA
Min. suggested contact load	12 V at 10 mA	12 V at 10 mA	12 V at 10 mA	12 V at 10 mA
Voltage drop	30 mV at 100 mA/6 VDC	30 mV at 100 mA/6 VDC	30 mV at 100 mA/6 VDC	30 mV at 100 mA/6 VDC
Max. switching frequency at operating load	360 cycles per hour	360 cycles per hour	360 cycles per hour	360 cycles per hour
Max. switching frequency without load	36000 cycles per hour	36000 cycles per hour	36000 cycles per hour	36000 cycles per hour
Typical response time/release time	10 ms / 5 ms	10 ms / 5 ms	10 ms / 5 ms	10 ms / 5 ms
Contact material	AgNi 90/10	AgNi 90/10	AgNi 90/10	AgNi 90/10
Electrical lifespan	50 x 10 ³	50 x 10 ³	50 x 10 ³	50 x 10 ³
Mechanical lifespan	10 x 10 ⁶	5 x 10 ⁶	5 x 10 ⁶	10 x 10 ⁶
Socket base				
Type	PRS 2	PRS 2	PRS 2	PRS 2 G
Cat. no./Qty.	15136.2/1	15136.2/1	15136.2/1	15320.2/1
General				
Mounting foot for DIN rails	TS 35	TS 35	TS 35	TS 35
Plug-in base for	5 mm pinning	5 mm pinning	5 mm pinning	5 mm pinning
Connection type	Screw connection	Screw connection	Screw connection	Screw connection
Technical data				
Rated current	10 A	10 A	10 A	10 A
Rated voltage	300 V	300 V	300 V	300 V
Dielectric strength	4000 Veff	4000 Veff	4000 Veff	4000 Veff
Insulation group (VDE 0110b)	C/250 V	C/250 V	C/250 V	C/250 V
Ambient temperature	-25 to +80 °C	-25 to +80 °C	-25 to +80 °C	-25 to +80 °C
Protection degree, enclosure	IP 20	IP 20	IP 20	IP 20
Flammability class UL 94	V-0	V-0	V-0	V-0
Touch protection, acc. to	VBG 4	VBG 4	VBG 4	VBG 4
Wire connect cross-section	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²
With ferrules	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²
Screw torque	max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm
Stripping length	7 mm	7 mm	7 mm	7 mm
Approvals	UL/CSA	UL/CSA	UL/CSA	UL/CSA
Holding clamp				
Type	PRSXT C1/2	PRSXT C1/2	PRSXT C1/2	PRSXT C1/2
Cat. no./Qty.	16016.2/20	16016.2/20	16016.2/20	16016.2/20

Relay 2-CO PRS 2 XT

PRSXT 2G/24V AC	PRSXT 2G/230V AC				
					
PRSXT 2G/24V AC 16021.2/1	PRSXT 2G/230V AC 16022.2/1				
76 x 15.7 x 76 mm 56 g	76 x 15.7 x 76 mm 56 g				
PRSXT 2/24V AC 16014.2/1	PRSXT 2/230V AC 16015.2/1				
29 x 13 x 30.55 mm 16 g	29 x 13 x 30.55 mm 16 g				
Insulation IEC 664/VDE 0110, rated voltage 250 V, contamination degree 3, overvoltage category III, flammability class UL 94 V-0					
2.5 kV	2.5 kV				
-40 to +70 °C	-40 to +70 °C				
yes	yes				
red LED	red LED				
yes	yes				
no	no				
24 V AC	230 V AC				
0.76 VA	0.74 VA				
50 / 60 Hz	50 / 60 Hz				
2 CO contact	2 CO contact				
240 V AC/400 V AC	240 V AC/400 V AC				
8 A / 240 V AC	8 A / 240 V AC				
15 A / 300 A	15 A / 300 A				
2000 VA	2000 VA				
12 V at 10 mA	12 V at 10 mA				
30 mV at 100 mA/6 VDC	30 mV at 100 mA/6 VDC				
360 cycles per hour	360 cycles per hour				
36000 cycles per hour	36000 cycles per hour				
10 ms / 5 ms	10 ms / 5 ms				
AgNi 90/10	AgNi 90/10				
50 x 10 ³	50 x 10 ³				
5 x 10 ⁶	5 x 10 ⁶				
PRS 2 G 15320.2/1	PRS 2 G 15320.2/1				
TS 35	TS 35				
5 mm pinning	5 mm pinning				
Screw connection	Screw connection				
10 A	10 A				
300 V	300 V				
4000 Veff	4000 Veff				
C/250 V	C/250 V				
-25 to +80 °C	-25 to +80 °C				
IP 20	IP 20				
V-0	V-0				
VBG 4	VBG 4				
2 x 2.5 mm ²	2 x 2.5 mm ²				
2 x 1.5 mm ²	2 x 1.5 mm ²				
max. 0.8 Nm	max. 0.8 Nm				
7 mm	7 mm				
UL/CSA	UL/CSA				
PRSXT C1/2 16016.2/20	PRSXT C1/2 16016.2/20				

Relay with 1 CO PRS 1

Complete unit, screw connection		PRS 1/12 V DC	PRS 1/24 V DC	PRS 1/60 V DC	PRS 1/110 V DC
consisting of: - Relay - Insert module - Socket base - Holding clamp					
Type		PRS 1/12 V DC 15163.2/1	PRS 1/24 V DC 15169.2/1	PRS 1/60 V DC 15720.2/1	PRS 1/110 V DC 15721.2/1
Size (L x W x H) with TS 35 x 7.5		76 x 15.7 x 71 mm	76 x 15.7 x 71 mm	76 x 15.7 x 71 mm	76 x 15.7 x 71 mm
Weight		55 g	55 g	55 g	55 g
Components					
Relay 1 W, encapsulated construction					
Type		PRS 1/12 V DC 6996.0/1	PRS 1/24 V DC 6804.0/1	PRS 1/60 V DC 15539.2/1	PRS 1/110 V DC 15540.2/1
Weight		15 g	15 g	15 g	15 g
General specifications					
DIN-VDE specifications		Insulation IEC 664/VDE 0110, Rated voltage 250 V, contamination degree 3, overvoltage category III, flammability class UL 94 V-0			
Test voltage coil/contact		5 kV	5 kV	5 kV	5 kV
Pinning		3.5 mm	3.5 mm	3.5 mm	3.5 mm
Operating temperature		-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C
Important notes		-	-	-	-
Input data					
Input voltage		12 V DC	24 V DC	60 V DC	110 V DC
Power consumption		0.40 W	0.40 W	0.42 W	0.42 W
Output specifications					
Contacts		1 CO contact	1 CO contact	1 CO contact	1 CO contact
Switching voltage/Max. switching voltage		250 V AC/440 V AC	250 V AC/440 V AC	250 V AC/440 V AC	250 V AC/440 V AC
Max. continuous current/inrush current		12 A / 25 A	12 A / 25 A	12 A / 25 A	12 A / 25 A
Typical response time/release time		7 ms/3 ms	7 ms/3 ms	7 ms/3 ms	7 ms/3 ms
Contact material		AgNi 90/10	AgNi 90/10	AgNi 90/10	AgNi 90/10
Electrical lifespan		1.2 x 10 ³	1.2 x 10 ³	1.2 x 10 ³	1.2 x 10 ³
at contact load		4 A @ 250 V AC	4 A @ 250 V AC	4 A @ 250 V AC	4 A @ 250 V AC
Mechanical lifespan		> 30 x 10 ⁶	> 30 x 10 ⁶	> 30 x 10 ⁶	> 30 x 10 ⁶
Insert module					
Type		PRS LED 24 V DC 15141.2/1	PRS LED 24 V DC 15141.2/1	PRS LED 110 V DC 15422.2/1	PRS LED 110 V DC 15422.2/1
Cat. no./Qty.					
protected against polarity reversal		Status display with free-wheel diode	Status display with free-wheel diode	Status display with free-wheel diode	Status display with free-wheel diode
in parallel to coil		12 to 24 V DC	12 to 24 V DC	60 to 110 V DC	60 to 110 V DC
Socket base					
Type		PRS 1 15135.2/1	PRS 1 15135.2/1	PRS 1 15135.2/1	PRS 1 15135.2/1
Cat. no./Qty.					
General					
Mounting foot for DIN rails		TS 35	TS 35	TS 35	TS 35
Plug-in base for		3.5 mm pinning	3.5 mm pinning	3.5 mm pinning	3.5 mm pinning
Connection type		Screw connection	Screw connection	Screw connection	Screw connection
Technical data					
Rated current		12 A	12 A	12 A	12 A
Rated voltage		300 V	300 V	300 V	300 V
Dielectric strength		4000 Veff	4000 Veff	4000 Veff	4000 Veff
Insulation group (VDE 0110 b)		C/250 V	C/250 V	C/250 V	C/250 V
Ambient temperature		-25 to +80 °C	-25 to +80 °C	-25 to +80 °C	-25 to +80 °C
Protection degree, enclosure		IP 20	IP 20	IP 20	IP 20
Flammability class UL 94		V-0	V-0	V-0	V-0
Touch protection, acc. to		VBG 4	VBG 4	VBG 4	VBG 4
Wire connect cross-section		2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²
With ferrules		2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²
Screw torque		max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm
Approvals		UL/CSA	UL/CSA	UL/CSA	UL/CSA
Holding clamp					
Type		PRS C 1/2 15138.2/1	PRS C 1/2 15138.2/1	PRS C 1/2 15138.2/1	PRS C 1/2 15138.2/1
Cat. no./Qty.					

Relay with 1 CO PRS 1

PRSU 1 L/24 V DC	PRSU 1/24 V AC	PRSU 1/115 V AC	PRSU 1/230 V AC		
					
PRSU 1 L/24 V DC 15419.2/1 76 x 15.7 x 71 mm 60 g	PRSU 1/24 V AC 15164.2/1 76 x 15.7 x 71 mm 55 g	PRSU 1/115 V AC 15418.2/1 76 x 15.7 x 71 mm 55 g	PRSU 1/230 V AC 15170.2/1 76 x 15.7 x 71 mm 55 g		
PRS 1 L/24 V DC 6940.0/1 15 g	PRS 1/24 V AC 6480.2/1 15 g	PRS 1/115 V AC 15228.2/1 15 g	PRS 1/230 V AC 6481.2/1 15 g		
Insulation IEC 664/VDE 0110, Rated voltage 250 V, contamination degree 3, overvoltage category III, flammability class UL 94 V-0					
4 kV	5 kV	5 kV	5 kV		
5 mm	3.5 mm	3.5 mm	3.5 mm		
-20 to +50 °C	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C		
Inductive loads	-	-	-		
24 V DC	24 V AC	115 V AC	230 V AC		
0.50 W	0.75 VA	0.75 VA	0.75 VA		
1 CO contact	1 CO contact	1 CO contact	1 CO contact		
250 V AC	250 V AC/440 V AC	250 V AC/440 V AC	250 V AC/440 V AC		
16 A/80 A (20 ms)	12 A / 25 A	12 A / 25 A	12 A / 25 A		
10 ms/10 ms	7 ms/3 ms	7 ms/3 ms	7 ms/3 ms		
Ag Sn 02	AgNi 90/10	AgNi 90/10	AgNi 90/10		
1 x 10 ⁵	1.2 x 10 ³	1.2 x 10 ³	1.2 x 10 ³		
16 A @ 250 V AC	4 A @ 250 V AC	4 A @ 250 V AC	4 A @ 250 V AC		
> 30 x 10 ⁶	> 30 x 10 ⁶	> 30 x 10 ⁶	> 30 x 10 ⁶		
PRS LED 24 V UC 15141.2/1 Status display with free-wheel diode 12 to 24 V/DC	PRS LED 24 V UC 15175.2/1 Status display 12 to 48 V AC/DC	PRS LED 230 V AC 15142.2/1 Status display 110 to 230 V/AC	PRS LED 230 V AC 15142.2/1 Status display 110 to 230 V/AC		
PRS 2 15136.2/1 TS 35 5 mm pinning Screw connection	PRS 1 15135.2/1 TS 35 3.5 mm pinning Screw connection	PRS 1 15135.2/1 TS 35 3.5 mm pinning Screw connection	PRS 1 15135.2/1 TS 35 3.5 mm pinning Screw connection		
10 A	12 A	12 A	12 A		
300 V	300 V	300 V	300 V		
4000 Veff	4000 Veff	4000 Veff	4000 Veff		
C/250 V	C/250 V	C/250 V	C/250 V		
-25 to +80 °C	-25 to +80 °C	-25 to +80 °C	-25 to +80 °C		
IP 20	IP 20	IP 20	IP 20		
V-0	V-0	V-0	V-0		
VBG 4	VBG 4	VBG 4	VBG 4		
2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²		
2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²		
max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm		
UL/CSA	UL/CSA	UL/CSA	UL/CSA		
PRS C 1/2 15138.2/1	PRS C 1/2 15138.2/1	PRS C 1/2 15138.2/1	PRS C 1/2 15138.2/1		

Complete unit, screw connection	PRSU 2/12 V DC	PRSU 2/24 V DC	PRSU 2/48 V DC	PRSU 2/60 V DC
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- Relay
- Insert module
- Socket base
- Holding clamp



Type	PRSU 2/12 V DC	PRSU 2/24 V DC	PRSU 2/48 V DC	PRSU 2/60 V DC
Cat. no./Qty.	15165.2/1	15171.2/1	15411.2/1	15412.2/1
Size (L x W x H) with TS 35 x 7.5	76 x 15.7 x 71 mm	76 x 15.7 x 71 mm	76 x 15.7 x 71 mm	76 x 15.7 x 71 mm
Weight	60 g	60 g	60 g	60 g

Weight	0.9	0.9	0.9	0.9
Components				

Relay 2 W, encapsulated construction

Type	PRS 2/12 V DC	PRS 2/24 V DC	PRS 2/48 V DC	PRS 2/60 V DC
Cat. no./Qty.	6482.2/1	6483.2/1	15334.2/1	15335.2/1
Weight	15 g	15 g	15 g	15 g

Weight	15 g	15 g	15 g	15 g
General specifications				

DIN-VDE specifications	Insulation IEC 664/VDE 0110, Rated voltage 250 V, contamination degree 3, overvoltage category III, flammability class UL 94 V-0
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Test voltage coil/contact	5 kV	5 kV	5 kV	5 kV
Pinning	5 mm	5 mm	5 mm	5 mm
Operating temperature	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C

Operating temperature	10 to 170 °C	10 to 170 °C	10 to 170 °C	10 to 170 °C
Input data				

Input data				
Input voltage	12 V DC	24 V DC	48 V DC	60 V DC
Power consumption	0.40 W	0.40 W	0.40 W	0.40 W

Output specifications	2010-11	2011-12	2012-13	2013-14	2014-15
1. Number of students	1,000	1,000	1,000	1,000	1,000
2. Number of teachers	100	100	100	100	100
3. Number of classrooms	100	100	100	100	100
4. Number of computers	100	100	100	100	100
5. Number of textbooks	100	100	100	100	100
6. Number of other resources	100	100	100	100	100

Contacts	2 CO contact	2 CO contact	2 CO contact	2 CO contact
Switching voltage/Max. switching voltage	250 V AC/440 V AC	250 V AC/440 V AC	250 V AC/440 V AC	250 V AC/440 V AC
Max. continuous current/inrush current	8 A / 15 A	8 A / 15 A	12 A / 25 A	8 A / 15 A
Typical response time/release time	7 ms/2 ms	7 ms/2 ms	7 ms/2 ms	7 ms/2 ms
Contact material	AgNi 90/10	AgNi 90/10	AgNi 90/10	AgNi 90/10
Electrical lifespan	1.5×10^5	1.5×10^5	1.5×10^5	1.5×10^5
at contact load	4 A @ 230 V AC	4 A @ 230 V AC	4 A @ 230 V AC	4 A @ 230 V AC
Mechanical lifespan	$> 30 \times 10^6$	$> 30 \times 10^6$	$> 30 \times 10^6$	$> 30 \times 10^6$

Insert module

Type	PRS LED 24 V DC	PRS LED 24 V DC	PRS LED 110 V DC	PRS LED 110 V DC
Cat. no./Qty.	15141.2/1	15141.2/1	15422.2/1	15422.2/1
protected against polarity reversal	Status display with free-wheel diode	Status display with free-wheel diode	Status display with free-wheel diode	Status display with free-wheel diode
in parallel to coil	12 to 24 V DC	12 to 24 V DC	60 to 110 V DC	60 to 110 V DC

Socket base	42 to 47 + 25	42 to 47 + 25	42 to 47 + 25	42 to 47 + 25	42 to 47 + 25
Socket base					

Type Cat. no./Qty. General	PRS 2 15136.2/1	PRS 2 15136.2/1	PRS 2 15136.2/1	PRS 2 15136.2/1
Mounting foot for DIN rails	TS 35	TS 35	TS 35	TS 35
Plug-in base for Connection type	5 mm pinning Screw connection	5 mm pinning Screw connection	5 mm pinning Screw connection	5 mm pinning Screw connection

Connection type	screw connection	screw connection	screw connection	screw connection
Technical data				

Rated current	10 A	10 A	10 A	10 A
Rated voltage	300 V	300 V	300 V	300 V
Dielectric strength	4000 Veff	4000 Veff	4000 Veff	4000 Veff
Insulation group (VDE 0110 b)	C/250 V	C/250 V	C/250 V	C/250 V
Ambient temperature	-25 to +80 °C	-25 to +80 °C	-25 to +80 °C	-25 to +80 °C
Protection degree, enclosure	IP 20	IP 20	IP 20	IP 20
Flammability class UL 94	V-0	V-0	V-0	V-0
Touch protection, acc. to	VBG 4	VBG 4	VBG 4	VBG 4
Wire connect cross-section	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²
With ferrules	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²
Screw torque	max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm
Approvals	UL/CSA	UL/CSA	UL/CSA	UL/CSA

Approvals	SE/CSA	SE/CSA	SE/CSA	SE/CSA
Holding clamp				

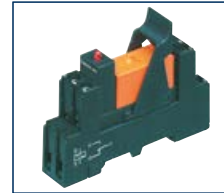
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Cat. no./Qty.	15138.2/1	15138.2/1	15138.2/1	15138.2/1

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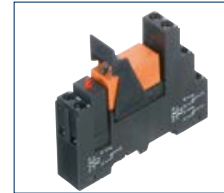
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Year	2010	2011	2012	2013	2014
Share of GDP	1.1	1.2	1.3	1.4	1.5

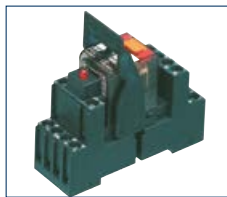
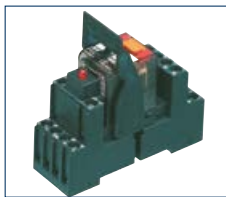
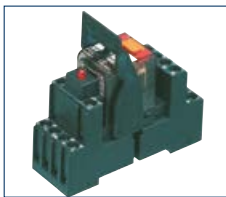
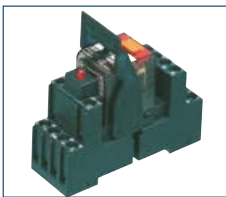
Relay with 2 CO PRS 2

PRSU 2/110 V DC	PRSU 2/24 V AC	PRSU 2/115 V AC	PRSU 2/230 V AC		
					
PRSU 2/110 V DC 15722.2/1	PRSU 2/24 V AC 15166.2/1	PRSU 2/115 V AC 15413.2/1	PRSU 2/230 V AC 15172.2/1		
76 x 15.7 x 71 mm 60 g	76 x 15.7 x 71 mm 60 g	76 x 15.7 x 71 mm 60 g	76 x 15.7 x 71 mm 60 g		
PRS 2/110 V DC 15541.2/1	PRS 2/24 V AC 6484.2 /1	PRS 2/115 V AC 15229.2/1	PRS 2/230 V AC 6485.2/1		
15 g	15 g	15 g	15 g		
Insulation IEC 664/VDE 0110, Rated voltage 250 V, contamination degree 3, overvoltage category III, flammability class UL 94 V-0					
5 kV	5 kV	5 kV	5 kV		
5 mm	5 mm	5 mm	5 mm		
-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C		
110 V DC	24 V AC	115 V AC	230 V AC		
0.40 W	0.75 VA	0.75 VA	0.75 VA		
2 CO contact	2 CO contact	2 CO contact	2 CO contact		
250 V AC/440 V AC	250 V AC/440 V AC	250 V AC/440 V AC	250 V AC/440 V AC		
8 A / 15 A	8 A / 15 A	8 A / 15 A	8 A / 15 A		
7 ms/2 ms	7 ms/2 ms	7 ms/2 ms	7 ms/2 ms		
AgNi 90/10	AgNi 90/10	AgNi 90/10	AgNi 90/10		
1.5 x 10 ⁵	1.5 x 10 ⁵	1.5 x 10 ⁵	1.5 x 10 ⁵		
4 A @ 230 V AC	4 A @ 230 V AC	4 A @ 230 V AC	4 A @ 230 V AC		
> 30 x 10 ⁶	> 5 x 10 ⁶	> 5 x 10 ⁶	> 5 x 10 ⁶		
PRS LED 24 V UC 15175.2 /1	PRS LED 24 V UC 15175.2/1	PRS LED 230 V AC 15142.2/1	PRS LED 230 V AC 15142.2/1		
Status display	Status display	Status display	Status display		
12 to 48 V AC/DC	12 to 48 V AC/DC	110 to 230 V AC/DC	110 to 230 V AC/DC		
PRS 2 15136.2/1	PRS 2 15136.2/1	PRS 2 15136.2/1	PRS 2 15136.2/1		
TS 35	TS 35	TS 35	TS 35		
5 mm pinning	5 mm pinning	5 mm pinning	5 mm pinning		
Screw connection	Screw connection	Screw connection	Screw connection		
10 A	10 A	10 A	10 A		
300 V	300 V	300 V	300 V		
4000 Veff	4000 Veff	4000 Veff	4000 Veff		
C/250 V	C/250 V	C/250 V	C/250 V		
-25 to +80 °C	-25 to +80 °C	-25 to +80 °C	-25 to +80 °C		
IP 20	IP 20	IP 20	IP 20		
V-0	V-0	V-0	V-0		
VBG 4	VBG 4	VBG 4	VBG 4		
2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²		
2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²		
max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm		
UL/CSA	UL/CSA	UL/CSA	UL/CSA		
PRS C 1/2 15138.2/1	PRS C 1/2 15138.2/1	PRS C 1/2 15138.2/1	PRS C 1/2 15138.2/1		

Relay 2 CO contact, PRS 2 G

Complete unit, screw connection		PRSU 2 G/12 V DC	PRSU 2 G/24 V DC	PRSU 2 G/48 V DC	PRSU 2 G/60 V DC
consisting of: - Relay - Insert module - Socket base - Holding clamp					
Type	PRSU 2 G/12 V DC	PRSU 2 G/24 V DC	PRSU 2 G/48 V DC	PRSU 2 G/60 V DC	
Cat. no./Qty.	15414.2/1	15233.2/1	15415.2/1	15416.2/1	
Size (L x W x H) with TS 35	76 x 15.7 x 71 mm	76 x 15.7 x 71 mm	76 x 15.7 x 71 mm	76 x 15.7 x 71 mm	
Weight	60 g	60 g	60 g	60 g	
Components					
Relay 2 W, encapsulated construction					
Type	PRS 2/12 V DC	PRS 2/24 V DC	PRS 2/48 V DC	PRS 2/60 V DC	
Cat. no./Qty.	6482.2/1	6483.2/1	15334.2/1	15335.2/1	
Weight	15 g	15 g	15 g	15 g	
General specifications					
DIN-VDE specifications	Insulation IEC 664/VDE 0110, rated voltage 250 V, contamination degree 3, overvoltage category III, flammability class UL 94 V-0				
Test voltage coil/contact	5 kV	5 kV	5 kV	5 kV	
Pinning	5 mm	5 mm	5 mm	5 mm	
Operating temperature	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	
Input data					
Input voltage	12 V DC	24 V DC	48 V DC	60 V DC	
Power consumption	0.40 W	0.40 W	0.40 W	0.40 W	
Output specifications					
Contacts	2 CO contact	2 CO contact	2 CO contact	2 CO contact	
Switching voltage/Max. Switching voltage	250 V AC/440 V AC	250 V AC/440 V AC	250 V AC/440 V AC	250 V AC/440 V AC	
Max. continuous current/inrush current	8 A / 15 A	8 A / 15 A	8 A / 15 A	8 A / 15 A	
Typical response time/release time	7 ms/2 ms	7 ms/2 ms	7 ms/2 ms	7 ms/2 ms	
Contact material	AgNi 90/10	AgNi 90/10	AgNi 90/10	AgNi 90/10	
Electrical lifespan	1.5 x 10 ⁵	1.5 x 10 ⁵	1.5 x 10 ⁵	1.5 x 10 ⁵	
at contact load	4 A @ 230 V AC	4 A @ 230 V AC	4 A @ 230 V AC	4 A @ 230 V AC	
Mechanical lifespan	> 30 x 10 ⁶	> 30 x 10 ⁶	> 30 x 10 ⁶	> 30 x 10 ⁶	
Insert module					
Type	PRS LED 24 V DC	PRS LED 24 V DC	PRS LED 110 V DC	PRS LED 110 V DC	
Cat. no./Qty.	15141.2/1	15141.2/1	15422.2/1	15422.2/1	
protected against polarity reversal	Status display with free-wheel diode	Status display with free-wheel diode	Status display with free-wheel diode	Status display with free-wheel diode	
in parallel to coil	12 to 24 V DC	12 to 24 V DC	60 to 110 V DC	60 to 110 V DC	
Socket base					
Type	PRS 2 G	PRS 2 G	PRS 2 G	PRS 2 G	
Cat. no./Qty.	15320.2/1	15320.2/1	15320.2/1	15320.2/1	
General					
Mounting foot for DIN rails	TS 35	TS 35	TS 35	TS 35	
Plug-in base for	5 mm pinning	5 mm pinning	5 mm pinning	5 mm pinning	
Connection type	Screw connection	Screw connection	Screw connection	Screw connection	
Technical data					
Rated current	10 A	10 A	10 A	10 A	
Rated voltage	300 V	300 V	300 V	300 V	
Dielectric strength	4000 Veff	4000 Veff	4000 Veff	4000 Veff	
Insulation group (VDE 0110 b)	C/250 V	C/250 V	C/250 V	C/250 V	
Ambient temperature	-25 to +80 °C	-25 to +80 °C	-25 to +80 °C	-25 to +80 °C	
Protection degree, enclosure	IP 20	IP 20	IP 20	IP 20	
Flammability class UL 94	V-0	V-0	V-0	V-0	
Touch protection, acc. to	VBG 4	VBG 4	VBG 4	VBG 4	
Wire connect cross-section	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²	
With ferrules	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²	
Screw torque	max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm	
Approvals	UL/CSA	UL/CSA	UL/CSA	UL/CSA	
Holding clamp					
Type	PRS C 1/2	PRS C 1/2	PRS C 1/2	PRS C 1/2	
Cat. no./Qty.	15138.2/1	15138.2/1	15138.2/1	15138.2/1	

- consisting of:
- Relay
- Insert module
- Socket base
- Holding clamp



Type	PRSU 4/12 V DC	PRSU 4/24 V DC	PRSU 4/48 V DC	PRSU 4/60 V DC
Cat. no./Qty.	15167.2/1	15173.2/1	15724.2/1	15725.2/1
Size (L x W x H) with TS 35 x 7.5	76 x 27.1 x 85 mm	76 x 27.1 x 85 mm	76 x 27.1 x 85 mm	76 x 27.1 x 85 mm
Weight	95 g	95 g	95 g	95 g

Relay 4 W, open construction with switch

Type	PRS 4/12 V DC	PRS 4/24 V DC	PRS 4/48 V DC	PRS 4/60 V DC
Cat. no./Qty.	6486.2/1	6487.2/1	15461.2/1	15336.2/1
Weight	30 g	30 g	30 g	30 g

DIN-VDE specifications	Insulation IEC 664/VDE 0110, Rated voltage 250 V, contamination degree 3, overvoltage category III
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Test voltage coil/contact	2.5 kV	2.5 kV	2.5 kV	2.5 kV
Operating temperature	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C

Input voltage	12 V DC	24 V DC	48 V DC	60 V DC
Power consumption	0.75 W	0.75 W	0.75 W	0.75 W

Contacts	4 CO contact	4 CO contact	4 CO contact	4 CO contact
Switching voltage/Max. switching voltage	250 V AC/250 V AC	250 V AC/250 V AC	250 V AC/250 V AC	250 V AC/250 V AC
Max. continuous current/inrush current	6 A / 12 A	6 A / 12 A	6 A / 12 A	6 A / 12 A
Typical response time/release time	15 ms/10 ms	15 ms/10 ms	15 ms/10 ms	15 ms/10 ms
Contact material	AgNi 90/10	AgNi 90/10	AgNi 90/10	AgNi 90/10
Electrical lifespan	1.5×10^5	1.5×10^5	1.5×10^5	1.5×10^5
at contact load	6 A @ 250 V AC	6 A @ 250 V AC	6 A @ 250 V AC	6 A @ 250 V AC
Mechanical lifespan	$> 30 \times 10^6$	$> 30 \times 10^6$	$> 30 \times 10^6$	$> 30 \times 10^6$

Type	PRS LED 24 V DC	PRS LED 24 V DC	PRS LED 110 V DC	PRS LED 110 V DC
Cat. no./Qty.	15141.2/1	15141.2/1	15422.2/1	15422.2/1
protected against polarity reversal	Status display with free-wheel diode	Status display with free-wheel diode	Status display with free-wheel diode	Status display with free-wheel diode
in parallel to coil	12 to 24 V DC	12 to 24 V DC	60 to 110 V DC	60 to 110 V DC

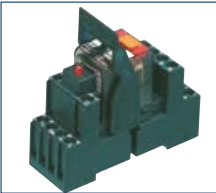
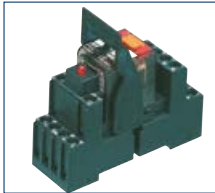
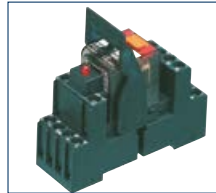
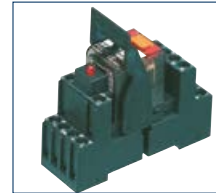
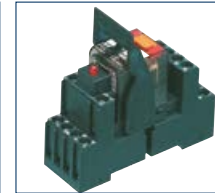
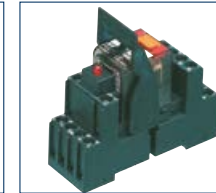
Type	PR5 4	PR5 4	PR5 4	PR5 4
Cat. no./Qty.	15137.2/1	15137.2/1	15137.2/1	15137.2/1
General				
Mounting foot for DIN rails	TS 35	TS 35	TS 35	TS 35
Plug-in base for	2.8 mm Faston	2.8 mm Faston	2.8 mm Faston	2.8 mm Faston
Connection type	Screw connection	Screw connection	Screw connection	Screw connection

Rated current	10 A	10 A	10 A	10 A
Rated voltage	300 V	300 V	300 V	300 V
Dielectric strength	2400 Veff	2400 Veff	2400 Veff	2400 Veff
Insulation group (VDE 0110 b)	C/250 V	C/250 V	C/250 V	C/250 V
Ambient temperature	-25 to +80 °C	-25 to +80 °C	-25 to +80 °C	-25 to +80 °C
Protection degree, enclosure	IP 20	IP 20	IP 20	IP 20
Flammability class UL 94	V-0	V-0	V-0	V-0
Touch protection, acc. to	VBG 4	VBG 4	VBG 4	VBG 4
Wire connect cross-section	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²
With ferrules	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²
Screw torque	max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm
Approvals	UL/CSA	UL/CSA	UL/CSA	UL/CSA

Type	PRS C 4	PRS C 4	PRS C 4	PRS C 4
Cat. no./Qty.	15140.2/1	15140.2/1	15140.2/1	15140.2/1

Country	2010	2011	2012	2013	2014
Algeria	0.00	0.00	0.00	0.00	0.00
Angola	0.00	0.00	0.00	0.00	0.00
Argentina	0.00	0.00	0.00	0.00	0.00
Armenia	0.00	0.00	0.00	0.00	0.00
Australia	0.00	0.00	0.00	0.00	0.00
Austria	0.00	0.00	0.00	0.00	0.00
Azerbaijan	0.00	0.00	0.00	0.00	0.00

Relay with 4 CO PRS 4

PRSU 4/110 V DC	PRSU 4/220 V DC	PRSU 4/12 V AC	PRSU 4/24 V AC	PRSU 4/115 V AC	PRSU 4/230 V AC
					
PRSU 4/110 V DC 15726.2/1	PRSU 4/220 V DC 15727.2/1	PRSU 4/12 V AC 15392.2/1	PRSU 4/24 V AC 15168.2/1	PRSU 4/115 V AC 15728.2/1	PRSU 4/230 V AC 15174.2/1
76 x 27.1 x 85 mm 95 g	76 x 27.1 x 85 mm 95 g	76 x 27.1 x 85 mm 95 g	76 x 27.1 x 85 mm 95 g	76 x 27.1 x 85 mm 95 g	76 x 27.1 x 85 mm 95 g
PRS 4/110 V DC 15542.2/1	PRS 4/220 V DC 15368.2/1	PRS 4/12 V AC 15393.2/1	PRS 4/24 V AC 6488.2/1	PRS 4/115 V AC 15257.2/1	PRS 4/230 V AC 6489.2/1
30 g	30 g	30 g	30 g	30 g	30 g
Insulation IEC 664/VDE 0110, Rated voltage 250 V, contamination degree 3, overvoltage category III					
2.5 kV -40 to +70 °C	2.5 kV -40 to +70 °C	2.5 kV -40 to +70 °C	2.5 kV -40 to +70 °C	2.5 kV -40 to +70 °C	2.5 kV -40 to +70 °C
110 V DC 0.75 W	220 V DC 0.75 W	12 V AC 1.0 VA	24 V AC 1.0 VA	115 V AC 1.0 VA	230 V AC 1.0 VA
4 CO contact 250 V/250 V AC 6 A / 12 A 15 ms/10 ms AgNi 90/10 1.5 x 10 ⁵ 6 A, 250 V A > 30 x 10 ⁶	4 CO contact 250 V/250 V AC 6 A / 12 A 15 ms/10 ms AgNi 90/10 1.5 x 10 ⁵ 6 A @ 250 V AC > 30 x 10 ⁶	4 CO contact 250 V/250 V AC 6 A / 12 A 15 ms/10 ms AgNi 90/10 1.5 x 10 ⁵ 6 A @ 250 V AC > 20 x 10 ⁶	4 CO contact 250 V/250 V AC 6 A / 12 A 15 ms/10 ms AgNi 90/10 1.5 x 10 ⁵ 6 A @ 250 V AC > 20 x 10 ⁶	4 CO contact 250 V AC/250 V AC 6 A / 12 A 15 ms/10 ms AgNi 90/10 1.5 x 10 ⁵ 6 A @ 250 V AC > 20 x 10 ⁶	4 CO contact 250 V AC/250 V AC 6 A / 12 A 15 ms/10 ms AgNi 90/10 1.5 x 10 ⁵ 6 A @ 250 V AC > 20 x 10 ⁶
PRS LED 110 V DC 15422.2/1	PRS LED 230 V AC 15142.2/1	PRS LED 24 V UC 15175.2/1	PRS LED 24 V UC 15175.2/1	PRS LED 230 V AC 15142.2/1	PRS LED 230 V AC 15142.2/1
Status display with free-wheel diode 60 to 110 V DC	Status display 110 to 230 V DC	Status display 12 to 48 V AC/DC	Status display 12 to 48 V AC/DC	Status display 110 to 230 V AC/DC	Status display 110 to 230 V AC
PRS 4 15137.2/1	PRS 4 15137.2/1	PRS 4 15137.2/1	PRS 4 15137.2/1	PRS 4 15137.2/1	PRS 4 15137.2/1
TS 35 2.8 mm Faston Screw connection	TS 35 2.8 mm Faston Screw connection	TS 35 2.8 mm Faston Screw connection	TS 35 2.8 mm Faston Screw connection	TS 35 2.8 mm Faston Screw connection	TS 35 2.8 mm Faston Screw connection
10 A 300 V 2400 Veff C/250 V -25 to +80 °C IP 20 V-0 VBG 4 2 x 2.5 mm ² 2 x 1.5 mm ² max. 0.8 Nm UL/CSA	10 A 300 V 2400 Veff C/250 V -25 to +80 °C IP 20 V-0 VBG 4 2 x 2.5 mm ² 2 x 1.5 mm ² max. 0.8 Nm UL/CSA	10 A 300 V 2400 Veff C/250 V -25 to +80 °C IP 20 V-0 VBG 4 2 x 2.5 mm ² 2 x 1.5 mm ² max. 0.8 Nm UL/CSA	10 A 300 V 2400 Veff C/250 V -25 to +80 °C IP 20 V-0 VBG 4 2 x 2.5 mm ² 2 x 1.5 mm ² max. 0.8 Nm UL/CSA	10 A 300 V 2400 Veff C/250 V -25 to +80 °C IP 20 V-0 VBG 4 2 x 2.5 mm ² 2 x 1.5 mm ² max. 0.8 Nm UL/CSA	10 A 300 V 2400 Veff C/250 V -25 to +80 °C IP 20 V-0 VBG 4 2 x 2.5 mm ² 2 x 1.5 mm ² max. 0.8 Nm UL/CSA
PRS C 4 15140.2/1	PRS C 4 15140.2/1	PRS C 4 15140.2/1	PRS C 4 15140.2/1	PRS C 4 15140.2/1	PRS C 4 15140.2/1

Relay 4 CO contact, PRS 4 G

Complete unit, screw connection		PRSU 4 G/12 V DC	PRSU 4 G/24 V DC	PRSU 4 G/48 V DC	PRSU 4 G/60 V DC
consisting of: - Relay - Insert module - Socket base - Holding clamp					
Type		PRSU 4 G/12 V DC	PRSU 4 G/24 V DC	PRSU 4 G/48 V DC	PRSU 4 G/60 V DC
Cat. no./Qty.		15421.2/1	15332.2/1	15729.2/1	15730.2/1
Size (L x W x H) with TS 35 x 7.5		76 x 27.1 x 87 mm	76 x 27.1 x 87 mm	76 x 27.1 x 87 mm	76 x 27.1 x 87 mm
Weight		95 g	95 g	95 g	95 g
Components					
Relay 4 W, open construction with switch					
Type		PRS 4/12 V DC	PRS 4/24 V DC	PRS 4/48 V DC	PRS 4/60 V DC
Cat. no./Qty.		6486.2/1	6487.2/1	15461.2/1	15336.2/1
Weight		30 g	30 g	30 g	30 g
General specifications					
DIN-VDE specifications		Insulation IEC 664/VDE 0110, rated voltage 250 V, contamination degree 3, overvoltage category III			
Test voltage coil/contact		2.5 kV	2.5 kV	2.5 kV	2.5 kV
Operating temperature		-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C
Input data					
Input voltage		12 V DC	24 V DC	48 V DC	60 V DC
Power consumption		0.75 W	0.75 W	0.75 W	0.75 W
Output specifications					
Contacts		4 CO contact	4 CO contact	4 CO contact	4 CO contact
Switching voltage/Max. Switching voltage		250 V AC/250 V AC	250 V AC/250 V AC	250 V AC/250 V AC	250 V AC/250 V AC
Max. continuous current/inrush current		6 A / 12 A	6 A / 12 A	6 A / 12 A	6 A / 12 A
Typical response time/release time		15 ms/10 ms	15 ms/10 ms	15 ms/10 ms	15 ms/10 ms
Contact material		AgNi 90/10	AgNi 90/10	AgNi 90/10	AgNi 90/10
Electrical lifespan		1.5 x 10 ⁵	1.5 x 10 ⁵	1.5 x 10 ⁵	1.5 x 10 ⁵
at contact load		6 A @ 250 V AC	6 A @ 250 V AC	6 A @ 250 V AC	6 A @ 250 V AC
Mechanical lifespan		> 30 x 10 ⁶	> 30 x 10 ⁶	> 30 x 10 ⁶	> 30 x 10 ⁶
Insert module					
Type		PRS LED 24 V DC	PRS LED 24 V DC	PRS LED 110 V DC	PRS LED 110 V DC
Cat. no./Qty.		15141.2/1	15141.2/1	15422.2/1	15422.2/1
protected against polarity reversal		Status display with free-wheel diode	Status display with free-wheel diode	Status display with free-wheel diode	Status display with free-wheel diode
in parallel to coil		12 to 24 V DC	12 to 24 V DC	60 to 110 V DC	60 to 110 V DC
Socket base					
Type		PRS 4 G	PRS 4 G	PRS 4 G	PRS 4 G
Cat. no./Qty.		15324.2/1	15324.2/1	15324.2/1	15324.2/1
General					
Mounting foot for DIN rails		TS 35	TS 35	TS 35	TS 35
Plug-in base for		2.8 mm Faston	2.8 mm Faston	2.8 mm Faston	2.8 mm Faston
Connection type		Screw connection	Screw connection	Screw connection	Screw connection
Technical data					
Rated current		10 A	10 A	10 A	10 A
Rated voltage		300 V	300 V	300 V	300 V
Dielectric strength		2400 Veff	2400 Veff	2400 Veff	2400 Veff
Insulation group (VDE 0110 b)		C/250 V	C/250 V	C/250 V	C/250 V
Ambient temperature		-25 to +80 °C	-25 to +80 °C	-25 to +80 °C	-25 to +80 °C
Protection degree, enclosure		IP 20	IP 20	IP 20	IP 20
Flammability class UL 94		V-0	V-0	V-0	V-0
Touch protection, acc. to		VBG 4	VBG 4	VBG 4	VBG 4
Wire connect cross-section		2 x 2.5mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²
With ferrules		2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²
Screw torque		max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm
Approvals		UL/CSA	UL/CSA	UL/CSA	UL/CSA
Holding clamp					
Type		PRS C 4	PRS C 4	PRS C 4	PRS C 4
Cat. no./Qty.		15140.2/1	15140.2/1	15140.2/1	15140.2/1

Relay 4 CO contact, PRS 4 G

PRSU 4 G/110 V DC	PRSU 4 G/220 V DC	PRSU 4 G/12 V AC	PRSU 4 G/24 V AC	PRSU 4 G/115 V AC	PRSU 4 G/230 V AC
					
PRSU 4 G/110 V DC 15731.2/1	PRSU 4 G/220 V DC 15732.2/1	PRSU 4 G/12 V AC 15420.2/1	PRSU 4 G/24 V AC 15371.2/1	PRSU 4 G/115 V AC 15733.2/1	PRSU 4 G/230 V AC 15372.2/1
76 x 27.1 x 87 mm 95 g	76 x 27.1 x 87 mm 95 g	76 x 27.1 x 87 mm 95 g	76 x 27.1 x 87 mm 95 g	76 x 27.1 x 87 mm 95 g	76 x 27.1 x 87 mm 95 g
PRS 4 /110 V DC 15542.2/1	PRS 4 /220 V DC 15368.2/1	PRS 4 /12 V AC 15393.2/1	PRS 4 /24 V AC 6488.2/1	PRS 4 /115 V AC 15257.2/1	PRS 4 /230 V AC 6489.2/1
30 g	30 g	30 g	30 g	30 g	30 g
Insulation IEC 664/VDE 0110, Rated voltage 250 V, contamination degree 3, overvoltage category III					
2.5 kV -40 to +70 °C	2.5 kV -40 to +70 °C	2.5 kV -40 to +70 °C	2.5 kV -40 to +70 °C	2.5 kV -40 to +70 °C	2.5 kV -40 to +70 °C
110 V DC 0.75 W	220 V DC 0.75 W	12 V AC 1.0 VA	24 V AC 1.0 VA	115 V AC 1.0 VA	230 V AC 1.0 VA
4 CO contact 250 V AC/250 V AC 6 A / 12 A 15 ms/10 ms AgNi 90/10 1.5 x 10 ⁵ 6 A @ 250 V AC > 30 x 10 ⁶	4 CO contact 250 V AC/250 V AC 6 A / 12 A 15 ms/10 ms AgNi 90/10 1.5 x 10 ⁵ 6 A @ 250 V AC > 30 x 10 ⁶	4 CO contact 250 V AC/250 V AC 6 A / 12 A 15 ms/10 ms AgNi 90/10 1.5 x 10 ⁵ 6 A @ 250 V AC > 20 x 10 ⁶	4 CO contact 250 V AC/250 V AC 6 A / 12 A 15 ms/10 ms AgNi 90/10 1.5 x 10 ⁵ 6 A @ 250 V AC > 20 x 10 ⁶	4 CO contact 250 V AC/250 V AC 6 A / 12 A 15 ms/10 ms AgNi 90/10 1.5 x 10 ⁵ 6 A @ 250 V AC > 20 x 10 ⁶	4 CO contact 250 V AC/250 V AC 6 A / 12 A 15 ms/10 ms AgNi 90/10 1.5 x 10 ⁵ 6 A @ 250 V AC > 20 x 10 ⁶
PRS LED 110 V DC 15422.2/1	PRS LED 230 V AC 15142.2/1	PRS LED 24 V UC 15175.2/1	PRS LED 24 V UC 15175.2/1	PRS LED 230 V AC 15142.2/1	PRS LED 230 V AC 15142.2/1
Status display with free-wheel diode 60 to 110 V DC	Status display 110 to 230 V AC	Status display 12 to 48 V AC/DC	Status display 12 to 48 V AC/DC	Status display 110 to 230 V AC	Status display 110 to 230 V AC
PRS 4 G 15324.2/1	PRS 4 G 15324.2/1	PRS 4 G 15324.2/1	PRS 4 G 15324.2/1	PRS 4 G 15324.2/1	PRS 4 G 15324.2/1
TS 35 2.8 mm Faston Screw connection	TS 35 2.8 mm Faston Screw connection	TS 35 2.8 mm Faston Screw connection	TS 35 2.8 mm Faston Screw connection	TS 35 2.8 mm Faston Screw connection	TS 35 2.8 mm Faston Screw connection
10 A 300 V 2400 Veff C/250 V -25 to +80 °C IP 20 V-0 VBG 4 2 x 2.5mm ² 2 x 1.5mm ² max. 0.8 Nm UL/CSA	10 A 300 V 2400 Veff C/250 V -25 to +80 °C IP 20 V-0 VBG 4 2 x 2.5mm ² 2 x 1.5mm ² max. 0.8 Nm UL/CSA	10 A 300 V 2400 Veff C/250 V -25 to +80 °C IP 20 V-0 VBG 4 2 x 2.5mm ² 2 x 1.5mm ² max. 0.8 Nm UL/CSA	10 A 300 V 2400 Veff C/250 V -25 to +80 °C IP 20 V-0 VBG 4 2 x 2.5mm ² 2 x 1.5mm ² max. 0.8 Nm UL/CSA	10 A 300 V 2400 Veff C/250 V -25 to +80 °C IP 20 V-0 VBG 4 2 x 2.5mm ² 2 x 1.5mm ² max. 0.8 Nm UL/CSA	10 A 300 V 2400 Veff C/250 V -25 to +80 °C IP 20 V-0 VBG 4 2 x 2.5mm ² 2 x 1.5mm ² max. 0.8 Nm UL/CSA
PRS C 4 15140.2/1	PRS C 4 15140.2/1	PRS C 4 15140.2/1	PRS C 4 15140.2/1	PRS C 4 15140.2/1	PRS C 4 15140.2/1

Relay 4 CO PRS 4 eco

Complete unit, screw or tension-spring connection (Z)

consisting of:

- Relay
- Socket base



Type	PRS 4/24 V DC eco	PRS 4/24 V AC eco	PRS 4/230 V AC eco	PRS 4G/24V DC eco
Cat. no./Qty.	15619.2/1	15620.2/1	15621.2/1	15622.2/1
Size (L x W x H) with TS 35 x 7.5	76 x 27.1 x 68 mm	76 x 27.1 x 68 mm	76 x 27.1 x 68 mm	78 x 27.1 x 70 mm
Weight	98 g	98 g	98 g	100 g

Components

Relay 4W, open design, with switch and status display

Type	PRS 4/24 V DC eco	PRS 4/24 V AC eco	PRS 4/230 V AC eco	PRS 4/24 V DC eco
Cat. no./Qty.	15591.2/1	15592.2/1	15593.2/1	15591.2/1
Weight	35 g	35 g	35 g	35 g

General specifications

DIN-VDE specifications	Insulation IEC 664/VDE 0110, Rated voltage 250V, contamination degree 2, overvoltage category II			
Test voltage coil/contact	2.5 kV	2.5 kV	2.5 kV	2.5 kV
Operating temperature	-25 to +70 °C	-25 to +55 °C	-25 to +55 °C	-25 to +70 °C
Lockable test button	yes	yes	yes	yes
Indicators	red LED	red LED	red LED	red LED
Mechanical indicator	yes	yes	yes	yes
Free-wheel diode	yes	no	no	yes

Input data

Input voltage	24 V DC	24 V AC	230 V AC	24 V DC
Power consumption	0.9 W	1.6 VA	1.6 VA	0.9 W
Frequency	-	50 / 60 Hz	50 / 60 Hz	-

Output specifications

Contacts	4 CO contact	4 CO contact	4 CO contact	4 CO contact
Max. switching voltage AC / DC	250 V / 250 V	250 V / 250 V	250 V / 250 V	250 V / 250 V
Min. switching voltage	5 V	5 V	5 V	5 V
Max. continuous current	AC 1 6 A / 250 V AC	6 A / 250 V AC	6 A / 250 V AC	6 A / 250 V AC
	DC 1 6 A / 24 V DC	6 A / 24 V DC	6 A / 24 V DC	6 A / 24 V DC
Max. inrush current	12 A	12 A	12 A	12 A
Contact load	AC 1 1500 VA	1500 VA	1500 VA	1500 VA
Min. contact load	0.3 W	0.3 W	0.3 W	0.3 W
Contact resistance	≤ 100 mΩ	≤ 100 mΩ	≤ 100 mΩ	≤ 100 mΩ
Max. switching frequency at operating load	1200 cycles per hour	1200 cycles per hour	1200 cycles per hour	1200 cycles per hour
Max. switching frequency without load	18000 cycles per hour	18000 cycles per hour	18000 cycles per hour	18000 cycles per hour
Typical response time/release time	13 ms / 3 ms	13 ms / 3 ms	13 ms / 3 ms	13 ms / 3 ms
Contact material	AgNi	AgNi	AgNi	AgNi
Electrical lifespan	AC 1 ≥ 1 x 10 ⁵	≥ 1 x 10 ⁵	≥ 1 x 10 ⁵	≥ 1 x 10 ⁵
Mechanical lifespan	≥ 2 x 10 ⁷	≥ 2 x 10 ⁷	≥ 2 x 10 ⁷	≥ 2 x 10 ⁷

Socket base

Type	PRS 4	PRS 4	PRS 4	PRS 4 G
Cat. no./Qty.	15137.2/1	15137.2/1	15137.2/1	15324.2/1
General				
Mounting foot for DIN rails	TS 35	TS 35	TS 35	TS 35
Plug-in base for	2.8 mm Faston	2.8 mm Faston	2.8 mm Faston	2.8 mm Faston
Connection type	Screw connection	Screw connection	Screw connection	Screw connection
Technical data				
Rated current	10 A	10 A	10 A	10 A
Rated voltage	300 V	300 V	300 V	300 V
Dielectric strength	2400 Veff	2400 Veff	2400 Veff	2400 Veff
Insulation group (VDE 0110b)	C/250 V	C/250 V	C/250 V	C/250 V
Ambient temperature	-25 to +80 °C	-25 to +80 °C	-25 to +80 °C	-25 to +80 °C
Protection degree, enclosure	IP 20	IP 20	IP 20	IP 20
Flammability class UL 94	V-0	V-0	V-0	V-0
Touch protection, acc. to	VBG 4	VBG 4	VBG 4	VBG 4
Wire connect cross-section	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²	2 x 2.5 mm ²
With ferrules	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²
Screw torque	max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm	max. 0.8 Nm
Stripping length	7 mm	7 mm	7 mm	7 mm
Approvals	UL/CSA	UL/CSA	UL/CSA	UL/CSA

Accessory: Holding clamp (optional)

Type	PRS C4 eco	PRS C4 eco	PRS C4 eco	PRS C4 eco
Cat. no./Qty.	15628.2/1	15628.2/1	15628.2/1	15628.2/1

Relay 4 CO PRS 4 eco

PRS 4 G/24 V AC eco	PRS 4 G/230 V AC eco	PRS 4 Z/24 V DC eco	PRS 4 Z/24 V AC eco	PRS 4 Z/230 V AC eco	
					
PRS 4 G/24 V AC eco 15623.2/1	PRS 4 G/230 V AC eco 15624.2/1	PRS 4 Z/24 V DC eco 15625.2/1	PRS 4 Z/24 V AC eco 15626.2/1	PRS 4 Z/230 V AC eco 15627.2/1	
78 x 27.1 x 70 mm 100 g	78 x 27.1 x 70 mm 100 g	98 x 31 x 69.2 mm 109 g	98 x 31 x 69.2 mm 109 g	98 x 31 x 69.2 mm 109 g	
PRS 4/24 V AC eco 15592.2/1	PRS 4/230 V AC eco 15593.2/1	PRS 4/24 V DC eco 15591.2/1	PRS 4/24 V AC eco 15592.2/1	PRS 4/230 V AC eco 15593.2/1	
35 g	35 g	35 g	35 g	35 g	
Insulation IEC 664/VDE 0110, Rated voltage 250V, contamination degree 2, overvoltage category II					
2.5 kV -25 to +55 °C	2.5 kV -25 to +55 °C	2.5 kV -25 to +70 °C	2.5 kV -25 to +55 °C	2.5 kV -25 to +55 °C	
yes	yes	yes	yes	yes	
red LED	red LED	red LED	red LED	red LED	
yes	yes	yes	yes	yes	
no	no	yes	no	no	
24 V AC 1.6 VA 50 / 60 Hz	230 V AC 1.6 VA 50 / 60 Hz	12 V DC 0.9 W -	24 V AC 1.6 VA 50 / 60 Hz	230 V AC 1.6 VA 50 / 60 Hz	
4 CO contact 250 V / 250 V 5 V 6 A / 250 V AC 6 A / 24 V DC 12 A 1500 VA 0.3 W ≤ 100 mΩ 1200 cycles per hour 18000 cycles per hour 13 ms / 3 ms AgNi ≥ 1 x 10 ⁵ ≥ 2 x 10 ⁷	4 CO contact 250 V / 250 V 5 V 6 A / 250 V AC 6 A / 24 V DC 12 A 1500 VA 0.3 W ≤ 100 mΩ 1200 cycles per hour 18000 cycles per hour 13 ms / 3 ms AgNi ≥ 1 x 10 ⁵ ≥ 2 x 10 ⁷	4 CO contact 250 V / 250 V 5 V 6 A / 250 V AC 6 A / 24 V DC 12 A 1500 VA 0.3 W ≤ 100 mΩ 1200 cycles per hour 18000 cycles per hour 13 ms / 3 ms AgNi ≥ 1 x 10 ⁵ ≥ 2 x 10 ⁷	4 CO contact 250 V / 250 V 5 V 6 A / 250 V AC 6 A / 24 V DC 12 A 1500 VA 0.3 W ≤ 100 mΩ 1200 cycles per hour 18000 cycles per hour 13 ms / 3 ms AgNi ≥ 1 x 10 ⁵ ≥ 2 x 10 ⁷	4 CO contact 250 V / 250 V 5 V 6 A / 250 V AC 6 A / 24 V DC 12 A 1500 VA 0.3 W ≤ 100 mΩ 1200 cycles per hour 18000 cycles per hour 13 ms / 3 ms AgNi ≥ 1 x 10 ⁵ ≥ 2 x 10 ⁷	
PRS 4 G 15324.2/1	PRS 4 G 15324.2/1	PRS 4 Z 15431.2/1	PRS 4 Z 15431.2/1	PRS 4 Z 15431.2/1	
TS 35 2.8 mm Faston Screw connection	TS 35 2.8 mm Faston Screw connection	TS 35 2.8 mm Faston Tension-spring connection	TS 35 2.8 mm Faston Tension-spring connection	TS 35 2.8 mm Faston Tension-spring connection	
10 A 300 V 2400 Veff C/250 V -25 to +80 °C IP 20 V-0 VBG 4 2 x 2.5 mm ² 2 x 1.5 mm ² max. 0.8 Nm 7 mm UL/CSA	10 A 300 V 2400 Veff C/250 V -25 to +80 °C IP 20 V-0 VBG 4 2 x 2.5 mm ² 2 x 1.5 mm ² max. 0.8 Nm 7 mm UL/CSA	12 A 300 V > 2500 Veff C/250 V -25 to +70 °C IP 20 V-0 VBG 4 2 x 0.2 - 1.5 mm ² 2 x 0.2 - 0.75 mm ² - 7 mm UL/CSA	12 A 300 V > 2500 Veff C/250 V -25 to +70 °C IP 20 V-0 VBG 4 2 x 0.2 - 1.5 mm ² 2 x 0.2 - 0.75 mm ² - 7 mm UL/CSA	12 A 300 V > 2500 Veff C/250 V -25 to +70 °C IP 20 V-0 VBG 4 2 x 0.2 - 1.5 mm ² 2 x 0.2 - 0.75 mm ² - 7 mm UL/CSA	
PRS C4 eco 15628.2/1	PRS C4 eco 15628.2/1	PRS C4 eco 15628.2/1	PRS C4 eco 15628.2/1	PRS C4 eco 15628.2/1	

Plug relay system PRS

Tension-spring connection

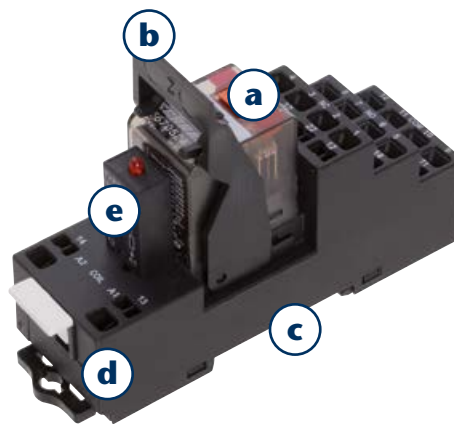
The **PRS Z** relay bases extend the PRS plug-relay system with their widespread tension-spring wire connection mechanism. Each of the base's wire connections is doubled in order to allow for a simple double potential pick-off (test point). The well-known advantages of the **PRS** relay system also apply to this base. The entire line of accessories with which you are already familiar are compatible and can be used with the bases. So you can make use of the same illuminated displays and holding clamps that are used with the screw connection mechanism. Dependable functionality is ensured because of this combination with our established line of PRS relays.

1. Overview

- a Pluggable relay**
Pluggable relays are also available with AgSNO and gold contacts, to fit with the many functions of your individual requirements!

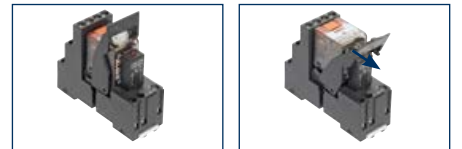


- c Mounts on standard TS 35 rail**
CONTA-CLIP relay bases can be mounted as needed on standard TS 35 DIN rails, according to EN 50035 and EN 50022.



- d AQI/PRS external cross-connection**
The AQI/PRS external cross-connection system enables a time-saving distribution of potentials. You can save time when coupling multiple relay components with this system.

- b Using the mount/dismount lever**
The mount/dismount clamp forms a reliable connection by latching the relay with the socket base. The fitted relay can be removed, easily and without force, from the socket base by using the dismount function of the lever!



- e Pluggable LED and protective modules**
Pluggable modules allow easy insertion into the base, with reverse-connect protection. The module circuitry is effective in parallel to the coil of the deployed relay.



2. Features

1. Relay

- **PLUG RELAY SYSTEM** (Relay with 1, 2 or 4 CO contacts)
- Load-independent switching
- Direct control via the PLC outputs
- High interference immunity
- Electrical isolation of control and load circuits
- Minimal contact resistance, and high insulation resistance
- The PRS XT relay features switch/button for MANUAL/AUTOMATIC switching and an integrated LED for signalling the switching status
- The PRS 4 relay with a switch/button for MANUAL/AUTOMATIC switching
- The PRS 4 eco relay features switch/button for MANUAL/AUTOMATIC switching, and an integrated LED for signalling the switching status DC relay with integrated free-wheel diode.

Technical data for the available relays can be found on the following product pages.

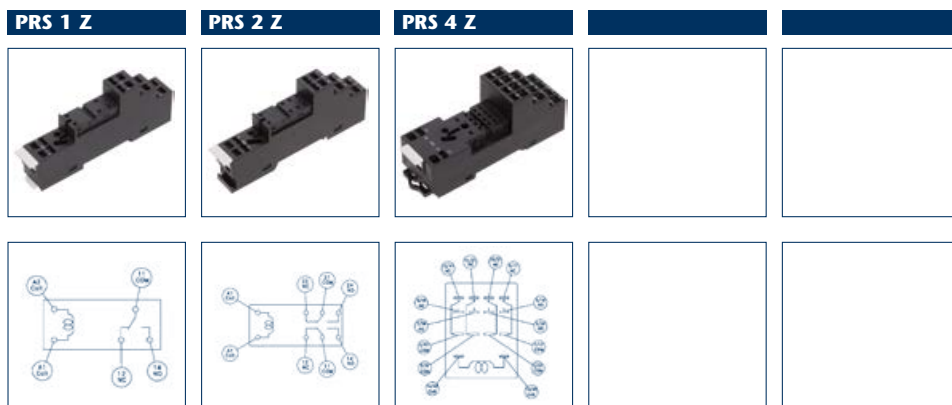


Plug relay system PRS

Tension-spring connection

II. Socket base

- Mounts on TS 35
- Very versatile and modular construction of individual relay bases
- User-friendly, because the relays can be easily replaced
- High-quality connection terminals
- Doubled connections
- Pluggable LED display with additional protective circuitry
- Holding clamp made of high-quality plastic

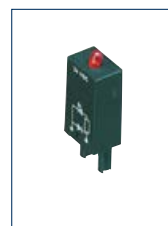


Type	PRS 1 Z	PRS 2 Z	PRS 4 Z		
Cat. no./Qty.	15780.2/1	15789.2/1	15431.2/1		
Size (L x W x H) with TS 35	98 x 16.3 x 47.5 mm	98 x 16.3 x 47.5 mm	98 x 31 x 47.5 mm		
Size with holding clamp (L x W x H) with TS 35	98 x 16.3 x 69.2 mm	98 x 16.3 x 69.2 mm	98 x 31 x 69.2 mm		
Weight	42 g	44 g	74 g		
General					
Mounting foot for DIN rails	TS 35	TS 35	TS 35		
Plug-in base for	3.5 mm pinning	5 mm pinning	2.8 mm Faston		
Connection type	Tension-spring connection	Tension-spring connection	Tension-spring connection		
Technical data					
Rated current	12 A	10 A	12 A		
Rated voltage	300 V	300 V	300 V		
Dielectric strength coil/contact	> 2500 Veff	> 2500 Veff	> 2500 Veff		
Insulation group (VDE 0110 b)	C/250 V	C/250 V	C/250 V		
Ambient temperature	-25 to +70 °C	-25 to +70 °C	-25 to +70 °C		
Protection degree, enclosure	IP 20	IP 20	IP 20		
Flammability class UL 94	V-0	V-0	V-0		
Touch protection, acc. to	VBG 4	VBG 4	VBG 4		
Wire connect cross-section	2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²		
With ferrules	2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²		
Stripping length	7 mm	7 mm	7 mm		
Approvals	UL/CSA	UL/CSA	UL/CSA		

III. Insert modules

- Plugs simply into the base, reverse-connect protection
- Circuitry parallel to coil

Cat. no./Qty.	Type	Voltage range	
15141.2/1	PRS LED(RD) 24 V DC	12 to 24 V DC	Status display with free-wheel diode
15142.2/1	PRS LED(RD) 230 V DC	110 to 230 V AC	Status display
15175.2/1	PRS LED(RD) 24 V DC	12 to 48 V AC/DC	Status display
15422.2/1	PRS LED(RD) 110 V DC	60 to 110 V DC	Status display with free-wheel diode
15810.2/1	PRS LED(RD) 230 V UC Var.	230 V AC/DC	Status display with varistor
16070.2/1	PRS LED(GN) 24 V UC Var.	24 V AC/DC	Status display with varistor
15808.2/1	PRS RC 24 V AC	24 V AC	Plug-in module with RC element
15809.2/1	PRS RC 240 V AC	240 V AC	Plug-in module with RC element



IV. Holding clamp

The mount/dismount clamp forms a reliable connection by latching the relay with the socket base. The fitted relay can be removed, easily and without force, from the socket base by using the dismount function of the lever.

Cat. no./Qty.	Type	Weight	
15138.2/1	PRS C 1/C 2	2 g	15 mm relay height
15140.2/1	PRS C 4	4 g	
15628.2/1	PRS C 4 eco	4 g	
16016.2/1	PRSXT C1/2	4 g	25 mm relay height



Relay 1-CO PRS 1 XT

Complete unit, tension-spring connection		PRSUXT 1Z/24 V DC	PRSUXT 1Z/24 V AC	PRSUXT 1Z/230 V AC	
consisting of: - Relay - Socket base - Holding clamp					
Type	Cat. no./Qty.	PRSUXT 1Z/24 V DC 16092.2/1	PRSUXT 1Z/24 V AC 16093.2/1	PRSUXT 1Z/230 V AC 16094.2/1	
Size (L x W x H) with TS 35 x 7.5		98 x 16.3 x 69.2 mm	98 x 16.3 x 69.2 mm	98 x 16.3 x 69.2 mm	
Weight		60 g	60 g	60 g	
Components					
Relay 1W, open design, with switch and status display					
Type	Cat. no./Qty.	PRSXT 1/24 V DC 16083.2/1	PRSXT 1/24 V AC 16084.2/1	PRSXT 1/230 V AC 16085.2/1	
Size (L x W x H)		29 x 13 x 30.55 mm	29 x 13 x 30.55 mm	29 x 13 x 30.55 mm	
Weight		16g	16g	16g	
General specifications					
DIN-VDE specifications		Insulation IEC 664/VDE 0110, Rated voltage 250 V, contamination degree 3, Overvoltage category III, flammability class UL 94 V-0			
Test voltage coil/contact		2.5 KV	2.5 KV	2.5 KV	
Operating temperature		-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	
Lockable test button		yes	yes	yes	
Indicators		red LED	red LED	red LED	
Mechanical indicator		yes	yes	yes	
Free-wheel diode		yes	no	no	
Input data					
Input voltage		24 V DC	24 V AC	230 V AC	
Power consumption		0.4 W	0.76 VA	0.74 VA	
Frequency		-	50 / 60 Hz	50 / 60 Hz	
Output specifications					
Contacts		1 CO contact	1 CO contact	1 CO contact	
Switching voltage/Max. Switching voltage		240 V AC/400 V AC	240 V AC/400 V AC	240 V AC/400 V AC	
Max. continuous current		16 A / 240 V AC	16 A / 240 V AC	16 A / 240 V AC	
Max. inrush current 4s / 30 ms		30 A / 300 A	30 A / 300 A	30 A / 300 A	
Max. contact load		4000 VA	4000 VA	4000 VA	
Min. suggested contact load		12 V at 10 mA	12 V at 10 mA	12 V at 10 mA	
Voltage drop		30 mV at 100 mA/6 VDC	30 mV at 100 mA/6 VDC	30 mV at 100 mA/6 VDC	
Max. switching frequency at operating load		360 cycles per hour	360 cycles per hour	360 cycles per hour	
Max. switching frequency without load		36000 cycles per hour	36000 cycles per hour	36000 cycles per hour	
Typical response time/release time		8 ms / 6 ms	8 ms / 6 ms	8 ms / 6 ms	
Contact material		AgNi 90/10	AgNi 90/10	AgNi 90/10	
Electrical lifespan		50 x 10 ³	50 x 10 ³	50 x 10 ³	
Mechanical lifespan		10 x 10 ⁶	5 x 10 ⁶	5 x 10 ⁶	
Socket base					
Type	Cat. no./Qty.	PRS 2 Z 15789.2/1	PRS 2 Z 15789.2/1	PRS 2 Z 15789.2/1	
General					
Mounting foot for DIN rails		TS 35	TS 35	TS 35	
Plug-in base for		5 mm pinning	5 mm pinning	5 mm pinning	
Connection type		Tension-spring connection	Tension-spring connection	Tension-spring connection	
Technical data					
Rated current		10 A	10 A	10 A	
Rated voltage		300 V	300 V	300 V	
Dielectric strength		> 2500 Veff	> 2500 Veff	> 2500 Veff	
Insulation group (VDE 0110b)		C/250 V	C/250 V	C/250 V	
Ambient temperature		-25 to +70 °C	-25 to +70 °C	-25 to +70 °C	
Protection degree, enclosure		IP 20	IP 20	IP 20	
Flammability class UL 94		V-0	V-0	V-0	
Touch protection, acc. to		VBG 4	VBG 4	VBG 4	
Wire connect cross-section		2 x 0.2 - 1.5 mm ²	2 x 0.2 - 1.5 mm ²	2 x 0.2 - 1.5 mm ²	
With ferrules		2 x 0.2 - 0.75 mm ²	2 x 0.2 - 0.75 mm ²	2 x 0.2 - 0.75 mm ²	
Stripping length		7 mm	7 mm	7 mm	
Approvals		UL/CSA	UL/CSA	UL/CSA	
Holding clamp					
Type	Cat. no./Qty.	PRSXT C1/2 16016.2/20	PRSXT C1/2 16016.2/20	PRSXT C1/2 16016.2/20	

Relay 2-CO PRS 2 XT

Complete unit, tension-spring connection

consisting of:

- Relay
- Socket base
- Holding clamp



Type	PRSXT 2Z/24 V DC	PRSXT 2Z/24 V AC	PRSXT 2Z/230 V AC	
Cat. no./Qty.	16023.2/1	16024.2/1	16025.2/1	
Size (L x W x H) with TS 35 x 7.5	98 x 16.3 x 69.2 mm	98 x 16.3 x 69.2 mm	98 x 16.3 x 69.2 mm	
Weight	60 g	60 g	60 g	
Components				
Relay 2W, open design, with switch and status display				
Type	PRSXT 2/24 V DC	PRSXT 2/24 V AC	PRSXT 2/230 V AC	
Cat. no./Qty.	16013.2/1	16014.2/1	16015.2/1	
Size (L x W x H)	29 x 13 x 30.55 mm	29 x 13 x 30.55 mm	29 x 13 x 30.55 mm	
Weight	16 g	16 g	16 g	
General specifications				
DIN-VDE specifications	Insulation IEC 664/VDE 0110, rated voltage 250 V, contamination degree 3, overvoltage category III, flammability class UL 94 V-0			
Test voltage coil/contact	2.5 kV	2.5 kV	2.5 kV	
Operating temperature	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	
Lockable test button	yes	yes	yes	
Indicators	red LED	red LED	red LED	
Mechanical indicator	yes	yes	yes	
Free-wheel diode	yes	no	no	
Input data				
Input voltage	24 V DC	24 V AC	230 V AC	
Power consumption	0.4 W	0.76 VA	0.74 VA	
Frequency	-	50 / 60 Hz	50 / 60 Hz	
Output specifications				
Contacts	2 CO contact	2 CO contact	2 CO contact	
Switching voltage/Max. Switching voltage	240 V AC/400 V AC	240 V AC/400 V AC	240 V AC/400 V AC	
Max. continuous current	8 A / 240 V AC	8 A / 240 V AC	8 A / 240 V AC	
Max. inrush current 4s / 30 ms	15 A / 300 A	15 A / 300 A	15 A / 300 A	
Max. contact load	2000 VA	2000 VA	2000 VA	
Min. suggested contact load	12 V at 10 mA	12 V at 10 mA	12 V at 10 mA	
Voltage drop	30 mV at 100 mA/6 VDC	30 mV at 100 mA/6 VDC	30 mV at 100 mA/6 VDC	
Max. switching frequency at operating load	360 cycles per hour	360 cycles per hour	360 cycles per hour	
Max. switching frequency without load	36000 cycles per hour	36000 cycles per hour	36000 cycles per hour	
Typical response time/release time	10 ms / 5 ms	10 ms / 5 ms	10 ms / 5 ms	
Contact material	AgNi 90/10	AgNi 90/10	AgNi 90/10	
Electrical lifespan	50 x 10 ³	50 x 10 ³	50 x 10 ³	
Mechanical lifespan	10 x 10 ⁶	5 x 10 ⁶	5 x 10 ⁶	
Socket base				
Type	PRS 2 Z	PRS 2 Z	PRS 2 G	
Cat. no./Qty.	15789.2/1	15789.2/1	15320.2/1	
General				
Mounting foot for DIN rails	TS 35	TS 35	TS 35	
Plug-in base for	5 mm pinning	5 mm pinning	5 mm pinning	
Tension-spring connection	Tension-spring connection	Tension-spring connection	Tension-spring connection	
Technical data				
Rated current	10 A	10 A	10 A	
Rated voltage	300 V	300 V	300 V	
Dielectric strength	> 2500 Veff	> 2500 Veff	> 2500 Veff	
Insulation group (VDE 0110b)	C/250 V	C/250 V	C/250 V	
Ambient temperature	-25 to +70 °C	-25 to +70 °C	-25 to +70 °C	
Protection degree, enclosure	IP 20	IP 20	IP 20	
Flammability class UL 94	V-0	V-0	V-0	
Touch protection, acc. to	VBG 4	VBG 4	VBG 4	
Wire connect cross-section	2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²	
With ferrules	2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²	
Stripping length	7 mm	7 mm	7 mm	
Approvals	UL/CSA	UL/CSA	UL/CSA	
Holding clamp				
Type	PRSXT C1/2	PRSXT C1/2	PRSXT C1/2	
Cat. no./Qty.	16016.2/20	16016.2/20	16016.2/20	

Relay 1 CO contacts, PRS 1 Z

Complete unit, tension-spring connection		PRSU 1Z/12 V DC	PRSU 1Z/24 V DC	PRSU 1Z/60 V DC	PRSU 1Z/110 V DC
consisting of: - Relay - Insert module - Socket base - Holding clamp					
Type	Cat. no./Qty.	PRSU 1Z/12V DC 15781.2/1	PRSU 1Z/24V DC 15782.2/1	PRSU 1Z/60V DC 15783.2/1	PRSU 1Z/110V DC 15784.2/1
Size (L x W x H) with TS 35		98 x 16.3 x 69.2 mm	98 x 16.3 x 69.2 mm	98 x 16.3 x 69.2 mm	98 x 16.3 x 69.2 mm
Weight		59 g	59 g	59 g	59 g
Components					
Relay 1 W, encapsulated construction					
Type	Cat. no./Qty.	PRS 1/12 V DC 6996.0/1	PRS 1/24 V DC 6804.0/1	PRS 1/60 V DC 15539.2/1	PRS 1/110 V DC 15540.2/1
Weight		15 g	15 g	15 g	15 g
General specifications					
DIN-VDE specifications	Insulation IEC 664/VDE 0110, Rated voltage 250 V, contamination degree 3, Overvoltage category III, Flammability class UL 94 V-0				
Test voltage coil/contact		5 kV	5 kV	5 kV	5 kV
Pinning		3.5 mm	3.5 mm	3.5 mm	3.5 mm
Operating temperature		-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C
Important notes		-	-	-	-
Input data					
Input voltage		12 V DC	24 V DC	60 V DC	110 V DC
Power consumption		0.40 W	0.40 W	0.42 W	0.42 W
Output specifications					
Contacts		1 CO contact	1 CO contact	1 CO contact	1 CO contact
Switching voltage/Max. Switching voltage		240 V AC/400 V AC	240 V AC/400 V AC	240 V AC/400 V AC	240 V AC/400 V AC
Max. continuous current/inrush current		12 A / 25 A	12 A / 25 A	12 A / 25 A	12 A / 25 A
Typical response time/release time		7 ms/3 ms	7 ms/3 ms	7 ms/3 ms	7 ms/3 ms
Contact material		AgNi 90/10	AgNi 90/10	AgNi 90/10	AgNi 90/10
Electrical lifespan		1.2 x 10 ³	1.2 x 10 ³	1.2 x 10 ³	1.2 x 10 ³
at contact load		4 A @ 230 V AC	4 A @ 230 V AC	4 A @ 230 V AC	4 A @ 230 V AC
Mechanical lifespan		> 30 x 10 ⁶	> 30 x 10 ⁶	> 30 x 10 ⁶	> 30 x 10 ⁶
Insert module					
Type	Cat. no./Qty.	PRS LED 24 V DC 15141.2/1	PRS LED 24 V DC 15141.2/1	PRS LED 110 V DC 15422.2/1	PRS LED 110 V DC 15422.2/1
Protected against polarity reversal		Status display with free-wheel diode	Status display with free-wheel diode	Status display with free-wheel diode	Status display with free-wheel diode
in parallel to coil		12 to 24 V DC	12 to 24 V DC	60 to 110 V DC	60 to 110 V DC
Socket base					
Type	Cat. no./Qty.	PRS 1 Z 15780.2/1	PRS 1 Z 15780.2/1	PRS 1 Z 15780.2/1	PRS 1 Z 15780.2/1
General					
Mounting foot for DIN rails		TS 35	TS 35	TS 35	TS 35
Plug-in base for		3.5 mm pinning	3.5 mm pinning	3.5 mm pinning	3.5 mm pinning
Connection type		Tension-spring connection	Tension-spring connection	Tension-spring connection	Tension-spring connection
Technical data					
Rated current		12 A	12 A	12 A	12 A
Rated voltage		300 V	300 V	300 V	300 V
Dielectric strength coil/contact		> 2500 Veff	> 2500 Veff	> 2500 Veff	> 2500 Veff
Insulation group (VDE 0110 b)		C/250 V	C/250 V	C/250 V	C/250 V
Ambient temperature		-25 to +70 °C	-25 to +70 °C	-25 to +70 °C	-25 to +70 °C
Protection degree, enclosure		IP 20	IP 20	IP 20	IP 20
Flammability class UL 94		V-0	V-0	V-0	V-0
Touch protection, acc. to		VBG 4	VBG 4	VBG 4	VBG 4
Wire connect cross-section		2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²
With ferrules		2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²
Stripping length		7 mm	7 mm	7 mm	7 mm
Approvals		UL/CSA	UL/CSA	UL/CSA	UL/CSA
Holding clamp					
Type	Cat. no./Qty.	PRS C 1/2 15138.2/1	PRS C 1/2 15138.2/1	PRS C 1/2 15138.2/1	PRS C 1/2 15138.2/1

Relay 1 CO contacts, PRS 1 Z

PRSU 1LZ/24 V DC	PRSU 1Z/24 V AC	PRSU 1Z/115 V AC	PRSU 1Z/230 V AC		
					
PRSU 1LZ/24 V DC 15788.2/1	PRSU 1Z/24 V AC 15785.2/1	PRSU 1Z/115 V AC 15786.2/1	PRSU 1Z/230 V AC 15787.2/1		
98 x 16.3 x 69.2 mm	98 x 16.3 x 69.2 mm	98 x 16.3 x 69.2 mm	98 x 16.3 x 69.2 mm		
59 g	59 g	59 g	59 g		
Components					
Relay 1 W, encapsulated construction					
PRS 1L/24 V DC 6940.0/1	PRS 1/24 V AC 6480.2/1	PRS 1/115 V AC 15228.2/1	PRS 1/230 V AC 6481.2/1		
15 g	15 g	15 g	15 g		
Insulation IEC 664/VDE 0110, Rated voltage 250 V, contamination degree 3, overvoltage category III, Flammability class UL 94 V-0					
4 kV	5 kV	5 kV	5 kV		
5 mm	3.5 mm	3.5 mm	3.5 mm		
-20 to +50 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C		
Inductive loads	-	-	-		
24 V DC	24 V AC	115 V AC	230 V AC		
0.50 W	0.75 VA	0.75 VA	0.75 VA		
1 CO contact	1 CO contact	1 CO contact	1 CO contact		
240 V AC	240 V AC/400 V AC	240 V AC/400 V AC	240 V AC/400 V AC		
16 A/80 A (20 ms)	12 A / 25 A	12 A / 25 A	12 A / 25 A		
10 ms/10 ms	7 ms/3 ms	7 ms/3 ms	7 ms/3 ms		
AgSn O2	AgNi 90/10	AgNi 90/10	AgNi 90/10		
1 x 10 ⁵	1.2 x 10 ³	1.2 x 10 ³	1.2 x 10 ³		
16 A @ 230 V AC	4 A @ 230 V AC	4 A @ 230 V AC	4 A @ 230 V AC		
> 30 x 10 ⁶	> 10 x 10 ⁶	> 10 x 10 ⁶	> 10 x 10 ⁶		
Insert module					
PRS LED 24 V DC 15141.2/1	PRS LED 24 V UC 15175.2/1	PRS LED 230 V AG 15142.2/1	PRS LED 230 V AG 15142.2/1		
Status display with free-wheel diode	Status display	Status display	Status display		
12 to 24 V DC	12 to 48 V AC/DC	110 to 230 V AC	110 to 230 V AC		
Socket base					
PRS 2 Z 15789.2/1	PRS 1 Z 15780.2/1	PRS 1 Z 15780.2/1	PRS 1 Z 15780.2/1		
TS 35	TS 35	TS 35	TS 35		
5 mm pinning	3.5 mm pinning	3.5 mm pinning	3.5 mm pinning		
Tension-spring connection	Tension-spring connection	Tension-spring connection	Tension-spring connection		
10 A	12 A	12 A	12 A		
300 V	300 V	300 V	300 V		
> 2500 Veff	> 2500 Veff	> 2500 Veff	> 2500 Veff		
C/250 V	C/250 V	C/250 V	C/250 V		
-25 to +70 °C	-25 to +70 °C	-25 to +70 °C	-25 to +70 °C		
IP 20	IP 20	IP 20	IP 20		
V-0	V-0	V-0	V-0		
VBG 4	VBG 4	VBG 4	VBG 4		
2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²		
2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²		
7 mm	7 mm	7 mm	7 mm		
UL/CSA	UL/CSA	UL/CSA	UL/CSA		
Holding clamp					
PRS C 1/2 15138.2/1	PRS C 1/2 15138.2/1	PRS C 1/2 15138.2/1	PRS C 1/2 15138.2/1		

- Relay
- Insert module
- Socket base
- Holding clamp

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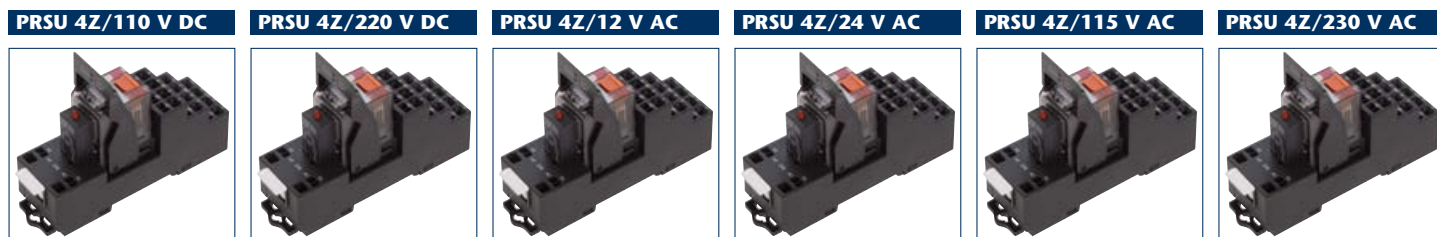
Relay 2 CO contacts, PRS 2 Z

PRSU 2Z/110 V DC	PRSU 2Z/24 V AC	PRSU 2Z/48 V AC	PRSU 2Z/115 V AC	PRSU 2Z/230 V AC	
					
PRSU 2Z/110 V DC 15794.2/1	PRSU 2Z/24 V AC 15795.2/1	PRSU 2Z/48 V AC 15950.2/1	PRSU 2Z/115V AC 15796.2/1	PRSU 2Z/230V AC 15797.2/1	
98 x 16.3 x 69.2 mm 61 g	98 x 16.3 x 69.2 mm 61 g	98 x 16.3 x 69.2 mm 61 g	98 x 16.3 x 69.2 mm 61 g	98 x 16.3 x 69.2 mm 61 g	
Components					
Relay 2 W, encapsulated construction					
PRS 2/110 V DC 15541.2/1	PRS 2/24 V AC 6484.2/1	PRS 2/48 V AC 15947.2/1	PRS 2/115V AC 15229.2/1	PRS 2/230 V AC 6485.2/1	
15 g	15 g	15 g	15 g	15 g	
Insulation IEC 664/VDE 0110, Rated voltage 250 V, contamination degree 3, overvoltage category III, flammability class UL 94 V-0					
5 kV	5 kV	5 kV	5 kV	5 kV	
5 mm	5 mm	5 mm	5 mm	5 mm	
-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	
110 V DC	24 V AC	48 V AC	115 V AC	230 V AC	
0.40 W	0.75 VA	0.75 VA	0.75 VA	0.75 VA	
2 CO contact	2 CO contact	2 CO contact	2 CO contact	2 CO contact	
240 V AC/400 V AC	240 V AC/400 V AC	240 V AC/400 V AC	240 V AC/400 V AC	240 V AC/400 V AC	
8 A / 15 A	8 A / 15 A	8 A / 15 A	8 A / 15 A	8 A / 15 A	
7 ms/2 ms	7 ms/2 ms	7 ms/2 ms	7 ms/2 ms	7 ms/2 ms	
AgNi 90/10	AgNi 90/10	AgNi 90/10	AgNi 90/10	AgNi 90/10	
1.5 x 10 ⁵	1.5 x 10 ⁵	1.5 x 10 ⁵	1.5 x 10 ⁵	1.5 x 10 ⁵	
4 A @ 230 V AC	4 A @ 230 V AC	4 A @ 230 V AC	4 A @ 230 V AC	4 A @ 230 V AC	
> 30 x 10 ⁶	> 5 x 10 ⁶	> 5 x 10 ⁶	> 5 x 10 ⁶	> 5 x 10 ⁶	
Insert module					
PRS LED 110 V DC 15422.2/1	PRS LED 24 V UC 15175.2/1	PRS LED 24 V UC 15175.2/1	PRS LED 230 V AC 15142.2/1	PRS LED 230 V AC 15142.2/1	
Status display with free-wheel diode	Status display	Status display	Status display	Status display	
60 to 110 V DC	12 to 48 V AC/DC	12 to 48 V AC/DC	110 to 230 V AC	110 to 230 V AC	
Socket base					
PRS 2 Z 15789.2/1	PRS 2 Z 15789.2/1	PRS 2 Z 15789.2/1	PRS 2 Z 15789.2/1	PRS 2 Z 15789.2/1	
TS 35	TS 35	TS 35	TS 35	TS 35	
5 mm pinning	5 mm pinning	5 mm pinning	5 mm pinning	5 mm pinning	
Tension-spring connection	Tension-spring connection	Tension-spring connection	Tension-spring connection	Tension-spring connection	
10 A	10 A	10 A	10 A	10 A	
300 V	300 V	300 V	300 V	300 V	
> 2500 Veff	> 2500 Veff	> 2500 Veff	> 2500 Veff	> 2500 Veff	
C/250 V	C/250 V	C/250 V	C/250 V	C/250 V	
-25 to +70 °C	-25 to +70 °C	-25 to +70 °C	-25 to +70 °C	-25 to +70 °C	
IP 20	IP 20	IP 20	IP 20	IP 20	
V-0	V-0	V-0	V-0	V-0	
VBG 4	VBG 4	VBG 4	VBG 4	VBG 4	
2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²	
2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²	
7 mm	7 mm	7 mm	7 mm	7 mm	
UL/CSA	UL/CSA	UL/CSA	UL/CSA	UL/CSA	
Holding clamp					
PRS C 1/2 15138.2/1	PRS C 1/2 15138.2/1	PRS C 1/2 15138.2/1	PRS C 1/2 15138.2/1	PRS C 1/2 15138.2/1	

Relay 4 CO contacts, PRS 4 Z

Complete unit, tension-spring connection		PRSU 4Z/12 V DC	PRSU 4Z/24 V DC	PRSU 4Z/48 V DC	PRSU 4Z/60 V DC
consisting of: - Relay - Insert module - Socket base - Holding clamp					
Type		PRSU 4Z/12 V DC	PRSU 4Z/24 V DC	PRSU 4Z/48 V DC	PRSU 4Z/60 V DC
Cat. no./Qty.		15798.2/1	15799.2/1	15800.2/1	15801.2/1
Size (L x W x H) with TS 35		98 x 31 x 69.2 mm	98 x 31 x 69.2 mm	98 x 31 x 69.2 mm	98 x 31 x 69.2 mm
Weight		109 g	109 g	109 g	109 g
Components					
Relay 4 W, encapsulated construction					
Type		PRS 4/12 V DC	PRS 4/24 V DC	PRS 4/48 V DC	PRS 4/60 V DC
Cat. no./Qty.		6486.2/1	6487.2/1	15461.2/1	15336.2/1
Weight		30 g	30 g	30 g	30 g
General specifications					
DIN-VDE specifications	Insulation IEC 664/VDE 0110, Rated voltage 250 V, contamination degree 3, overvoltage category III, flammability class UL 94 V-0				
Test voltage coil/contact		2.5 kV	2.5 kV	2.5 kV	2.5 kV
Operating temperature		-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C
Input data					
Input voltage		12 V DC	24 V DC	48 V DC	60 V DC
Power consumption		0.75 W	0.75 W	0.75 W	0.75 W
Output specifications					
Contacts		4 CO contact	4 CO contact	4 CO contact	4 CO contact
Switching voltage/Max. switching voltage		240 V AC/240 V AC	240 V AC/240 V AC	240 V AC/240 V AC	240 V AC/240 V AC
Max. continuous current/inrush current		6 A / 12 A	6 A / 12 A	6 A / 12 A	6 A / 12 A
Typical response time/release time		15 ms/10 ms	15 ms/10 ms	15 ms/10 ms	15 ms/10 ms
Contact material		AgNi 90/10	AgNi 90/10	AgNi 90/10	AgNi 90/10
Electrical lifespan		1.5 x 10 ⁵	1.5 x 10 ⁵	1.5 x 10 ⁵	1.5 x 10 ⁵
at contact load		6 A @ 240 V AC	6 A @ 240 V AC	6 A @ 240 V AC	6 A @ 240 V AC
Mechanical lifespan		> 30 x 10 ⁶	> 30 x 10 ⁶	> 30 x 10 ⁶	> 30 x 10 ⁶
Insert module					
Type		PRS LED 24 V DC	PRS LED 24 V DC	PRS LED 24 V UC	PRS LED 110 V DC
Cat. no./Qty.		15141.2/1	15141.2/1	15175.2/1	15422.2/1
Protected against polarity reversal		Status display with free-wheel diode	Status display with free-wheel diode	Status display	Status display with free-wheel diode
in parallel to coil		12 to 24 V DC	12 to 24 V DC	12 to 48 V AC/DC	60 to 110 V DC
Socket base					
Type		PRS 4 Z	PRS 4 Z	PRS 4 Z	PRS 4 Z
Cat. no./Qty.		15431.2/1	15431.2/1	15431.2/1	15431.2/1
General					
Mounting foot for DIN rails		TS 35	TS 35	TS 35	TS 35
Plug-in base for		2.8 mm Faston	2.8 mm Faston	2.8 mm Faston	2.8 mm Faston
Connection type		Tension-spring connection	Tension-spring connection	Tension-spring connection	Tension-spring connection
Technical data					
Rated current		12 A	12 A	12 A	12 A
Rated voltage		300 V	300 V	300 V	300 V
Dielectric strength coil/contact		> 2500 Veff	> 2500 Veff	> 2500 Veff	> 2500 Veff
Insulation group (VDE 0110 b)		C/250 V	C/250 V	C/250 V	C/250 V
Ambient temperature		-25 to +70 °C	-25 to +70 °C	-25 to +70 °C	-25 to +70 °C
Protection degree, enclosure		IP 20	IP 20	IP 20	IP 20
Flammability class UL 94		V-0	V-0	V-0	V-0
Touch protection, acc. to		VBG 4	VBG 4	VBG 4	VBG 4
Wire connect cross-section		2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²
With ferrules		2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²
Stripping length		7 mm	7 mm	7 mm	7 mm
Approvals		UL/CSA	UL/CSA	UL/CSA	UL/CSA
Holding clamp					
Type		PRS C 4	PRS C 4	PRS C 4	PRS C 4
Cat. no./Qty.		15140.2/1	15140.2/1	15140.2/1	15140.2/1

Relay 4 CO contacts, PRS 4 Z



PRS 4Z/110 V DC 15802.2/1	PRS 4Z/220 V DC 15803.2/1	PRS 4Z/12 V AC 15804.2/1	PRS 4Z/24 V AC 15805.2/1	PRS 4Z/115 V AC 15806.2/1	PRS 4Z/230 V AC 15807.2/1
98 x 31 x 69.2 mm	98 x 31 x 69.2 mm	98 x 31 x 69.2 mm	98 x 31 x 69.2 mm	98 x 31 x 69.2 mm	98 x 31 x 69.2 mm
109 g	109 g	109 g	109 g	109 g	109 g

Components

Relay 4 W, encapsulated construction

PRS 4/110 V DC 15542.2/1	PRS 4/220 V DC 15368.2/1	PRS 4/12 V AC 15393.2/1	PRS 4/24 V UC 6488.2/1	PRS 4/115 V AC 15257.2/1	PRS 4/230 V AC 6489.2/1
30 g	30 g	30 g	30 g	30 g	30 g

Insulation IEC 664/VDE 0110, Rated voltage 250 V, contamination degree 3, Overvoltage category III, Flammability class UL 94 V-0

2.5 kV	2.5 kV	2.5 kV	2.5 kV	2.5 kV	2.5 kV
-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C	-40 to +70 °C
110 V DC	220 V DC	12 V AC	24 V AC	115 V AC	230 V AC
0.75 W	0.75 W	1.0 VA	1.0 VA	1.0 VA	1.0 VA
4 CO contact	4 CO contact	4 CO contact	4 CO contact	4 CO contact	4 CO contact
240 V AC/240 V AC	240 V AC/240 V AC	240 V AC/240 V AC	240 V AC/240 V AC	240 V AC/240 V AC	240 V AC/240 V AC
6 A / 12 A	6 A / 12 A	6 A / 12 A	6 A / 12 A	6 A / 12 A	6 A / 12 A
15 ms/10 ms	15 ms/10 ms	15 ms/10 ms	15 ms/10 ms	15 ms/10 ms	15 ms/10 ms
AgNi 90/10	AgNi 90/10	AgNi 90/10	AgNi 90/10	AgNi 90/10	AgNi 90/10
1.5 x 10 ⁵	1.5 x 10 ⁵	1.5 x 10 ⁵	1.5 x 10 ⁵	1.5 x 10 ⁵	1.5 x 10 ⁵
6 A @ 240 V AC	6 A @ 240 V AC	6 A @ 240 V AC	6 A @ 240 V AC	6 A @ 240 V AC	6 A @ 240 V AC
> 30 x 10 ⁶	> 30 x 10 ⁶	> 20 x 10 ⁶	> 20 x 10 ⁶	> 20 x 10 ⁶	> 20 x 10 ⁶

Insert module

PRS LED 110 V DC 15422.2/1	PRS LED 230 V AC 15142.2/1	PRS LED 24 V UC 15175.2/1	PRS LED 24 V UC 15175.2/1	PRS LED 230 V AC 15142.2/1	PRS LED 230 V AC 15142.2/1
Status display with free-wheel diode	Status display	Status display	Status display	Status display	Status display
60 to 110 V DC	110 to 230 V AC	12 to 48 V AC/DC	12 to 48 V AC/DC	110 to 230 V AC	110 to 230 V AC

Socket base

PRS 4 Z 15431.2/1	PRS 4 Z 15431.2/1	PRS 4 Z 15431.2/1	PRS 4 Z 15431.2/1	PRS 4 Z 15431.2/1	PRS 4 Z 15431.2/1
TS 35	TS 35	TS 35	TS 35	TS 35	TS 35
2.8 mm Faston	2.8 mm Faston	2.8 mm Faston	2.8 mm Faston	2.8 mm Faston	2.8 mm Faston
Tension-spring connection	Tension-spring connection	Tension-spring connection	Tension-spring connection	Tension-spring connection	Tension-spring connection
12 A	12 A	12 A	12 A	12 A	12 A
300 V	300 V	300 V	300 V	300 V	300 V
> 2500 Veff	> 2500 Veff	> 2500 Veff	> 2500 Veff	> 2500 Veff	> 2500 Veff
C/250 V	C/250 V	C/250 V	C/250 V	C/250 V	C/250 V
-25 to +70 °C	-25 to +70 °C	-25 to +70 °C	-25 to +70 °C	-25 to +70 °C	-25 to +70 °C
IP 20	IP 20	IP 20	IP 20	IP 20	IP 20
V-0	V-0	V-0	V-0	V-0	V-0
VBG 4	VBG 4	VBG 4	VBG 4	VBG 4	VBG 4
2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²	2 x 0.2 to 1.5 mm ²
2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²	2 x 0.2 to 0.75 mm ²
7 mm	7 mm	7 mm	7 mm	7 mm	7 mm
UL/CSA	UL/CSA	UL/CSA	UL/CSA	UL/CSA	UL/CSA

Holding clamp

PRS C 4 15140.2/1	PRS C 4 15140.2/1	PRS C 4 15140.2/1	PRS C 4 15140.2/1	PRS C 4 15140.2/1	PRS C 4 15140.2/1

Relay modules with 1 CO RM 1

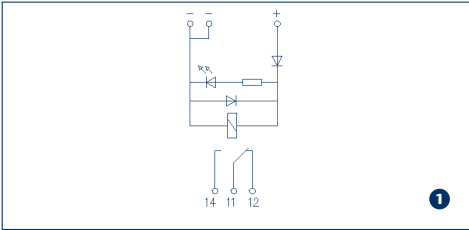
- Mounts on TS 32/TS 35
- Screw connection
- Input side: free-wheel and reverse-polarity protection diode
- LED for indicating the switching status
- Relay module available as plug-in or soldered construction

RM 1/1 W
Pluggable relay
1 CO contact

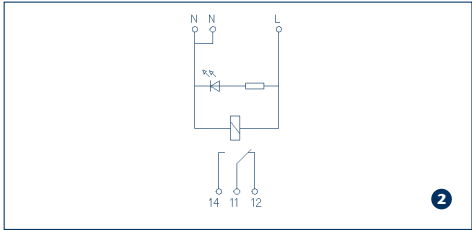
RMD 1/1 W
Soldered relay
1 CO contact



Circuit diagram



Circuit diagram



Size (L x W x H) with TS 35 x 7.5	87 x 20 x 72 mm	
Weight	57 g	
Cat. no./Qty.	Type	Circuit diagram
Pluggable relay		
6584.2/1	RM 1/1 W/12 V DC	1
5450.2/1	RM 1/1 W/24 V DC	1
5602.2/1	RM 1/1 W/115 V DC	1
5598.2/1	RM 1/1 W/24 V AC	2
5460.2/1	RM 1/1 W/115 V AC	2
5462.2/1	RM 1/1 W/230 V AC	2
Soldered relay		
6585.2/1	RMD 1/1 W/12 V DC	1
5451.2/1	RMD 1/1 W/24 V DC	1
5603.2/1	RMD 1/1 W/115 V DC	1
5599.2/1	RMD 1/1 W/24 V AC	2
5461.2/1	RMD 1/1 W/115 V AC	2
5463.2/1	RMD 1/1 W/230 V AC	2
Relay		
Relay	pluggable/soldered	
Contacts	1 CO contact	
Design	Closed	

General specifications	
DIN-VDE specifications	DIN EN 50178; DIN VDE 0110, Contamination degree 2, overvoltage category III
Test voltage	4 kV
Coil/contact	5 mm
Pinning	-20 to +50 °C
Operating temperature	7 mm
Stripping length	0.2 to 2.5 mm ² /AWG 22 to 14
Wire connect cross-section	

Relay data				
Input data				
Input voltage ±10%	12 V DC	24 V DC	115 V DC	24 V AC
Power consumption ±10%	0.6 W	0.6 W	0.6 W	1.0 VA
Status indication per relay (LED)	red	red	red	red
Output specifications				
Contacts	1/2 CO contact	1/2 CO contact	1/2 CO contact	1/2 CO contact
Max. switching voltage	250 V AC	250 V AC	250 V AC	250 V AC
Max. continuous current/inrush current	6 A/10 A*	6 A/10 A*	6 A/10 A*	6 A/10 A*
Max. power rating (ohmic load)	2000 VA at 250 VAC, 8 A	2000 VA at 250 VAC, 8 A	2000 VA at 250 VAC, 8 A	2000 VA at 250 VAC, 8 A
Typical response time/release time	9 ms/7 ms	9 ms/7 ms	9 ms/7 ms	15 ms/10 ms
Contact material	AgNi	AgNi	AgNi	AgNi
Electrical lifespan at max. contact load	> 5 x 10 ⁵	> 5 x 10 ⁵	> 5 x 10 ⁵	> 5 x 10 ⁵
Mechanical lifespan	> 2 x 10 ⁷	> 2 x 10 ⁷	> 2 x 10 ⁷	> 2 x 10 ⁷
*2 CO relays 6 A/10 A, 1 CO relay 8 A/10A				

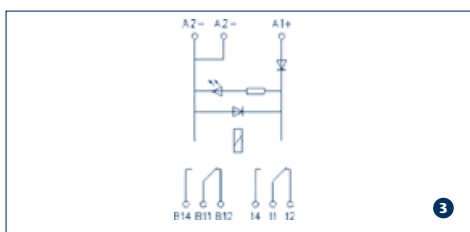
Relay modules 2 CO RM 1/2

RM 1/2 W
Pluggable relay
2 CO contact

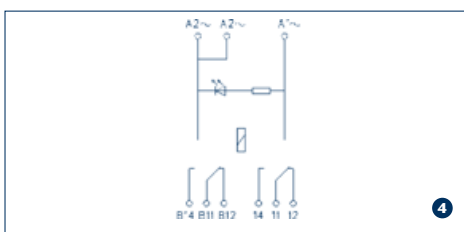
RMD 1/2 W
Soldered relay
2 CO contact



Circuit diagram



Circuit diagram



Size (L x W x H) with TS 35 x 7.5	87 x 26 x 76 mm	
Weight	60 g	
Cat. no./Qty.	Type	Circuit diagram
Pluggable relay		
6586.2/1	RM 1/2 W / 12 V DC	3
5550.2/1	RM 1/2 W / 24 V DC	3
5652.2/1	RM 1/2 W / 115 V DC	3
5648.2/1	RM 1/2 W / 24 V AC	4
5562.2/1	RM 1/2 W / 115 V AC	4
5564.2/1	RM 1/2 W / 230 V AC	4
Soldered relay		
6587.2/1	RMD 1/2 W / 12 V DC	3
5551.2/1	RMD 1/2 W / 24 V DC	3
5653.2/1	RMD 1/2 W / 115 V DC	3
5649.2/1	RMD 1/2 W / 24 V AC	4
5563.2/1	RMD 1/2 W / 115 V AC	4
5565.2/1	RMD 1/2 W / 230 V AC	4
Relay with gold contacts		
6229.2/1	RMD 1 Au/2 W 24 V DC	3
Relay		
Relay	pluggable/soldered	
Contacts	2 CO contact	
Design	Closed	

DIN EN 50178; DIN VDE 0110, Contamination degree 2, overvoltage category III

4 kV
5 mm
-20 to +50°C
7 mm
0.2 to 2.5 mm²/AWG 22 to 14

115 V AC	230 VAC	24 V DC (RMD 1 Au)
1.0 VA	1.0 VA	0.4 W
red	red	red
1/2 CO contact	1/2 CO contact	1/2 CO contact
250 V AC	250 V AC	250 V AC
6 A/10 A*	6 A/10 A*	1 A / 1 A
2000 VA at 250 VAC, 8 A	2000 VA at 250 VAC, 8 A	125 VA/30 W
15ms/8ms	15 ms/10 ms	6 ms/5 ms
AgNi	AgNi	AgPd 60/10+10µm Au
> 5 x 10 ⁵	> 5 x 10 ⁵	> 5 x 10 ⁵
> 2 x 10 ⁷	> 2 x 10 ⁷	> 2 x 10 ⁷

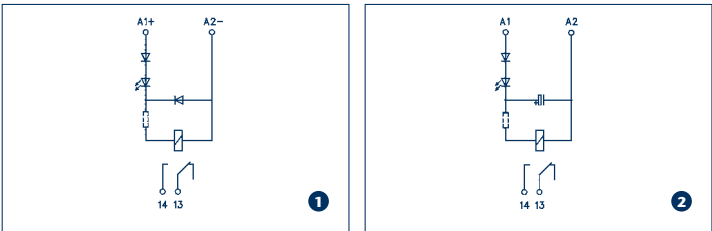
RM-S relay modules

- Mounts on TS 32/TS 35
- Screw connection
- Input side:
 - free-wheel and reverse-polarity protection diode
- LED for indicating switching status is possible
- Thin design, a width of 11.2 mm

RM-S
Soldered relay
1 NO contact



Circuit diagram



General specifications	
DIN-VDE specifications	DIN EN 50178, DIN VDE 0110, contamination degree 2, overvoltage cat. II
Test voltage coil/contact	4 kV
Operating temperature	-20 to +50°C
Stripping length	7 mm
Wire connect cross-section	0.2 to 2.5 mm ² /AWG 22 to 14
Wire cross-section for coil RMS-S	0.2 to 1.5 mm ² /AWG 28-16
Relay	soldered
Design	Closed

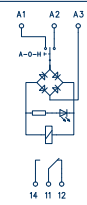
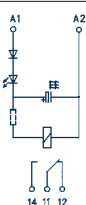
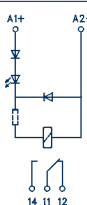
Cat. no./Qty.	Type	Circuit diagram
Size (L x W x H) with TS 35 x 7.5		
77 x 11.2 x 55 mm		
Weight		
30 g		
red LED		
6347.2/1	RM-SR/1 S/12 V DC	1
5400.2/1	RM-SR/1 S/24 V DC	1
5412.2/1	RM-SR/1 S/48 V DC	1
5424.2/1	RM-SR/1 S/60 V DC	1
6356.2/1	RM-SR/1 S/12 V DC/AC	2
5406.2/1	RM-SR/1 S/24 V DC/AC	2
5418.2/1	RM-SR/1 S/48 V DC/AC	2
Green LED		
6348.2/1	RM-SG/1 S/12 V DC	1
5401.2/1	RM-SG/1 S/24 V DC	1
5413.2/1	RM-SG/1 S/48 V DC	1
5425.2/1	RM-SG/1 S/60 V DC	1
6357.2/1	RM-SG/1 S/12 V DC/AC	2
5407.2/1	RM-SG/1 S/24 V DC/AC	2
5419.2/1	RM-SG/1 S/48 V DC/AC	2
without LED		
6349.2/1	RM-S/1 S/12 V DC	1
5402.2/1	RM-S/1 S/24 V DC	1
5414.2/1	RM-S/1 S/48 V DC	1
5426.2/1	RM-S/1 S/60 V DC	1
6358.2/1	RM-S/1 S/12 V DC/AC	2
5408.2/1	RM-S/1 S/24 V DC/AC	2
5420.2/1	RM-S/1 S/48 V DC/AC	2

Relay data				
Input data				
Input voltage ±10%	12 V DC	24 V DC	48 V DC	60 V DC
Power consumption ±10%	0.6 W	0.6 W	0.6 W	0.6 W
Output specifications				
Contacts				
Max. switching voltage	250 V AC	250 V AC	250 V AC	250 V AC
Max. continuous current/inrush current	6 A / 8 A	6 A / 8 A	6 A / 8 A	6 A / 8 A
Max. switching capacity at resistive load	2000 VA at 250 V AC, 8 A/ 192 W at 24 V DC, 8 A	2000 VA at 250 V AC, 8 A/ 192 W at 24 V DC, 8 A	2000 VA at 250 V AC, 8 A/ 192 W at 24 V DC, 8 A	2000 VA at 250 V AC, 8 A/ 192 W at 24 V DC, 8 A
Typical response time/release time	9 ms/ 7 ms	9 ms/ 7 ms	9 ms/ 7 ms	9 ms/ 7 ms
Contact material	AgNi	AgNi	AgNi	AgNi
Electrical lifespan at max. contact load	> 1.5 x 10 ⁵	> 1.5 x 10 ⁶	> 1.5 x 10 ⁷	> 1.5 x 10 ⁸
Mechanical lifespan	> 1 x 10 ⁷	> 1 x 10 ⁸	> 1 x 10 ⁹	> 1 x 10 ¹⁰

RMS-S
Soldered relay
1 CO contact



Circuit diagram



Cat. no./Qty.	Type	Circuit diagram
Size	77 x 11.2 x 60 mm	
Weight	30 g	
red LED		
6353.2/1	RM-SR/1 W/12 V DC	3
5770.2/1	RM-SR/1 W/24 V DC	3
5776.2/1	RM-SR/1 W/48 V DC	3
5782.2/1	RM-SR/1 W/60 V DC	3
6362.2/1	RM-SR/1 W/12 V DC/AC	4
5773.2/1	RM-SR/1 W/24 V DC/AC	4
5779.2/1	RM-SR/1 W/48 V DC/AC	4
Green LED		
6354.2/1	RM-SG/1 W/12 V DC	3
5771.2/1	RM-SG/1 W/24 V -	3
5777.2/1	RM-SG/1 W/48 V DC	3
5783.2/1	RM-SG/1 W/60 V DC	3
6363.2/1	RM-SG/1 W/12 V DC/AC	4
5774.2/1	RM-SG/1 W/24 V DC/AC	4
5780.2/1	RM-SG/1 W/48 V DC/AC	4
without LED		
6355.2/1	RM-S/1 W/12 V DC	3
5772.2/1	RM-S/1 W/24 V DC	3
5778.2/1	RM-S/1 W/48 V DC	3
5784.2/1	RM-S/1 W/60 V DC	3
6364.2/1	RM-S/1 W/12 V DC/AC	4
5775.2/1	RM-S/1 W/24 V DC/AC	4
5781.2/1	RM-S/1 W/48 V DC/AC	4
12 V AC/DC	24 V AC/DC	48 V AC/DC
0.6 W/0.8 VA	0.4 W/0.6 VA	0.5 W/0.7 VA
250 V AC	250 V AC	250 V AC
6 A / 8 A	6 A / 8 A	6 A / 8 A
2000 VA at	2000 VA at	2000 VA at
250 V AC, 8 A/	250 V AC, 8 A/	250 V AC, 8 A/
192 W at 24 V DC, 8 A	192 W at 24 V DC, 8 A	192 W at 24 V DC, 8 A
15 ms/10 ms	15 ms/10 ms	15 ms/10 ms
AgNi	AgNi	AgNi
> 1.5 x 10 ⁹	> 1.5 x 10 ¹⁰	> 1.5 x 10 ¹¹
> 1 x 10 ¹¹	> 1 x 10 ¹²	> 1 x 10 ¹³

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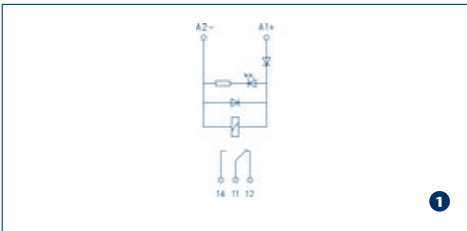
Relay modules 1 CO RM L

- Mounts on TS 32/TS 35
- Screw connection
- LED for indicating the switching status
- Power relay, 16 A

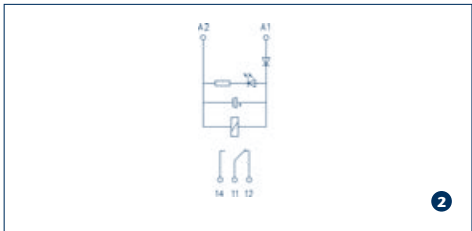
RML/1 W
Soldered relay
1 CO contact



Circuit diagram



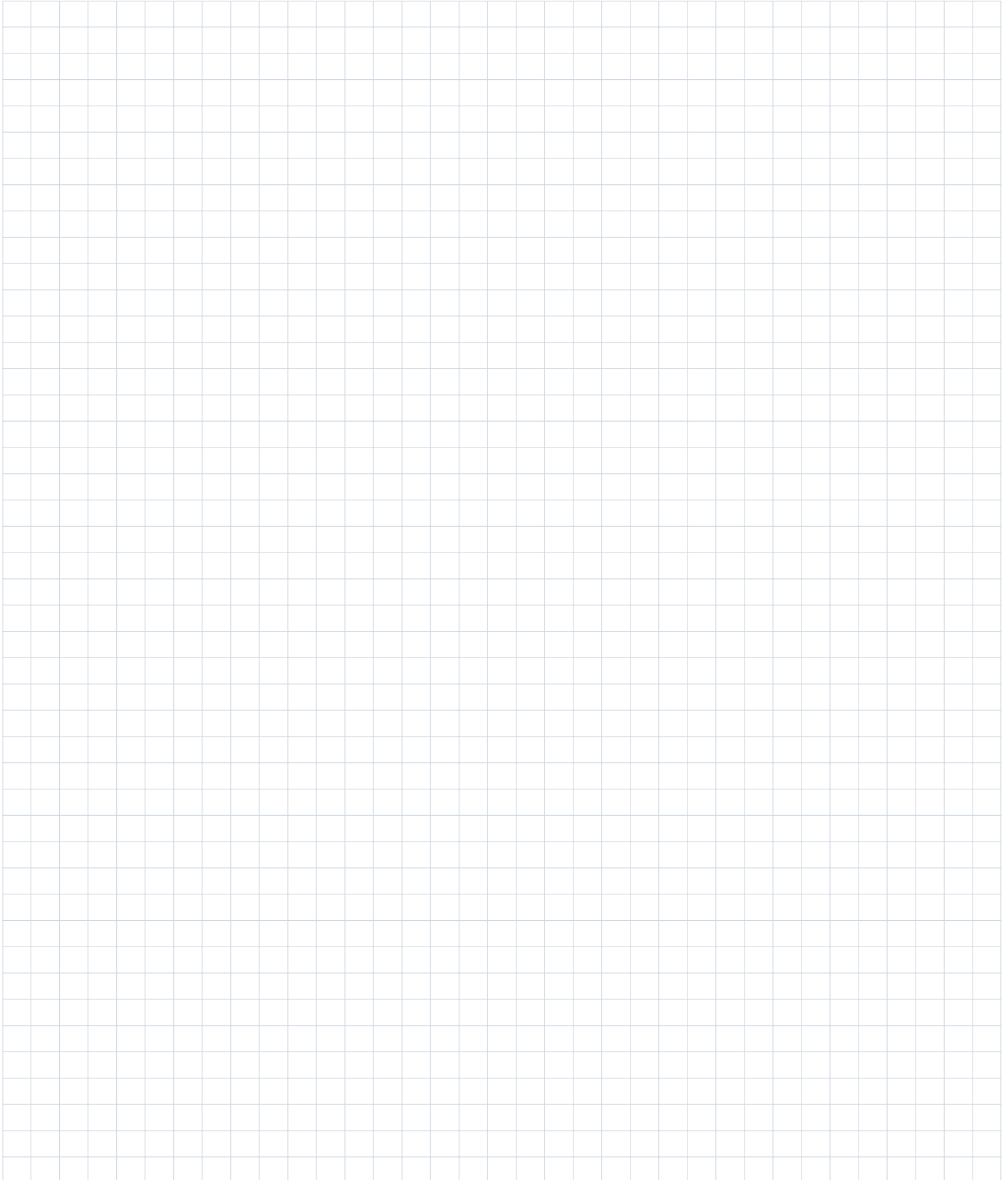
Circuit diagram



Cat. no./Qty.	Type	Circuit diagram
Soldered relay		
5800.2/1	RML/1 W/24 V DC	1
5801.2/1	RML/1 W/24 V AC/DC	2
5802.2/1	RML/1 W/48 V DC	1
Load relay		
6920.0	RML-L/1 W/24 V DC	1
Size (L x W x H)		
with TS 35 x 7.5	87 x 24 x 68 mm	
Weight	53 g	
Relay	soldered	
Contacts	1 CO contact	
Design	Closed	
General specifications		
DIN-VDE specifications	DIN EN 50178, DIN VDE 0110, contamination degree 2, overvoltage category III	
Test voltage coil/contact	4 kV	
Operating temperature	-20 to +50 °C	
Stripping length	7 mm	
Wire connect cross-section	0.2 to 2.5 mm²/AWG 22 to 14	

Relay data				RML-L
Input data				
Input voltage ±10%	24 V DC	24 V AC/DC	48 V DC	24 V DC
Power consumption ±10%	0.5 W	0.5 W/1.0 VA	0.5 W	0.5 W
Status indication per relay (LED)	red	red	red	red
Output specifications				
Contacts	1 CO contact	1 CO contact	1 CO contact	1 CO contact
Max. switching voltage	250 V AC	250 V AC	250 V AC	250 V AC
Max. continuous current/inrush current	16 A / 25 A	16 A / 25 A	16 A / 25 A	16 A/80 A (20 ms)
Max. power rating (ohmic load)	4000 VA at 250 V AC, 16 A	4000 VA at 250 V AC, 16 A	4000 VA at 250 V AC, 16 A	4000 VA at 250 V AC, 16 A
Typical response time/release time	9 ms/7 ms	15 ms/8 ms	9 ms/7 ms	9 ms/7 ms
Contact material	AgNi 90/10	AgNi 90/10	AgNi 90/10	AgSnO 2
Electrical lifespan at max. contact load	> 2 x 10 ⁵	> 2 x 10 ⁵	> 2 x 10 ⁵	> 2 x 10 ⁵
Mechanical lifespan	> 1 x 10 ⁷	> 1 x 10 ⁷	> 1 x 10 ⁷	> 1 x 10 ⁷

Notes



- Mounts on TS 32/TS 35
- Screw connection
- Relay modules with 1 CO contacts
- Input side:
 - free-wheel and reverse-polarity protection diode
- LED for indicating the switching status
- Relays available as solder-in or pluggable
- Other voltages available upon request
- Gold-plated relay contact upon request

RIM/1 W
Pluggable relay
1 CO contact



RIMD/1 W
Soldered relay
1 CO contact

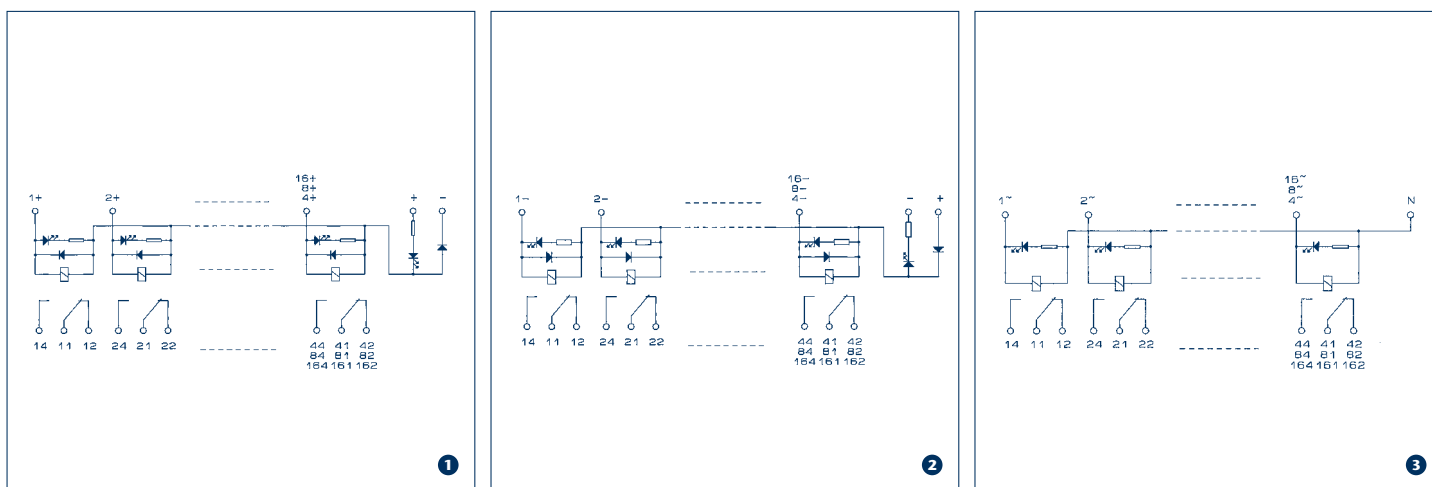


Relay Contacts Design	Pluggable 1 CO contact Closed	soldered 1 CO contact Closed
General specifications		
DIN-VDE specifications	DIN EN 50178, DIN VDE 0110, contamination degree 2, overvoltage cat. III	
Test voltage coil/contact	4 kV	4 kV
Operating temperature	-20 to +50 °C	-20 to +50 °C
Stripping length	7 mm	7 mm
Wire connect cross-section	0.2 to 2.5 mm²/AWG 22 to 14	0.2 to 2.5 mm²/AWG 22 to 14

[illegible]

Relay modules 1 CO contact RIM

Circuit diagram



Modules	Cat. no./Qty. Relay Pluggable	Type	Cat. no./Qty. Relay soldered	Type	Circuit dia- gram	Size (L x W x H) with TS 35 x 7.5	Weight
Modules with 2 relays each with 1 CO contact							
	6021.2/1	RIM 2/1 W/24 V +	6030.2/1	RIMD 2/1 W/24 V +	1	87 x 41 x 66/57	100 g / 90 g
	6022.2/1	RIM 2/1 W/24 V -	6031.2/1	RIMD 2/1 W/24 V -	2	87 x 41 x 66/57	100 g / 90 g
	6023.2/1	RIM 2/1 W/24 ACG	6032.2/1	RIMD 2/1 W/24 ACG	3	87 x 41 x 66/57	100 g / 90 g
	6024.2/1	RIM 2/1 W/48 V +	6033.2/1	RIMD 2/1 W/48 V +	1	87 x 41 x 66/57	100 g / 90 g
	6025.2/1	RIM 2/1 W/48 V -	6034.2/1	RIMD 2/1 W/48 V -	2	87 x 41 x 66/57	100 g / 90 g
	6026.2/1	RIM 2/1 W/115 V +	6035.2/1	RIMD 2/1 W/115 V +	1	87 x 41 x 66/57	100 g / 90 g
	6027.2/1	RIM 2/1 W/115 V -	6036.2/1	RIMD 2/1 W/115 V -	2	87 x 41 x 66/57	100 g / 90 g
	6028.2/1	RIM 2/1 W/115 ACG	6037.2/1	RIMD 2/1 W/115 ACG	3	87 x 41 x 66/57	100 g / 90 g
	6029.2/1	RIM 2/1 W/230 ACG	6038.2/1	RIMD 2/1 W/230 ACG	3	87 x 41 x 66/57	100 g / 90 g
Modules with 4 relays each with 1 CO contact							
	6039.2/1	RIM 4/1 W/24 V +	6048.2/1	RIMD 4/1 W/24 V +	1	87 x 77 x 66/57	180 g / 160 g
	6040.2/1	RIM 4/1 W/24 V -	6049.2/1	RIMD 4/1 W/24 V -	2	87 x 77 x 66/57	180 g / 160 g
	6041.2/1	RIM 4/1 W/24 ACG	6050.2/1	RIMD 4/1 W/24 ACG	3	87 x 77 x 66/57	180 g / 160 g
	6042.2/1	RIM 4/1 W/48 V +	6051.2/1	RIMD 4/1 W/48 V +	1	87 x 77 x 66/57	180 g / 160 g
	6043.2/1	RIM 4/1 W/48 V -	6052.2/1	RIMD 4/1 W/48 V -	2	87 x 77 x 66/57	180 g / 160 g
	6044.2/1	RIM 4/1 W/115 V +	6053.2/1	RIMD 4/1 W/115 V +	1	87 x 77 x 66/57	180 g / 160 g
	6045.2/1	RIM 4/1 W/115 V -	6054.2/1	RIMD 4/1 W/115 V -	2	87 x 77 x 66/57	180 g / 160 g
	6046.2/1	RIM 4/1 W/115 ACG	6055.2/1	RIMD 4/1 W/115 ACG	3	87 x 77 x 66/57	180 g / 160 g
	6047.2/1	RIM 4/1 W/230 ACG	6056.2/1	RIMD 4/1 W/230 ACG	3	87 x 77 x 66/57	180 g / 160 g
Modules with 8 relays each with 1 CO contact							
	6057.2/1	RIM 8/1 W/24 V +	6066.2/1	RIMD 8/1 W/24 V +	1	87 x 148 x 66/57	340 g / 300 g
	6058.2/1	RIM 8/1 W/24 V -	6067.2/1	RIMD 8/1 W/24 V -	2	87 x 148 x 66/57	340 g / 300 g
	6059.2/1	RIM 8/1 W/24 ACG	6068.2/1	RIMD 8/1 W/24 ACG	3	87 x 148 x 66/57	340 g / 300 g
	6060.2/1	RIM 8/1 W/48 V +	6069.2/1	RIMD 8/1 W/48 V +	1	87 x 148 x 66/57	340 g / 300 g
	6061.2/1	RIM 8/1 W/48 V -	6070.2/1	RIMD 8/1 W/48 V -	2	87 x 148 x 66/57	340 g / 300 g
	6062.2/1	RIM 8/1 W/115 V +	6071.2/1	RIMD 8/1 W/115 V +	1	87 x 148 x 66/57	340 g / 300 g
	6063.2/1	RIM 8/1 W/115 V -	6072.2/1	RIMD 8/1 W/115 V -	2	87 x 148 x 66/57	340 g / 300 g
	6064.2/1	RIM 8/1 W/115 ACG	6073.2/1	RIMD 8/1 W/115 ACG	3	87 x 148 x 66/57	340 g / 300 g
	6065.2/1	RIM 8/1 W/230 ACG	6074.2/1	RIMD 8/1 W/230 ACG	3	87 x 148 x 66/57	340 g / 300 g
Modules with 16 relays each with 1 CO contact							
	6075.2/1	RIM 16/1 W/24 V +	6084.2/1	RIMD 16/1 W/24 V +	1	87 x 291 x 66/57	660 g / 580 g
	6076.2/1	RIM 16/1 W/24 V -	6085.2/1	RIMD 16/1 W/24 V -	2	87 x 291 x 66/57	660 g / 580 g
	6077.2/1	RIM 16/1 W/24 ACG	6086.2/1	RIMD 16/1 W/24 ACG	3	87 x 291 x 66/57	660 g / 580 g
	6078.2/1	RIM 16/1 W/48 V +	6087.2/1	RIMD 16/1 W/48 V +	1	87 x 291 x 66/57	660 g / 580 g
	6079.2/1	RIM 16/1 W/48 V -	6088.2/1	RIMD 16/1 W/48 V -	2	87 x 291 x 66/57	660 g / 580 g
	6080.2/1	RIM 16/1 W/115 V +	6089.2/1	RIMD 16/1 W/115 V +	1	87 x 291 x 66/57	660 g / 580 g
	6081.2/1	RIM 16/1 W/115 V -	6090.2/1	RIMD 16/1 W/115 V -	2	87 x 291 x 66/57	660 g / 580 g
	6082.2/1	RIM 16/1 W/115 ACG	6091.2/1	RIMD 16/1 W/115 ACG	3	87 x 291 x 66/57	660 g / 580 g
	6083.2/1	RIM 16/1 W/230 ACG	6092.2/1	RIMD 16/1 W/230 ACG	3	87 x 291 x 66/57	660 g / 580 g

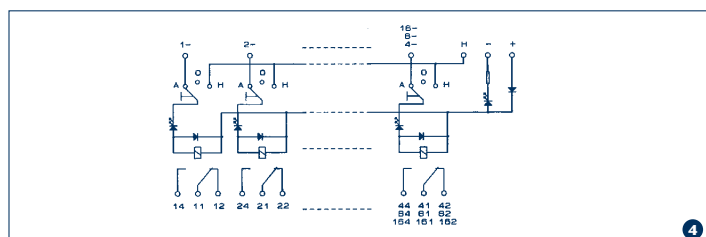
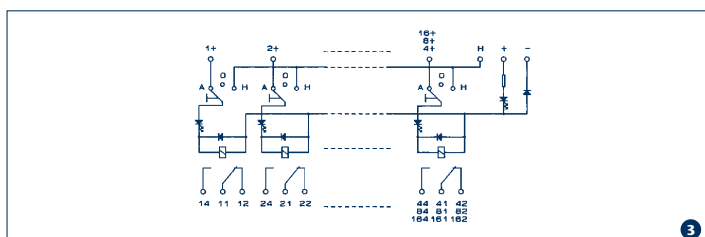
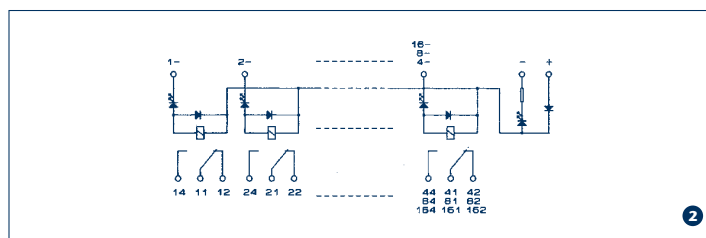
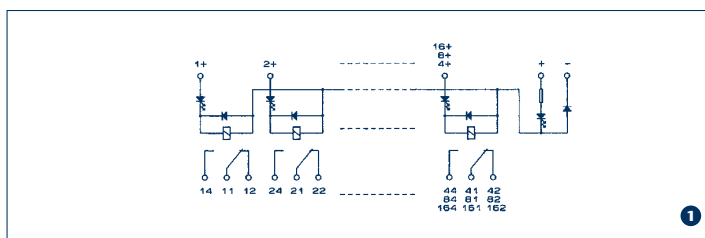
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Figure 1 consists of six diagrams, numbered 1 through 6, illustrating different wiring configurations for a three-phase motor. Each diagram shows a three-phase supply (L1, L2, L3) and a neutral line (N). The motor terminals are labeled 1, 2, 3, 4, 5, and 6. The diagrams show various combinations of direct connections, phase reversals, and star/delta connections. Diagram 1 shows a standard star connection. Diagram 2 shows a delta connection. Diagram 3 shows a star connection with a phase reversal. Diagram 4 shows a delta connection with a phase reversal. Diagram 5 shows a star connection with a phase reversal. Diagram 6 shows a delta connection with a phase reversal. The diagrams are arranged in a 2x3 grid.

Modules	Cat. no./Qty. Relay Pluggable	Type	Cat. no./Qty. Relay soldered	Type	Circuit dia- gram	Size (L x W x H) with TS 35 x 7.5	Weight
Modules with 2 relays each with 1 CO contact							
	5900.3/1	RIM 2 S/1 W/24 V +	5902.3/1	RIMD 2 S/1 W/24 V +	1	87 x 44 x 74	115 g / 105 g
	5901.3/1	RIM 2 S/1 W/24 V -	5903.3/1	RIMD 2 S/1 W/24 V -	2	87 x 44 x 74	115 g / 105 g
	6588.2/1	RIM 2 S/1 W/24 ACG	6589.2/1	RIMD 2 S/1 W/24 ACG	3	87 x 44 x 74	115 g / 105 g
	6590.2/1	RIM 2 S/1 W/230 ACG	6591.2/1	RIMD 2 S/1 W/230 ACG	3	87 x 44 x 74	115 g / 105 g
	6606.2/1	RIM 2-2 S/1 W/24 +	6607.2/1	RIMD 2-2 S/1 W/24 +	4	87 x 44 x 74	115 g / 105 g
	6608.2/1	RIM 2-2 S/1 W/24 -	6609.2/1	RIMD 2-2 S/1 W/24 -	5	87 x 44 x 74	115 g / 105 g
	6610.2/1	RIM 2-2 S/1 W/24 ACG	6611.2/1	RIMD 2-2 S/1 W/24 ACG	6	87 x 44 x 74	115 g / 105 g
	6612.2/1	RIM 2-2 S/1 W/230 ACG	6613.2/1	RIMD 2-2 S/1 W/230 ACG	6	87 x 44 x 74	115 g / 105 g
Modules with 4 relays each with 1 CO contact							
	5904.3/1	RIM 4 S/1 W/24 V +	5906.3/1	RIMD 4 S/1 W/24 V +	1	87 x 78 x 74	195 g / 175 g
	5905.3/1	RIM 4 S/1 W/24 V -	5907.3/1	RIMD 4 S/1 W/24 V -	2	87 x 78 x 74	195 g / 175 g
	6592.2/1	RIM 4 S/1 W/24 ACG	6593.2/1	RIMD 4 S/1 W/24 ACG	3	87 x 78 x 74	195 g / 175 g
	6594.2/1	RIM 4 S/1 W/230 ACG	6595.2/1	RIMD 4 S/1 W/230 ACG	3	87 x 78 x 74	195 g / 175 g
	6614.2/1	RIM 4-2 S/1 W/24 +	6615.2/1	RIMD 4-2 S/1 W/24 +	4	87 x 78 x 74	195 g / 175 g
	6616.2/1	RIM 4-2 S/1 W/24 -	6617.2/1	RIMD 4-2 S/1 W/24 -	5	87 x 78 x 74	195 g / 175 g
	6618.2/1	RIM 4-2 S/1 W/24 ACG	6619.2/1	RIMD 4-2 S/1 W/24 ACG	6	87 x 78 x 74	195 g / 175 g
	6620.2/1	RIM 4-2 S/1 W/230 ACG	6621.2/1	RIMD 4-2 S/1 W/230 ACG	6	87 x 78 x 74	195 g / 175 g
Modules with 8 relays each with 1 CO contact							
	5908.3/1	RIM 8 S/1 W/24 V +	5910.3/1	RIMD 8 S/1 W/24 V +	1	87 x 150 x 74	365 g / 325 g
	5909.3/1	RIM 8 S/1 W/24 V -	5911.3/1	RIMD 8 S/1 W/24 V -	2	87 x 150 x 74	365 g / 325 g
	6596.2/1	RIM 8 S/1 W/24 ACG	6597.2/1	RIMD 8 S/1 W/24 ACG	3	87 x 150 x 74	365 g / 325 g
	6598.2/1	RIM 8 S/1 W/230 ACG	6599.2/1	RIMD 8 S/1 W/230 ACG	3	87 x 150 x 74	365 g / 325 g
	6622.2/1	RIM 8-2 S/1 W/24 +	6623.2/1	RIMD 8-2 S/1 W/24 +	4	87 x 150 x 74	365 g / 325 g
	6624.2/1	RIM 8-2 S/1 W/24 -	6625.2/1	RIMD 8-2 S/1 W/24 -	5	87 x 150 x 74	365 g / 325 g
	6626.2/1	RIM 8-2 S/1 W/24 ACG	6627.2/1	RIMD 8-2 S/1 W/24 ACG	6	87 x 150 x 74	365 g / 325 g
	6628.2/1	RIM 8-2 S/1 W/230 ACG	6629.2/1	RIMD 8-2 S/1 W/230 ACG	6	87 x 150 x 74	365 g / 325 g
Modules with 16 relays each with 1 CO contact							
	6600.2/1	RIM 16 S/1 W/24 V +	6601.2/1	RIMD 16 S/1 W/24 V +	1	87 x 292 x 74	715 g / 635 g
	6602.2/1	RIM 16 S/1 W/24 V -	6603.2/1	RIMD 16 S/1 W/24 V -	2	87 x 292 x 74	715 g / 635 g
	6604.2/1	RIM 16 S/1 W/24 ACG	6605.2/1	RIMD 16 S/1 W/24 ACG	3	87 x 292 x 74	715 g / 635 g
	6630.2/1	RIM 16 S/1 W/230 ACG	6631.2/1	RIMD 16 S/1 W/230 ACG	3	87 x 292 x 74	715 g / 635 g
	6632.2/1	RIM 16-2 S/1 W/24 +	6633.2/1	RIMD 16-2 S/1 W/24 +	4	87 x 292 x 74	715 g / 635 g
	6634.2/1	RIM 16-2 S/1 W/24 -	6635.2/1	RIMD 16-2 S/1 W/24 -	5	87 x 292 x 74	715 g / 635 g
	6636.2/1	RIM 16-2 S/1 W/24 ACG	6637.2/1	RIMD 16-2 S/1 W/24 ACG	6	87 x 292 x 74	715 g / 635 g
	6638.2/1	RIM 16-2 S/1 W/230 ACG	6639.2/1	RIMD 16-2 S/1 W/230 ACG	6	87 x 292 x 74	715 g / 635 g

Relay modules 1 CO contact RIM-16 A

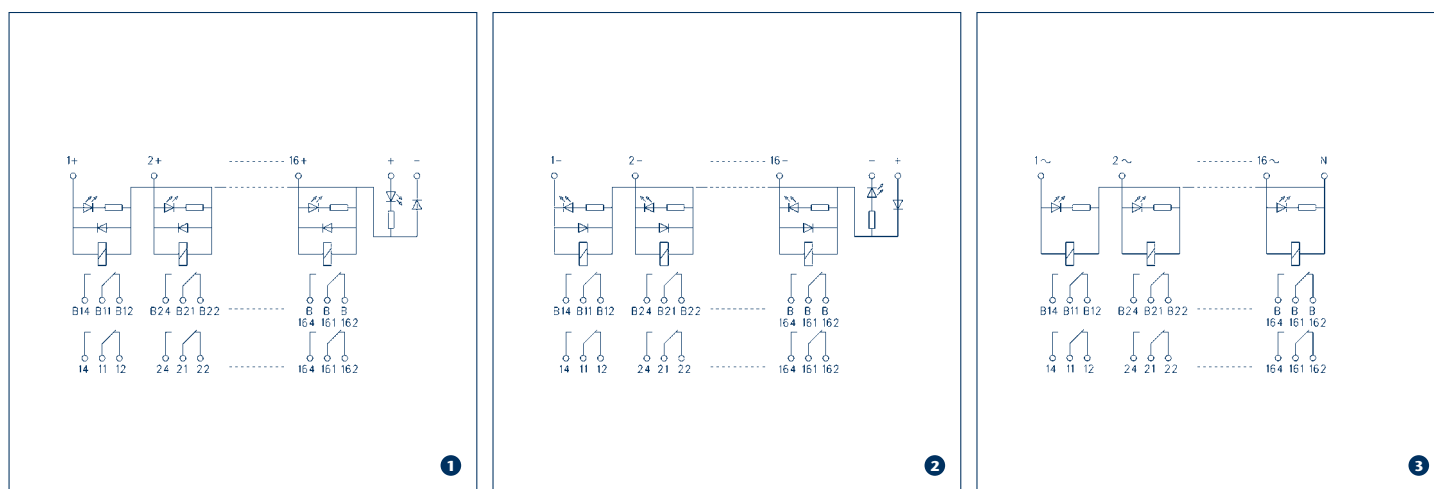
Circuit diagram



Modules	Cat. no./Qty. Relay Pluggable	Type	Cat. no./Qty. Relay soldered	Type	Circuit dia- gram	Size (L x W x H) with TS 35 x 7.5	Weight
Modules with 2 relays each with 1 CO contact							
	6016.2/1	RIM 2-16 A/1 W/24 V +	6648.2/1	RIMD 2-16 A/1 W/24 V +	1	87 x 42 x 74	100 g / 90 g
	6640.2/1	RIM 2-16 A/1 W/24 V -	6649.2/1	RIMD 2-16 A/1 W/24 V -	2	87 x 42 x 74	100 g / 90 g
	6017.2/1	RIM 2 S-16 A/1 W/24 V +	6650.2/1	RIMD 2 S-16 A/1 W/24 V +	3	87 x 42 x 74	110 g / 100 g
	6641.2/1	RIM 2 S-16 A/1 W/24 V -	6651.2/1	RIMD 2 S-16 A/1 W/24 V -	4	87 x 42 x 74	110 g / 100 g
Modules with 4 relays each with 1 CO contact							
	6018.2/1	RIM 4-16 A/1 W/24 V +	6652.2/1	RIMD 4-16 A/1 W/24 V +	1	87 x 77 x 74	180 g / 160 g
	6642.2/1	RIM 4-16 A/1 W/24 V -	6653.2/1	RIMD 4-16 A/1 W/24 V -	2	87 x 77 x 74	180 g / 160 g
	6019.2/1	RIM 4 S-16 A/1 W/24 V +	6654.2/1	RIMD 4 S-16 A/1 W/24 V +	3	87 x 77 x 74	200 g / 180 g
	6643.2/1	RIM 4 S-16 A/1 W/24 V -	6655.2/1	RIMD 4 S-16 A/1 W/24 V -	4	87 x 77 x 74	200 g / 180 g
Modules with 8 relays each with 1 CO contact							
	6012.2/1	RIM 8-16 A/1 W/24 V +	6656.2/1	RIMD 8-16 A/1 W/24 V +	1	87 x 148 x 74	340 g / 300 g
	6644.2/1	RIM 8-16 A/1 W/24 V -	6657.2/1	RIMD 8-16 A/1 W/24 V -	2	87 x 148 x 74	340 g / 300 g
	6013.2/1	RIM 8 S-16 A/1 W/24 V +	6658.2/1	RIMD 8 S-16 A/1 W/24 V +	3	87 x 148 x 74	380 g / 340 g
	6645.2/1	RIM 8 S-16 A/1 W/24 V -	6659.2/1	RIMD 8 S-16 A/1 W/24 V -	4	87 x 148 x 74	380 g / 340 g
Modules with 16 relays each with 1 CO contact							
	6014.2/1	RIM 16-16 A/1 W/24 V +	6660.2/1	RIMD 16-16 A/1 W/24 V +	1	87 x 290 x 74	660 g / 580 g
	6646.2/1	RIM 16-16 A/1 W/24 V -	6661.2/1	RIMD 16-16 A/1 W/24 V -	2	87 x 290 x 74	660 g / 580 g
	6015.2/1	RIM 16 S-16 A/1 W/24 V +	6662.2/1	RIMD 16 S-16 A/1 W/24 V +	3	87 x 290 x 74	740 g / 660 g
	6647.2/1	RIM 16 S-16 A/1 W/24 V -	6663.2/1	RIMD 16 S-16 A/1 W/24 V -	4	87 x 290 x 74	740 g / 660 g

Relay modules 2 CO contact RIM

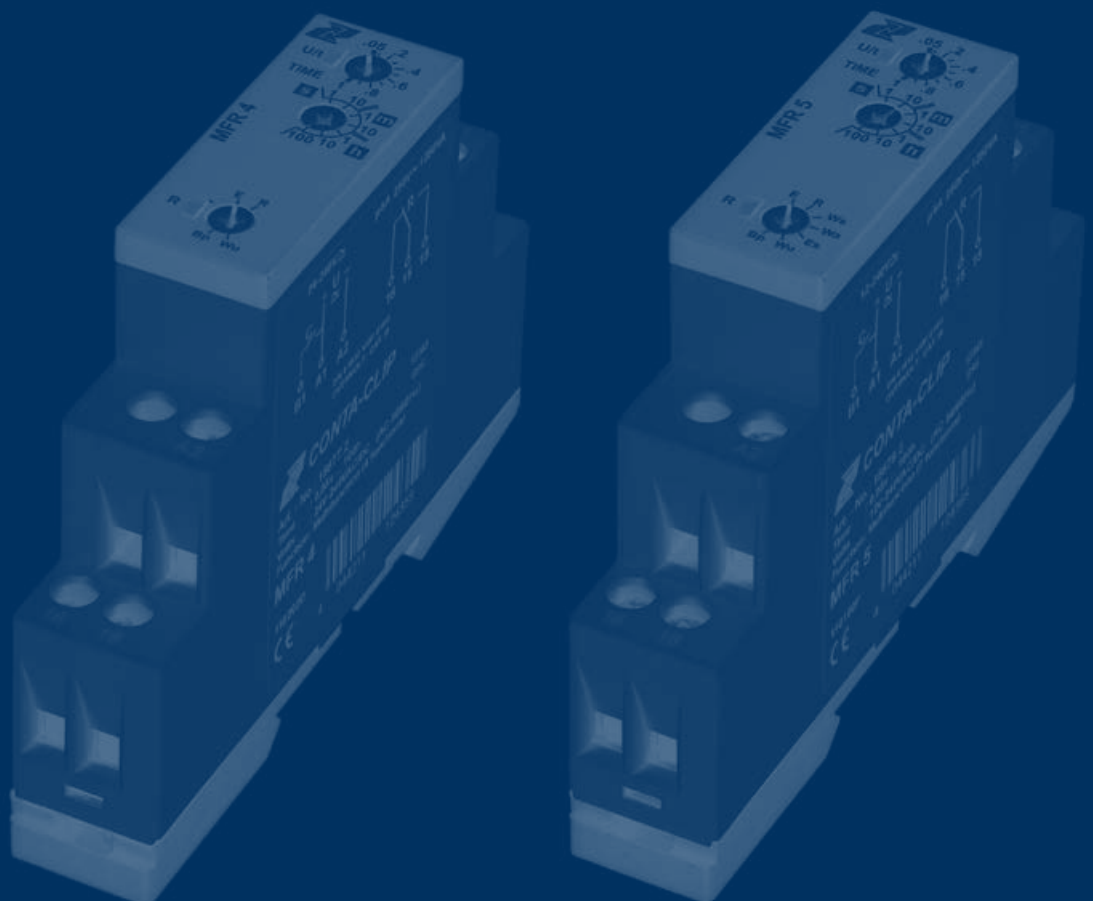
Circuit diagram



Modules	Cat. no./Qty. Relay Pluggable	Type	Cat. no./Qty. Relay soldered	Type	Circuit dia- gram	Size (L x W x H) with TS 35 x 7.5	Weight
Modules with 2 relays each with 2 CO contact							
	5566.2/1	RIM 2/2 W/24 V +	5567.2/1	RIMD 2/2 W/24 V +	1	87 x 44 x 72	120 g / 110 g
	5568.2/1	RIM 2/2 W/24 V -	5569.2/1	RIMD 2/2 W/24 V -	2	87 x 44 x 72	120 g / 110 g
	5658.2/1	RIM 2/2 W/24 ACG	5659.2/1	RIMD 2/2 W/24 ACG	3	87 x 44 x 72	120 g / 110 g
	5570.2/1	RIM 2/2 W/48 V +	5571.2/1	RIMD 2/2 W/48 V +	1	87 x 44 x 72	120 g / 110 g
	5572.2/1	RIM 2/2 W/48 V -	5573.2/1	RIMD 2/2 W/48 V -	2	87 x 44 x 72	120 g / 110 g
	5662.2/1	RIM 2/2 W/115 V +	5663.2/1	RIMD 2/2 W/115 V +	1	87 x 44 x 72	120 g / 110 g
	5664.2/1	RIM 2/2 W/115 V -	5665.2/1	RIMD 2/2 W/115 V -	2	87 x 44 x 72	120 g / 110 g
	5578.2/1	RIM 2/2 W/115 ACG	5579.2/1	RIMD 2/2 W/115 ACG	3	87 x 44 x 72	120 g / 110 g
	5580.2/1	RIM 2/2 W/230 ACG	5581.2/1	RIMD 2/2 W/230 ACG	3	87 x 44 x 72	120 g / 110 g
Modules with 4 relays each with 2 CO contact							
	5582.2/1	RIM 4/2 W/24 V +	5583.2/1	RIMD 4/2 W/24 V +	1	87 x 80 x 72	202 g / 182 g
	5584.2/1	RIM 4/2 W/24 V -	5585.2/1	RIMD 4/2 W/24 V -	2	87 x 80 x 72	202 g / 182 g
	5668.2/1	RIM 4/2 W/24 ACG	5669.2/1	RIMD 4/2 W/24 ACG	3	87 x 80 x 72	202 g / 182 g
	5586.2/1	RIM 4/2 W/48 V +	5587.2/1	RIMD 4/2 W/48 V +	1	87 x 80 x 72	202 g / 182 g
	5588.2/1	RIM 4/2 W/48 V -	5589.2/1	RIMD 4/2 W/48 V -	2	87 x 80 x 72	202 g / 182 g
	5672.2/1	RIM 4/2 W/115 V +	5673.2/1	RIMD 4/2 W/115 V +	1	87 x 80 x 72	202 g / 182 g
	5674.2/1	RIM 4/2 W/115 V -	5675.2/1	RIMD 4/2 W/115 V -	2	87 x 80 x 72	202 g / 182 g
	5594.2/1	RIM 4/2 W/115 ACG	5595.2/1	RIMD 4/2 W/115 ACG	3	87 x 80 x 72	202 g / 182 g
	5596.2/1	RIM 4/2 W/230 ACG	5597.2/1	RIMD 4/2 W/230 ACG	3	87 x 80 x 72	202 g / 182 g
Modules with 8 relays each with 2 CO contact							
	6155.2/1	RIM 8/2 W/24 V +	6156.2/1	RIMD 8/2 W/24 V +	1	87 x 151 x 72	392 g / 352 g
	6157.2/1	RIM 8/2 W/24 V -	6158.2/1	RIMD 8/2 W/24 V -	2	87 x 151 x 72	392 g / 352 g
	6159.2/1	RIM 8/2 W/24 ACG	6160.2/1	RIMD 8/2 W/24 ACG	3	87 x 151 x 72	392 g / 352 g
	6161.2/1	RIM 8/2 W/48 V +	6162.2/1	RIMD 8/2 W/48 V +	1	87 x 151 x 72	392 g / 352 g
	6163.2/1	RIM 8/2 W/48 V -	6164.2/1	RIMD 8/2 W/48 V -	2	87 x 151 x 72	392 g / 352 g
	6165.2/1	RIM 8/2 W/115 V +	6166.2/1	RIMD 8/2 W/115 V +	1	87 x 151 x 72	392 g / 352 g
	6167.2/1	RIM 8/2 W/115 V -	6168.2/1	RIMD 8/2 W/115 V -	2	87 x 151 x 72	392 g / 352 g
	6169.2/1	RIM 8/2 W/115 ACG	6170.2/1	RIMD 8/2 W/115 ACG	3	87 x 151 x 72	392 g / 352 g
	6171.2/1	RIM 8/2 W/230 ACG	6172.2/1	RIMD 8/2 W/230 ACG	3	87 x 151 x 72	392 g / 352 g
Modules with 16 relays each with 2 CO contact							
	6173.2/1	RIM 16/2 W/24 V +	6174.2/1	RIMD 16/2 W/24 V +	1	87 x 293 x 72	764 g / 684 g
	6175.2/1	RIM 16/2 W/24 V -	6176.2/1	RIMD 16/2 W/24 V -	2	87 x 293 x 72	764 g / 684 g
	6177.2/1	RIM 16/2 W/24 ACG	6178.2/1	RIMD 16/2 W/24 ACG	3	87 x 293 x 72	764 g / 684 g
	6179.2/1	RIM 16/2 W/48 V +	6180.2/1	RIMD 16/2 W/48 V +	1	87 x 293 x 72	764 g / 684 g
	6181.2/1	RIM 16/2 W/48 V -	6182.2/1	RIMD 16/2 W/48 V -	2	87 x 293 x 72	764 g / 684 g
	6183.2/1	RIM 16/2 W/115 V +	6184.2/1	RIMD 16/2 W/115 V +	1	87 x 293 x 72	764 g / 684 g
	6185.2/1	RIM 16/2 W/115 V -	6186.2/1	RIMD 16/2 W/115 V -	2	87 x 293 x 72	764 g / 684 g
	6187.2/1	RIM 16/2 W/115 ACG	6188.2/1	RIMD 16/2 W/115 ACG	3	87 x 293 x 72	764 g / 684 g
	6189.2/1	RIM 16/2 W/230 ACG	6190.2/1	RIMD 16/2 W/230 ACG	3	87 x 293 x 72	764 g / 684 g

Functional relays

Automation engineering applications often call for small control tasks. These new functional relays were developed in order to accomplish such tasks as simply as possible. The small size and great flexibility of these relays allows them to be used in many different applications.



Functional relays



Multi-function timing relays MFR 4 | MFR 5 | MFR 7

Instead of timing units with only one function, these units offer the affordable possibility to implement several common time functions, such as ON-delay, impulse-ON, impulse-OFF, or pulse-monitoring. They reduce storage costs, since only one unit is needed for all applications.



Clock-pulse generator dual-time relays MFR 6

This functional unit features a blink function with a freely configurable time setting. The output relay is controlled in accordance with both set times, until the supply voltage is interrupted. You can select operation – either beginning with pulse or beginning with delay.



Undervoltage monitoring relays USR1 | USR 2

These functional units are used for the undervoltage monitoring of alternating voltage in 3- or 1-phase supply systems. They monitor the power supply and protect motors and other power-consuming modules from the effects of phase errors. Voltages that are too low or loss of phase can lead to system failures and as such represent an enormous potential for danger.

Functional relays



2 star-delta switching relay SDSR

Star-delta switching is a commonly used function in motor-control engineering. These new timing relays were developed in order to accomplish this task as simply as possible. They can be used in different motor types because the transit time is adjustable.



Voltage monitoring relays VMR 1 | VMR 3

These voltage-monitoring relays conveniently monitor three-phase systems with and without a neutral wire. By precisely capturing characteristic values, they ensure the accessibility and reliability of a facility or machine. And in doing so, they deliver long-term added value. When operating facilities such as pumps and machines, it is critical to monitor the phase sequence, phase loss and asymmetry. Monitoring allows safe operation and prevents damage in a simple and efficient way.

GSM-PRO2



GSM-PRO2(E) the perfect communicator

CONTA-CLIP's GSM-PRO2(E) module provides a 2G/3G remote control and maintenance solution which allows you to monitor and control decentralized facilities. The **GSM-PRO2(E)** module informs you when your process has reached a userdefined status or limit value. Digital and analogue inputs values can be transmitted via e-mail or SMS (text message). The digital relay outputs can be switched using an SMS sent from the decentralized control room or from the service technician. This way the process can be monitored and controlled remotely. Android, iPhone and Windows smartphone apps are available to make the monitoring and control functions of the **GSM-PRO2(E)** modules even easier to operate. A user-friendly application can be used to configure the module's inputs and outputs and their required functions.

Multi-function timing relay MFR

MFR 4 | MFR 5

General specifications

Mechanical design

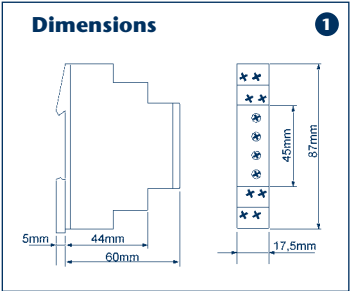
- Mounts on TS 35
- Housing made of self-extinguishing plastic, IP40 protection
- Any mounting position is possible
- Screw connections protected against accidental contact, acc. to VBG 4 IP20 protection

Screw connection

- 1 x 0.5 to 2.5 mm² with/without wire-end ferrules
- 1 x 4 mm² without wire-end ferrules
- 2 x 0.5 to 2.5 mm² with/without wire-end ferrules
- 2 x 2.5 mm² flexible without wire-end ferrules
- Torque max. 1 Nm

Functional description

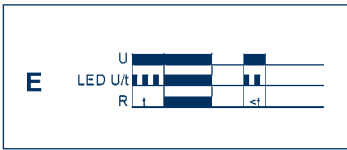
- The voltage supply must be disconnected before the time function is selected.
- Please refer to data sheet or information printed on the module for a complete list of the various module functions.



Environmental conditions	
Ambient temperature	-25 to +55 °C (acc. to IEC 68-1) -25 to +55 °C (acc. to IEC 508-1)
Storage temperature	-25 to +70 °C
Transportation temperature	-25 to +70 °C
Relative humidity	15% to 85% (acc. to IEC 721-3-3 Class 3K3)
Contamination degree	3 (acc. to IEC 664-1)
Vibration resistance	10 to 55 Hz 0.35 mm (acc. to IEC 68-2-6)
Shock resistance	15 g 11 ms (acc. to IEC 68-2-27)

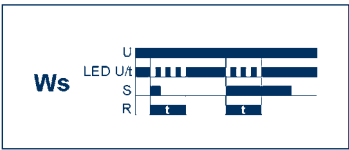
ON delay (E)

The set time t begins to run with the application of the supply voltage U . The green LED U/t flashes. After the time t has passed (the green LED U/t is lit), the output relay R goes on (yellow LED lit). This status is maintained until the supply voltage is interrupted. If the supply voltage is interrupted before the expiration of the time t , then the expired time is deleted and the time starts anew when the supply voltage is re-applied.



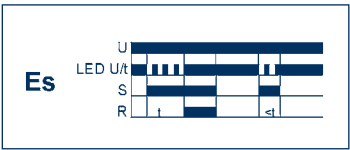
Impulse-ON with control contact (Ws)

The supply voltage U must constantly be applied to device (green LED U/t is lit). The output relay R activates (yellow LED lit) when the control contact S closes, and the set time t begins (green LED U/t flashes). After the time t has passed (green LED U/t is lit), the output relay deactivates (yellow LED not lit up). The control contact can be switched while the time is running. A further cycle can be started only when the currently running cycle is closed.



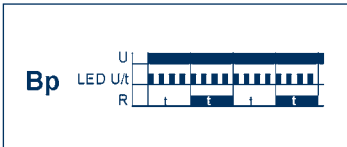
ON-delay with control contact (Es)

The supply voltage U must constantly be applied to device (green LED U/t is lit). The set time t begins when the control contact S is closed. The green LED U/t flashes. The output relay R activates (yellow LED is lit) after the expiration of the time t (green LED U/t is lit). This status is maintained until the control contact is opened. If the control contact is opened before the expiration of the time t , then the expired time is deleted and the time starts anew with the next cycle.



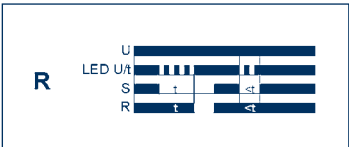
Flasher begin with delay (Bp)

The set time t begins to run with the application of the supply voltage U . The green LED U/t flashes. After the time t has passed, the output relay R goes on (the yellow LED lights up), and the set time t begins again. After the time t has passed, the output relay deactivates (yellow LED not lit). The output relay is controlled in a 1:1 ratio until the supply voltage is interrupted.



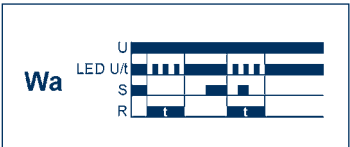
OFF-delay with control contact (R)

The supply voltage U must constantly be applied to device (green LED U/t is lit). The output relay R activates (yellow LED lit) when the control contact S closes. The set time t begins to run when the control contact S is opened. The green LED U/t flashes. The output relay deactivates (yellow LED not lit) after the expiration of the time t (green LED U/t is lit). If the control contact is closed again before time t is expired, then the expired time is deleted and the time starts anew with the next cycle.



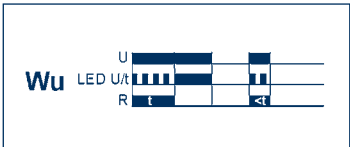
Impulse-OFF with control contact (Wa)

The supply voltage U must constantly be applied to device (green LED U/t is lit). The closure of control contact S has no influence on the positioning of the output relay R . When the control contact opens, the output relay activates (yellow LED is lit) and the set time t begins to run (green LED U/t flashes). The output relay deactivates (yellow LED not lit) after the expiration of the time t (green LED U/t is lit). The control contact can be switched while the time is running. A further cycle can be started only when the currently running cycle is closed.



Impulse-ON voltage controlled (Wu)

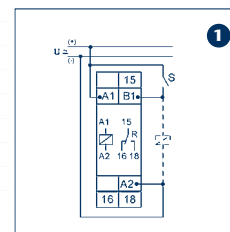
The output relay R is activated (yellow LED lit) when the supply voltage is applied. The set time then begins to run (green LED U/t flashes). The output relay deactivates (yellow LED not lit) after the expiration of the time t (green LED U/t is lit). This status is maintained until the supply voltage is interrupted. If the supply voltage is interrupted before the time t expires, the the output relay is deactivated. The time that has already expired is deleted and when the supply voltage is re-applied the time is started anew.



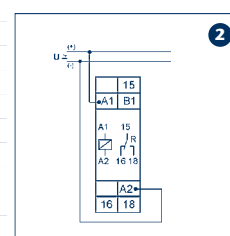


Type	MFR 4	MFR 5	
Cat. no./Qty.	15677.2/1	15678.2/1	
Dimensions	1	1	
Wiring diagram	1, 2	1, 2	
Dimensions (L x W x H) TS 35 x 7.5	87 x 17.5 x 67.5 mm	87 x 17.5 x 67.5 mm	
Weight (individually packed: components and packaging)	65 g	65 g	
Short description	Timing relay	Timing relay	
	Multi-function	Multi-function	
	4 functions	7 functions	
	7 time ranges	7 time ranges	
	Wide-range input	Wide-range input	
	1 CO contact	1 CO contact	
	Width: 17.5 mm	Width: 17.5 mm	
	Installation design	Installation design	
Functions	E, R, Wu, Bp*	E, R, Ws, Wa, Es, Wu, Bp*	
Time ranges / Setting ranges	50 ms to 100 h	50 ms to 100 h	
Displays	Green LED U/t ON*	Green LED U/t ON*	
	Green LED U/t flashing*	Green LED U/t flashing*	
	Yellow LED R ON/OFF*	Yellow LED R ON/OFF*	
Input circuit			
Supply voltage	24 to 240 V AC/DC terminals A1(+) – A2(-)	12 to 240 V AC/DC terminals A1(+) – A2(-)	
Tolerance	24 V -15 % to 240 V +10 %	12 V -10 % to 240 V +10 %	
Rated frequency	48 to 63 Hz	48 to 63 Hz	
Rated consumption	4 VA (1.5 W)	4 VA (1.5 W)	
Power-on duration	100 %	100 %	
Recovery time	100 ms	100 ms	
Residual ripple for DC	10 %	10 %	
Release voltage	> 30 % of min. supply voltage	> 30 % of min. supply voltage	
Overvoltage category	III (acc. to IEC 664-1)	III (acc. to IEC 664-1)	
Rated impulse voltage	4 kV	4 kV	
Output circuit	1 potential-free CO contact	1 potential-free CO contact	
Rated voltage	250 V AC	250 V AC	
Switching capacity of aligned device (gap < 5 mm)	2000 VA (8 A/250 V AC)	2000 VA (8 A/250 V AC)	
Switching capacity of non-aligned device (gap < 5 mm)	2000 VA (8 A/250 V AC)	2000 VA (8 A/250 V AC)	
Fuse	8 A fast acting	8 A fast acting	
Mechanical lifespan	20 x 10 ⁶ switching cycles	20 x 10 ⁶ switching cycles	
Electrical lifespan	2 x 10 ⁵ switching cycles at 1000 VA*	2 x 10 ⁵ switching cycles at 1000 VA*	
Switching frequency	Max. 60/min at 100 VA* Max. 6/min at 1000 VA* (acc. to IEC 947-5-1)	Max. 60/min at 100 VA* Max. 6/min at 1000 VA* (acc. to IEC 947-5-1)	
Rated insulation voltage	250 V AC (acc. to IEC 664-1)	250 V AC (acc. to IEC 664-1)	
Overvoltage category	III (acc. to IEC 664-1)	III (acc. to IEC 664-1)	
Rated impulse voltage	4 kV	4 kV	
Control contact			
Input	Voltage applied, terminals A1-B1	Voltage applied, terminals A1-B1	
Can carry load	yes	yes	
Response threshold	Automatically adjusted to supply voltage	Automatically adjusted to supply voltage	
Max. line length	10 m	10 m	
Min. control pulse duration	DC 50 ms/AC 100 ms	DC 50 ms/AC 100 ms	
Accuracy			
Basic accuracy	± 1 % (from scale reading)	± 1 % (from scale reading)	
Setting tolerance	≤ 5 % (from scale reading)	≤ 5 % (from scale reading)	
Repeat accuracy	< 0.5 % or ± 5 ms	< 0.5 % or ± 5 ms	
Voltage influence	-	-	
Temperature influence	≤ 0.01 % / °C	≤ 0.01 % / °C	

With control contact



Without control contact



Functional relays

Abbreviations legend:

- E** ON delay
- R** OFF delay*
- Ws** Impulse-ON*
- Wa** Impulse-OFF*
- Es** ON delay*
- Wu** Impulse-ON
- Voltage controlled
- Bp** Flasher, begin with pause
- *With control contact

Green LED U/t ON:

Supply voltage applied

Green LED U/t flashing:

Indicates time has expired

Yellow LED R ON/OFF:

Position of output relay

Output circuit

VA resistive load

*See abbreviations legend

Multi-function timing relay MFR

MFR 7

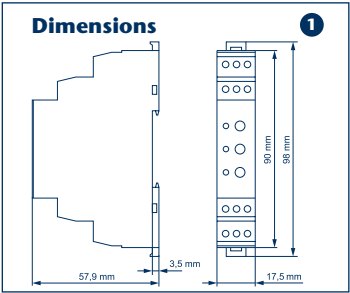
General specifications

Mechanical design

- Mounts on TS 35
- Housing made of self-extinguishing plastic, IP40 protection
- Any mounting position is possible
- Screw connections protected against accidental contact, acc. to VBG 4 IP20 protection

Screw connection

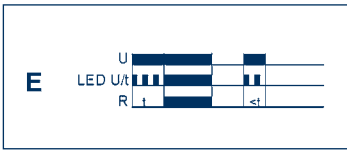
- 1 x 0.5 to 2.5 mm² with/without wire-end ferrules
- 1 x 4 mm² without wire-end ferrules
- Torque max. 0,5 Nm



Environmental conditions	
Ambient temperature	-20 to +50 °C
Storage temperature	-40 to +70 °C
Relative humidity	25 % to 75 %
Contamination degree	2

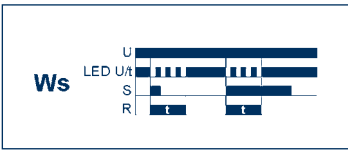
ON delay (E)

The set time t begins to run with the application of the supply voltage U . The green LED U/t flashes. After the time t has passed (the green LED U/t is lit), the output relay R goes on (yellow LED lit). This status is maintained until the supply voltage is interrupted. If the supply voltage is interrupted before the expiration of the time t , then the expired time is deleted and the time starts anew when the supply voltage is re-applied.



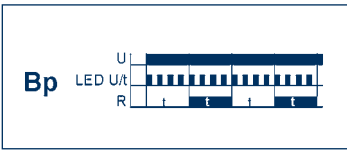
Impulse-ON with control contact (Ws)

The supply voltage U must constantly be applied to device (green LED U/t is lit). The output relay R activates (yellow LED lit) when the control contact S closes, and the set time t begins (green LED U/t flashes). After the time t has passed (green LED U/t is lit), the output relay deactivates (yellow LED not lit up). The control contact can be switched while the time is running. A further cycle can be started only when the currently running cycle is closed.



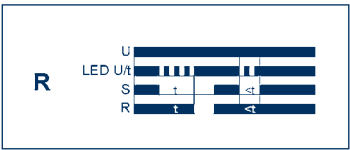
Flasher begin with delay (Bp)

The set time t begins to run with the application of the supply voltage U . The green LED U/t flashes. After the time t has passed, the output relay R goes on (the yellow LED lights up), and the set time t begins again. After the time t has passed, the output relay deactivates (yellow LED not lit). The output relay is controlled in a 1:1 ratio until the supply voltage is interrupted.



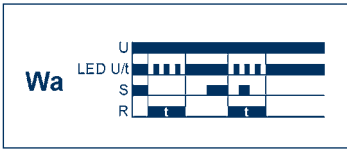
OFF-delay with control contact (R)

The supply voltage U must constantly be applied to device (green LED U/t is lit). The output relay R activates (yellow LED lit) when the control contact S closes. The set time t begins to run when the control contact S is opened. The green LED U/t flashes. The output relay deactivates (yellow LED not lit) after the expiration of the time t (green LED U/t is lit). If the control contact is closed again before time t is expired, then the expired time is deleted and the time starts anew with the next cycle.



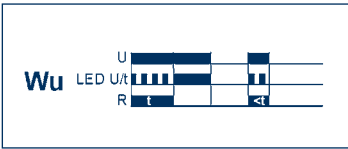
Impulse-OFF with control contact (Wa)

The supply voltage U must constantly be applied to device (green LED U/t is lit). The closure of control contact S has no influence on the positioning of the output relay R . When the control contact opens, the output relay activates (yellow LED is lit) and the set time t begins to run (green LED U/t flashes). The output relay deactivates (yellow LED not lit) after the expiration of the time t (green LED U/t is lit). The control contact can be switched while the time is running. A further cycle can be started only when the currently running cycle is closed.



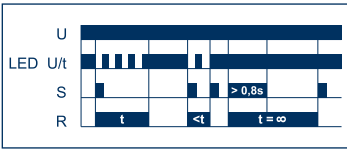
Impulse-ON voltage controlled (Wu)

The output relay R is activated (yellow LED lit) when the supply voltage is applied. The set time then begins to run (green LED U/t flashes). The output relay deactivates (yellow LED not lit) after the expiration of the time t (green LED U/t is lit). This status is maintained until the supply voltage is interrupted. If the supply voltage is interrupted before the time t expires, the the output relay is deactivated. The time that has already expired is deleted and when the supply voltage is re-applied the time is started anew.



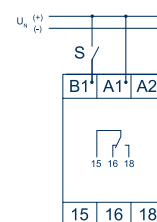
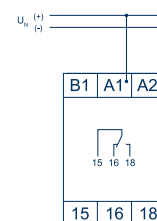
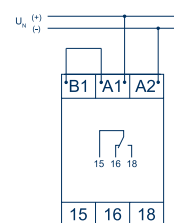
F-Flipflop (Toggle)

The function of the impulse switch mode (with ($<0.8s$) or without ($>0.8s$) off delay) depends on the control pulse length. The supply voltage U must be constantly applied to the device (green LED U/t illuminated). When the control contact S is triggered by short pulse ($<0.8s$), the output relay R switches into on-position (yellow LED R illuminated) and the set interval t for automatic off delay ($<0.8s$) is activated (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay switches into off-position (yellow LED not illuminated). If the control contact S is re-triggered before the interval t has expired, the interval already expired is erased and the output relay R switches into off-position (yellow LED not illuminated). By start without timing function (long trigger pulse) the output relay switches into off-position by another activation of the control contact S , only.



MFR 7


Type		MFR 7	
Cat. no./Qty.		16373.2/10	
Dimensions (L x W x H) TS 35 x 7.5		90 x 17,5 x 57,9 mm	
Weight		44 g	
Functions		E, R, Ws, Wa, Bp, F, Wu (Wu = Ws with fixed jumper A1-B1)	
Time ranges / Setting ranges		50 ms to 10 h	
Displays		Green LED U/t ON Supply voltage applied Green LED U/t flashing Indicates time has expired Yellow LED R ON/OFF position of output relay	
Input circuit		DC	AC
Supply voltage		24 to 48 V AC/DC, terminals A1(+) – A2(-)	24...240 V AC, terminals A1– A2
Tolerance		-15 % / + 10 %	-15 % / + 10 %
Rated frequency		-	48 bis 63 Hz
Rated consumption		0,4 W	1 W (8 VA)
Power-on duration		100 %	100 %
Backup power time		<20 ms	<60 ms (230 V AC) / <30 ms (24 V AC)
Recovery time		>100 ms	>100 ms
Release voltage		>30 % of min. supply voltage	> 30 % of min. supply voltage
Control contact		Terminals A1-B1	
Input		Yes	
Can carry load		DC min. 50 ms / AC min. 100 ms	
Output circuit		1 CO	
Contact		250 V	
Rated voltage		5 A / 250 V	
Switching capacity (ohmic load)		AgNi	
Contact material		5A flink	
Fuse		1 x 10 ⁶ cycles	
Mechanical lifespan		1 x 10 ⁵ cycles	
Electrical lifespan		6/min - 1200/min	
Endurance with – without load		Accuracy	
Accuracy		Basic accuracy	
Basic accuracy		< 1,5 % (from scale reading)	
Setting tolerance		< 5 % (from scale reading)	
Repeat accuracy		< 0,5 % or ± 5 ms	
Temperature influence		<0,05 % / °C	
General specifications		Contamination degree / overvoltage category (IEC61812-1)	
Contamination degree / overvoltage category (IEC61812-1)		2 / II	
Rated insulation voltage (IEC 61812-1)		300 V (Input circuit / Output circuit)	
Rated impulse voltage (IEC 61812-1)		2500 V (Input circuit / Output circuit)	
Insulation test voltage (IEC 61812-1)		1600 V (Input circuit / Output circuit)	
Ambient temperature/ Storage temperature		-20 to +50 °C / -40 to +70 °C	
Relative humidity		25 to 75 %	
Protection degree housing / terminals		IP40 / IP20	
Connection type / cross-section		Screw connection / 0,25...2,5 mm²	
Stripping length / Torque		7 mm / max. 0,5 Nm	

With control contact

Without control contact

Function Wu (WS)


Clock-pulse generator dual-time relays MFR

MFR 6

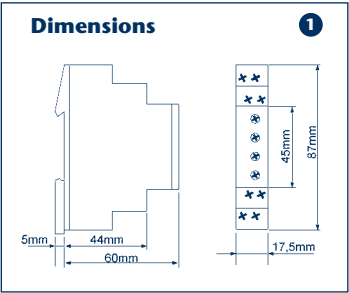
General specifications

Mechanical design

- Mounts on TS 35
- Housing made of self-extinguishing plastic, IP40 protection
- Any mounting position is possible
- Screw connections protected against accidental contact, acc. to VBG 4 IP20 protection

Screw connection

- 1 x 0.5 to 2.5 mm² with/without wire-end ferrules
- 1 x 4 mm² without wire-end ferrules
- 2 x 0.5 to 2.5 mm² with/without wire-end ferrules
- 2 x 2.5 mm² flexible without wire-end ferrules
- Torque max. 1 Nm



Environmental conditions

Ambient temperature	-25 to +55 °C (acc. to IEC 68-1)
	-25 to +55 °C (acc. to IEC 508-1)
Storage temperature	-25 to +70 °C
Transportation temperature	-25 to +70 °C
Relative humidity	15% to 85% (acc. to IEC 721-3-3 Class 3K3)
Contamination degree	3 (acc. to IEC 664-1)
Vibration resistance	10 to 55 Hz 0.35 mm (acc. to IEC 68-2-6)
Shock resistance	15 g 11 ms (acc. to IEC 68-2-27)

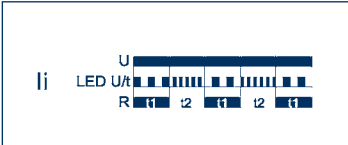
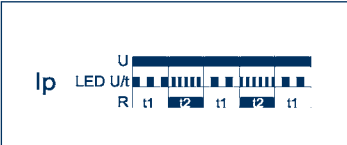
Functional description

Pulsed begin with delay (Ip)

The set time t1 begins to run with the application of the supply voltage U. (The green LED U/t flashes slowly.) After the time t1 expires, the output relay R activates (yellow LED is lit), and the time t2 begins to run (green LED U/t flashes quickly). After the time t2 has expired, the output relay deactivates (yellow LED not lit). The output relay is controlled in accordance with both set times until the supply voltage is interrupted.

Pulsed begin with pulse (Ij)

The output relay R is activated (yellow LED lit) when the supply voltage U is applied. The set time t1 then begins to run (green LED U/t flashes slowly). After the time t1 has expired, the output relay is deactivated (yellow LED not lit), and the set time t2 begins to run (green LED U/t flashes quickly). After the time t2 has expired, the output relay re-activates (yellow LED is lit). The output relay is controlled in accordance with both set times until the supply voltage is interrupted.



Wiring diagram

1

U

A1 B1

A1 15 16 18

A2 16 18

A2

16 18

A1 B1

I1

A1 B1

I1

Output circuit
*VA resistive load

111

Undervoltage monitoring relays USR

USR 1 | USR 2

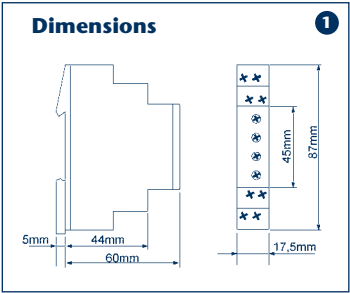
General specifications

Mechanical design

- Mounts on TS 35
- Housing made of self-extinguishing plastic, IP40 protection
- Any mounting position is possible
- Screw connections protected against accidental contact, acc. to VBG 4 IP20 protection

Screw connection

- 1 x 0.5 to 2.5 mm² with/without wire-end ferrules
- 1 x 4 mm² without wire-end ferrules
- 2 x 0.5 to 1.5 mm² with/without wire-end ferrules
- 2 x 2.5 mm² flexible without wire-end ferrules
- Torque max. 1 Nm



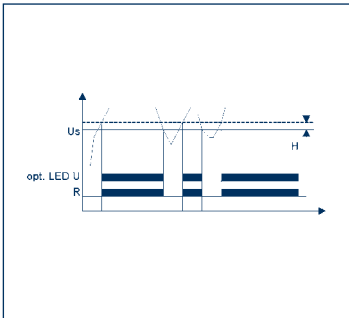
Environmental conditions	
Ambient temperature	-25 to +55 °C (acc. to IEC 68-1)
	-25 to +55 °C (acc. to IEC 508-1)
Storage temperature	-25 to +70 °C
Transportation temperature	-25 to +70 °C
Relative humidity	15% to 85% (acc. to IEC 721-3-3 Class 3K3)
Contamination degree	3 (acc. to IEC 664-1)
Vibration resistance	10 to 55 Hz 0.35 mm (acc. to IEC 68-2-6)
Shock resistance	15 g 11 ms (acc. to IEC 68-2-27)

Functional description

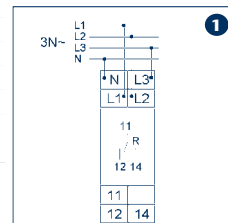
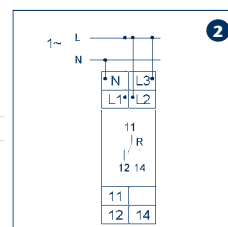
Undervoltage monitoring for three-phase AC mains with a fixed (UFR 1) or variable (UFR 2) switching threshold, and a fixed hysteresis. All measuring inputs (L1, L2, and L3) must each be connected to a phase voltage. If three-phase measurements are not desired, then multiple measurement inputs should be connected to one phase, so that all inputs have the appropriate voltage applied. If the reverse voltage coming from the load exceeds the threshold U_s , then a phase failure can not be detected.

Undervoltage monitoring without the optional time function

The output relay activates (yellow LED lit) when the measured voltage of all connected phases exceeds the threshold U_s by more than the hysteresis. When the voltage of one of the connected phases falls below the fixed threshold value, the output relay is deactivated (yellow LED not lit).



	USR 1	USR 2	
			
Type	USR 1	USR 2	
Cat. no./Qty.	15682.2/1	15683.2/1	
Dimensions	1	1	
Wiring diagrams	1, 2	1, 2	
Dimensions (L x W x H) TS 35 x 7.5	87 x 17.5 x 67.5 mm	87 x 17.5 x 67.5 mm	
Weight (individually packed: components and packaging)	72 g	72 g	
Short description	Undervoltage Monitoring relays	Undervoltage Monitoring relays	
	Voltage monitoring 3-phase	Voltage monitoring 3-phase	
	Undervoltage monitoring	Undervoltage monitoring	
	Supply voltage = Measuring voltage	Supply voltage = Measuring voltage	
	Switching threshold fixed for systems accord. to VDE0108	Variable switching threshold	
	1 CO contact	1 CO contact	
	Width: 17.5 mm	Width: 17.5 mm	
	Installation design	Installation design	
Time ranges / Setting ranges	Triggering delay	Triggering delay	
	Fast, approx. 200 ms	Fast, approx. 200 ms	
Displays			
	Yellow LED R ON/OFF*	Yellow LED R ON/OFF*	
		Green LED L1 ON/OFF*	
		Green LED L2 ON/OFF*	
		Green LED L3 ON/OFF*	
Input circuit			
Supply voltage	= measuring voltage	= measuring voltage	
Terminals	N-L1-L2-L3	N-L1-L2-L3	
Rated voltage	Un: 3N-400/230 V	Un: 3N-400/230 V	
Tolerance	-30% to +10% of Un	-30% to +10% of Un	
Rated frequency	48 to 63 Hz	48 to 63 Hz	
Rated consumption	5 VA (0.6 W)	8 VA (0.8 W)	
Power-on duration	100 %	100 %	
Recovery time	500 ms	500 ms	
Stored energy time	-	-	
Release voltage	Defined by measuring function	Defined by measuring function	
Overvoltage category	III (acc. to IEC 664-1)	III (acc. to IEC 664-1)	
Rated impulse voltage	4 kV	4 kV	
Output circuit	1 potential-free CO contact	1 potential-free CO contact	
Rated voltage	250 V AC	250 V AC	
Switching capacity of aligned device (gap < 5 mm)	1250 VA (5 A/250 V AC)	1250 VA (5 A/250 V AC)	
Switching capacity of non-aligned device (gap < 5 mm)	1250 VA (5 A/250V AC)	1250 VA (5 A/250V AC)	
Fuse	5 A fast acting	5 A fast acting	
Mechanical lifespan	20 x 10 ⁶ switching cycles	20 x 10 ⁶ switching cycles	
Electrical lifespan	2 x 10 ⁵ switching cycles at 1000 VA*	2 x 10 ⁵ switching cycles at 1000 VA*	
Switching frequency	Max. 60/min at 100 VA* Max. 6/min at 1000 VA* (acc. to IEC 947-5-1)	Max. 60/min at 100 VA* Max. 6/min at 1000 VA* (acc. to IEC 947-5-1)	
Overvoltage category	III (acc. to IEC 664-1)	III (acc. to IEC 664-1)	
Rated impulse voltage	4 kV	4 kV	
Measuring circuit			
Measured value	AC sinus, 48 to 68 Hz	AC sinus, 48 to 68 Hz	
Measurement input	= supply voltage	= supply voltage	
Terminals	N-L1-L2-L3	N-L1-L2-L3	
Overload capacity	Defined by the tolerance of the supply voltage	Defined by the tolerance of the supply voltage	
input resistance	-	-	
Switching threshold Us	Fast 195.5 V (L-N) For facilities, acc. to VDE 0108	160 to 240 V (L-N)	
Hysteresis H	approx. 5%	approx. 5%	
Overvoltage category	III (acc. to IEC 664-1)	III (acc. to IEC 664-1)	
Rated impulse voltage	4 kV	4 kV	
Accuracy			
Basic accuracy	± 5% from rated voltage	± 5% from rated voltage	
Setting tolerance	-	-	
Repeat accuracy	≤ 2%	≤ 2%	
Voltage influence	-	-	
Temperature influence	≤ 1 %	≤ 1 %	

Wiring diagram

Wiring diagram


Functional relays

Abbreviations legend:
Yellow LED R ON/OFF:

Position of output relay

Green LED L1 ON/OFF:

Displays voltage L1-N

Green LED L2 ON/OFF:

Displays voltage L2-N

Green LED L3 ON/OFF:

Displays voltage L3-N

Output circuit

*VA resistive load

*See abbreviations legend

Star-delta switching relay SDSR

SDSR 2

General specifications

Mechanical design

- Mounts on TS 35
- Housing made of self-extinguishing plastic, IP40 protection
- Any mounting position is possible
- Screw connections protected against accidental contact, acc. to VBG 4 IP 20 protection

Screw connection

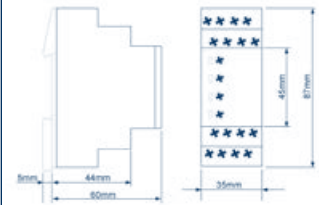
- 1 x 0.5 to 2.5 mm² with/without wire-end ferrules
- 1 x 4 mm² without wire-end ferrules
- 2 x 0.5 to 1.5 mm² with/without wire-end ferrules
- 2 x 2.5 mm² flexible without wire-end ferrules
- Torque max. 1 Nm

Functional description

When supply voltage U is applied, the output relay for the star protection activates (yellow LED is lit), and the set star time (t1) begins to run (green LED U/t flashes). After the star time expires (green LED U/t is lit), the output relay for the star protection is deactivated (yellow LED is not lit), and the set transit time (t2) begins to run. After the transit time expires, the output relay for the delta protection activates. In order to re-start this function, the supply voltage must be interrupted and re-applied.

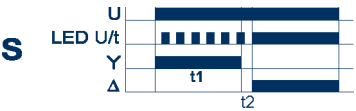
Dimensions

1

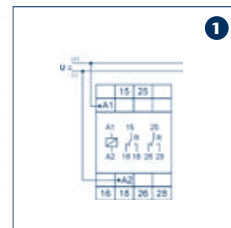


Environmental conditions

Ambient temperature	-25 to +55 °C (acc. to IEC 68-1)
	-25 to +40 °C (UL 508)
Storage temperature	-25 to +70 °C
Transportation temperature	-25 to +70 °C
Relative humidity	15 % to 85 % (acc. to IEC 721-3-3 Class 3K3)
Contamination degree	2, in installed condition 3 (acc. to IEC 664-1)
Vibration resistance	10 to 55 Hz 0.35 mm (acc. to IEC 68-2-6)
Shock resistance	15 g 11 ms (acc. to IEC 68-2-27)



SDSR 2			
			
Type	SDSR 2		
Cat. no./Qty.	15777.2/1		
Dimensions	2		
Wiring diagram	2		
Dimensions (L x W x H) TS 35 x 7.5	87 x 35 x 67.5mm		
Weight (individually packed: components and packaging)	106 g		
Short description	Star-delta start-up		
	2 CO contact		
	Wide-range input		
	Width: 35 mm		
	Installation design		
Functions	S star-delta start-up		
Time delay range	Time end range/setting range		
Star time	10 sec/500 ms to 10 sec 30 sec/1500 ms to 30 sec 1 min/3 sec to 1 min		
Transit time (fast)			
	40 ms		
	60 ms		
	80 ms		
	100 ms		
Displays			
	Green LED ON*		
	Green LED flashes*		
	Yellow LED R ON/OFF*		
Supply circuit			
supply voltage	12 to 240 V AC/DC terminals A1(+)-A2(-)		
Tolerance	12 V -10% to 240 V +10%		
Rated frequency	48 to 63 Hz		
Rated consumption	4 VA (1.5 W)		
Power-on duration	100%		
Recovery time	100 ms		
Residual ripple for DC	10%		
Release voltage	> 30% of min. supply voltage		
Overvoltage category	III (acc. to IEC 664-1)		
Rated impulse voltage	4 kV		
Output circuit	2 potential-free CO contact		
Rated voltage	250 V AC		
Switching capacity of aligned device (gap < 5 mm)	2000 VA (8A/250V AC)		
Switching capacity of non-aligned device (gap < 5 mm)	2000 VA (8A/250V AC)		
Fuse	8A fast acting		
Mechanical lifespan	20 x 10 ⁶ switching cycles		
Electrical lifespan	2 x 10 ⁵ switching cycles at 1000 VA resistive load		
Switching frequency	Max. 60/min at 100 VA resistive load Max. 6/min at 1000 VA resistive load (acc. to IEC 947-5-1)		
Rated insulation voltage	250 V AC (acc. to IEC 664-1)		
Overvoltage category	III (acc. to IEC 664-1)		
Rated impulse voltage	4 kV		
Accuracy			
Basic accuracy	± 1 % (from scale reading)		
Setting tolerance	≤ 5 % (from scale reading)		
Repeat accuracy	< 0.5 % or ± 5 ms		
Voltage influence	-		
Temperature influence	≤ 0.01 % / °C		

Wiring diagram

Abbreviations legend:

Green LED ON:
Supply voltage activated
Output relay for delta protection is activated

Green LED flashing:
Indicates expiration of star time

Yellow LED ON/OFF:
Position of output relay for star protection

Voltage-monitoring relay VMR

VMR 1

The new voltage-monitoring relays conveniently monitor three-phase systems with and without a neutral wire. By precisely capturing characteristic values, they ensure the accessibility and reliability of a facility or machine. And in doing so, they deliver long-term added value. When operating facilities such as pumps and machines, it is critical to monitor the phase sequence, phase loss and asymmetry. Monitoring allows safe operation and prevents damage in a simple and efficient way. The power for the devices is supplied from the monitored measurement circuit. Thus the relays can easily and punctually record any irregularities in the three-phase supply systems, such as single-phase operations resulting from mains malfunctions which can lead to overheated motors. They notify of the need for maintenance or repair steps before further costs are incurred.

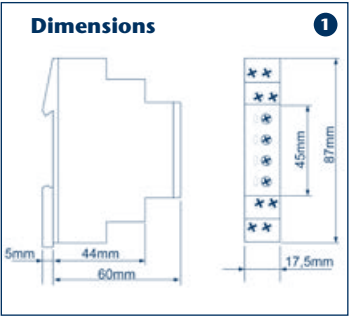
Screw connection

- 1 x 0.5 to 2.5 mm² with/without wire-end ferrules
- 1 x 4 mm² without wire-end ferrules
- 2 x 0.5 to 1.5 mm² with/without wire-end ferrules
- 2 x 2.5 mm² flexible without wire-end ferrules
- Torque max. 1 Nm

Application areas:

- Monitoring the connection for mobile equipment (construction equipment, agricultural devices, refrigerated vehicles)
- Protecting people and facilities – monitoring for reversal of rotation direction (for hoisting equipment, conveyor systems, elevators, escalators, etc.)
- Monitoring of sensitive systems
- Protecting from effects of passing temporary loads (loss of phase)
- Switching from normal to spare systems

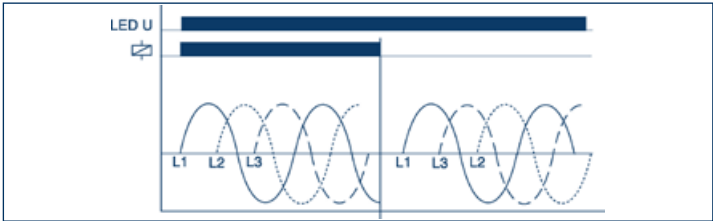
Dimensions



Environmental conditions

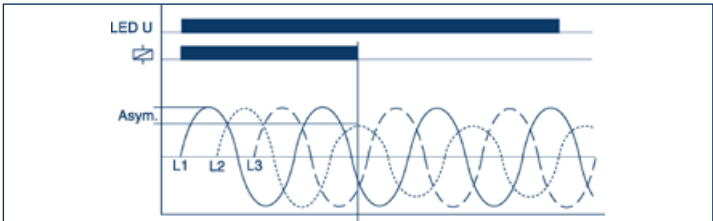
Ambient temperature	-25 to +55 °C (acc. to IEC 68-1)
	-25 to +55 °C (acc. to IEC 508-1)
Storage temperature	-25 to +70 °C
Transportation temperature	-25 to +70 °C
Relative humidity	15 % to 85 % (acc. to IEC 721-3-3 Class 3K3)
Contamination degree	3 (acc. to IEC 664-1)
Vibration resistance	10 to 55 Hz 0.35 mm (acc. to IEC 68-2-6)
Shock resistance	15 g 11 ms (acc. to IEC 68-2-27)

Functional description



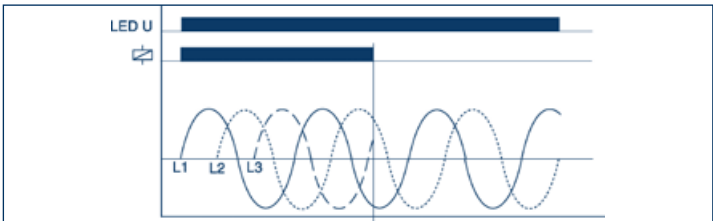
Monitoring of phase sequence

If all phase are connected correctly and the voltage asymmetry is smaller than the defined set value, then the output relay R activates (yellow LED illuminated). If the rotational direction of the phase sequence changes, then the output relay R deactivates (yellow LED not illuminated)



Monitoring asymmetry

The output relay R is deactivated (the yellow LED is not illuminated) when the asymmetry exceeds the set value on the ASYM controller. The shut-off also takes place when the asymmetry is caused by inverse voltage from motors running on two phases.



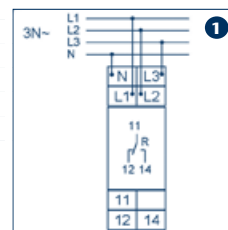
Monitoring for loss of phase

In the event of a phase loss, the output relay R deactivates (yellow LED is not illuminated).

	VMR 1		
- Mounts on TS 35 - Self-extinguishing plastic housing, IP 40 protection - Any mounting position is possible - Screw terminals protected against accidental touch according to VBG 4 IP 20 protection			

Type	VMR 1		
Cat. no./Qty.	15956.2/1		
Dimensions	1		
Wiring diagram	1		
Dimensions (L x W x H) TS 35 x 7.5	87 x 17.5 x 67.5 mm		
Weight (individually packed: components and packaging)	72 g		
Short description			

Overvoltage monitoring in three-phase systems, monitoring for phase sequence and loss of phase, monitoring for asymmetrical connection of the neutral wire is optional; supply voltage = measuring-circuit voltage
1 CO contact
width: 17.5 mm
Installation design

Wiring diagram


Functions			
	Monitoring of phase sequence		
	Monitoring asymmetry		
	Monitoring for loss of phase		
Time delay range			
Triggering delay (quick)	approx. 100 ms		
Displays			
Green LED ON*	Supply voltage applied		
Yellow LED ON/OFF	Position of output relay		
Supply circuit	1 min/3 sec to 1 min		
supply voltage	(= measuring-circuit voltage)		
Terminals	(N)-L1-L2-L3		
Rated voltage UN	3(N)-400/230 V		
Tolerance	-30% to +30% of Un		
Rated consumption	8 VA (0.8 W)		
Rated frequency	AC 48 to 63 Hz		
Power-on duration	100 %		
Recovery time	500 ms		
Stored energy time	-		
Release voltage	>20 % of supply voltage		
Overvoltage category	III (acc. to IEC 60664-1)		
Rated impulse voltage	4 kV		
Output circuit	1 potential-free CO contact		
Rated voltage	250 V AC		
Switching capacity	1250 VA (5 A / 250 V AC)		
Fuse	5 A fast acting		
Mechanical lifespan	20 x 10 ⁴ switching cycles		
Electrical lifespan	2 x 10 ⁵ switching cycles at 1000 VA resistive load		
Switching frequency	Max. 60/min at 100 VA resistive load Max. 6/min at 1000 VA resistive load (acc. to IEC 947-5-1)		
Overvoltage category	III (acc. to IEC 60664-1)		
Rated impulse voltage	4 kV		
Measuring circuit			
Measured value	3(N)~, sine, 48 to 63 Hz		
Measurement input	(= supply voltage)		
Terminals	(N)-L1-L2-L3		
Overload capacity	Def. by tolerance of the supply voltage		
input resistance	-		
Asymmetry	5 % to 25 %		
Overvoltage category	III (acc. to IEC 60664-1)		
Rated impulse voltage	4 kV		
Accuracy			
Basic accuracy	± 5 %		
Setting tolerance	≤ 5 %		
Repeat accuracy	± 2 %		
Voltage influence	-		
Temperature influence	≤ 0.05 % / °C		

Abbreviations legend:

Green LED ON:
Supply voltage activated
Output relay for delta protection is activated
Green LED flashing:
Indicates expiration of star time
Yellow LED ON/OFF:
Position of output relay for star protection

*See abbreviations legend

Voltage-monitoring relay VMR

VMR 3

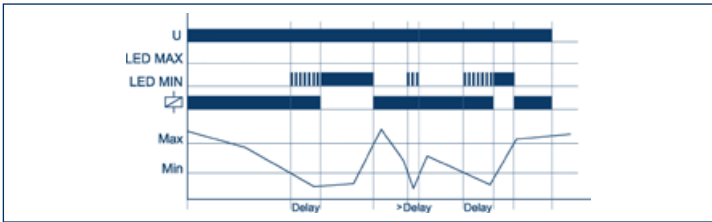
The new **VMR 3** voltage-monitoring relay features professional monitoring of phase loss and phase sequence in three-phase and single-phase systems, with adjustable switching thresholds and triggering delays. The monitoring of the phase sequence, and thus the rotational direction of the phase sequence, is a very important function. A drive which is rotating incorrectly can lead to severe machine or system damage.

Screw connection

- 1 x 0.5 to 2.5 mm² with/without wire-end ferrules
- 1 x 4 mm² without wire-end ferrules
- 2 x 0.5 to 1.5 mm² with/without wire-end ferrules
- 2 x 2.5 mm² flexible without wire-end ferrules
- Torque max. 1 Nm

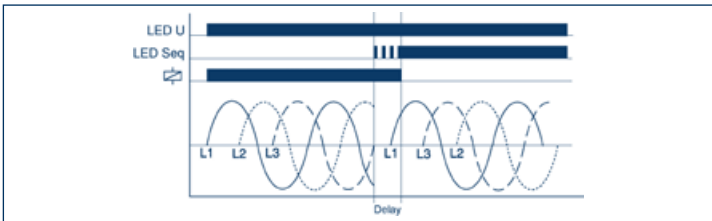
Functional description

During all functions, if the minimum value for the measured voltage has been selected as a larger value than the maximum, then the Min. and Max. LEDs flash alternately (the relay is in off position). If a system error has occurred when activating the device, then the output relay remains off and the LED for the corresponding threshold illuminates. The device records every phase voltage (L-N) separately and monitors them according to the selection function (UNDER or WINDOW).



Undervoltage monitoring (UNDER, UNDER+SEQ)

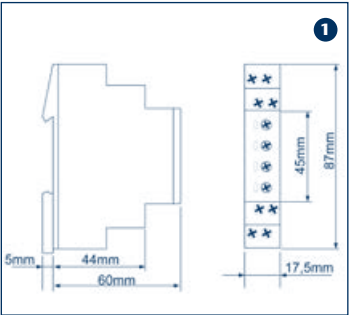
When the measured voltage (one of the phase voltages) falls under the value set at the Min controller, the set triggering delay time begins to run (the red LED Min flashes). The output relay R deactivates (yellow LED not illuminated) after the expiration of the delay time (red LED Min illuminated). If the measured voltage (all phase voltages) exceeds the value set at the Max. controller, then the output relay R re-activates (yellow LED illuminated).



Monitoring the phase sequence (SEQ)

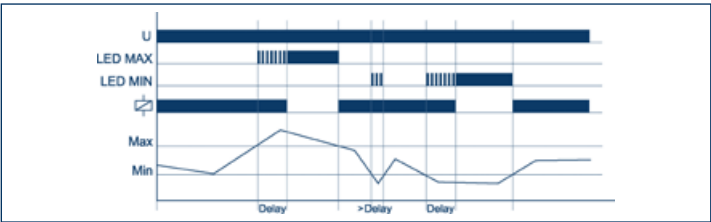
The monitoring of the phase sequence is selectable for all functions. For single-phase circuits, monitoring of the phase sequence must be turned off. When the rotation direction of the phase changes (red LED SEQ illuminated), the output relay R is deactivated (yellow LED not illuminated) after the triggering delay time expires.

In addition, this unit can monitor machines for possible surges or dips in the mains voltage. A breakage in a neutral wire can also be quickly, safely, and reliably detected. This makes the **VMR 3** a compact solution for operating non-stationary machines securely and reliably, with a pluggable power supply from three-phase current.



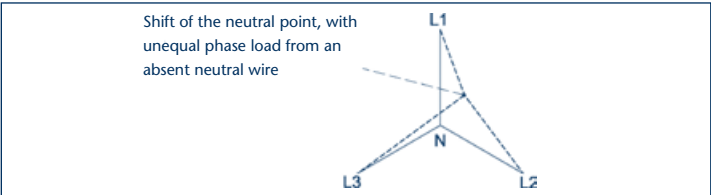
Environmental conditions

Ambient temperature	-25 to +55 °C (acc. to IEC 68-1)
Storage temperature	-25 to +55 °C (acc. to IEC 508-1)
Transportation temperature	-25 to +70 °C
Relative humidity	15 % to 85 % (acc. to IEC 721-3-3 Class 3K3)
Contamination degree	3 (acc. to IEC 664-1)
Vibration resistance	10 to 55 Hz 0.35 mm (acc. to IEC 68-2-6)
Shock resistance	15 g 11 ms (acc. to IEC 68-2-27)



Window function (WIN, WIN+SEQ)

The output relay R activates (yellow LED illuminated) when the measured voltage (all phase voltages) exceeds the set value on the Min controller. When the measured voltage (one of the phase voltages) exceeds the value set at the Max. controller, the set triggering delay time begins to run (the red LED max. flashes). The output relay R deactivates (yellow LED not illuminated) after the expiration of the delay time (red LED Max illuminated). The output relay re-activates (yellow LED illuminated) when the measured voltage once again falls below the maximum value (red LED Max not illuminated). When the measured voltage (one of the phase voltages) falls under the value set at the Min controller, the set triggering delay time begins to run (the red LED Min flashes). The output relay R deactivates (yellow LED not illuminated) after the expiration of the delay time (red LED Min illuminated).

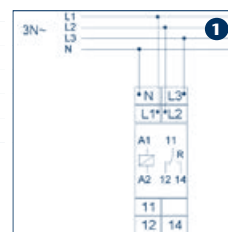
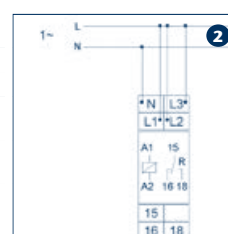


Neutral wire break

The device monitors each phase (L1, L2 and L3) in reference to N. An asymmetrical phase load and a neutral wire breakage in the mains line will result in a dislocation of the neutral point. When one of the phase voltage exceeds the set shutdown threshold (Min. or Max.), the triggering delay then begins to run (red LED Min. or Max. flashes). The output relay R deactivates (yellow LED not illuminated) after the expiration of the delay time (red LED Max or Min illuminated).

	VMR 3		
- Mounts on TS 35 - Housing made of self-extinguishing plastic, IP40 protection - Any mounting position is possible - Screw terminals protected against accidental touch according to VBG 4 IP 20 protection			

Type	VMR 3		
Cat. no./Qty.	15958.2/1		
Dimensions	1		
Wiring diagram	1.2		
Dimensions (L x W x H) TS 35 x 7.5	87 x 17.5 x 67.5 mm		
Weight (individually packed: components and packaging)	72 g		

Wiring diagram**Wiring diagram**

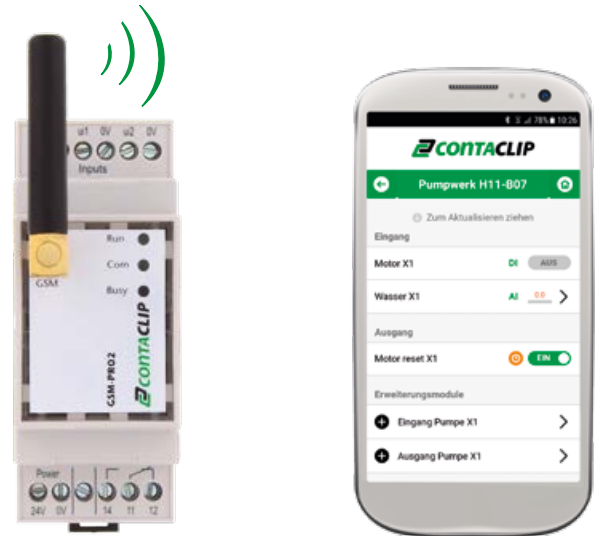
Functions			
UNDER	Undervoltage monitoring		
UNDER+SEQ	Undervoltage and phase sequence monitoring		
WIN	Monitoring the window between the min. and max. thresholds		
WIN+SEQ	Monitoring the window between the min. and max. thresholds and phase sequence monitoring		
Time delay range	Setting range		
Start-up override	-		
Triggering delay	0.1 s to 10 s		
Displays			
Red LED ON/OFF	Error display for corr. threshold		
Red LED flashing	Displays the triggering delay for the corresponding threshold		
Yellow LED ON/OFF	Position of output relay		
Supply circuit			
supply voltage	(= measuring-circuit voltage)		
Terminals	(N)-L1-L2-L3		
Rated voltage UN	3(N)-400/230 V		
Tolerance	-30% to +30 % of UN		
Rated consumption	8 VA (1 W)		
Rated frequency	AC 48 to 63 Hz		
Power-on duration	100 %		
Recovery time	500 ms		
Stored energy time	-		
Release voltage	>20 % of supply voltage		
Overvoltage category	III (acc. to IEC 60664-1)		
Rated impulse voltage	4 kV		
Output circuit	1 potential-free CO contact		
Rated voltage	250 V AC		
Switching capacity	1250 VA (5 A / 250 V AC)		
Fuse	5 A fast acting		
Mechanical lifespan	20 x 10 ⁶ switching cycles		
Electrical lifespan	2 x 10 ⁵ switching cycles at 1000 VA resistive load		
Switching frequency	Max. 60/min at 100 VA resistive load Max. 6/min at 1000 VA resistive load (acc. to IEC 947-5-1)		
Overvoltage category	III (acc. to IEC 60664-1)		
Rated impulse voltage	4 kV		
Measuring circuit			
Measured value	3(N)-, Sinus, 48 to 63 Hz		
Measurement input	(= supply voltage)		
Terminals	(N)-L1-L2-L3		
Overload capacity	Def. by tolerance of supply voltage		
input resistance	80% to 130% of UN		
Asymmetry	70% to 120% of UN		
Overvoltage category	III (acc. to IEC 60664-1)		
Rated impulse voltage	4 kV		
Accuracy			
Basic accuracy	± 5% of scale limit		
Setting tolerance	≤ 5% of scale limit		
Repeat accuracy	≤ 2%		
Voltage influence	-		
Temperature influence	≤ 1 %		

GSM-PRO2 / GSM-PRO2E: the perfect communicator

CONTA-CLIP's GSM-PRO2 module provides a **2G/3G** remote control and maintenance solution which allows you to monitor and control decentralized facilities.

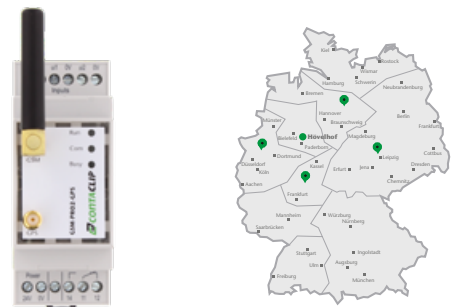
The **GSM-PRO2** module informs you when your process has reached a user-defined status or limit value. Digital and analogue inputs values can be transmitted via e-mail or SMS (text message). The digital relay outputs can be switched using an SMS sent from the decentralized control room or from the service technician. This way the process is monitored and controlled remotely. Android and iPhone apps are available to make the monitoring and control functions of the **GSM-PRO2** modules even easier to operate.

A user-friendly application can be used to configure the module's inputs and outputs and their required functions.



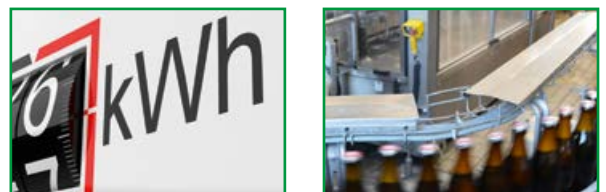
GSM-PRO2-GPS

The **GSM-PRO2-GPS** module has integrated GPS functionality with an external antenna connection. The module can determine its exact position at any time. This way the user can see the location on a map using a web browser. This enables you to easily and continually monitor the positions of mobile facilities or machines.



Input and output

Both **GSM-PRO2** modules are equipped with two multi-function inputs, one relay output and one pulse counter input. Both of the **GSM-PRO2E** variants are equipped with ten multi-function inputs, four relay outputs and one counter input. The pulse counter input can process a maximum of 1000 pulses per second, so that for example a photovoltaic system or a kWh meter can be connected.



Expansion modules

The **GSM-PRO2** modules provide the option for expanding the number of available inputs and outputs. Up to 15 I/O expansion modules, in 4 different versions, can be controlled by each **GSM-PRO2**. The built-in plug connector supplies power and control functionality for the modules. The expansion modules can also be configured with the user-friendly application.



OTA (over-the-air) capabilities

In many systems or machines, some parameters or user entries may need to be changed after the installation is completed. In such cases you may also need to change parameters on the **GSM-PRO2** module. The **GSM-PRO2** module features OTA (over-the-air) functions for just such instances.

OTA configuration

Whether you're adding a new phone number of a user, a new I/O setting, a change in the module name or any other change: the settings on all **GSM-PRO2** modules can easily be changed from remote locations around the world.

OTA firmware updates

The **GSM-PRO2** can also update its firmware using OTA. So modules with different versions can always be kept up to date.



Logging functionality

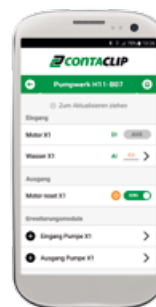
Is your process running optimally? What happened last week?

How many hours has the machine been running this week?

The extensive logging functionality of the **GSM-PRO2** module allows you to log events that have taken place at a facility or a machine over a defined period of time. The log files can be transferred to the PC using a USB cable. Or you can have the log files automatically sent to your e-mail address.

Smartphone app

CONTA-CLIP's iPhone and Android smartphone apps for the **GSM-PRO2** modules provide a simple and fast solution so that you can get an overview of each distributed system and application. This app can show you the status of all inputs and outputs from one or more **GSM-PRO2** modules. They also allow you a degree of control over the process. Module outputs can be controlled easily and directly using this app. The app's buttons provide an intuitive control interface (for controlling a heater, motor, water pump, etc.).



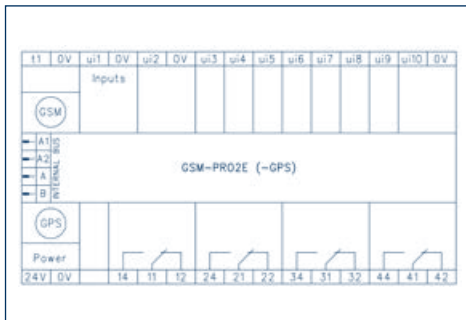
Web portal software

The **GSM-PRO2**, like most SMS modules, are often used as stand-alone units in the field. These modules are put to use at various remote locations even though they normally have configurations which are very similar. It is often quite helpful to have one overall view of the status of all modules used in the field. The new **GSM-PRO2** web-based portal software from **CONTA-CLIP** offers you precisely this possibility. All modules in the field can now be easily monitored and run from a single local site or control panel.



Circuit diagram		GSM-PRO2	GSM-PRO2-GPS
			
TYPE		GSM-PRO2	GSM-PRO2-GPS
Cat. no.		16368.2	16369.2
Size L x W x H (TS 35 / direct mount)		95 x 36 x 67 / 65 mm (without antenna)	95 x 36 x 67 / 65 mm (without antenna)
Weight		133 g	137 g
Input/output data			
2 multi-function (analogue / digital) inputs		0...10 V / 0(4)...20 mA/ 24 V DC (10...30 V DC)	
Resolution / accuracy (0...10 V) – (0...20 mA)		20 mV / ± (20 mV + 0,3 % of the measured value) – 40 µA / ± (40 µA + 0,3 % of the measured value)	
Input resistance (0...10 V) – (0...20 mA)		80 kOhm / 500 Ohm	
Input current (dig. inputs)		@10 V: 0,2 mA / @24 V: 0,5 mA / @30 V: 0,6 mA	
UI minimum pulse duration		500 ms	
Threshold of dig. inputs		Low < 2 V / High > 4 V	
Counter, digital input (pull-down)		1000 pulses/sec max. pull-down resistance: 24 kOhm	
Pull-down voltage source		Typically 10...30 V DC, unregulated, depending on the load	
Relay output		CO universal kontakt, 250 V ~	
Continuous current / inrush current (resistive load)		5 A / 5 A	
Max. switching capacity		1200 VA at 240 V AC, 5 A	
Lifespan at resistive load		Electrical: at max. load: > 1,5 x 10 ⁵ switching cycles. Mechanical: 15 x 10 ⁶ switching cycles	
Max. switching frequency		6 min ⁻¹ at continuous current, 1200 min ⁻¹ at no load	
Contact material / Test voltage		AgNi / 4 kV	
GSM specifications			
General		2G: Quad-band GSM bands: 850, 900, 1800 and 1900 MHz	
		3G: Five-band UMTS (WCDMA/FDD) bands: 800, 850, 900, 1900 and 2100 MHz	
SIM card		Nano SIM	
Antenna		50 Ohm impedance, SMA plug	
GPS data			
Frequency		-	1575...1587 Mhz
Time to first fix (@ -140 dBm)		-	Hot <2 s, Warm<35 s, cold<46 s
Antenna		-	50 Ohm impedance, SMA plug
Voltage active antenna		-	3 V @ RF plug
Bus specifications			
Interface		Serial RS485, non isolated	
General specifications			
Voltage supply		10...30 V DC	
Current consumption		275 mA DC @ 24 V DC	
Backup power		Internal maintenance-free supercap capacitor	
Operation / storage temperatures		- 20 °C...+50 °C / -20 °C...+70 °C	
Max. relative humidity		80 %, non-condensing	
DIN VDE specifications		Low Voltage Directive (LVD) 2014/35/EU, in compliance with EN 50178	
Electromagnetic properties		Directive 2014/30/EU, in compliance with EN 55011 und EN 61326-1	
Frequency spectrum		RED 2014/53/EU in compliance with EN 301-511 V12.5.1, EN 301-908-1 V11.4, EN 301-908-2 V11.1.1, EN 301 440-1 V2.1.1	
Wire cross-section / stripping length		0,2 – 2,5 mm² screw terminal / 6 mm	
Assembly / installation position		TS35 DIN rail or direct mounting / any	
Material / flammability class		Housing: Noryl. Connection terminals: Polyamide 6.6 V0 / UL 94 V-0	
Protection class (DIN 40050)		IP 20	
Accessories			Qty.
GSM antenna		GSM-ANTENNA-90°	
Cat. no.		16379.2	1
GPS antenna		GSM-ANTENNA-GPS-3M-K	
Cat. no.		16380.2	1
External combi-antenna GSM + GPS		GSM-ANTENNA-EXTERNAL-GSM+GPS-SMA-3M	
Cat. no.		16381.2	1
External antenna GSM		GSM-ANTENNA-EXTERNAL-SMA-3M	
Cat. no.		16061.2	1
External antenna GSM		GSM-ANTENNA-EXTERNAL-SMA-5M	
Cat. no.		16172.2	1
External antenna GSM		GSM-ANTENNA-EXTERNAL-SMA-10M	
Cat. no.		16173.2	1
External antenna GSM		GSM-ANTENNA-EXTERNAL-SMA-3M-ECO	
Cat. no.		16139.2	1
Programming cable		GSM-USB-MICRO-cable	
Cat. no.		16382.2	1

Circuit diagram



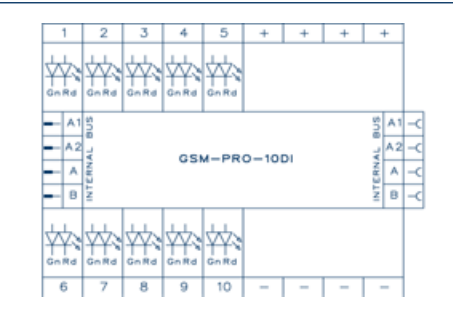
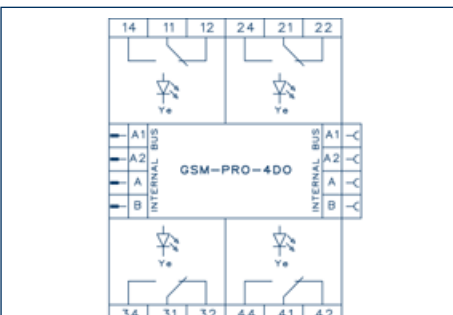
GSM-PRO2E



GSM-PRO2E-GPS



TYPE	GSM-PRO2E	Qty.	GSM-PRO2E-GPS	Qty.
Cat. no.	16407.2	1	16408.2	1
Size L x W x H (TS 35 / direct mount)	95 x 36 x 67 / 65 mm (without antenna)		95 x 88 x 67 / 65 mm (without antenna)	
Weight	188 g		190 g	
Input/output data				
10 multi-function (analogue /digital) inputs	0...10 V / 0(4)...20 mA / 24 V DC (10...30 V DC)			
Resolution / accuracy (0...10 V) – (0...20 mA)	20 mV / ± (20 mV + 0,3 % of the measured value) – 40 µA / ± (40 µA + 0,3 % of the measured value)			
Input resistance (0...10 V) – (0...20 mA)	80 kOhm / 500 Ohm			
Input current (dig. inputs)	@10 V: 0,2 mA / @24 V: 0,5 mA / @30 V: 0,6 mA			
UI minimum pulse duration	500 ms			
Threshold of dig. inputs	Low < 2 V / High > 4 V			
Counter, digital input (pull-down)	1000 pulses/sec max. pull-down resistance: 24 kOhm			
Pull-down voltage source	Typically 10...30 V DC, unregulated, depending on the load			
4 relay outputs	CO universal contact, 250 V ~			
Continuous current / inrush current (resistive load)	5 A / 5 A			
Max. switching capacity	1200 VA at 240 V AC, 5 A			
Lifespan at resistive load	Electrical: at max. load: > 1,5 x 10 ⁵ switching cycles. Mechanical: 15 x 10 ⁶ switching cycles			
Max. switching frequency	6 min ⁻¹ at continuous current, 1200 min ⁻¹ at no load			
Contact material / Test voltage	AgNi / 4 kV			
GSM specifications				
General	2G: Quad-band GSM bands: 850, 900, 1800 and 1900 MHz			
SIM card	3G: Five-band UMTS (WCDMA/FDD) bands: 800, 850, 900, 1900 and 2100 MHz			
Antenna	Nano SIM			
GPS data	50 Ohm impedance, SMA plug			
Frequency	-		1575...1587 Mhz	
Time to first fix (@ -140 dBm)	-		Hot <2 s, Warm<35 s, cold<46 s	
Antenna	-		50 Ohm impedance, SMA plug	
Voltage active antenna	-		3 V @ RF plug	
Bus specifications				
Interface	Serial RS485, non isolated			
General specifications				
Voltage supply	10...30 V DC			
Current consumption	275 mA DC @ 24 V DC			
Backup power	Internal maintenance-free supercap capacitor			
Operation / storage temperatures	- 20 °C...+50 °C / -20 °C...+70 °C			
Max. relative humidity	80 %, non-condensing			
DIN VDE specifications	Low Voltage Directive (LVD) 2014/35/EU, in compliance with EN 50178			
Electromagnetic properties	Directive 2014/30/EU, in compliance with EN 55011 und EN 61326-1			
Frequency spectrum	RED 2014/53/EU in compliance with EN 301-511 V12.5.1, EN 301-908-1 V11.4, EN 301-908-2 V11.1.1, EN 301 440-1 V2.1.1			
Wire cross-section / stripping length	0,2 – 2,5 mm ² screw terminal / 6 mm			
Assembly / installation position	TS35 DIN rail or direct mounting / any			
Material / flammability class	Housing: Noryl. Connection terminals: Polyamide 6.6 V0 / UL 94 V-0			
Protection class (DIN 40050)	IP 20			
Accessories				Qty.
GSM antenna	GSM-ANTENNA-90°			
Cat. no.	16379.2			1
GPS antenna	GSM-ANTENNA-GPS-3M-K			
Cat. no.	16380.2			1
External combi-antenna GSM + GPS	GSM-ANTENNA-EXTERNAL-GSM+GPS-SMA-3M			
Cat. no.	16381.2			1
External antenna GSM	GSM-ANTENNA-EXTERNAL-SMA-3M			
Cat. no.	16061.2			1
External antenna GSM	GSM-ANTENNA-EXTERNAL-SMA-5M			
Cat. no.	16172.2			1
External antenna GSM	GSM-ANTENNA-EXTERNAL-SMA-10M			
Cat. no.	16173.2			1
External antenna GSM	GSM-ANTENNA-EXTERNAL-SMA-3M-ECO			
Cat. no.	16139.2			1
Programming cable	GSM-USB-MICRO-cable			
Cat. no.	16382.2			1

Digital input module • 10 digital inputs 24 V • One status LED per input	GSM-PRO-10DI 	Circuit diagram 
Type Cat. no.	GSM-PRO-10DI 16375.2	Qty. 1
Digital output module • 4 relay outputs, each with a CO contact • Max. continuous current per relay 16A (contact material for high inrush current) • A yellow status LED for each channel	GSM-PRO-4DO 	Circuit diagram 
Type Cat. no.	GSM-PRO-4DO 16378.2	Qty. 1
Analog-Eingangs-Modul • 8 multi-function analogue inputs 0...10 V, 0(4)...20 mA, NTC, RTD (PT1000 / NI1000) – 40...+120 °C • Individual per-input configuration	GSM-PRO-8AI 	Circuit diagram 
Type Cat. no.	GSM-PRO-8AI 16377.2	Qty. 1
Analogue output module • 4 analogue outputs, 0...10 V	GSM-PRO-4AO 	Circuit diagram 
Type Cat. no.	GSM-PRO-4AO 16376.2	Qty. 1

CSM-PRO-10DI 16375.2	CSM-PRO-4DO 16378.2	CSM-PRO-8AI 16377.2	CSM-PRO-4AO 16376.2	Technical Documentation	
		8		Multi-function analogue inputs	0...10 V / 0(4)..20 mA / RTD. Default: RTD input. Input can be configured via plug-in resistors
		•		Input resistance (0...10V)	Resistor: fixed(200 kOhm)
		•		Input resistance (0(4)...20mA)	Resistor: plug-in (Ri), 250 Ohm ± 0,1% (resistor is not included)*
		•		Input resistance (RTD – 40...+120 °C)	Resistor: plug-in (Rt), Sensor abhängig ± 0,1% (resistor is not included))*
		•		RTD Sensor Type	PT1000 (IEC6075) Rt: 5k11 ± 0,1 % , NI1000 (TK5000 Siemens) Rt: 5k11 ± 0,1%, NTC (10K3A1) Rt: 40K ±0,1%*
		•		Resolution / conversion error (0...10 V)	10 bit / ± (10 mV + 0,3 % of measured value)
		•		Resolution / conversion error (0(4)...20 mA)	10 bit / ± (20 µA + 0,4 % of measured value)
		•		Resolution / conversion error (RTD)	14 bit / ± (0,4 °C + 0,5 % of measured value)
		•		Temperature coefficient	< 0,02% °C
10				Digital input	Active High (connect power supply voltage or VDD (+) on the module to the input)
•				Input voltage	24 V DC (10...30V)
•				Threshold dig. inputs	Low <3 V / High >6 V
•				Max. frequency	20 Hz
•				Min. pulse length	15 ms
•				Impedance	58 kOhm
•				VDD (+) output	Can only be used for the inputs
•				LED status display	Bi-colour LED for each input (green / red / off, programmable)
		4		Analogue output	0...10 V DC, short-circuit and overvoltage protection (24 V)
		•		Load resistance / Current per channel	> 1 kOhm / < 10 mA
		•		Resolution / Conversion error	10bit / ± (30 mV + 0,5 % of measured value)
		•		Temperature coefficient	< 0,02 % °C
		•		LED status display	Yellow LED. Light intensity is dependent on output value; < 1.5V = unlit
	4			Relay output	
•				Contact type	4 x 1 CO
•				Max. switching voltage	250 V~
•				Continuous current / inrush current (resistive load)	16 A / 80 A (20 ms)
•				Max. module current (all relays)	32 A
•				Max. switching capacity	4000 VA
•				Electrical lifespan at rated load / 2A load	1 x 10 ⁵ / 7 x 10 ⁵ switching operations @ 23 °C and resistive load
•				Mechanical lifespan	30 x 10 ⁵ switching operations
•				Max. switching frequency	6 min ⁻¹ at continuous current, 1200 min ⁻¹ at no load
•				Contact material	AgSnO ₂
•				Test voltage coil/contact	5 kV
•				LED status display	Yellow
				Bus specifications	
•	•	•	•	Interface	Serial RS485, non isolated
•	•	•	•	Max. cable length	500 m
•	•	•	•	Terminating resistor	Integrated terminating resistor, activated by jumper (default: off)
•	•	•	•	Protective circuitry	Integrated transient protection
•	•	•	•	Bus connection	Integrated plug connection (modules mounted without a gap, no cabling required)
				Bus connector (not incl.)	Pluggable male or female screw connector 0.2...1.0 mm2, Stripping length: 7 mm
•	•	•	•	Connection medium	Shielded twisted pair cable
				General specifications	
•	•	•	•	LED status display(bi-colour)	Run - no communication - Error
•	•	•	•	Voltage supply	20...28 V DC. (Power bus connector: 5A max.)
30	100	50	57	DC current consumption	... mA typical @ 24V DC (all outputs active @ full load)
•	•	•	•	Operation / storage temperatures	0 °C...+ 50 °C / – 20 °C...+ 70 °C
•	•	•	•	Relative humidity	90 % max., non-condensing
•	•	•	•	CE marking	Low-Voltage Directive (LVD) 2014/35/EC, in compliance with EN 50178
•	•	•	•		EMC Directive 2014/30/EC, in compliance with EN 55011 and EN 61326-1
•	•	•	•	Connection cross-section / Stripping length	0,2 – 2,5 mm ² screw connection / 6 mm
•	•	•	•	Assembly / Installation position	TS35 DIN rail or direct mounting / any
53	53	53	36	Size (L x W x H)	... x 95 x 60 mm
•	•	•	•	Insulating material / Flammability class	Housing and I/O terminals: Polycarbonate; Bus connector: Polyamide 6.6 / UL 94 V-0
•	•	•	•	Construction	Row-mounted installation without gaps (renewed external power needed every 15 modules)
•	•	•	•	Protection class (DIN 40050)	IP 20
121	154	117	64	Weight, g	

* Plug-in resistor Ri and Rt available on request

Opto-couplers

The unambiguous and secure separation of potentials in the different data and control signals – this is important for the trouble-free functioning of equipment and production facilities. The opto-coupler is to an increasing degree responsible for the coupling between sensor and controls, or controls and actuators.

The opto-coupler offers several other advantages over mechanical relay couplers, in addition to the electrical isolation of input and output circuits. This includes a high switching frequency, a high repetition accuracy, a long lifespan, and resistance to shock.

CONTA-CLIP offers opto-couplers in a variety of voltages and power ranges. These modules and units are provided with the appropriate protective input circuitry so that they are suited for industrial applications.



Opto-couplers | Solid-state



Solid-state Compact PSC

The **PSC** Solid-state Compact features a compact shape in terminal block design. Thanks to their thin form (6.2 mm) and a switchable continuous current of 2 amps, these solid-state modules can be integrated into a mounted-rail control design where space is tight. And owing to their features of secure electrical isolation of circuits and the multiplication of contacts, these modules are well-suited for use in automation engineering. The solid-state units offer a total of 8 varieties, including screw and tension-spring wire connections, and are available with input voltages from 24 to 60 VDC and 240 VAC. With the AQI cross-connection system, mutual potentials can be carried out over the coil or contact sides. Excellent equipment identification is possible since the socket base has a labelling surface for the standard PMC BSTR 6/30 marking system. **CONTA-CLIP** also offers a customer-specific labelling service, in addition to the standard marking.



Solid state relay module CMS-SSR

The **CMS-SSR** two-way solid state relay module has universal AC/DC inputs and outputs that allow for any operating combination. The voltage drop to the outputs is extremely low, even at maximum operating load. This results in very low heating up of the local surroundings. Both channels of the module are identical and have a yellow LED to indicate the switch status.



Opto-coupler modules OKI

The **OKI** opto-coupler modules are available with either four or eight switching channels, suitable for varying input voltage types.

The applied output voltage can be between 5 and 48 V. The maximum output current can be up to 100 mA. An LED showing the actual switching status is available for each channel. The standard maximum transmission frequency is 100 Hz. Modules with higher transmission frequencies are available upon request.

Solid-state relays SSR & Base SSOIF

The **Opto 22** solid-state relay modules feature excellent handling characteristics and a high power rating. Individual modules can be replaced and combined together.

The modules are suitable for particularly high output current levels of up to 3 A. Short-term current surges may reach up to 5 A, and yet the electrical isolation from the input side is still ensured.

The opto-coupler can simply be inserted onto the **SSOIF** base system, and it is then attached. Depending on the version, between 1 and 16 such modules can be attached side by side.

For their protection, the opto-couplers use an integrated safety fuse, which can be easily twisted out and replaced. The switching status is also displayed with an integrated LED. The Base **SSOIF** can be mounted on the standard **TS 32** and **TS 35** DIN rail systems.

Solid-state compact PSC

Solid-state terminals

1. Overview

a Labelling | Marking

The socket bases have a labelling surface which is optimally suited for our **PMC Pocket-Maxicard** standard marking systems. In addition to our large variety of standard labels, **CONTA-CLIP** can also provide "just-in-time" individual labelling for you.



b Using the mount/dismount lever

The mounting and dismounting mechanism forms a reliable connection by latching the relay with the socket base. The fitted relay can be removed, easily and without force, from the socket base by using the dismount function of the lever!



c Pluggable solid-state modules

Pluggable relays are also available with AgSNO and gold contacts, to fit with the many functions of your individual requirements!

Converting switching relays to solid-state modules

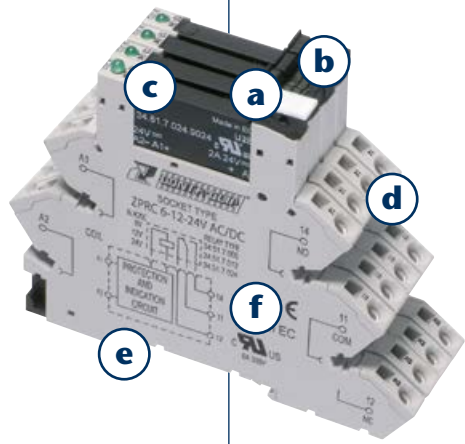
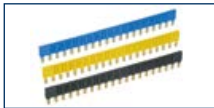
Relay terminals can be later converted to solid-state terminal, in cases of high expected electrical lifespans and in order to avoid the influence of contact-material migration (with DC).

Socket base	Input	Output	Solid-state relays
ZPRC 6-12-24V DC	24V DC	2A 24V DC	PSC 1/24V/DC-24V/2A/DC
ZPRC 60V DC	60V DC	2A 24V DC	PSC 1/60V/DC-24V/2A/DC
ZPRC 230V AC	230V AC	2A 24V DC	PSC 1/60V/DC-24V/2A/DC
ZPRC LW 230V AC	230V AC	2A 24V DC	PSC 1/60V/DC-24V/2A/DC
ZPRC 6-12-24V DC	24V DC	2A 230V AC	PSC 1/24V/DC-240V/2A/AC
ZPRC 60V DC	60V DC	2A 230V AC	PSC 1/60V/DC-240V/2A/AC
ZPRC 230V AC	230V AC	2A 230V AC	PSC 1/60V/DC-240V/2A/AC
ZPRC LW 230V AC	230V AC	2A 230V AC	PSC 1/60V/DC-240V/2A/AC
PRC 6-12-24V DC	24V DC	2A 24V DC	PSC 1/24V/DC-24V/2A/DC
PRC 60V DC	60V DC	2A 24V DC	PSC 1/60V/DC-24V/2A/DC
PRC 230V AC	230V AC	2A 24V DC	PSC 1/60V/DC-24V/2A/DC
PRC LW 230V AC	230V AC	2A 24V DC	PSC 1/60V/DC-24V/2A/DC
PRC 6-12-24V DC	24V DC	2A 230V AC	PSC 1/24V/DC-240V/2A/AC
PRC 60V DC	60V DC	2A 230V AC	PSC 1/60V/DC-240V/2A/AC
PRC 230V AC	230V AC	2A 230V AC	PSC 1/60V/DC-240V/2A/AC
PRC LW 230V AC	230V AC	2A 230V AC	PSC 1/60V/DC-240V/2A/AC



d Pluggable external cross-connections

The AQI/PRC pluggable cross-connection system enables a time-saving distribution of potentials. The AQI/PRC is constructed so that it is protected against accidental touch. It is available as a 20-pole unit, in either yellow, blue or black. The cross-connection can be shortened to fewer poles in order to fit the required interface. Insulation plating can be used to insulate the ends.



e Mounts on standard TS 35 rail

CONTA-CLIP solid-state terminals can be mounted as needed on standard TS 35 DIN rails, according to EN 50035 and EN 50022.

f Connection types

All of our relay terminals are optionally available with screw or tension-spring connection systems.



2. Approvals (details upon request)



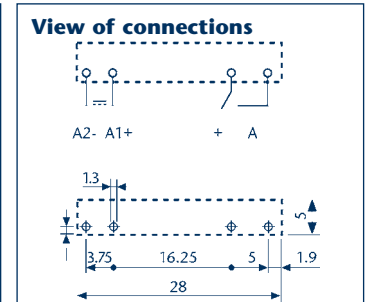
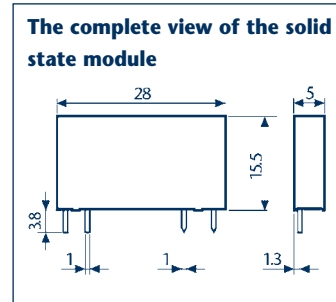
Solid-state compact PSC

Solid-state terminals

3. Features

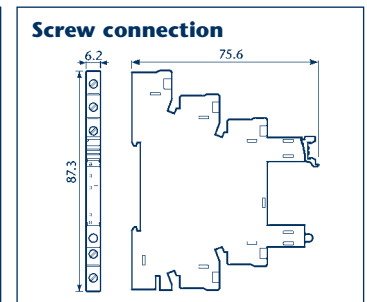
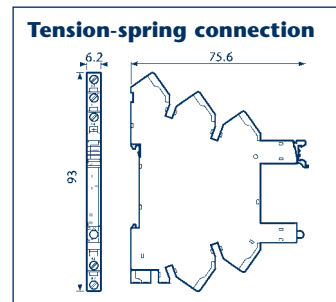
I. Solid-state module

- 5 mm width, very thin solid-state module, semi-conductor relay
- For DC or AC loads, without contact-material burn-off
- For high frequency switching cycles



II. Socket base

- Mounts on TS 35
- Very flexible and modular construction of individual solid-state module base
- User-friendly, because the relays can be easily replaced
- High-quality connecting terminals (tension-spring or screw connection system)
- Integrated EMC input circuitry and LED
- High-quality innovative mount/dismount lever
- All versions are optionally available with screw or tension-spring connection system



4. General specifications

Opto-coupler, semiconductor relay, SSR

Additional data

Ambient heat dissipation	without output current W at rated output current W	0.2 to 0.5 at ZPRCU LW 1/240 V DC and PRCU LW 1/240 V DC 0.4 to 0.9 at ZPRCU LW 1/240 V DC and PRCU LW 1/240 V DC
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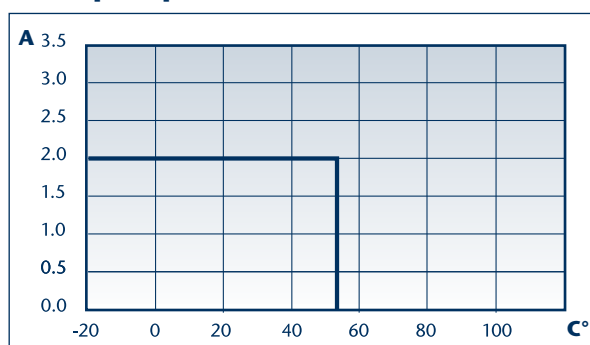
5. Input specifications

DC version

Rated voltage U_N V	Input code	Operating range U_{min} V U_{max} V		Drop-out voltage U V	Rated current, I mA	Power rating P W
24	–	16.8	30	10	10.5	–
230 to 240 VAC	–	184	264	72	5.6 (*)	0.5 (*)

* Rated current and power at $U_N = 240$ V.

6. Output specifications



Continuous current, dependent on the ambient temperature.
SSR with 2 A, DC or AC

Solid-state compact PSC

Solid-state terminal, screw connection

consisting of:

- Base terminal and pluggable solid-state module
- Mounts on TS 35

PSCU 1/24 V DC/24 V DC



PSCU 1/24 V DC/240 V AC



PSCU 1/240 V AC/24 V DC

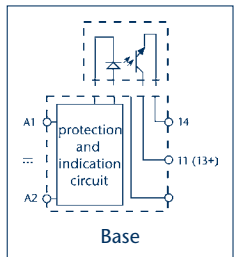
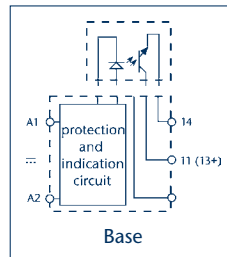
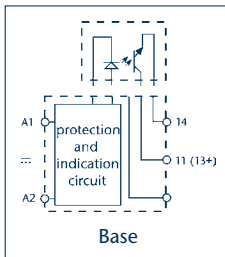
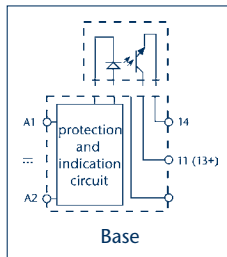


PSCU 1/240 V AC/240 V AC



Circuit diagram

- Internal EMC coil circuitry and LED display



Type	PSCU 1/24 V DC/24 V DC	PSCU 1/24 V DC/240 V AC	PSCU 1/240 V AC/24 V DC	PSCU 1/240 V AC/240 V AC
Cat. no./Qty. Type/Colour grey (RAL 7032)	15530.2/10	15529.2/10	15532.2/10	15531.2/10
Size (L x W x H) with TS35 x 7.5	87.3 x 6.2 x 79.9 mm	87.3 x 6.2 x 79.9 mm	87.3 x 6.2 x 79.9 mm	87.3 x 6.2 x 79.9 mm
Weight	36 g	36 g	36 g	36 g
Rated operating voltage	24 V DC	24 V DC	230 V AC	230 V AC
General specifications				
Response time/Release time	0.1/0.4 ms	12/12 ms	0.1/0.4 ms	12/12 ms
Dielectric strength of control/load circuit	2,500 V	2,500 V	2,500 V	2,500 V
Ambient temperature	-20 to +55 °C	-20 to +55 °C	-20 to +55 °C	-20 to +55 °C
Relay protection type	RT III	RT III	RT III	RT III
Ratings for socket base				
Ambient temperature	-20 to +55 °C	-20 to +55 °C	-20 to +55 °C	-20 to +55 °C
Stripping length	10 mm	10 mm	10 mm	10 mm
Max. wire cross-section, solid finely stranded	1 x 2.5 1 x 2.5 mm ² 1 x 14 1 x 14 mm ²	1 x 2.5 1 x 2.5 mm ² 1 x 14 1 x 14 mm ²	1 x 2.5 1 x 2.5 mm ² 1 x 14 1 x 14 mm ²	1 x 2.5 1 x 2.5 mm ² 1 x 14 1 x 14 mm ²
Input circuit				
Rated voltage	24 V DC	24 V DC	230 V AC/DC	230 V AC/DC
Power rating	0.2 W	0.2 W	0.9 W	0.9 W
Operating range	16 to 30 V DC	16 to 30 V DC	184 to 264 V AC/DC	184 to 264 V AC/DC
Control current	10.5 mA DC	10.5 mA DC	5.6 mA DC	5.6 mA DC
Drop-out voltage	10 V DC	10 V DC	44 V AC/DC	44 V AC/DC
Input resistance	3,200 Ω	3,200 Ω	21,300 Ω	21,300 Ω
Ratings for solid-state module combined with socket base				
Output circuit				
Output	1 NO contact	1 NO contact	1 NO contact	1 NO contact
Max. continuous current Max. inrush current (10ms)	2/20 A	2/40 A	2/20 A	2/40 A
Rated voltage Max. reverse voltage	(24/33) V DC	(240/275) V AC	(240/275) V DC	(240/275) V AC
Switching load-voltage range	1.5 to 24 V DC	12 to 240 V AC	1.5 to 24 V DC	12 to 240 V AC
Min. switching current	1 mA	22 mA	1 mA	22 mA
Max. residual current at 55 °C	0.001 mA	1.5 mA	0.001 mA	1.5 mA
Max. voltage drop at 20°C and rated current	0.12 V	1.6 V	0.12 V	1.6 V
Components, socket base				
Type/Colour grey (RAL 7032)	PRC 6-12-24 V DC	PRC 6-12-24 V DC	PRC 220 ... 240 V AC/DC	PRC 220 ... 240 V AC/DC
Cat. no./Qty.	15490.2/10	15490.2/10	15489.2/10	15489.2/10
Components, solid-state module				
Type/colour	PSC 1/24 V DC-24 V/2 A/DC	PSC 1/24 V DC-240 V/2 A/AC	PSC 1/60 V DC-24 V/2 A/DC	PSC 1/60 V/DC-240 V/2 A/AC
Cat. no./Qty.	15505.2/10	15504.2/10	15507.2/10	15506.2/10
Accessories for AQI/PRC ext. insul. cross-connection				
Cat. no./Qty. yellow	15545.8/1	15545.8/1	15545.8/1	15545.8/1
Cat. no./Qty. blue	15545.5/1	15545.5/1	15545.5/1	15545.5/1
Cat. no./Qty. black	15545.4/1	15545.4/1	15545.4/1	15545.4/1
TW/PRC partition				
Cat. no./Qty.	15546.2/1	15546.2/1	15546.2/1	15546.2/1
Labelling/markers PMC				
Cat. no./Qty. standard print, see catalogue	PMC BSTR 6/30	PMC BSTR 6/30	PMC BSTR 6/30	PMC BSTR 6/30
Cat. no./Qty. blank	9106.7/300	9106.7/300	9106.7/300	9106.7/300
Cat. no./Qty. special print	9107.7/300	9107.7/300	9107.7/300	9107.7/300
Screwdriver SDB				
Cat. no./Qty.	SDB 0.6 x 3.5	SDB 0.6 x 3.5	SDB 0.6 x 3.5	SDB 0.6 x 3.5
Cat. no./Qty.	1086.0/1	1086.0/1	1086.0/1	1086.0/1

Solid-state compact PSC

Solid-state terminal, tension-spring connection

consisting of:

- Base terminal and pluggable solid-state module
- Mounts on TS 35

ZPSCU 1/24 V DC/24 V DC



ZPSCU 1/24 V DC/240 V AC



ZPSCU 1/240 V AC/24 V DC

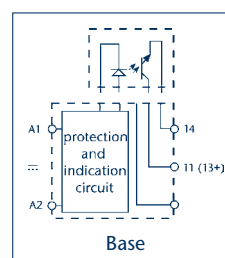
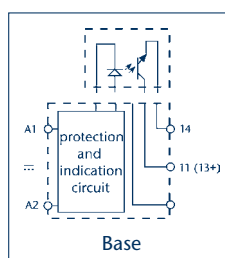
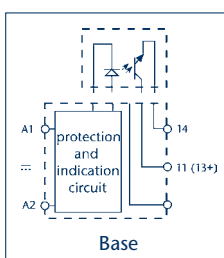
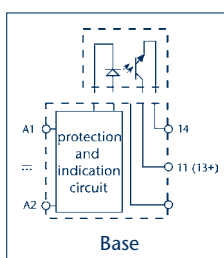


ZPSCU 1/240 V AC/240 V AC



Circuit diagram

- Internal EMC coil circuitry and LED display



Type	ZPSCU 1/24 V DC/24 V DC	ZPSCU 1/24 V DC/240 V AC	ZPSCU 1/240 V AC/24 V DC	ZPSCU 1/240 V AC/240 V AC
Cat. no./Qty. Type/Colour grey (RAL 7032)	15534.2/10	15533.2/10	15543.2/10	15535.2/10
Size (L x W x H) with TS35 x 7.5	93 x 6.2 x 79.9 mm	93 x 6.2 x 79.9 mm	93 x 6.2 x 79.9 mm	93 x 6.2 x 79.9 mm
Weight	36 g	36 g	36 g	36 g
Rated operating voltage	24 V DC	24 V DC	230 V AC	230 V AC
General specifications				
Response time/Release time	0.1/0.4 ms	12/12 ms	0.1/0.4 ms	12/12 ms
Dielectric strength of control/load circuit	2,500 V	2,500 V	2,500 V	2,500 V
Ambient temperature	-20 to +55 °C	-20 to +55 °C	-20 to +55 °C	-20 to +55 °C
Relay protection type	RT III	RT III	RT III	RT III
Ratings for socket base				
Ambient temperature	-20 to +55 °C	-20 to +55 °C	-20 to +55 °C	-20 to +55 °C
Stripping length	10 mm	10 mm	10 mm	10 mm
Max. connection cross-section, solid finely stranded	1 x 2.5/2 x 1.5 1 x 2.5/2 x 1.5	1 x 2.5/2 x 1.5 1 x 2.5/2 x 1.5	1 x 2.5/2 x 1.5 1 x 2.5/2 x 1.5	1 x 2.5/2 x 1.5 1 x 2.5/2 x 1.5
	mm ² AWG	mm ² AWG	mm ² AWG	mm ² AWG
	1 x 14/2 x 16 1 x 14/2 x 16	1 x 14/2 x 16 1 x 14/2 x 16	1 x 14/2 x 16 1 x 14/2 x 16	1 x 14/2 x 16 1 x 14/2 x 16
Input circuit				
Rated voltage	24 V DC	24 V DC	230 V AC/DC	230 V AC/DC
Power rating	0.2 W	0.2 W	0.9 W	0.9 W
Operating range	16 to 30 V DC	16 to 30 V DC	184 to 264 V AC/DC	184 to 264 V AC/DC
Control current	10.5 mA DC	10.5 mA DC	5.6 mA DC	5.6 mA DC
Drop-out voltage	10 V DC	10 V DC	44 V AC/DC	44 V AC/DC
Input resistance	3200 Ω	3200 Ω	43,000 Ω	43,000 Ω
Ratings for solid-state module combined with socket base				
Output circuit				
Output	1 NO contact	1 NO contact	1 NO contact	1 NO contact
Max. continuous current Max. inrush current (10ms)	2/20 A	2/40 A	2/20 A	2/40 A
Rated voltage Max. reverse voltage	(24/33) V DC	(240/275) V AC	(240/275) V DC	(240/275) V AC
Switching load-voltage range	1.5 to 24 V DC	12 to 240 V AC	1.5 to 24 V DC	12 to 240 V AC
Min. switching current	1 mA	22 mA	1 mA	22 mA
Max. residual current at 55 °C	0.001 mA	1.5 mA	0.001 mA	1.5 mA
Max. voltage drop at 20 °C and rated current	0.12 V	1.6 V	0.12 V	1.6 V
Components, socket base				
Type/Colour grey (RAL 7032)	ZPRC 6-12-24 V DC	ZPRC 6-12-24 V DC	ZPRC 220 ... 240 V AC/DC	ZPRC 220 ... 240 V AC/DC
Cat. no./Qty.	15494.2/10	15494.2/10	15493.2/10	15493.2/10
Components, solid-state module				
Type/colour	PSC 1/24 V DC-24 V/2 A/DC	PSC 1/24 V DC-240 V/2A/AC	PSC 1/60 V/DC-24 V/2A/DC	PSC 1/60 V/DC-240 V/2A/AC
Cat. no./Qty.	15505.2/10	15504.2/10	15507.2/10	15506.2/10
Accessories for AQI/PRC ext. insul. cross-connection				
Cat. no./Qty. yellow	AQI/PRC/20	AQI/PRC/20	AQI/PRC/20	AQI/PRC/20
Cat. no./Qty. blue	15545.8/1	15545.8/1	15545.8/1	15545.8/1
Cat. no./Qty. black	15545.5/1	15545.5/1	15545.5/1	15545.5/1
Cat. no./Qty. black	15545.4/1	15545.4/1	15545.4/1	15545.4/1
TW/PRC partition	TW/PRC	TW/PRC	TW/PRC	TW/PRC
Cat. no./Qty.	15546.2/1	15546.2/1	15546.2/1	15546.2/1
Labelling/markers PMC				
Cat. no./Qty. standard print, see catalogue	PMC BSTR 6/30	PMC BSTR 6/30	PMC BSTR 6/30	PMC BSTR 6/30
Cat. no./Qty. blank	CONTA-CONNECT	CONTA-CONNECT	CONTA-CONNECT	CONTA-CONNECT
Cat. no./Qty. special print	9106.7/300	9106.7/300	9106.7/300	9106.7/300
Cat. no./Qty. special print	9107.7/300	9107.7/300	9107.7/300	9107.7/300
Metal actuating tool BWMA	BWMA 1	BWMA 1	BWMA 1	BWMA 1
Cat. no./Qty.	3808.0/1	3808.0/1	3808.0/1	3808.0/1

- Mounts on TS 32/TS 35
- Screw connection
- LED for indicating the switching status
- Other transmission frequencies available upon request

OKI 4/5
4 channels

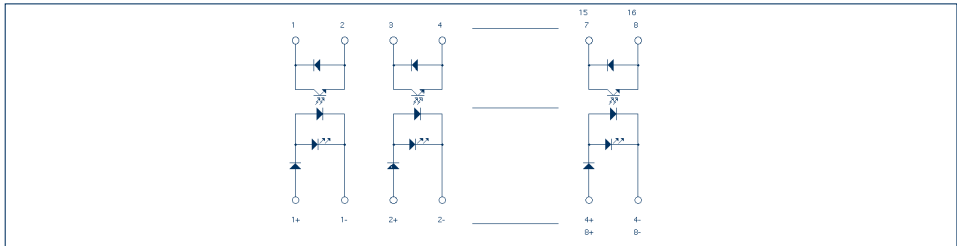
OKI 8/5
8 channels

OKI 4/24
4 channels

OKI 8/24
8 channels



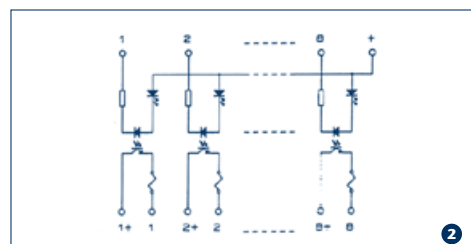
Circuit diagram

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- SSOIF 16



Circuit diagram



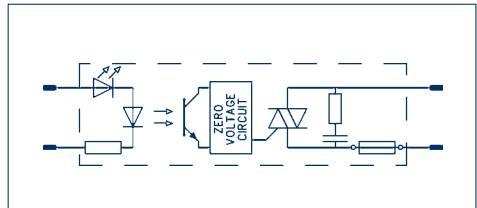
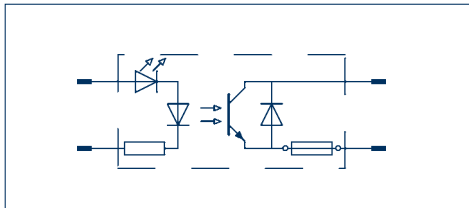
Opto-couplers

SSR

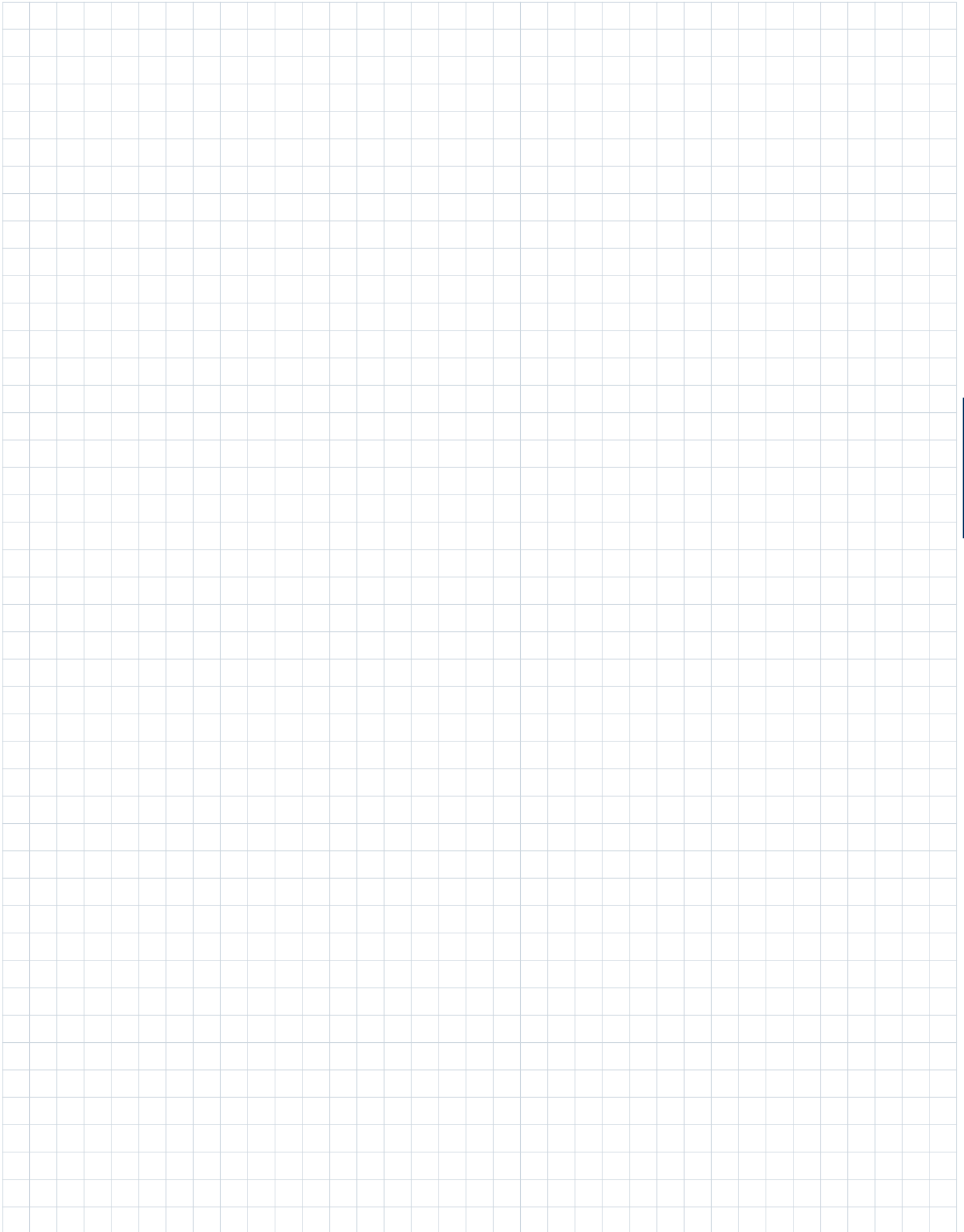
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Circuit diagram

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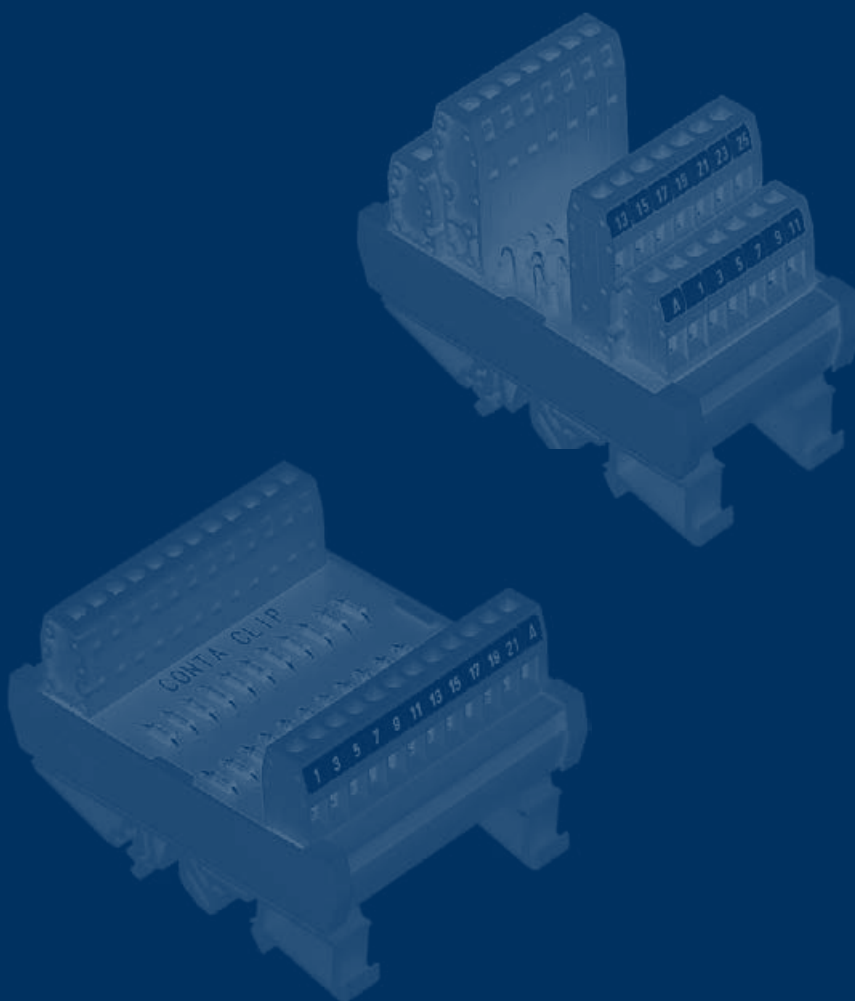
Notizen



Fuse, component, diode and indicator modules

In the passive electronics sector, **CONTA-CLIP** offers a large variety of module types which support fast, secure, and compact functionality.

These modules can be mounted with their combi-base on either the **TS 32** or **TS 35** DIN rails. They feature a screw PCB terminal connection with a rated cross-section of 2.5 mm². Customer-specific descriptions can be attached using the standard PMC Pocket-Maxicard Quick marking system. The **PMCs** fit on labelling channels located on both sides of the orange-coloured fitting trough.



Fuse, component, diode and indicator modules



Fuse modules SM

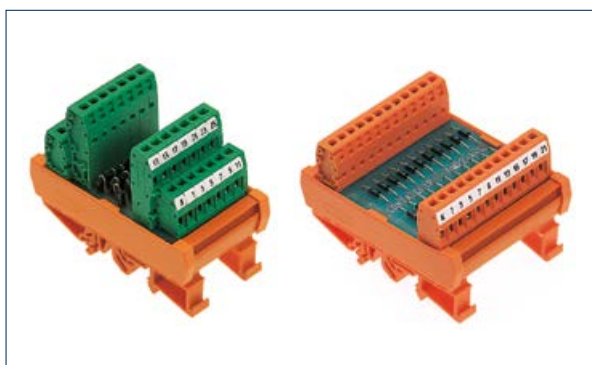
The **SM** fuse modules are designed with three or six micro-fuse receptacles. Each is separated with screw-PCB terminals. The fuse receptacles can hold micro-fuses in the 5x20 size.

In the ...G designs, the entries for the fuse receptacles are connected to each other via the PCB. This allows for a shared power supply.



Component modules BSM

The **BSM** component module features two rows of solder pins, attached parallel to the PCB. They are connected via circuit tracks, with screw-PCB terminals. The area on the opposite side to the solder pins may be used for soldering on a variety of user-side components, such as resistors, diodes, capacitors or varistors.



Diode modules DM

Different components, such as diodes or diodes with resistors, can be connected in parallel or in series using the **DM** diode modules. These diode circuits fulfil a variety of tasks in the area of electrical and electronic controls. These include: protection against polarity reversal, the electric decoupling of warning signals, spark-repression diodes for overvoltages from inductive loads such as magnet valves or DC relays, and lamp test modules for the detection and decoupling of group status messages.

The modules are available in minus-pole or plus-pole designs, or as freely-switchable units.

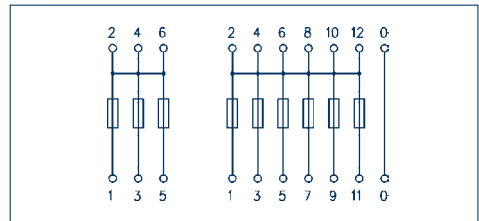


Lamp test modules LPM

The **LPM** lamp test modules are for the detection and decoupling of group status messages. They serve as visual indicators of the switching or signal status.

The **LPM-K** modules feature diodes which are connected in pairs on the cathode side. They are freely-switchable on the anode. On the modules, the diodes are connected in pairs on the cathode side. One anode from the connected pair is connected to a common collection point with the other anodes.

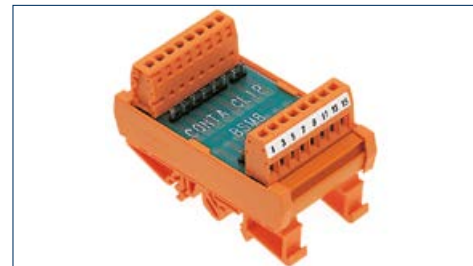
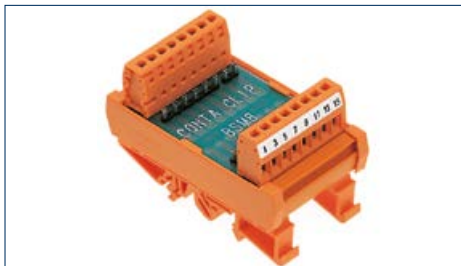
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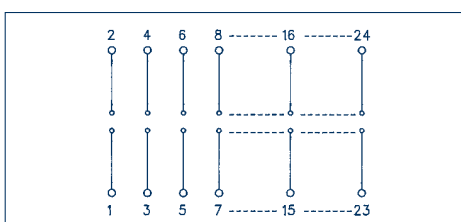
Component modules BSM

- Mounts on TS 32/TS 35
- Screw connection
- Two rows of soldering pins for versatile assembly with components

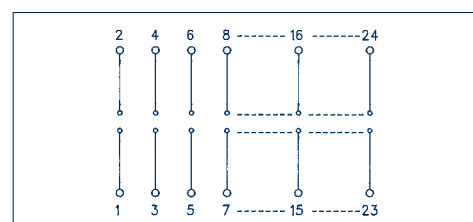
BSM



Circuit diagram

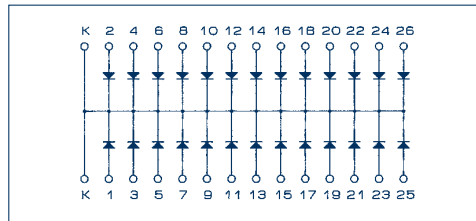
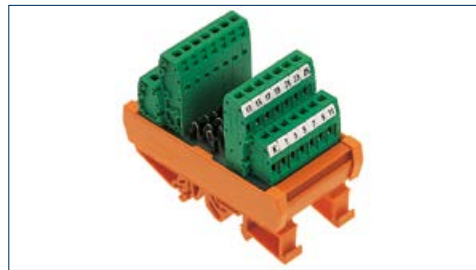
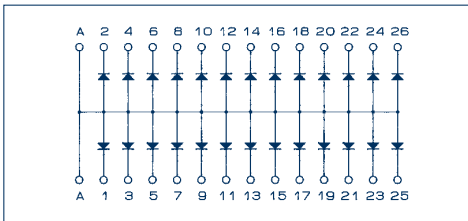
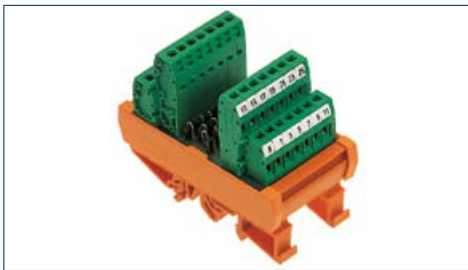


Circuit diagram



Type	BSM 4*		
Cat. no./Qty.	6011.2/1		
Size (L x W x H) with TS 35 x 7.5	87 x 27 x 57 mm		
Weight	45 g		
Number of solder pins	2 rows for 4 poles		
Type	BSM 4/AD*		
Cat. no./Qty.	6011.9/1		
Size (L x W x H) with TS 35 x 7.5	87 x 27 x 57 mm		
Weight	62 g		
Number of solder pins	2 rows for 4 poles		
Type	BSM 8*		
Cat. no./Qty.	5700.2/1		
Size (L x W x H) with TS 35 x 7.5	87 x 47 x 57 mm		
Weight	79 g		
Number of solder pins	2 rows for 8 poles		
Type	BSM 8/AD*		
Cat. no./Qty.	5700.9/1		
Size (L x W x H) with TS 35 x 7.5	87 x 47 x 57 mm		
Weight	102 g		
Number of solder pins	2 rows for 8 poles		
Type	BSM 12*		
Cat. no./Qty.	5701.2/1		
Size (L x W x H) with TS 35 x 7.5	87 x 68 x 57 mm		
Weight	100 g		
Number of solder pins	2 rows for 12 poles		
Type	BSM 12/AD*		
Cat. no./Qty.	5701.9/1		
Size (L x W x H) with TS 35 x 7.5	87 x 68 x 57 mm		
Weight	135 g		
Number of solder pins	2 rows for 12 poles		
General specifications			
DIN-VDE specifications	DIN EN 50178, DIN VDE 0110, contamination degree 2, overvoltage cat. III	DIN EN 50178, DIN VDE 0110, contamination degree 2, overvoltage cat. III	DIN EN 50178, DIN VDE 0110, contamination degree 2, overvoltage cat. III
Operating temperature	-20 to +50 °C	-20 to +50 °C	-20 to +50 °C
Stripping length	7 mm	7 mm	7 mm
Wire connect cross-section	0.2 to 2.5 mm ²	0.2 to 2.5 mm ²	0.2 to 2.5 mm ²
Screw connection	AWG 22-14	AWG 22-14	AWG 22-14
Input data			
Distance between pins	35 mm	35 mm	35 mm
Height of soldering pins	approx. 5 mm	approx. 5 mm	approx. 5 mm
Solder pin grid/pitch	5.08 mm	5.08 mm	5.08 mm
Max. operating voltage	250 V AC	250 V AC	250 V AC
Max. rated current	5 A	5 A	5 A

*The .../AD modules must be used when the operating voltage exceeds 25 V AC/60 V DC.



*The .../AD modules must be used when the operating voltage exceeds 25 V AC/60 V DC. Designs with other diode types are available upon request.

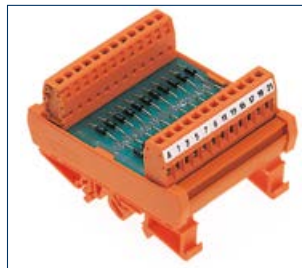
Diode modules DM

- Mounts on TS 32/TS 35
- Screw connection
- Diode modules with freely switchable diodes, and also diode gates with shared anodes or shared cathodes
- These modules can be used for protection against reverse polarity, decoupling, and arc suppression

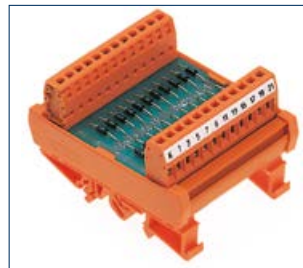
DM



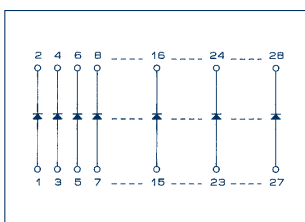
DM-A



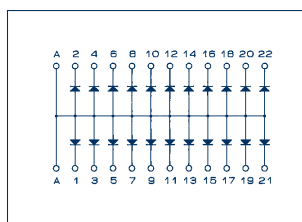
DM-K



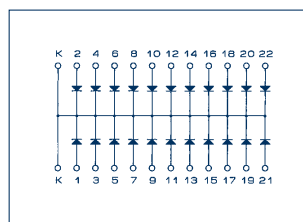
Circuit diagram



Circuit diagram



Circuit diagram



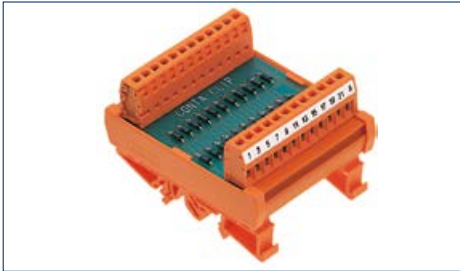
Type Cat. no./Qty.	DM 4* 6318.2/1	DM 14-A* 5704.2/1	DM 14-K* 5706.2/1
Size (L x W x H) with TS 35 x 7.5	87 x 27 x 57 mm	87 x 49 x 57 mm	87 x 49 x 57 mm
Weight	44 g	80 g	80 g
Type Cat. no./Qty.	DM 4/AD* 6318.9/1	DM 14-A/AD* 5704.9/1	DM 14-K/AD* 5706.9/1
Size (L x W x H) with TS 35 x 7.5	87 x 27 x 57 mm	87 x 49 x 57 mm	87 x 49 x 57 mm
Weight	62 g	101 g	101 g
Type Cat. no./Qty.	DM 8* 5702.2/1	DM 22-A* 5705.2/1	DM 22-K* 5707.2/1
Size (L x W x H) with TS 35 x 7.5	87 x 47 x 57 mm	87 x 68 x 57 mm	87 x 68 x 57 mm
Weight	78 g	109 g	109 g
Type Cat. no./Qty.	DM 8/AD* 5702.9/1	DM 22-A/AD* 5705.9/1	DM 22-K/AD* 5707.9/1
Size (L x W x H) with TS 35 x 7.5	87 x 47 x 57 mm	87 x 68 x 57 mm	87 x 68 x 57 mm
Weight	99 g	138 g	138 g
Type Cat. no./Qty.	DM 12* 5703.2/1		
Size (L x W x H) with TS 35 x 7.5	87 x 69 x 57 mm		
Weight	107 g		
Type Cat. no./Qty.	DM 12/AD* 5703.9/1		
Size (L x W x H) with TS3 5 x 7.5	87 x 69 x 57 mm		
Weight	135 g		
Type Cat. no./Qty.	DM 14* 6319.2/1		
Size (L x W x H) with TS 35 x 7.5	87 x 46 x 57 mm		
Weight	116 g		
Type Cat. no./Qty.	DM 14/AD* 6319.9/1		
Size (L x W x H) with TS 35 x 7.5	87 x 46 x 57 mm		
Weight	147 g		
General specifications			
DIN-VDE specifications	DIN EN 50178, DIN VDE 0110, contamination degree 2, overvoltage cat. III	DIN EN 50178, DIN VDE 0110, contamination degree 2, overvoltage cat. III	DIN EN 50178, DIN VDE 0110, contamination degree 2, overvoltage cat. III
Operating temperature	-20 to +50 °C	-20 to +50 °C	-20 to +50 °C
Stripping length	7 mm	7 mm	7 mm
Wire connect cross-section	0.2 to 2.5 mm ²	0.2 to 2.5 mm ²	0.2 to 2.5 mm ²
Screw connection	AWG 22-14	AWG 22-14	AWG 22-14
Input data			
Max. operating voltage	250 V AC/DC	250 V AC/DC	250 V AC/DC
Diode reverse voltage	1000 V	1000 V	1000 V
Max. diode current	1 A	1 A	1 A
Total current per module	-	6 A	6 A
Diode type	1 N 4007	1 N 4007	1 N 4007
Reverse current of diode	5 µA	5 µA	5 µA
On-state voltage of diode	0.8 V	0.8 V	0.8 V

*The .../AD modules must be used when the operating voltage exceeds 25 V AC/60 V DC. Designs with other diode types are available upon request.

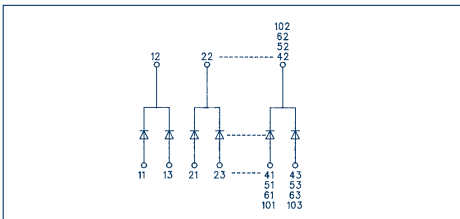
Lamp test modules LPM

- Mounts on TS 32/TS 35
- Screw connection
- Lamp test modules for the detection and decoupling of group status messages
- The LPM-K modules feature diodes which are connected in pairs on the cathode side. They are freely-switchable at the anode.
- The LPM-A modules feature diodes which are connected in pairs on the cathode side.
- One anode from the connected pair is connected to a common collection point with the other anodes.

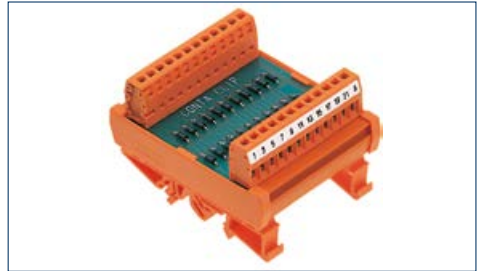
LPM



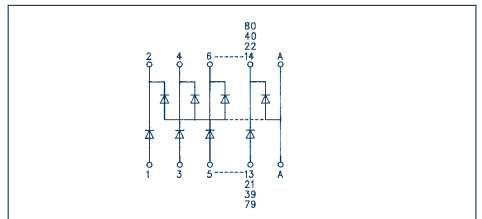
Circuit diagram



LPM-A



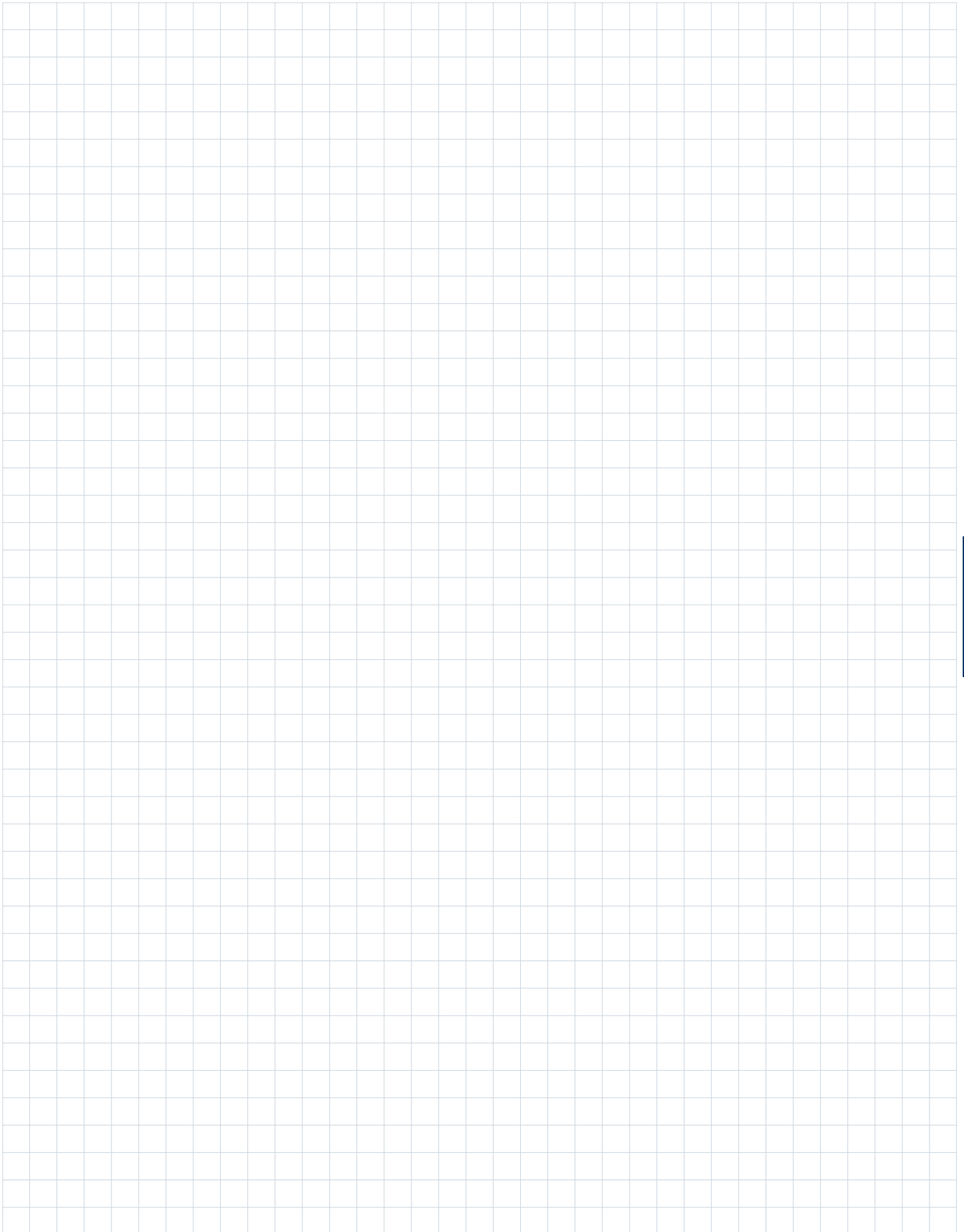
Circuit diagram



Type	LPM 8-4K*	LPM 7-A*
Cat. no./Qty.	5708.2/1	5710.2/1
Size (L x W x H) with TS 35 x 7.5	87 x 49 x 57 mm	87 x 49 x 57 mm
Weight	74 g	80 g
Type	LPM 8-4K/AD*	LPM 7-A/AD*
Cat. no./Qty.	5708.9/1	5710.9/1
Size (L x W x H) with TS 35 x 7.5	87 x 49 x 57 mm	87 x 49 x 57 mm
Weight	96 g	109 g
Type	LPM 12-6K*	LPM 11-A*
Cat. no./Qty.	5709.2/1	5711.2/1
Size (L x W x H) with TS 35 x 7.5	87 x 68 x 57 mm	87 x 68 x 57 mm
Weight	100 g	110 g
Type	LPM 12-6K/AD*	LPM 11-A/AD*
Cat. no./Qty.	5709.9/1	5711.9/1
Size (L x W x H) with TS 35 x 7.5	87 x 68 x 57 mm	87 x 68 x 57 mm
Weight	130 g	198 g
Type	LPM 20-10K*	LPM 20-A*
Cat. no./Qty.	6124.2/1	6125.2/1
Size (L x W x H) with TS 35 x 7.5	87 x 109 x 57 mm	87 x 115 x 57 mm
Weight	152 g	176 g
Type	LPM 20-10K/AD*	LPM 20-A/AD*
Cat. no./Qty.	6124.9/1	6125.9/1
Size (L x W x H) with TS 35 x 7.5	87 x 109 x 57 mm	87 x 115 x 57 mm
Weight	190 g	215 g
Type		LPM 40-A*
Cat. no./Qty.		6126.2/1
Size (L x W x H) with TS 35 x 7.5		87 x 216 x 57 mm
Weight		325 g
Type		LPM 40-A/AD*
Cat. no./Qty.		6126.9/1
Size (L x W x H) with TS 35 x 7.5		87 x 216 x 57 mm
Weight		390 g
General specifications		
DIN-VDE specifications	DIN EN 50178, DIN VDE 0110, contamination degree 2, overvoltage cat. III	DIN EN 50178, DIN VDE 0110, contamination degree 2, overvoltage cat. III
Operating temperature	-20 to +50 °C	-20 to +50 °C
Stripping length	7 mm	7 mm
Wire connect cross-section	0.2 to 2.5 mm ²	0.2 to 2.5 mm ²
Screw connection	AWG 22-14	AWG 22-14
Input data		
Max. operating voltage	250 V AC/DC	250 V AC/DC
Diode reverse voltage	1000 V	1000 V
Max. diode current	1 A	1 A
Total current per module	-	-
Diode type	1 N 4007	1 N 4007
Reverse current of diode	5 µA	5 µA
On-state voltage of diode	0.8 V	0.8 V

*The .../AD modules must be used when the operating voltage exceeds 25 V AC/60 V DC. Designs with other diode types are available upon request.

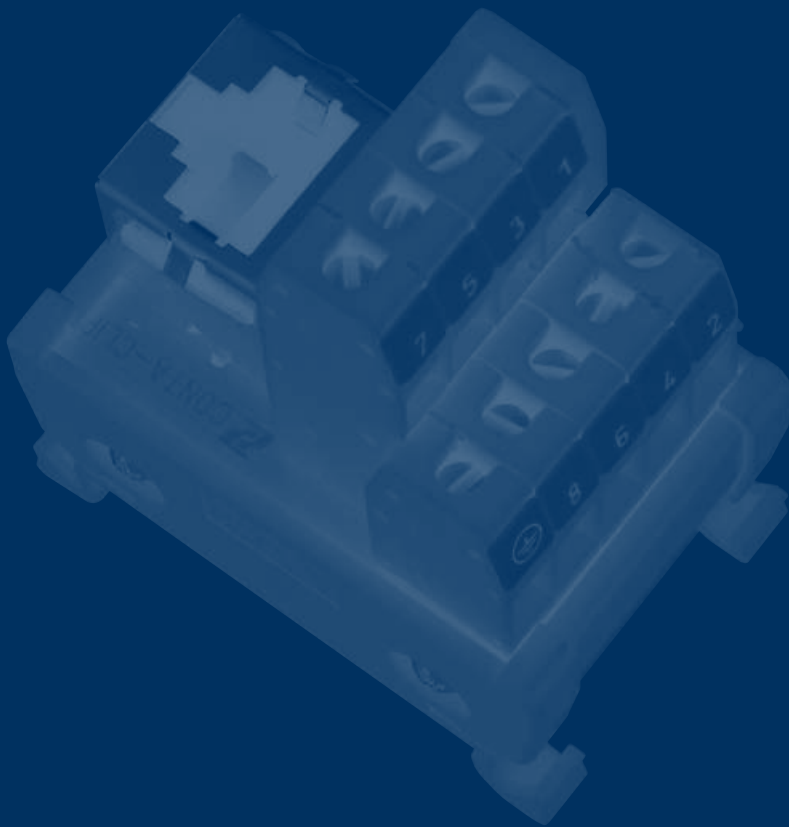
Notizen



Interface modules

Interface modules allow for a passive mechanical-electrical implementation of standard connectors onto screw or tension-spring PCB terminals. The individual signals of the multi-pole or high-pole connectors are implemented one-to-one to the PCB – from the individual wire via connectors to pre-assembled cables. Thus the assembly time and associated costs are reduced.

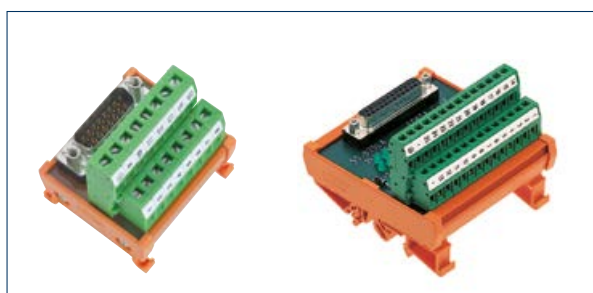
Because of the compact design of the interface modules, their clear terminal labelling, and their simple assembly on TS 32 or TS 35 rails, this system represents an attractive alternative to a pure individual wire approach.



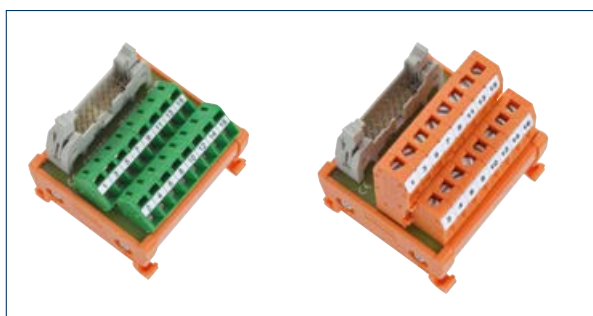
Interface modules



RJ 45 and **USB modules** implement the standardized RJ45 Ethernet and USB connectors from bus systems, computer components, laptops or modems on screw PCB terminals. They can be mounted with the compact **RS-SP0** profile on the **TS 35** rail.



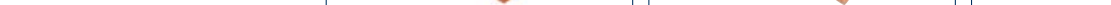
Signal lines can be implemented with **SD modules**, using male or female connectors, according to IEC 807-2/DIN 41652, on screw or tension-spring PCB terminals. The interface modules are equipped with their respective counterparts, which are available with from 9 to 37 poles. The **SD-LA modules** also feature a LED status display.

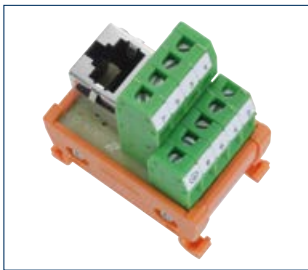


The **FBK modules** enable the assembly of pre-assembled cables with connectors (from 10 to 64 poles) according to IEC 603-1/DIN 41651, for use with screw or tension-spring PCB terminals.

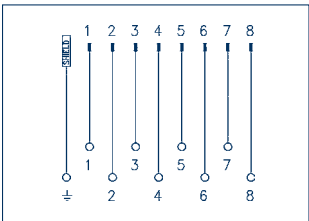


The **OE** interface modules make use of the **EDAC** "hermaphrodite" multi-pole plug (Series 516) on screw connections. This results in excellent shock and vibration resistance. The offset arrangement of the connector means that the neighbouring modules will not be impaired. The **EDAC** connector is compatible with the **ELCO** 8016 connector series.

- 



Circuit diagram



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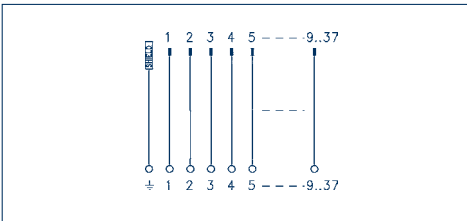
Interface modules SD...C

- Mounts on TS 35
- D-sub on screw connection or on tension-spring connection (Z)
- D-sub connection acc. to MIL-C-24308/ DIN 41652
- Module versions from 9 to 37 connections
- Male (S) / female (B) versions

SD..S...C



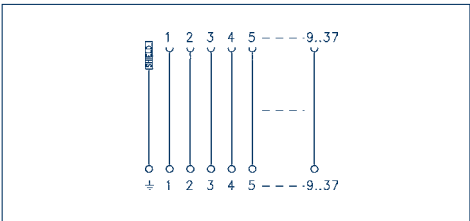
Circuit diagram



SD..B...C



Circuit diagram

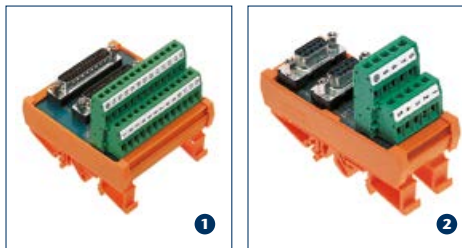


Type	D-sub male plug	D-sub female plug
Cat. no./Qty.	SD-S 9 C 15292.2/1	SD-B 9 C 15294.2/1
Size (L x W x H) with TS 35 x 7.5	47 x 37 x 61 mm	47 x 37 x 61 mm
Weight	50 g	50 g
Type	SD-S 9 CZ	SD-B 9 CZ
Cat. no./Qty.	15293.2/1	15295.2/1
Size (L x W x H) with TS 35 x 7.5	47 x 37 x 38 mm	47 x 37 x 38 mm
Weight	35 g	35 g
Type	SD-S 15 C	SD-B 15 C
Cat. no./Qty.	15296.2/1	15298.2/1
Size (L x W x H) with TS 35 x 7.5	47 x 51 x 61 mm	47 x 51 x 61 mm
Weight	72 g	72 g
Type	SD-S 15 CZ	SD-B 15 CZ
Cat. no./Qty.	15297.2/1	15299.2/1
Size (L x W x H) with TS 35 x 7.5	47 x 51 x 38 mm	47 x 51 x 38 mm
Weight	46 g	46 g
Type	SD-S 25 C	SD-B 25 C
Cat. no./Qty.	15300.2/1	15302.2/1
Size (L x W x H) with TS 35 x 7.5	47 x 78 x 61 mm	47 x 78 x 61 mm
Weight	107 g	107 g
Type	SD-S 25 CZ	SD-B 25 CZ
Cat. no./Qty.	15301.2/1	15303.2/1
Size (L x W x H) with TS 35 x 7.5	47 x 78 x 38 mm	47 x 78 x 38 mm
Weight	67 g	67 g
Type	SD-S 37 C	SD-B 37 C
Cat. no./Qty.	15304.2/1	15306.2/1
Size (L x W x H) with TS 35 x 7.5	47 x 107 x 61 mm	47 x 107 x 61 mm
Weight	148 g	148 g
Type	SD-S 37 CZ	SD-B 37 CZ
Cat. no./Qty.	15305.2/1	15307.2/1
Size (L x W x H) with TS 35 x 7.5	47 x 107 x 38 mm	47 x 107 x 38 mm
Weight	90 g	90 g
General specifications		
DIN-VDE specifications	DIN EN 50178, DIN VDE 0110, contamination degree 2, overvoltage cat. III	DIN EN 50178, DIN VDE 0110, contamination degree 2, overvoltage cat. III
Operating temperature	-20 to +50 °C	-20 to +50 °C
Stripping length, screw/tension-spring	7/6 mm	7/6 mm
Connection	Screw / tension-spring (Z types)	Screw / tension-spring (Z types)
Wire connect cross-section	0.2 to 2.5 mm ²	0.2 to 2.5 mm ²
Connection	AWG 22-14	AWG 22-14
Connection data		
Status indication	-	-
Reverse polarity protection	-	-
Input voltage	125 V AC/DC	125 V AC/DC
Rated current	1.5 A	1.5 A
Male plug	D-sub acc. to MIL-C-24308/DIN 41652	D-sub acc. to MIL-C-24308/DIN 41652
Test voltage	0.67 kV eff	0.67 kV eff

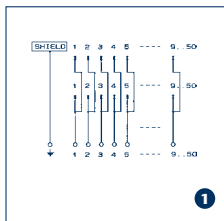
Interface modules SD

- Mounts on TS 32/TS 35
- D-sub on screw connection
- D-sub connection acc. to MIL-C-24308/
DIN 41652
- Module versions from 9 to 50 connections
- Male (S) / female (B) versions
- Width: 87 mm

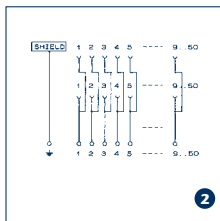
SD 2 double D-sub connection



Circuit diagram



Circuit diagram

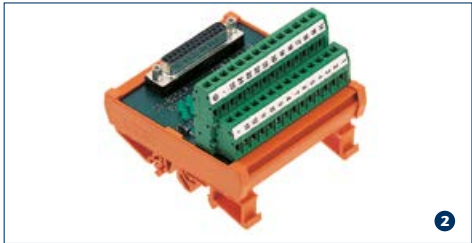


Type	D-sub male plug	1
Cat. no./Qty.	SD 2-S 9	
Size (L x W x H) with TS 35 x 7.5	6301.2/1	
Weight	87 x 37 x 72 mm	
Type	SD 2-S 15	
Cat. no./Qty.	6302.2/1	
Size (L x W x H) with TS 35 x 7.5	87 x 51 x 72 mm	
Weight	104 g	
Type	SD 2-S 25	
Cat. no./Qty.	6303.2/1	
Size (L x W x H) with TS 35 x 7.5	87 x 77 x 72 mm	
Weight	149 g	
Type	SD 2-S 37	
Cat. no./Qty.	6304.2/1	
Size (L x W x H) with TS 35 x 7.5	87 x 107 x 72 mm	
Weight	205 g	
Type	D-sub female plug	2
Cat. no./Qty.	SD 2-B 9	
Size (L x W x H) with TS 35 x 7.5	6306.2/1	
Weight	87 x 37 x 72 mm	
Type	SD 2-B 15	
Cat. no./Qty.	6307.2/1	
Size (L x W x H) with TS 35 x 7.5	87 x 51 x 72 mm	
Weight	104 g	
Type	SD 2-B 25	
Cat. no./Qty.	6308.2/1	
Size (L x W x H) with TS 35 x 7.5	87 x 77 x 72 mm	
Weight	149 g	
Type	SD 2-B 37	
Cat. no./Qty.	6309.2/1	
Size (L x W x H) with TS 35 x 7.5	87 x 107 x 72 mm	
Weight	205 g	
General specifications		
DIN-VDE specifications	DIN EN 50178, DIN VDE 0110, contamination degree 2, overvoltage cat. III	
Operating temperature	-20 to +50 °C	
Stripping length	7 mm	
Connection	Screw connection	
Wire connect cross-section	0.2 to 2.5 mm ²	
Connection	AWG 22-14	
Connection data		
Status indication	-	
Reverse polarity protection	-	
Input voltage	125 V AC/DC	
Rated current	1 A	
Male plug	D-sub connection acc. to MIL-C-24308/DIN 41652	
Test voltage	0.67 kV eff	

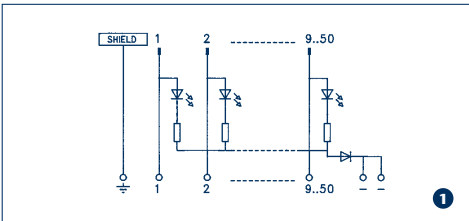
Interface modules SD

- Mounts on TS 32/TS 35
- D-sub on screw connection
- D-sub connection acc. to MIL-C-24308/ DIN 41652
- Module versions from 9 to 37 connections
- Male (S) / female (B) versions
- Width: 87mm
- LED display

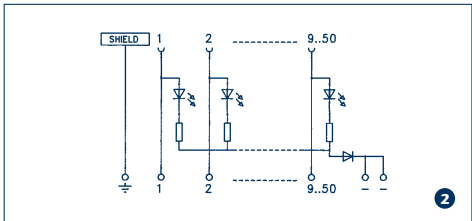
SD-LA
with illuminated display



Circuit diagram



Circuit diagram

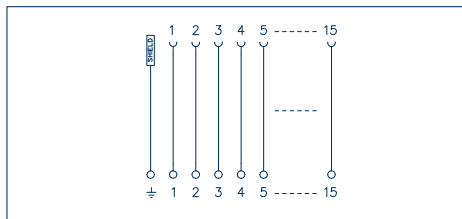


Type Cat. no./Qty.	D-sub male plug SD S 9 LA 6520.2/1	1
Size (L x W x H) with TS 35 x 7.5	87 x 41 x 72 mm	
Weight	79 g	
Type Cat. no./Qty.	SD S 15 LA 6521.2/1	
Size (L x W x H) with TS 35 x 7.5	87 x 56 x 72 mm	
Weight	105 g	
Type Cat. no./Qty.	SD S 25 LA 6135.2/1	
Size (L x W x H) with TS 35 x 7.5	87 x 83 x 72 mm	
Weight	152 g	
Type Cat. no./Qty.	SD S 37 LA 6522.2/1	
Size (L x W x H) with TS 35 x 7.5	87 x 112 x 72 mm	
Weight	203 g	
Type Cat. no./Qty.	D-sub female plug SD B 9 LA 6524.2/1	2
Size (L x W x H) with TS 35 x 7.5	87 x 41 x 72 mm	
Weight	79 g	
Type Cat. no./Qty.	SD B 15 LA 6525.2/1	
Size (L x W x H) with TS 35 x 7.5	87 x 56 x 72 mm	
Weight	105 g	
Type Cat. no./Qty.	SD B 25 LA 6136.2/1	
Size (L x W x H) with TS 35 x 7.5	87 x 83 x 72 mm	
Weight	152 g	
Type Cat. no./Qty.	SD B 37 LA 6526.2/1	
Size (L x W x H) with TS 35 x 7.5	87 x 112 x 72 mm	
Weight	203 g	
General specifications		
DIN-VDE specifications	DIN EN 50178, DIN VDE 0110, contamination degree 2, overvoltage category III	
Operating temperature	-20 to +50 °C	
Stripping length	7 mm	
Connection	Screw connection	
Wire connect cross-section	0.2 to 2.5 mm ²	
Connection	AWG 22-14	
Connection data		
Status indication	green LED	
Reverse polarity protection	Diode 1 N 4007	
Input voltage	24 V DC	
Rated current	1 A	
Male plug	D-sub connection acc. to MIL-C-24308/DIN 41652	
Test voltage	0.67 kV eff	

- SD-S15..-HD



SD-B15..-HD



Interface modules

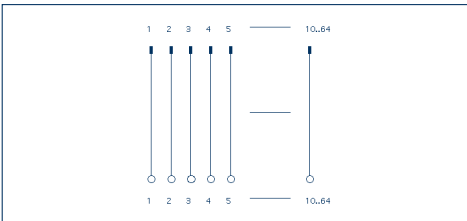
Interface modules FBK...C

- Mounts on TS 35
- Flat ribbon cable on screw connection or on tension-spring connection (Z)
- Male plug connection acc. to DIN 41651
- Module versions from 10 to 64 connections
- Ejector mechanism for socket block (female connectors)
- Width: 47 mm

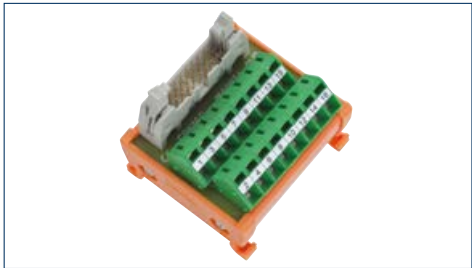
FBK... C



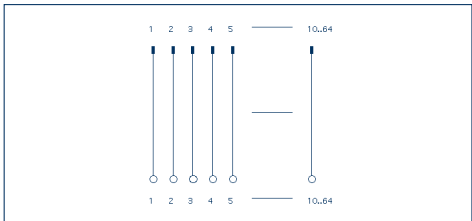
Circuit diagram



FBK... CZ



Circuit diagram

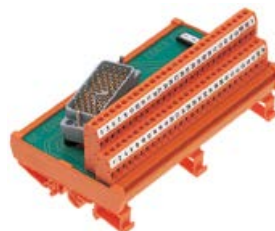


Type	Cat. no./Qty.	FBK 10C	15272.2/1	FBK 10CZ	15273.2/1
Size (L x W x H) with TS 35 x 7.5		47 x 36 x 61 mm		47 x 36 x 38 mm	
Weight		47 g		32 g	
Type	Cat. no./Qty.	FBK 14C	15274.2/1	FBK 14CZ	15275.2/1
Size (L x W x H) with TS 35 x 7.5		47 x 46 x 61 mm		47 x 46 x 38 mm	
Weight		61 g		43 g	
Type	Cat. no./Qty.	FBK 16C	15276.2/1	FBK 16CZ	15277.2/1
Size (L x W x H) with TS 35 x 7.5		47 x 51 x 61 mm		47 x 51 x 38 mm	
Weight		68 g		48 g	
Type	Cat. no./Qty.	FBK 20C	15278.2/1	FBK 20CZ	15279.2/1
Size (L x W x H) with TS 35 x 7.5		47 x 63 x 61 mm		47 x 63 x 38 mm	
Weight		82 g		58 g	
Type	Cat. no./Qty.	FBK 26C	15280.2/1	FBK 26CZ	15281.2/1
Size (L x W x H) with TS 35 x 7.5		47 x 77 x 61 mm		47 x 77 x 38 mm	
Weight		102 g		68 g	
Type	Cat. no./Qty.	FBK 34C	15282.2/1	FBK 34CZ	15283.2/1
Size (L x W x H) with TS 35 x 7.5		47 x 96 x 61 mm		47 x 96 x 38 mm	
Weight		130 g		80 g	
Type	Cat. no./Qty.	FBK 40C	15284.2/1	FBK 40CZ	15285.2/1
Size (L x W x H) with TS 35 x 7.5		47 x 113 x 61 mm		47 x 113 x 38 mm	
Weight		151 g		88 g	
Type	Cat. no./Qty.	FBK 50C	15286.2/1	FBK 50CZ	15287.2/1
Size (L x W x H) with TS 35 x 7.5		47 x 138 x 61 mm		47 x 138 x 38 mm	
Weight		184 g		99 g	
Type	Cat. no./Qty.	FBK 60C	15288.2/1	FBK 60CZ	15289.2/1
Size (L x W x H) with TS 35 x 7.5		47 x 169 x 61 mm		47 x 169 x 38 mm	
Weight		222 g		122 g	
Type	Cat. no./Qty.	FBK 64C	15290.2/1	FBK 64CZ	15291.2/1
Size (L x W x H) with TS 35 x 7.5		47 x 169 x 61 mm		47 x 169 x 38 mm	
Weight		232 g		128 g	
General specifications					
DIN-VDE specifications		DIN EN 50178, DIN VDE 0110, contamination degree 2, overvoltage cat. III		DIN EN 50178, DIN VDE 0110, contamination degree 2, overvoltage cat. III	
Operating temperature		-20 to +50 °C		-20 to +50 °C	
Stripping length		7 mm		6 mm	
Connection		Screw connection		Tension-spring connection	
Wire connect cross-section		0.2 to 2.5 mm ²		0.2 to 2.5 mm ²	
Connection		AWG 22-14		AWG 22-14	
Input data					
Status indication		-		-	
Reverse polarity protection		-		-	
Input voltage		125 V AC/DC		125 V AC/DC	
Rated current		1 A		1 A	
Male plug		Flat ribbon cable connection EN 60603-13/DIN 41651		Flat ribbon cable connection EN 60603-13/DIN 41651	
Test voltage		0.67 kV eff		0.67 kV eff	

Interface modules OE-E

OE-E 38/E 56

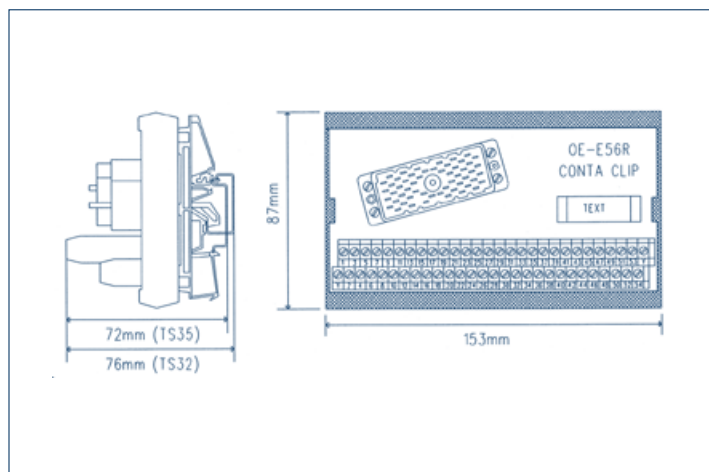
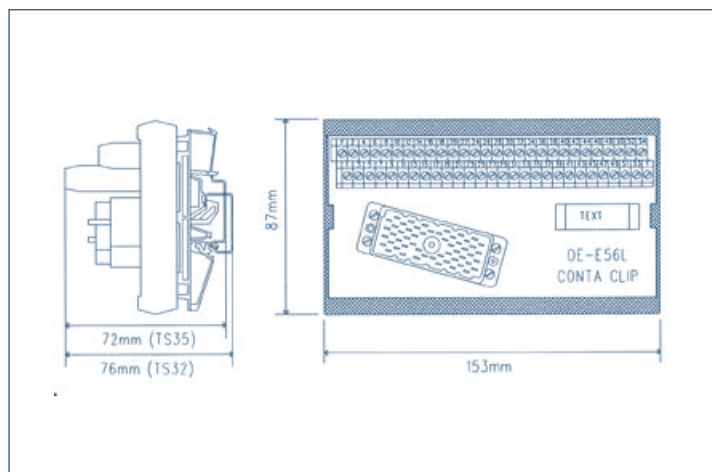
- Mounts on TS 32/TS 35
- EDAC plug connector on screw connection
- The EDAC series 516 is 100% compatible with the ELCO 8016
- Offset arrangement of plug connector
- Does not influence the neighbouring modules
- "Left" and "right" versions are available



Circuit diagram



Type	OE-E 38/36 L	OE-E 38/36 R	OE-E 56 L	OE-E 56 R
Cat. no./Qty.	15351.2/1	15350.2/1	15090.2/1	15091.2/1
Size (L x W x H) with TS 35 x 7.5	122 x 107 x 72 mm	122 x 107 x 72 mm	122 x 153 x 72 mm	122 x 153 x 72 mm
Weight	272 g	272 g	295 g	295 g
General specifications				
DIN-VDE specifications	DIN EN 50178:1997; DIN VDE 0110 con- tamination degree 2, overvoltage category III	DIN EN 50178:1997; DIN VDE 0110 con- tamination degree 2, overvoltage category III	DIN EN 50178:1997; DIN VDE 0110 con- tamination degree 2, overvoltage category III	DIN EN 50178:1997; DIN VDE 0110 con- tamination degree 2, overvoltage category III
Test voltage	0.8 kV	0.8 kV	0.8 kV	0.8 kV
Operating temperature	-20 to +55 °C	-20 to +55 °C	-20 to +55 °C	-20 to +55 °C
Stripping length	7 mm	7 mm	7 mm	7 mm
Connection	Screw connection	Screw connection	Screw connection	Screw connection
Wire connect cross-section	0.2 to 2.5 mm ²	0.2 to 2.5 mm ²	0.2 to 2.5 mm ²	0.2 to 2.5 mm ²
Connection	AWG 22-14	AWG 22-14	AWG 22-14	AWG 22-14
Connection data				
Pin block and position	516-038 left	516-038 right	516-056 left	516-056 right
No. of poles	36 + shield	36 + shield	54 + shield	54 + shield
Polarization code of male plug connector	1-1 (changeable)	1-1 (changeable)	4-4 (changeable)	4-4 (changeable)
Input voltage	250 V AC/DC	250 V AC/DC	250 V AC/DC	250 V AC/DC
Max. rated current per pole	2 A	2 A	2 A	2 A
Max. total current	36 A	36 A	56 A	56 A
Male plug	EDAC connection	EDAC connection	EDAC connection	EDAC connection
Clearance and creepage distance: EDAC male plug	EN 50020/DIN VDE 0170/171 sect. 7	EN 50020/DIN VDE 0170/171 sect. 7	EN 50020/DIN VDE 0170/171 sect. 7	EN 50020/DIN VDE 0170/171 sect. 7
PCB	DIN VDE 0110	DIN VDE 0110	DIN VDE 0110	DIN VDE 0110



Converter Units

Whether for manufacturing, electrical machine and plant instrumentation, control engineering, power distribution, building automation, or process engineering – it is always important to guarantee that the signal exchange between the peripheral devices and the upper-level central control and instrumentation systems remains potential-free and operationally safe.

There are standardized electrical signal strengths which are typical for industrial processes. Current levels from 0 to 20 mA, 4 to 20 mA, or voltage levels from 0 to 10 V have become established as the standard output or input levels of sensors or actuators of varying physical sizes.

CONTA-CLIP offers a wide variety of different signal converters and different designs. These cover most conceivable applications.



Converter Units



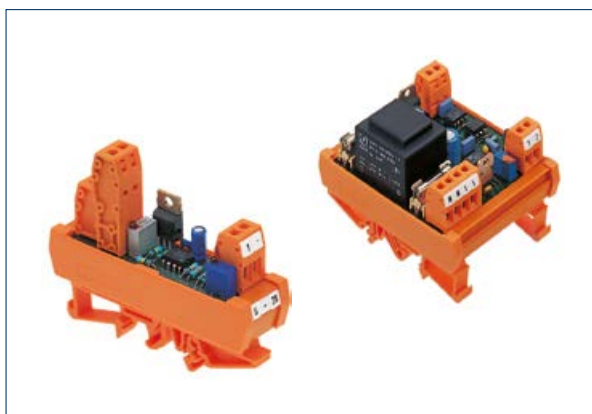
Signal converters CML

Thanks to their thin form (6.2 mm), these converter units can be integrated into a mounted-rail control design where space is tight. It does not matter if they are voltage and current signals (**CML-UI-UI**), potentiometer signals (**CML-POT-UI**) or temperature signals from PT 100 sensors (**CML-PT100-UI**). For the signal converters, there are always two standardized output signals available: signals 0 to 20 mA or 4 to 20 mA and 0 to 10 V. They can be converted easily with DIP switches, and offer an externally-accessible option for calibration.



Multi-function signal converters CMS

The **CMS** signal converter was developed to convert analogue and frequency-based signals from a field sensor to a standard signal for a controller. These multi-function signal converters come enclosed in a compact sealed housing. All the common conversions are selectable directly on the unit with DIP switches (current, voltage and frequency). The integrated three-way electrical isolation separates the input and output circuits as well as the power supply. The module includes an additional digital output that can be used as an alarm indicator.



Signal conversion modules

The signal conversion modules offer a variety of conversion options in the standard open-mounting profile for TS 35 and TS 32 DIN rails. Possible conversions include voltage and current signals (**CAE/I, U**) or potentiometric signals (**CAE/POT**).

Overview of the product line

- **CAE/I, U**: analogue signal converter modules without electrical isolation
- **CAE/...G/230**: analogue signal converter modules without electrical isolation
- **CAE/POT** potentiometric modules

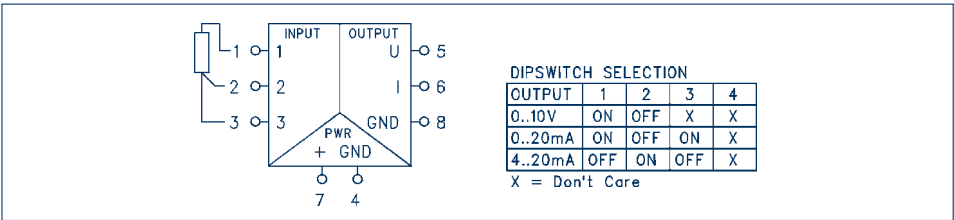
Temperature converter units CML

- Mounts on TS 35
- Compact design, width: 6.2 mm
- Screw connection
- Converts PT100 resistance thermometers (3- or 2-wire) to standard analogue signals
- Three-way output: 0 to 10 V, 0 to 20 mA or 4 to 20 mA
- Output signal adjustable via DIP switch
- OFFSET and SPAN setting is always accessible
- Special temperature ranges available upon request
- PT 500 and PT 1000 connections available upon request

CML-PT 100-UI



Circuit diagram



Type	CML-PT 100-UI
Cat. no./Qty.	15752.2/1
Temperature range	-50 to +50 °C
Type	CML-PT 100-UI
Cat. no./Qty.	15701.2/1x
Temperature range	0 to +100 °C
Type	CML-PT 100-UI
Cat. no./Qty.	15753.2/1
Temperature range	0 to +200 °C
Type	CML-PT 100-UI
Cat. no./Qty.	15754.2/1
Temperature range	0 to +300 °C
Type	CML-PT 100-UI
Cat. no./Qty.	15755.2/1
Temperature range	0 to +400 °C
Size (L x W x H) with TS 35 x 7.5	93.1 x 6.2 x 102.5 mm
Weight	66 g
Colour	grey
General specifications	
DIN-VDE specifications	DIN EN 50178: 1987, DIN VDE 0110, contamination degree 2, overvoltage cat. III
Electromagnetic properties	CE compliant
Protection class	IP 20
Operating temperature	-20 to +55 °C
Connection type	
Stripping length	12 mm
Conductor cross-section	0.2 to 2.5 mm²
Screw connection	AWG 22-14
Transmission errors	< 0.2 % of end value
Temperature coefficient	< 0.02 %/K
Frequency limit (- 3dB)	10 Hz
Power supply	24 V DC -15 % +10 % / 40 mA
Input data	
Input signal	PT 100 (IEC 751/EN 60751) 2- and 3-wire system
Conductor resistance	< 100 Ω
Supply current for PT 100	0.8 mA
Remarks:	initially OFFSET, then set to SPAN
Remarks:	when a 2-wire sensor is being used, connect terminals 2 and 3
Output specifications	
Voltage of output signal	0 to 10 V (initial setting)
Max. voltage of output signal	approx. 11 V
Load resistance	> 1 kΩ
Current of outputs (adjustable via DIP switch)	0 to 20 or 4 to 20 mA (initial setting is 4 to 20 mA)
Max. output current	approx. 22 mA
Load resistance	< 500 Ω
Offset	< 10 mV/20 mA
Remarks:	The current and voltage output can not both be used simultaneously

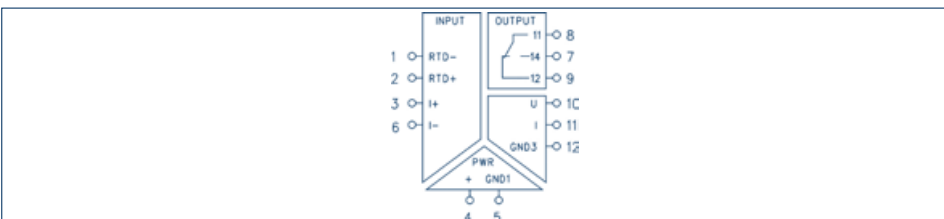
Multi-function thermal sensor unit CMS-RTD-UI

- Mounts on TS 35
- Compact design, width: 17.5 mm
- Three-way electrical isolation
- Screw connection
- Multi-channel thermocouple input
- Multi-function analogue output (U-I)
- Temperature conversion is adjustable via DIP switch
- 24 V DC power supply
- Limit-value relay with adjustable setpoint and hysteresis
- Other designs available upon request

CMS-RTD-UI



Circuit diagram



Type	CMS-RTD-UI
Cat. no./Qty.	15919.2/1
Size (L x W x H) with TS 35 x 7.5	99 x 17.5 x 114.5 mm
Weight	120 g
General specifications	
DIN-VDE specifications	DIN EN 50178:1997 ; DIN VDE 0110, contamination degree 2, overvoltage category III
Electromagnetic properties	CE compliant
Operating temperature	-20 °C to +55 °C
Connection type	Pluggable Screw connection, AWG 22-14
Stripping length	7 mm
Wire connect cross-section	0.2 to 2.5 mm ²
Conversion error set / not set	< 0.3 % F.S. / < 1.0 % F.S.
Temperature coefficient	< 0.01 % / K
Response time	200 ms
Offset voltage @ 3x I _n overload	< 0.7 % of I _n
Power supply	24 V DC ± 10 % / 60 mA
Insulation voltage input / output	1 kV, 50 Hz, 1 min
Insulation voltage power supply / signal	1 kV, 50 Hz, 1 min
Input data	
Input type	RTD as 2, 3 and 4 wire, in compliance with EN 60751/DIN 43760
	Pt-100 -50 to 850 °C (initial setting)
	Pt-500 -50 to + 850 °C
	Pt-1000 -50 to + 850 °C
	Ni-100 -50 to + 180 °C
	Ni-1000 -50 to + 180 °C
Cold junction compensation	-
Cold junction error	-
Excitation current	200 µA
Output specifications	
Output signals (adjustable via DIP switch)	0-10 V, 0-5 V, 1-5 V, 10-0 V, 0-5 mA, 0-10 mA, 0-20 mA, 4-20 mA
Load resistance U/I	U: > 1 kOhm I: <600 Ohm
Offset U/I	< 10 mV/ 20 µA
Max. output signal U/I	< 11 V/22 mA
Relay contact	1 CO contact
Max. switching voltage	240 V AC
Max. continuous current/inrush current	3 A / 5 A (at resistive load)
Contact material	AgNi
Electrical lifespan at max. contact load	> 1.5 x 10 ⁵
Mechanical lifespan	> 15 x 10 ⁶
Test voltage coil/contact	4 kV

Input Thermal sensor Type	Min. (°C) Max. (°C)		R0 (Ω)	Output U (V)				I (mA)			
				0-10 V	0-5 V	1-5 V	10-0 V	0-5 mA	0-10 mA	0-20 mA	0-40 mA
PT100	-50	+ 850	100	x	x	x	x	x	x	x	x
PT500	-50	+ 850	500	x	x	x	x	x	x	x	x
PT1000	-50	+ 850	1000	x	x	x	x	x	x	x	x
NI100	-50	+ 180	100	x	x	x	x	x	x	x	x
NI1000	-50	+ 180	1000	x	x	x	x	x	x	x	x

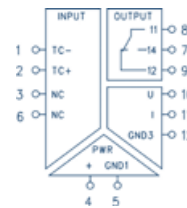
Multi-function thermocouple unit CMS-TC-UI

- Mounts on TS 35
- Compact design, width: 17.5 mm
- Three-way electrical isolation
- Screw connection
- Multi-channel thermocouple input
- Multi-function analogue output (U-I)
- Temperature conversion is adjustable via DIP switch
- 24 V DC power supply
- Limit-value relay with adjustable setpoint and hysteresis
- Other designs available upon request

CMS-TC-UI



Circuit diagram



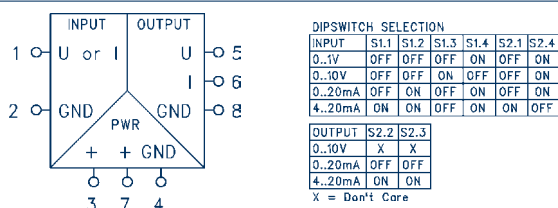
Type	CMS-TC-UI
Cat. no./Qty.	15900.2/1
Size (L x W x H) with TS 35 x 7.5	99 x 17.5 x 114.5 mm
Weight	120 g
General specifications	
DIN-VDE specifications	DIN EN50178 : 1997, DIN VDE 0110, contamination degree 2, overvoltage cat. III
Electromagnetic properties	CE compliant
Operating temperature	-20 °C to +55 °C
Connection type	Pluggable screw connection, AWG 22-14
Stripping length	7 mm
Wire connect cross-section	0.2 to 2.5 mm ²
Conversion error set / not set	< 0.3 % F.S. / < 1.0 % F.S.
Temperature coefficient	< 0.01 % / K
Response time	200 ms
Offset voltage @ 3x In overload	< 0.7 % of In
Power supply	24 V DC ± 10 % / 60 mA
Insulation voltage input / output	1 kV, 50 Hz, 1 min
Insulation voltage power supply / signal	1 kV, 50 Hz, 1 min
Input data	
Input type	Thermocouple acc. to EN 60584
	K -50 to + 1350 °C (initial setting)
	J -50 to + 1200 °C
	T -50 to + 400 °C
	E -50 to + 1000 °C
Cold junction compensation	Selectable
Cold junction error	≤ 3 K (typically 1.5 K)
Excitation current	-
Output specifications	
Output signals (adjustable via DIP switch)	0-10 V, 0-5 V, 1-5 V, 10-0 V, 0-5 mA, 0-10 mA, 0-20 mA, 4-20 mA
Load resistance U/I	U: > 1 kOhm I: <600 Ohm
Offset U/I	< 10 mV/20 µA
Max. output signal U/I	< 11 V/22 mA
Relay contact	1 CO contact
Max. switching voltage	240 V AC
Max. continuous current/inrush current	3 A / 5 A (at resistive load)
Contact material	AgNi
Electrical lifespan at max. contact load	> 1.5 x 10 ⁵
Mechanical lifespan	> 15 x 10 ⁶
Test voltage coil/contact	4 kV

Input Thermocouple Type			Standards	Output U (V)				I (mA)			
	Min. (°C)	Max. (°C)		0-10 V	0-5 V	1-5 V	10-0 V	0-5 mA	0-10 mA	0-20 mA	0-40 mA
K	-50	+ 1350	EN 60584	x	x	x	x	x	x	x	x
J	-50	+ 1200	EN 60584	x	x	x	x	x	x	x	x
T	-50	+ 400	EN 60584	x	x	x	x	x	x	x	x
E	-50	+ 1000	EN 60584	x	x	x	x	x	x	x	x

- CML-UI-UI



Circuit diagram



CML-UI-UI 15643.2/1
93.1 x 6.2 x 102.5 mm
66 g
DIN EN 50178: 1987, DIN VDE 0110, contamination degree 2, overvoltage cat. III
CE compliant
IP 20
-20 to +55 °C
Screw connection
12 mm / 8 mm
0.2 to 2.5 mm ²
AWG 22-14
< 0.2 % of end value
< 0.02 % / K
10 Hz
24 V DC -15 % +10 % / 40 mA
0 to 10 V / 0 to 20 mA / 4 to 20 mA
30 V, 50 mA, 50 mA
100 kΩ / 50 Ω / 50 Ω
2 %
2 %
initially OFFSET, then set to SPAN
0 to 10 V (initial setting)
approx. 11 V
> 1 kΩ
0 to 20 or 4 to 20 mA (initial setting is 4 to 20 mA)
approx. 22 mA
< 500 Ω
< 10 mV/20 mA
when the current and voltage outputs are used simultaneously, the load resistance must be > 10 kΩ on the voltage output.

Voltage and current transformer unit CML-UI-UI-G

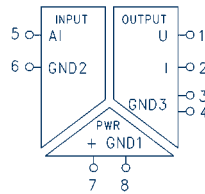
With electrical isolation

- Mounts on TS 35
- Compact design, width: 6.2 mm
- Screw connection
- Three-way electrical isolation between the input, output and power supply
- Input: 0 to 10 V, 2 to 10 V, 0 to 5 V, 1 to 5 V
0 to 20 mA, 4 to 20 mA
- Output: 0 to 10 V, 2 to 10 V, 0 to 5 V, 1 to 5 V
0 to 20 mA, 4 to 20 mA
- Input and output signals are adjustable via DIP switch
- No external calibration required
- Other designs available upon request

CML-UI-UI-G



Circuit diagram



DIPSWITCH SELECTION

INPUT	S1.1	S1.2	S1.3	S1.4	S2.1
0...10V	OFF	ON	OFF	OFF	OFF
2...10V	OFF	ON	OFF	OFF	ON
0...5V	OFF	ON	OFF	ON	OFF
1...5V	OFF	ON	OFF	ON	ON
0...20mA	ON	OFF	ON	OFF	OFF
4...20mA	ON	OFF	ON	OFF	ON

OUTPUT	S2.2	S2.3	S2.4
0...10V	OFF	OFF	OFF
2...10V	OFF	OFF	ON
0...5V	OFF	ON	OFF
1...5V	OFF	ON	ON
0...20mA	ON	OFF	OFF
4...20mA	ON	OFF	ON

Type	CML-UI-UI-G	Qty.
Cat. no.	15903.2	1
Size (L x W x H) with TS 35x7.5 mm	93.1 x 6.2 x 102.5	
Weight, g	66	
General specifications		
EMC specifications	EN 55011 / EN 61326-1	
Electromagnetic properties	In compliance with the EMC Directive 2001/108/EC	
Protection class	IP 20	
Operating temperature	-20 to +55 °C	
Connection type	Screw connection	
Connection cross-section, mm ²	0.2-2.5	
Screw connection	AWG 22-14	
Stripping length, mm	12	
Power supply, V DC	24 (± 10 %)	
Current consumption, mA	45 @ no load	
Transmission errors	< 0.2 % of end value	
Conversion errors	< 0.2 % of end value	
Temperature coefficient	< 0.02 % / K	
Insulation voltage (power supply / signal)	1 kV, 50 Hz, 1 min	
Insulation voltage (input / output)	1 kV, 50 Hz, 1 min	
Frequency limit (- 3dB) Hz	10	
Input data		
Input signals (adjustable via DIP switch)	0 (2) to 10 V / 0 (1) to 5 V / 0 (4) to 20 mA (initial setting: 0 to 10 V)	
Max. input signal	20 V / 20 V / 40 mA	
input resistance	> 50 kOhm / > 50 kOhm / 50 Ohm	
Output specifications		
Voltage output signal (adjustable via DIP switch)	0 (2) to 10 V / 0 (1) to 5 V (initial setting: 0 to 10 V)	
Max. voltage output signal, V	approx. 10.5	
Load resistance, kOhm	> 1	
Max. offset, U mV	20	
Current outputs (adjustable via DIP switch), mA	0 to 20 or 4 to 20	
Max. output current, mA	approx. 21	
Load resistance, kOhm	< 500	

Input U	Output U (V)				I (mA)	
	0-5 V	1-5 V	0-10 V	2-10 V	0-20 mA	4-20 mA
0...5 V	x	x	x	x	x	x
1...5 V	x	x	x	x	x	x
0...10 V	x	x	x	x	x	x
1...10 V	x	x	x	x	x	x
I						
0...20 mA	x	x	x	x	x	x
4...20 mA	x	x	x	x	x	x

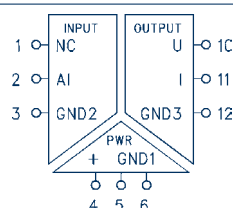
Multi-function signal converter units CMS

- Mounts on TS 35
- Compact design, width: 17.5 mm
- Three-way electrical isolation
- Screw connection
- Multi-function analogue input (U-I)
- Multi-function analogue output (U-I)
- Signal conversion adjustable via DIP switch
- Power supply: 24 VDC

CMS-UI-UI



Circuit diagram



Type	CMS-UI-UI
Cat. no./Qty.	15650.2/1
Size (L x W x H) with TS 35 x 7.5	99 x 17.5 x 114.5 mm
Weight	120 g
General specifications	
DIN-VDE specifications	DIN EN 50178: 1987, DIN VDE 0110, contamination degree 2, overvoltage cat. III
Electromagnetic properties	CE compliant
Operating temperature	0 to +55 °C
Connection type	Pluggable Screw connection
Stripping length	7 mm
Wire connect cross-section	0.2 to 2.5 mm ²
Screw connection	AWG 22-14
Transmission errors	< 0.1 %
Temperature coefficient	< 0.01 % / K
Frequency limit (- 3 dB)	10 Hz
Power supply	24 V DC ± 25 % / 50 mA
Insulation voltage, input / output	1 kV, 50 Hz, 1 min
Insulation voltage, power supply / signal	1 kV, 50 Hz, 1 min
Functions	Signal doubler / signal inverter / 2-signal converter
Input data	
Input signal (adjustable via DIP switch)	Refer to table (initial setting from 0 to 10 V)
Max. input signal U / I	40 V DC / 25 mA
Input resistance U / I	> 200 k Ω / 50 Ω
Output specifications	
Output signal (adjustable via DIP switch)	Refer to table (initial setting from 0 to 10 V)
Load resistance U / I	> 1 k Ω / < 600 Ω
Offset U / I	< 10 mV / 20 mA
Max. output signal U / I	approx. 11 V / 22 mA

Input U	Output U (V)			I (mA)			
	0-10 V	0-5 V	1-5 V	0-5 mA	0-10 mA	0-20 mA	4-20 mA
0...1 V	x	x	x	x	x	x	x
0...2 V	x	x	x	x	x	x	x
0...2.5 V	x	x	x	x	x	x	x
0...5 V	x	x	x	x	x	x	x
1...5 V	x	x	x	x	x	x	x
0...10 V	x	x	x	x	x	x	x
0...20 V	x	x	x	x	x	x	x
0...40 V	x	x	x	x	x	x	x
I							
0...5 mA	x	x	x	x	x	x	x
0...10 mA	x	x	x	x	x	x	x
0...20 mA	x	x	x	x	x	x	x
4...20 mA	x	x	x	x	x	x	x

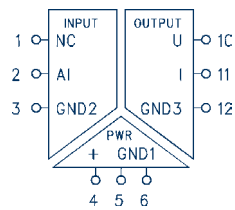
Multi-function signal converter units CMS

- Mounts on TS 35
- Compact design, width: 17.5 mm
- Three-way electrical isolation
- Screw connection
- Multi-function analogue input (U-I)
- Multi-function analogue output (U-I)
- Signal conversion adjustable via DIP switch
- Power supply: 24 VDC

CMS-UI60-UI



Circuit diagram



Type	CMS-UI60-UI
Cat. no./Qty.	15885.2/1
Size (L x W x H) with TS 35 x 7.5	99 x 17.5 x 114.5 mm
Weight	120 g
General specifications	
DIN-VDE specifications	DIN EN 50178: 1987, DIN VDE 0110, contamination degree 2, overvoltage cat. III
Electromagnetic properties	CE compliant
Operating temperature	0 to +55 °C
Connection type	Pluggable Screw connection
Stripping length	7 mm
Wire connect cross-section	0.2 to 2.5 mm ²
Screw connection	AWG 22-14
Transmission errors	< 0.1 %
Temperature coefficient	< 0.01 % / K
Frequency limit (- 3 dB)	10 Hz
Power supply	24 V DC ± 25 % / 50 mA
Insulation voltage, input / output	1 kV, 50 Hz, 1 min
Insulation voltage, power supply / signal	1 kV, 50 Hz, 1 min
Input data	
Input signal (adjustable via DIP switch)	Refer to table (initial setting from 0 to 10 V)
Max. input signal U / I	40 V DC / 25 mA
Input resistance U / I	> 200 kΩ / 50 Ω
Output specifications	
Output signals (adjustable via DIP switch)	Refer to table (initial setting from 0 to 10 V)
Load resistance U / I	> 1 kΩ / < 600 Ω
Offset U / I	< 10 mV / 20 μA
Max. output signal U / I	approx. 11 V / 22 μA

Input U	Output U (V)			I (mA)			
	0-10 V	0-5 V	1-5 V	0-5	0-10 mA	0-20 mA	4-20 mA
0...60 mV	x	x	x	x	x	x	x
0...100 mV	x	x	x	x	x	x	x
0...200 mV	x	x	x	x	x	x	x
0...300 mV	x	x	x	x	x	x	x
0...500 mV	x	x	x	x	x	x	x
0...1 V	x	x	x	x	x	x	x
0...2 V	x	x	x	x	x	x	x
0...2.5 V	x	x	x	x	x	x	x
0...5 V	x	x	x	x	x	x	x
1...5 V	x	x	x	x	x	x	x
0...10 V	x	x	x	x	x	x	x
0...20 V	x	x	x	x	x	x	x
0...40 V	x	x	x	x	x	x	x
I							
	0...5 mA	x	x	x	x	x	x
	0...10 mA	x	x	x	x	x	x
	0...20 mA	x	x	x	x	x	x
4...20 mA	x	x	x	x	x	x	x

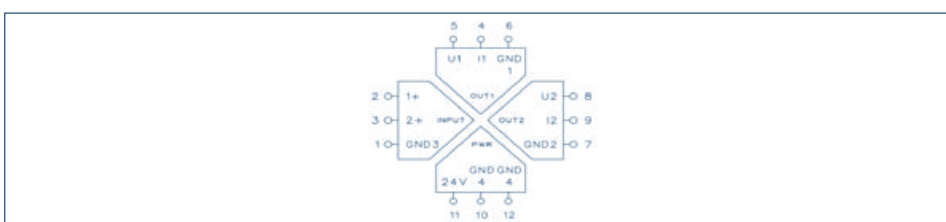
Multi-function signal converter units CMS

- Mounts on TS 35
- Compact design, width: 17.5 mm
- Three-way electrical isolation
- Screw connection
- Two multi-function analogue inputs (U-I)
- Two multi-function analogue outputs (U-I)
- Functions:
 - Signal doubler
 - Signal inverter
 - 2-channel signal converter
- Signal conversion adjustable via DIP switch
- Power supply 24 VDC

CMS-UI-2UI



Circuit diagram



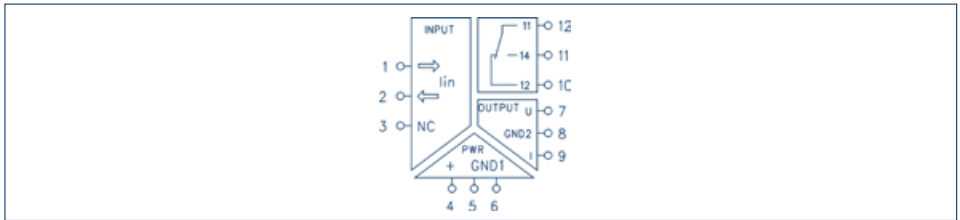
Type	CMS-UI-2UI
Cat. no./Qty.	16121.2/1
Size (L x W x H) with TS 35 x 7.5	99 x 17.5 x 114.5 mm
Weight	120 g
General specifications	
DIN-VDE specifications	DIN EN 50178: 1987, DIN VDE 0110, contamination degree 2, overvoltage cat. III
Electromagnetic properties	CE compliant
Operating temperature	0 to +55 °C
Connection type	Pluggable Screw connection
Stripping length	7 mm
Wire connect cross-section	0.2 to 2.5 mm ²
Screw connection	AWG 22-14
Transmission errors	< 0.5 % of end value
Temperature coefficient	< 0.02 % / °C
Frequency limit (- 3 dB)	10 Hz
Power supply	24 V DC ± 25 % / 65 mA
Insulation voltage, input / output	1 kV, 50 Hz, 1 min
Insulation voltage, power supply / signal	1 kV, 50 Hz, 1 min
Functions	Signal doubler / signal inverter / 2-channel conversion
Input data	
Input signal (adjustable via DIP switch)	Refer to table (initial setting from 0 to 10 V)
Max. input signal U / I	12 V / 25 mA
Input resistance U / I	> 50 kΩ / 100 Ω
Output specifications	
Output signal (adjustable via DIP switch)	Refer to table (initial setting from 0 to 10 V)
Load resistance U / I	> 1kΩ / < 600 Ω
Offset U / I	< 20 mV / < 40 μA
Max. output signal U / I	< 10.5 V / < 21 mA

Input U	Output U (V)				I (mA)			
	0-5 V	1-5 V	0-10 V	2-10 V	0-10 mA	2-10 mA	0-20 mA	4-20 mA
0...5 V	x	x	x	x	x	x	x	x
1...5 V	x	x	x	x	x	x	x	x
0...10 V	x	x	x	x	x	x	x	x
2...10 V	x	x	x	x	x	x	x	x
I								
0...10 mA	x	x	x	x	x	x	x	x
2...10 mA	x	x	x	x	x	x	x	x
0...20 mA	x	x	x	x	x	x	x	x
4...20 mA	x	x	x	x	x	x	x	x

Multi-function high-power converter unit CMS-I10 A

	CMS-I10A-UI
- Mounts on TS 35 - Compact design, width: 17.5 mm - Three-way electrical isolation - Screw connection - Multi-channel high-power input - Multi-function analogue output (U-I) - Current conversion is adjustable via DIP switch 24 V DC power supply - Limit-value relay with adjustable setpoint and hysteresis - Very easy zero-positioning with calibration button	

Circuit diagram



Type	CMS-I10A-UI
Cat. no./Qty.	15901.2/1
Size (L x W x H) with TS 35 x 7.5	99 x 17.5 x 114.5 mm
Weight	130 g
General specifications	
DIN-VDE specifications	DIN EN 50178: 1997; DIN VDE 0110, contamination degree 2, overvoltage cat. III
Electromagnetic properties	CE compliant
Operating temperature	-20 °C to +55 °C
Connection type	Pluggable screw connection, AWG 22-14
Stripping length	7 mm
Wire connect cross-section	0.2 to 2.5 mm ²
Transmission error and linearity error	< 0.5 % of In
Temperature coefficient	< 0.05 % / K
Response time	200 ms
Offset voltage @ 3x In overload	< 0.7 % of In
Power supply	24 V DC ± 10 % / 60 mA
Insulation voltage input / output	1 kV, 50 Hz, 1 min
Insulation voltage power supply / signal	1 kV, 50 Hz, 1 min
Input data	
Input voltage	0-250 V AC/DC
Input range	0-0, 5 A, 0-1 A, 0-5 A, 0-10 A AC and DC
Measuring principle	True RMS / Arithmetic mean
Input signals (adjustable via DIP switch)	Refer to table (initial setting 0-10 A)
AC input frequency	45-65 Hz
Output specifications	
Output signals (adjustable via DIP switch)	0-10 V, 0-5V, 1-5 V, 10-0 V, 0-5 mA, 0-10 mA, 0-20 mA, 4-20 mA
Load resistance U/I	U: > 1 kΩ I: < 600 Ω
Offset U/I	< 10 mV/20 μA
Max. output signal U/I	< 11 V/22 mA
Relay contact	1 CO contact
Max. switching voltage	240 V AC
Max. continuous current/inrush current	3 A / 5 A (at resistive load)
Contact material	AgNi
Electrical lifespan at max. contact load	> 1.5 x 10 ⁵
Mechanical lifespan	> 15 x 10 ⁶
Test voltage coil/contact	4 kV

Input I	Output U (V) 0-10 V	0-5 V	1-5 V	10-0 V	I (mA) 0-5 mA	0-10 mA	0-20 mA	4-20 mA
0...500 mA	x	x	x	x	x	x	x	x
0...1 A	x	x	x	x	x	x	x	x
0...5 A	x	x	x	x	x	x	x	x
0...10 A	x	x	x	x	x	x	x	x

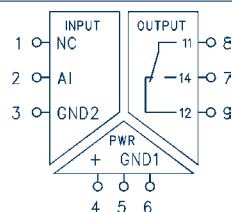
Multi-function signal converter units CMS

- Mounts on TS 35
- Compact design, width: 17.5 mm
- Three-way electrical isolation
- Screw connection
- Multi-function analogue input (U-I)
- Relay output, 1 CO contact
- Signal conversion adjustable via DIP switch
- Threshold and hysteresis settings are always accessible on the device
- Power supply: 24 VDC

CMS-UI-R



Circuit diagram



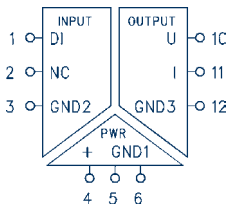
Type	CMS-UI-R
Cat. no./Qty.	15884.2/1
Size (L x W x H) with TS 35 x 7.5	99 x 17.5 x 114.5 mm
Weight	120 g
General specifications	
DIN-VDE specifications	DIN EN 50178: 1987, DIN VDE 0110, contamination degree 2, overvoltage cat. III
Electromagnetic properties	CE compliant
Operating temperature	0 to 55 °C
Connection type	Pluggable Screw connection
Stripping length	7 mm
Wire connect cross-section	0.2 to 2.5 mm ²
Screw connection	AWG 22-14
Temperature coefficient	< 0.02 % / K
Power supply	24 V DC ± 25 % / 50 mA
Insulation voltage, input / output	4 KV
Insulation voltage, power supply / signal	1 KV, 50 Hz, 1 min
Input data	
Input signals (adjustable via DIP switch)	Refer to table (initial setting from 0 to 10 V)
Max. input signal U / I	40 V DC / 25 mA
Input resistance U / I	> 200 kΩ / 50 Ω
Output specifications	
Relay contact	1 CO contact
Threshold setting range	1 to 90 %
Hysteresis setting range	1 to 90 %
functions	failsafe / not failsafe (default setting: failsafe)
Max. switching voltage	240 V AC
Max. continuous current / inrush current	3 A / 5 A
Max. power rating (ohmic load)	1200 VA at 240 V AC, 5 A
Contact material	AgNi
Electrical lifespan at max. contact load	> 1.5 x 10 ⁵
Mechanical lifespan	> 15 x 10 ⁶
Test voltage coil/contact	4 KV
Input	Output
U	Relay
0...1 V	x
0...2 V	x
0...2.5 V	x
0...5 V	x
1...5 V	x
0...10 V	x
0...20 V	x
0...40 V	x
I	
0...5 mA	x
0...10 mA	x
0...20 mA	x
4...20 mA	x

Multi-function signal converter units CMS

- Mounts on TS 35
- Compact design, width: 17.5 mm
- Three-way electrical isolation
- Screw connection
- Multi-function frequency input
- Multi-function analogue output (U-I)
- Signal conversion adjustable via DIP switch
- Power supply: 24 VDC



Circuit diagram



Type	CMS-F-UI
Cat. no./Qty.	15886.2/1
Size (L x W x H) with TS 35 x 7.5	99 x 17.5 x 114.5 mm
Weight	120 g
General specifications	
DIN-VDE specifications	DIN EN 50178: 1987, DIN VDE 0110, contamination degree 2, overvoltage cat. III
Electromagnetic properties	CE compliant
Operating temperature	0...+55 °C
Connection type	Pluggable Screw connection
Stripping length	7 mm
Wire connect cross-section	0.2...2.5 mm ²
Screw connection	AWG 22-14
Transmission errors	< 0.2 %
Temperature coefficient	< 0.02 % / K
Power supply	24 V DC ± 25 % / 50 mA
Insulation voltage, input / output	1 kV, 50 Hz, 1 min
Insulation voltage, power supply / signal	1 kV, 50 Hz, 1 min
Input data	
Input signal (adjustable via DIP switch)	Refer...table (initial setting from 0...1.0 kHz)
Frequency range (adjustable via DIP switch)	1.0 Hz...10.0 kHz (U _{in} : 5...24V AC/DC)
Sensor	2-wire, 3-wire PNP/NPN, NAMUR initiator, push-pull
Threshold / hysteresis	NAMUR: approx. 1.7 mA / approx. 0.2 mA; NPN: approx. 6.5 V / approx. 0.2 V; PNP: approx. 6.7 V / approx. 0.5 V
Resolution	0.1 mHz resp. 5 ppm from measured value
Output specifications	
Output signal	Refer...table (initial setting from 0...10 V)
Load resistance U / I	> 1 kΩ / < 600 Ω
Offset U / I	< 10 mV / 20 μA
Max. output signal U / I	< 15 V / 30 mA
Step response time	350 ms + two times the period of the input frequency

Input F	Output U		I(mA)		Input F	Output U		I(mA)	
	0-10	0-5 V	0-20 mA	4-20 mA		0-10 V	0-5 V	0-20 mA	4-20 mA
0...0.1 Hz	x	x	x	x	0...110 Hz	x	x	x	x
0...1.1 Hz	x	x	x	x	0...990 Hz	x	x	x	x
0...9.9 Hz	x	x	x	x	0...1000 Hz	x	x	x	x
0...10 Hz	x	x	x	x	0...1100 Hz	x	x	x	x
0...11 Hz	x	x	x	x	0...9900 Hz	x	x	x	x
0...99 Hz	x	x	x	x	0...10000 Hz	x	x	x	x
0...100 Hz	x	x	x	x					

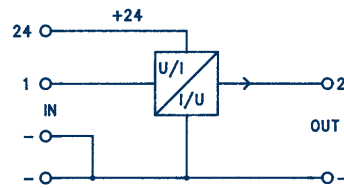
- CML-POT-UI**



Pin diagram of the AD574 12-bit DAC. The chip has 8 pins. Pin 1 is REF, Pin 2 is IN, Pin 3 is GND, Pin 4 is PWR, Pin 5 is OUTPUT U, Pin 6 is I, Pin 7 is GND, and Pin 8 is GND. A 10k resistor is connected between pins 1 and 2.

[illegible]

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CAE/U-I/4-20 mA

- CAE/I-U/4-20 mA**

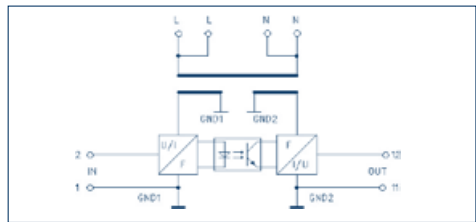


Converter Units

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Circuit diagram



- ## Converter Units

Customized solutions for electrical engineering applications

At **CONTA-CLIP**, we are primarily known for our mass-produced functional-electronic products. This includes relay modules, interface units, power supplies and surge protection. But did you know that we also provide customer-specific solutions?

Our experts will work together with you to develop prototypes that match your custom requirements: design, procurement of components, production, delivery and after-sales support.

We are your single-source solutions provider – from design to production, for small or large jobs, and for simple or complex functional units! Let us know if you need assistance with your application challenges and your **CONTA-CLIP** sales representative will contact you to help.

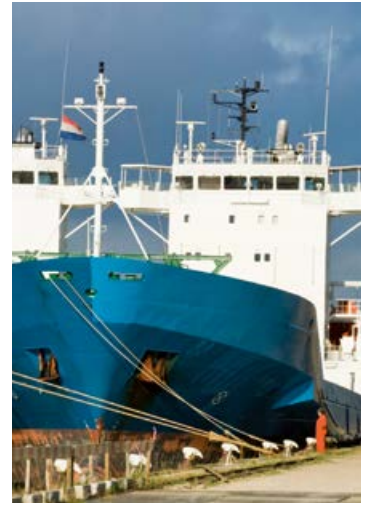


Offshore

Bow Thruster Controller



This device controls the bow thrusters and enables the precision docking of inland and offshore ships. It ensures that the ailerons and turbines can be controlled without interference from other signals such as those sent out by navigation or radar systems. The bow thruster controller is enclosed in a protective housing so that it can be directly mounted on the bridge or superstructure of a ship. The system uses its Modbus RS485 bus interface to communicate with other networked modules.



Traffic

Electronic rattle ticker



The rattle ticker is a system used to help pedestrians at crosswalks. This encapsulated, waterproof module was designed to be used in conjunction with traffic lights. A varying acoustic signal is emitted during traffic light phases. The signal allows visually impaired people to hear when it is safe to cross the street. The intensity and type of signal can be customized to your project's requirements. The system can be delivered as 42 V or 230 V, with or without a control push button, and with or without automatic volume adjustment.



Building automation

I/O module

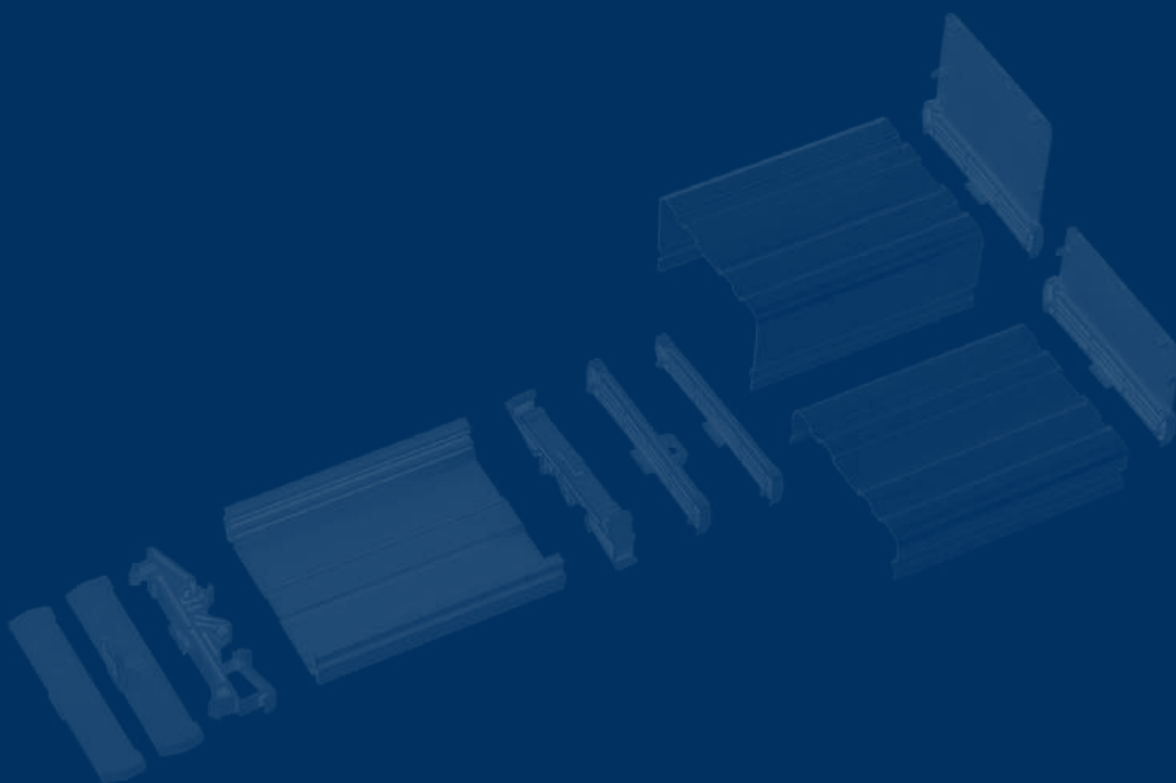


This product was designed to automatically control building blinds and lighting systems. The control system consists of relay and bypass modules that forward signals from a PLC to four groups of eight signals.

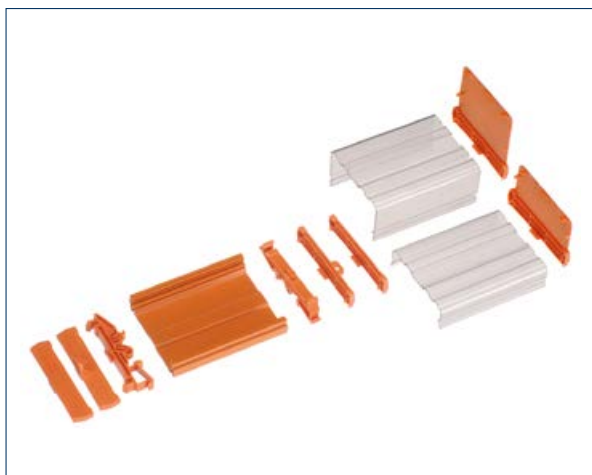


Accessories

The **CONTA-CLIP** line of accessories is conceived and designed with the customer in mind. Our accessories allow you to move forward on a great number of technical applications with a minimum of effort and parts.



Accessories



RS-SP locking-base system

CONTA-CLIP's RS-SP locking-base system can be customized to the length of the PCB because of its adjustable **RS-SP** extruded profile. In this way you can implement a variety of electronic switching tasks on the DIN rail.



Fuses SI

G fuses are available in sizes 5x20 and 6.3x32, and in "slow" and "fast-acting" versions.

RS-SP locking-base system

Extruded profiles can be used for the main holders of printed circuit boards.

The **RS-SP 1** and the **RS-SP 2** profiles have two PCB levels and are delivered in two-meter lengths. They can be easily shortened with a saw to the correct length. Of course we can also deliver the profiles according to your exact requirements. The profiles can be shortened freely, without rigid grid divisions, which ensures an individual fit of the enclosure profile to the electronics.

After you shorten the extruded profile to fit the desired module length or available space, you can mount the corresponding end plates and foot elements on to the module.

There are three graded profile versions available for different PCB widths: **RS-SP 0**, **RS-SP 1** and **RS-SP 2**.

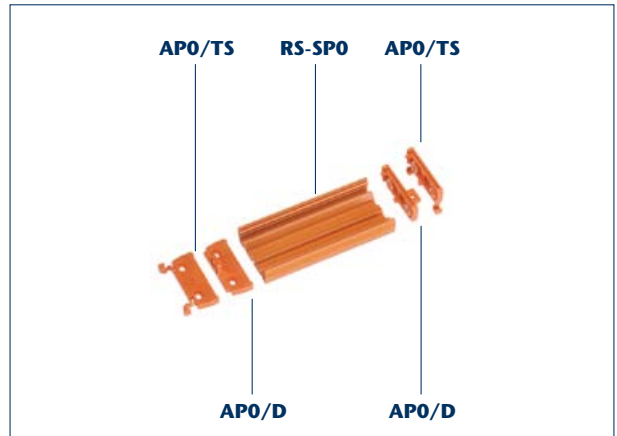
Transparent cover profiles for the **RS-SP 1** system are available as **AD 1** (low version) and **AD 2** (high version) in one meter lengths. The **AP/AD 1** (low version) and **AP/AD 2** (high version) end plates serve as holders. They are fastened to the cover profile by using the **BS-AD** mounting screws. Both the **RS-SP 1** and **RS-SP 2** can be labelled with the **SB** quick marking system by using the marking grooves which are intended for this purpose (refer to CONTA-CONNECT catalogue).

An **RS-SP** profile enclosure can consist of the following parts, depending on the requirements and assembly:

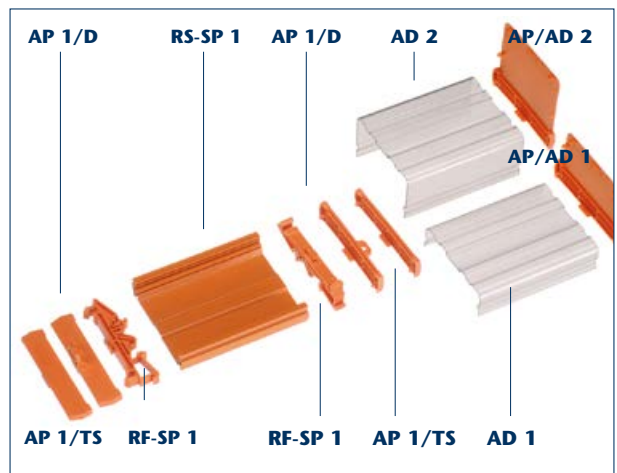
- **RS-SP** extruded profile (**RS-SPO**; **RS-SP 1**; **RS-SP 2** versions)
- **AP** end plates in varying versions:
 - AP/TS (**RS-SPO**) mount on the TS 35 DIN rail. **RS-SP 1** and **RS-SP 2** on TS 32/TS 35 rail.
 - AP/D direct mount
 - AP/AD 1 low version is for fastening the transparent AD 1 cover
 - AP/AD 2 high version is for fastening the transparent AD 2 cover
- **RF** mounting foot for mounting on DIN rail with the **RS-SP 1** profile and **RS-SP 3** onto TS 32/TS 35 DIN rails
- **AD** transparent cover profile
 - AD 1 low version
 - AD 2 high version
- **BS-AD** mounting screw for fastening the AD 1 and AD 2 cover profiles
- **BS-RS** mounting screws for securing the AP end plates (types **RS-SPO** and **RS-SP 2**)

The **RS-SP** locking-base system is delivered in the standard orange colour. Other colours are available upon request!

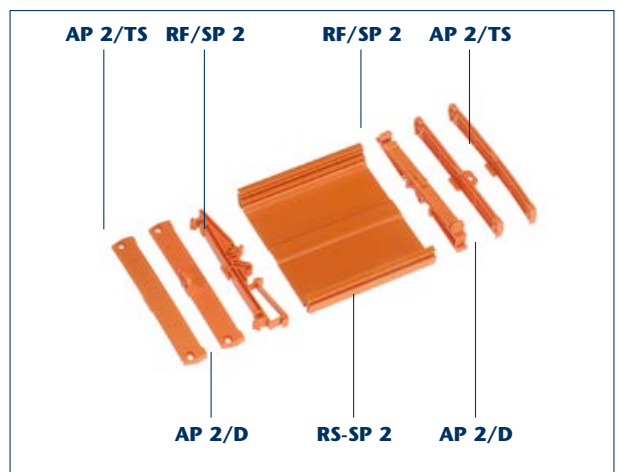
RS-SPO

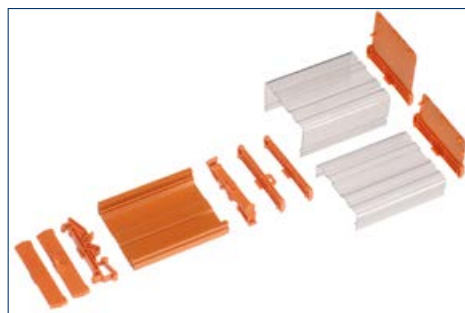


RS-SP 1

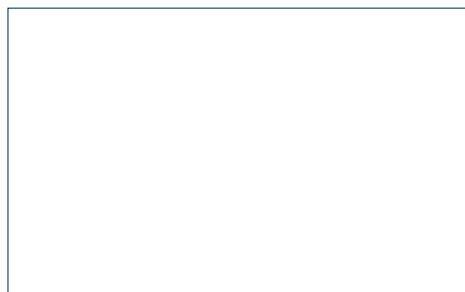


RS-SP 2



RS-SP locking-base system**RS-SP 0****RS-SP 1**

Components	Type	Cat. no.	Qty.	Type	Cat. no.	Qty.
Extruded profile	RS-SP 0 orange	5675.3	1	RS-SP 1 orange	5680.3	1
End plate / DIN rail mount	AP 0/TS orange	3133.3	20	AP 1/TS orange	5681.3	20
End plate / direct mount	AP 0/D orange	3134.3	20	AP 1/D orange	5682.3	20
End plate for AD 1	–	–	–	AP/AD 1	5891.0	20
End plate for AD 2	–	–	–	AP/AD 2	5895.0	20
Mounting screws BS-RS	BS/RS	4560.0	100	–	–	–
Cover profile AD-1	–	–	–	AD 1	5893.0	1
Cover profile AD-2	–	–	–	AD 2	5894.0	1
Mounting screws for cover profile BS-AD	–	–	–	BS/AD	2385.0	100
Mounting foot for TS 32/35	–	–	–	RF/SP 1 orange	5683.3	20
Size	mm	Thickness mm		mm	Thickness mm	
PCB upper level	42.5/–	1.5 + 0.2		73 + 0.4 ./. 0.1	1.5 + 0.2	
PCB lower level	–			68 + 0.4 ./. 0.1	1.5 + 0.2	
Total width	46.5			84		
Length	2000			2000		
Height on TS 32	–			43		
Height on TS 35	27			40		
Height when directly mounted	19.0			17		
Height of AD 1	–			25		
Height of AD 2	–			45		
Materials						
Material	RS-SP = PVC			RS-SP = PVC		
	AP/RF = PA 6.6-V 2			AP/RF = PA 6.6-V 2		

Locking-base system RS-SP**RS-SP 2**

Components	Type	Cat. no.	Qty.	
Extruded profile	RS-SP 2 orange	5690.3	1	
End plate / DIN rail mount	AP 2/TS orange	5691.3	20	
End plate / direct mount	AP 2/D orange	5692.3	20	
End plate for AD 1	–	–	–	
End plate for AD 2	–	–	–	
Mounting screws BS-RS	BS/RS	4560.0	100	
Cover profile AD-1	–	–	–	
Cover profile AD-2	–	–	–	
Mounting screws for cover profile BS-AD	–	–	–	
Mounting foot for TS 32/35	RF/SP 2 orange	5693.3	20	
Size	mm	Thickness mm		
PCB upper level	108.5 + 0.5 ./. 0.3	1.5 + 0.2		
PCB lower level	100 + 0.5 ./. 0.1	1.5 + 0.2		
Total width	119			
Length	2000			
Height on TS 32	43			
Height on TS 35	40			
Height when directly mounted	17			
Height of AD 1	–			
Height of AD 2	–			
Materials				
Material	RS-SP = PVC			
	AP/RF = PA 6.6-V 2			

Fuses SI

Micro-fuses/G-fuse cartridges 5 x 20 metric 250 V / slow-acting



Construction:

- Transparent glass tube
- Nickel-plated brass contact caps
- IEC 60127-2/2
- EN 60127-2/2
- DIN VDE 0820-2/2

Melting time limits

Rated current	1.5 x I _n min.	2.1 x I _n max.	2.75 x I _n min. max.	4 x I _n min. max.	10 x I _n min. max.
32 to 100 mA	1 h	2 min.	200 ms 10 s	40 ms 3 s	10 ms 300 ms
125 mA to 10 A	1 h	2 min.	600 ms 10 s	150 ms 3 s	20 ms 300 ms

Type	Cat. no.	Rated current, mA/A	Rated breaking capacity A AC	Voltage drop, mV	Power loss, W	Melting integral A²s	Qty.
SI 0.032 A	2912.0	32 mA	35 'L'	3000	0.2	0.010	10
SI 0.040 A	2913.0	40 mA	35 'L'	2000	0.2	0.020	10
SI 0.050 A	2914.0	50 mA	35 'L'	1500	0.2	0.035	10
SI 0.063 A	2915.0	63 mA	35 'L'	1000	0.2	0.05	10
SI 0.080 A	2916.0	80 mA	35 'L'	800	0.2	0.12	10
SI 0.100 A	2917.0	100 mA	35 'L'	700	0.3	0.16	10
SI 0.125 A	2918.0	125 mA	35 'L'	600	0.3	0.24	10
SI 0.160 A	2919.0	160 mA	35 'L'	600	0.3	0.4	10
SI 0.200 A	2920.0	200 mA	35 'L'	500	0.3	0.7	10
SI 0.250 A	2921.0	250 mA	35 'L'	400	0.2	1.4	10
SI 0.315 A	2922.0	315 mA	35 'L'	140	0.2	0.35	10
SI 0.400 A	2923.0	400 mA	35 'L'	130	0.2	0.49	10
SI 0.500 A	2924.0	500 mA	35 'L'	120	0.2	0.9	10
SI 0.630 A	2925.0	630 mA	35 'L'	110	0.2	1.4	10
SI 0.800 A	2926.0	800 mA	35 'L'	100	0.3	3.2	10
SI 1.000 A	2927.0	1 A	35 'L'	90	0.3	6.5	10
SI 1.250 A	2928.0	1.25 A	35 'L'	80	0.3	5.0	10
SI 1.600 A	2929.0	1.6 A	35 'L'	80	0.4	10	10
SI 2.000 A	2930.0	2 A	35 'L'	80	0.5	20	10
SI 2.500 A	2931.0	2.5 A	35 'L'	80	0.6	26	10
SI 3.150 A	2932.0	3.15 A	35 'L'	80	0.6	44	10
SI 4.000 A	2933.0	4 A	40 'L'	80	0.8	72	10
SI 5.000 A	2934.0	5 A	50 'L'	80	1.2	130	10
SI 6.300 A	2935.0	6.3 A	63 'L'	70	1.3	230	10
SI 8.000 A	2936.0	8 A	80 'L'	70	1.8	240	10
SI 10.00 A	2937.0	10 A	100 'L'	70	2.4	380	10

Micro-fuses/G-fuse cartridges 6.3 x 32 metric 440 V / 500V / fast-acting



Construction:

- Transparent glass tube
- Nickel-plated brass contact caps
- IEC 60127-2/2
- EN 60127-2/2
- DIN VDE 0820-2/2

Melting time limits

Rated current	1.5 x I _n min.	2.1 x I _n max.	2.75 x I _n min. max.	4 x I _n min. max.	10 x I _n min. max.
32 to 100 mA	1 h	30 min.	10 ms 500 ms	3 ms 100 ms	- 300 ms
125 mA to 10 A	1 h	30 min.	50 ms 2 s	10 ms 300 ms	- 300 ms
8 to 10 A	1 h	30 min.	50 ms 2 s	10 ms 400 ms	- 300 ms

Type	Cat. no.	Rated current, mA/A	Rated breaking capacity A AC	Voltage drop, mV	Power loss, W	Melting integral A²s	Qty.
SI 0.032 A	2891.0	32 mA	35 'L'	10000	0.8	0.0001	10
SI 0.040 A	2892.0	40 mA	35 'L'	8000	0.8	0.0002	10
SI 0.050 A	2893.0	50 mA	35 'L'	3500	0.4	0.0004	10
SI 0.063 A	2894.0	63 mA	35 'L'	3500	0.5	0.0007	10
SI 0.080 A	2895.0	80 mA	35 'L'	2500	0.5	0.0017	10
SI 0.100 A	2896.0	100 mA	35 'L'	2200	0.6	0.0022	10
SI 0.125 A	2897.0	125 mA	35 'L'	350	0.2	0.01	10
SI 0.160 A	2898.0	160 mA	35 'L'	310	0.2	0.02	10
SI 0.200 A	2899.0	200 mA	35 'L'	290	0.2	0.037	10
SI 0.250 A	2900.0	250 mA	35 'L'	280	0.3	0.073	10
SI 0.315 A	2901.0	315 mA	35 'L'	230	0.3	0.16	10
SI 0.400 A	2902.0	400 mA	35 'L'	200	0.3	0.31	10
SI 0.500 A	2903.0	500 mA	35 'L'	160	0.3	0.16	10
SI 0.630 A	2904.0	630 mA	35 'L'	140	0.3	0.39	10
SI 0.800 A	2905.0	800 mA	35 'L'	130	0.4	0.8	10
SI 1.000 A	2406.0	1 A	35 'L'	130	0.5	1.5	10
SI 1.250 A	2906.0	1.25 A	35 'L'	120	0.6	2.0	10
SI 1.600 A	2907.0	1.6 A	35 'L'	120	0.7	4.1	10
SI 2.000 A	2407.0	2 A	35 'L'	120	0.9	6.2	10
SI 2.500 A	2908.0	2.5 A	35 'L'	120	1.0	11	10
SI 3.150 A	2909.0	3.15 A	35 'L'	120	1.2	20	10
SI 4.000 A	2408.0	4 A	40 'L'	100	1.4	25	10
SI 5.000 A	2938.0	5 A	50 'L'	100	1.7	42	10
SI 6.300 A	2409.0	6.3 A	63 'L'	100	2.0	79	10
SI 8.000 A	2910.0	8 A	80 'L'	100	2.2	125	10
SI 10.00 A	2911.0	10 A	100 'L'	100	2.4	220	10

Fuses SI

Micro-fuses/G-fuse cartridges 6.3 x 32 imperial 250 V / 400 V / 500 V / slow-acting



Construction:

- Ceramic tube
- Nickel-plated brass contact caps



Melting time limits

Rated current	1.5 x I _n min.	2.1 x I _n max.	2.75 x I _n min. max.	4 x I _n min. max.	10 x I _n min. max.
32 to 100 mA	1 h	30 min.	400 ms 80 s	95 ms 5 s	10 ms 300 ms
125 mA to 10 A	1 h	30 min.	400 ms 80 s	150 ms 5 s	20 ms 300 ms

Type	Cat. no.	Rated current, mA/A	Rated breaking capacity A AC	Voltage drop, mV	Power loss, W	Melting integral A ² s	Qty.
SI 0.100 A/32 T	4950.0	100 mA		3600	1.3	0.050	10
SI 0.125 A/32 T	4951.0	125 mA		3400	1.4	0.080	10
SI 0.160 A/32 T	4952.0	160 mA		3000	1.5	0.12	10
SI 0.200 A/32 T	4953.0	200 mA	1.5 kA	2500	1.60	0.20	10
SI 0.250 A/32 T	4954.0	250 mA		2000	1.7	0.35	10
SI 0.315 A/32 T	4955.0	315 mA	@ 500 V AC	1800	1.8	0.50	10
SI 0.400 A/32 T	4956.0	400 mA		1600	2.0	0.80	10
SI 0.500 A/32 T	4957.0	500 mA	cos φ = 1	450	0.6	0.35	10
SI 0.630 A/32 T	4958.0	630 mA		400	0.7	0.49	10
SI 0.800 A/32 T	4959.0	800 mA		350	0.80	0.9	10
SI 1.000 A/32 T	4960.0	1 A		350	0.9	1.4	10
SI 1.250 A/32 T	4961.0	1.25 A	10 kA @ 400 V AC	300	1.0	3.2	10
SI 1.600 A/32 T	4962.0	1.6 A		200	1.1	5.2	10
SI 2.000 A/32 T	4963.0	2 A	cos φ = 0.3	180	1.2	10	10
SI 2.500 A/32 T	4964.0	2.5 A		160	1.3	19	10
SI 3.150 A/32 T	4965.0	3.15 A		150	1.4	37	10
SI 4.000 A/32 T	4966.0	4 A		140	1.5	68.0	10
SI 5.000 A/32 T	4967.0	5 A		135	2.2	80	10
SI 6.300 A/32 T	4968.0	6.3 A		110	2.2	215	10
SI 8.000 A/32 T	4969.0	8 A		110	2.6	370	10
SI 10.000 A/32 T	4970.0	10 A		100	3.0	620	10

Micro-fuses/G-fuse cartridges 6.3 x 32 imperial 440 V / 500V / fast-acting



Construction:

- Ceramic tube
- Nickel-plated brass contact caps



Melting time limits

Rated current	1.5 x I _n min.	2.1 x I _n max.	2.75 x I _n min. max.	4 x I _n min. max.	10 x I _n min. max.
160 to 800 mA	1 h	30 min.	20 ms 1.5 s	8 ms 400 ms	- 20 ms
1 to 25 A	1 h	30 min.	100 ms 5 s	20 ms 1 s	- 50 ms

When using these G-fuse cartridges with 6.3 A or higher, you must ensure that there is sufficient heat dissipation!

Type	Cat. no.	Rated current, mA/A	Rated breaking capacity A AC	Voltage drop, mV	Power loss, W	Melting integral A ² s	Qty.
SI 0.160 A/32 F	4971.0	160 mA		7000	2.5	0.0015	10
SI 0.200 A/32 F	4972.0	200 mA		6500	2.9	0.0035	10
SI 0.250 A/32 F	4973.0	250 mA		6000	3.4	0.0085	10
SI 0.315 A/32 F	4974.0	315 mA	1.5 kA	1000	0.90	0.036	10
SI 0.400 A/32 F	4975.0	400 mA	@ 500 V AC	900	1	0.07	10
SI 0.500 A/32 F	4976.0	500 mA	cos φ = 1	800	1.1	0.19	10
SI 0.630 A/32 F	4977.0	630 mA		700	1.3	0.35	10
SI 0.800 A/32 F	4978.0	800 mA		600	1.4	0.49	10
SI 1.000 A/32 F	4979.0	1 A		400	1.2	0.4	10
SI 1.250 A/32 F	4980.0	1.25 A	50 kA	300	1.30	0.8	10
SI 1.600 A/32 F	4981.0	1.6 A	@ 500 V AC	300	1.4	1.5	10
SI 2.000 A/32 F	4982.0	2 A	cos φ = 1	280	1.6	2.5	10
SI 2.500 A/32 F	4983.0	2.5 A		260	1.8	5	10
SI 3.150 A/32 F	4984.0	3.15 A		240	2.3	9	10
SI 4.000 A/32 F	4985.0	4 A	20 kA	220	2.6	18	10
SI 5.000 A/32 F	4986.0	5 A	@ 500 V AC	190	2.9	40	10
SI 6.300 A/32 F	4987.0	6.3 A		170	3.2	80	10
SI 8.000 A/32 F	4988.0	8 A	1.5 kA	160	3.7	150	10
SI 10.000 A/32 F	4989.0	10 A	@ 500 V AC	150	4.0	240	10

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IRCP LW 110...125V AC/DC	16199.2	43	PRCU 2 240V AC/DC	15926.2	58	PRSU 2Z/230V AC	15797.2	85
IRCP LW 230...240V AC	16200.2	43	PRCU 2 24V AC/DC	15925.2	58	PRSU 2Z/24V AC	15795.2	85
IRCPU 1/125V AC/DC	16239.2	42	PRCU LW 1/125V AC/DC	15553.2	53	PRSU 2Z/24V DC	15791.2	84
IRCPU 1/125V DC	16241.2	43	PRCU LW 1/240V AC	15554.2	53	PRSU 2Z/48V AC	15950.2	85
IRCPU 1/12V AC/DC	16236.2	42	PRS 1	15135.2	61	PRSU 2Z/48V DC	15792.2	84
IRCPU 1/220V DC	16242.2	43	PRS 1 Z	15780.2	79	PRSU 2Z/60V DC	15793.2	84
IRCPU 1/240V AC	16240.2	43	PRS 1/110V DC	15540.2	66	PRSU 4/110V DC	15726.2	73
IRCPU 1/24V AC/DC	16237.2	42	PRS 1/115V AC	15228.2	67	PRSU 4/115V AC	15728.2	73
IRCPU 1/60V AC/DC	16238.2	42	PRS 1/12V DC	6996.0	66	PRSU 4/12V AC	15392.2	73
IRCPU 1/6V AC/DC	16235.2	42	PRS 1/230V AC	6481.2	67	PRSU 4/12V DC	15167.2	72
IRCPU LW 1/125V AC/DC	16243.2	43	PRS 1/24V AC	6480.2	67	PRSU 4/220V DC	15727.2	73
IRCPU LW 1/240V AC	16244.2	43	PRS 1/24V DC	6804.0	66	PRSU 4/230V AC	15174.2	73
IRCU 1/125V AC/DC	16233.2	39	PRS 1/60V DC	15539.2	66	PRSU 4/230V AC eco	15621.2	76
IRCU 1/12V AC/DC	16231.2	39	PRS 1L/24V DC	6940.0	67	PRSU 4/24V AC	15168.2	73
IRCU 1/240V AC	16234.2	39	PRS 2	15136.2	61	PRSU 4/24V AC eco	15620.2	76
IRCU 1/24V AC/DC	16232.2	39	PRS 2 G	15320.2	61	PRSU 4/24V DC	15173.2	72
IRCU 1/6V AC/DC	16230.2	39	PRS 2 Z	15789.2	79	PRSU 4/24V DC eco	15619.2	76
L			PRS 2/110V DC	15541.2	58	PRSU 4/48V DC	15724.2	72
LPM 11-A	5711.2	142	PRS 2/115V AC	15229.2	69	PRSU 4/60V DC	15725.2	72
LPM 11-A/AD	5711.9	142	PRS 2/12V DC	6482.2	58	PRSU 4G/110V DC	15731.2	75
LPM 12-6 K	5709.2	142	PRS 2/230V AC	6485.2	69	PRSU 4G/115V AC	15733.2	75
LPM 12-6 K/AD	5709.9	142	PRS 2/24V AC	6484.2	69	PRSU 4G/12V AC	15420.2	75
LPM 20-10K/AD	6124.9	142	PRS 2/24V DC	6483.2	58	PRSU 4G/12V DC	15421.2	74
LPM 20-A	6125.2	142	PRS 2/48V AC	15947.2	85	PRSU 4G/220V DC	15732.2	75
LPM 20-A/AD	6125.9	142	PRS 2/48V DC	15334.2	68	PRSU 4G/230V AC	15372.2	75
LPM 40-A	6126.2	142	PRS 2/60V DC	15335.2	68	PRSU 4G/230V AC eco	15624.2	77
LPM 40-A/AD	6126.9	142	PRS 4	15137.2	61	PRSU 4G/24V AC	15371.2	75
LPM 7-A	5710.2	142	PRS 4 G	15324.2	61	PRSU 4G/24V AC eco	15623.2	77
LPM 7-A/AD	5710.9	142	PRS 4 Z	15431.2	79	PRSU 4G/24V DC	15332.2	74
LPM 8-4 K	5708.2	142	PRS 4/110V DC	15542.2	75	PRSU 4G/24V DC eco	15622.2	76
LPM 8-4 K/AD	5708.9	142	PRS 4/115V AC	15257.2	75	PRSU 4G/48V DC	15729.2	74
M			PRS 4/12V AC	15393.2	75	PRSU 4G/60V DC	15730.2	74
MC GS 6x12 R So WH	3885.7	39	PRS 4/12V DC	6486.2	74	PRSU 4Z/110V DC	15802.2	87
MC GS 6x12 R WH	3884.7	39	PRS 4/220V DC	15368.2	75	PRSU 4Z/115V AC	15806.2	87
MFR 4	15677.2	107	PRS 4/230V AC	6489.2	75	PRSU 4Z/12V AC	15804.2	87
MFR 5	15678.2	107	PRS 4/230V AC eco	15593.2	76	PRSU 4Z/12V DC	15798.2	86
MFR 6	15679.2	111	PRS 4/24V AC	6488.2	75	PRSU 4Z/220V DC	15803.2	87
MFR 7	16373.2	108	PRS 4/24V AC eco	15592.2	76	PRSU 4Z/230V AC	15807.2	87
MFR FIRCP 12-24V AC/DC	16227.2	49	PRS 4/24V DC	6487.2	74	PRSU 4Z/230V AC eco	15627.2	77
MFR FIRCPU 1/12V AC/DC	16285.2	49	PRS 4/24V DC eco	15591.2	76	PRSU 4Z/24V AC	15805.2	87
MFR FIRCPU 1/24V AC/DC	16286.2	49	PRS 4/48V DC	15461.2	74	PRSU 4Z/24V AC eco	15626.2	77
MFR IRCP 12-24V AC/DC	16207.2	49	PRS 4/60V DC	15336.2	74	PRSU 4Z/24V DC	15799.2	86
MFR IRCPU 1/12V AC/DC	16255.2	49	PRS C1/2	15138.2	61	PRSU 4Z/24V DC eco	15625.2	77
MFR IRCPU 1/24V AC/DC	16256.2	49	PRS C4	15140.2	61	PRSU 4Z/48V DC	15800.2	86
O			PRS C4 eco	15628.2	61	PRSU 4Z/60V DC	15801.2	86
OE-E38/36L	15351.2	153	PRS LED(GN) 24V UC Var.	16070.2	61	PRSUXT 1/230V AC	16088.2	62
OE-E38/36R	15350.2	153	PRS LED(RD) 230V AC	15142.2	61	PRSUXT 1/24V AC	16087.2	62
OE-E56L	15090.2	153	PRS LED(RD) 230V UC Var.	15810.2	61	PRSUXT 1/24V DC	16086.2	62
OE-E56R	15091.2	153	PRS LED(RD) 24V DC	15141.2	61	PRSUXT 1G/230V AC	16091.2	63
OKI 4/24 DC	5947.2	132	PRS LED(RD) 24V UC	15175.2	61	PRSUXT 1G/24V AC	16090.2	63
OKI 4/5 DC	5945.2	132	PRS LED(RD)/110V DC	15422.2	61	PRSUXT 1G/24V DC	16089.2	62
OKI 8/24 DC	5948.2	132	PRS RC 240V AC	15809.2	61	PRSUXT 1Z/230V AC	16094.2	80
OKI 8/5 DC	5946.2	132	PRS RC 24V AC	15808.2	61	PRSUXT 1Z/24V AC	16093.2	80
P			PRSU 1/110V DC	15721.2	66	PRSUXT 1Z/24V DC	16092.2	80
PMC BSTR 6/30 So WH	9107.7	52	PRSU 1/115V AC	15418.2	67	PRSUXT 2/230V AC	16019.2	64
PMC BSTR 6/30 WH	9106.7	52	PRSU 1/12V DC	15163.2	66	PRSUXT 2/24V AC	16018.2	64
PRC 1/12V DC	15501.2	39	PRSU 1/230V AC	15170.2	67	PRSUXT 2/24V DC	16017.2	64
PRC 1/12V DC Au	15558.2	45	PRSU 1/24V AC	15164.2	67	PRSUXT 2G/230V AC	16022.2	65
PRC 1/24V DC	15502.2	39	PRSU 1/24V DC	15169.2	66	PRSUXT 2G/24V AC	16021.2	65
PRC 1/24V DC Au	15559.2	45	PRSU 1/60V DC	15720.2	66	PRSUXT 2G/24V DC	16020.2	64
PRC 1/48V DC	15547.2	55	PRSU 1L/24V DC	15419.2	67	PRSUXT 2Z/230V AC	16025.2	81
PRC 1/5V DC	15500.2	39	PRSU 1LZ/24V DC	15788.2	83	PRSUXT 2Z/24V AC	16024.2	81
PRC 1/5V DC Au	15557.2	45	PRSU 1Z/110V DC	15784.2	82	PRSUXT 2Z/24V DC	16023.2	81
PRC 1/60V DC	15503.2	39	PRSU 1Z/115V AC	15786.2	83	PRSXT 1/230V AC	16085.2	62
PRC 1/60V DC Au	15568.2	45	PRSU 1Z/12V DC	15781.2	82	PRSXT 1/24V AC	16084.2	62
PRC 110...125V AC/DC	15497.2	53	PRSU 1Z/230V AC	15787.2	83	PRSXT 1/24V DC	16083.2	62
PRC 2 220...240V AC/DC	15921.2	58	PRSU 1Z/24V AC	15785.2	83	PRSXT 2/230V AC	16015.2	64
PRC 2 6-12-24V AC/DC	15920.2	58	PRSU 1Z/24V DC	15782.2	82	PRSXT 2/24V AC	16014.2	64
PRC 220...240V AC/DC	15489.2	53	PRSU 1Z/60V DC	15783.2	82	PRSXT 2/24V DC	16013.2	64
PRC 48-60V AC/DC	15496.2	53	PRSU 2/110V DC	15722.2	69	PRSXT C1/2	16016.2	61
PRC 6-12-24V AC/DC	15488.2	52	PRSU 2/115V AC	15413.2	69	PSC 1/24V DC-240V/2A/AC	15504.2	130
PRC 6-12-24V DC	15490.2	52	PRSU 2/12V DC	15165.2	68	PSC 1/24V DC-24V/2A/DC	15505.2	130
PRC LW 110...125V AC/DC	15555.2	53	PRSU 2/230V AC	15172.2	69	PSC 1/60V DC-240V/2A/AC	15506.2	130
PRC LW 220...240V AC	15491.2	53	PRSU 2/24V AC	15166.2	69	PSC 1/60V DC-24V/2A/DC	15507.2	130
PRCU 1/125V AC/DC	15511.2	53	PRSU 2/24V DC	15171.2	68	PSCU 1/240V AC/240V AC	15531.2	130
PRCU 1/12V AC/DC	15569.2	52	PRSU 2/48V DC	15411.2	68	PSCU 1/240V AC/24V DC	15532.2	130
			PRSU 2/60V DC	15412.2	68	PSCU 1/24V DC/240V AC	15529.2	130
			PRSU 2G/110V DC	15723.2	71	PSCU 1/24V DC/24V DC	15530.2	130
			PRSU 2G/115V AC	15417.2	71	PSPC 230/24-10A	16184.2	15
			PRSU 2G/12V DC	15414.2	70	PSPC 230/24-5A	16183.2	15

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PSPI 230/24-1,3	16110.2	16	RIM4/2W/24V+	5582.2	103	RIMD2/2W/24 ACG	5659.2	103
PSPI 230/24-2,5	16111.2	16	RIM4/2W/48V-	5588.2	103	RIMD2/2W/24V-	5569.2	103
PSPI 230/24-4	16112.2	17	RIM4/2W/48V+	5586.2	103	RIMD2/2W/24V+	5567.2	103
PSPM 230/24-1A	16180.2	14	RIM4S-16A/1W/24V-	6643.2	99	RIMD2/2W/48V-	5573.2	103
PSPM 230/24-2A	16181.2	14	RIM4S-16A/1W/24V+	6019.2	99	RIMD2/2W/48V+	5571.2	103
R			RIM4S/1W/230 ACG	6594.2	97	RIMD2S-16A/1W/24V-	6651.2	99
RF SP 2 OG	5693.3	177	RIM4S/1W/24 ACG	6592.2	97	RIMD2S-16A/1W/24V+	6650.2	99
RIM 4-16A/1W/24V+	6018.2	101	RIM4S/1W/24V-	5905.3	97	RIMD2S/1W/230 ACG	6591.2	97
RIM16-16A/1W/24V-	6646.2	101	RIM4S/1W/24V+	5904.3	97	RIMD2S/1W/24 ACG	6589.2	97
RIM16-16A/1W/24V+	6014.2	101	RIM8-16A/1W/24V DC	6644.2	99	RIMD2S/1W/24V-	5903.3	97
RIM16-2S/1W/230 ACG	6638.2	97	RIM8-16A/1W/24V+	6012.2	99	RIMD2S/1W/24V+	5902.3	97
RIM16-2S/1W/24 ACG	6636.2	97	RIM8-2S/1W/230 ACG	6628.2	97	RIMD4-16A/1W/24V-	6653.2	99
RIM16-2S/1W/24V-	6634.2	97	RIM8-2S/1W/24 ACG	6626.2	97	RIMD4-16A/1W/24V+	6652.2	99
RIM16-2S/1W/24V+	6632.2	97	RIM8-2S/1W/24V-	6624.2	97	RIMD4-2S/1W/230 ACG	6621.2	97
RIM16/1W/11S ACG	6082.2	95	RIM8-2S/1W/24V+	6622.2	97	RIMD4-2S/1W/24 ACG	6619.2	97
RIM16/1W/11SV-	6081.2	95	RIM8/1W/11S ACG	6064.2	95	RIMD4-2S/1W/24V-	6617.2	97
RIM16/1W/11SV+	6080.2	95	RIM8/1W/11SV -	6063.2	95	RIMD4-2S/1W/24V+	6615.2	97
RIM16/1W/230 ACG	6083.2	95	RIM8/1W/11SV+	6062.2	95	RIMD4/1W/11SV ACG	6055.2	95
RIM16/1W/24 ACG	6077.2	95	RIM8/1W/230 ACG	6065.2	95	RIMD4/1W/11SV-	6054.2	95
RIM16/1W/24V-	6076.2	95	RIM8/1W/24 ACG	6059.2	95	RIMD4/1W/11SV+	6053.2	95
RIM16/1W/24V+	6075.2	95	RIM8/1W/24V-	6058.2	95	RIMD4/1W/230 ACG	6056.2	95
RIM16/1W/48V-	6079.2	95	RIM8/1W/24V+	6057.2	95	RIMD4/1W/24 ACG	6050.2	95
RIM16/1W/48V+	6078.2	95	RIM8/1W/48V-	6061.2	95	RIMD4/1W/24V-	6049.2	95
RIM16/2W/11S ACG	6187.2	101	RIM8/1W/48V+	6060.2	95	RIMD4/1W/24V+	6048.2	95
RIM16/2W/11SV-	6185.2	101	RIM8/2W/11S ACG	6169.2	103	RIMD4/1W/48V-	6052.2	95
RIM16/2W/11SV+	6183.2	101	RIM8/2W/11SV-	6167.2	103	RIMD4/1W/48V+	6051.2	95
RIM16/2W/230 ACG	6189.2	101	RIM8/2W/11SV+	6165.2	103	RIMD4/2W/11S ACG	5595.2	103
RIM16/2W/24 ACG	6177.2	101	RIM8/2W/230 ACG	6171.2	103	RIMD4/2W/11SV-	5675.2	177
RIM16/2W/24V-	6175.2	101	RIM8/2W/24 ACG	6159.2	103	RIMD4/2W/11SV+	5673.2	103
RIM16/2W/24V+	6173.2	101	RIM8/2W/24V-	6157.2	103	RIMD4/2W/230 ACG	5597.2	103
RIM16/2W/48V-	6181.2	101	RIM8/2W/24V+	6155.2	103	RIMD4/2W/24 ACG	5669.2	103
RIM16/2W/48V+	6179.2	101	RIM8/2W/48V-	6163.2	103	RIMD4/2W/24V-	5585.2	103
RIM16S-16A/1W/24V-	6647.2	99	RIM8/2W/48V+	6161.2	103	RIMD4/2W/24V+	5583.2	103
RIM16S-16A/1W/24V+	6015.2	99	RIM8S-16A/1W/24V-	6645.2	99	RIMD4/2W/48V-	5589.2	103
RIM16S/1W/230 ACG	6630.2	97	RIM8S-16A/1W/24V+	6013.2	99	RIMD4/2W/48V+	5587.2	103
RIM16S/1W/24 ACG	6604.2	97	RIM8S/1W/230 ACG	6598.2	97	RIMD4S-16A/1W/24V-	6655.2	99
RIM16S/1W/24V-	6602.2	97	RIM8S/1W/24 ACG	6596.2	97	RIMD4S-16A/1W/24V+	6654.2	99
RIM16S/1W/24V+	6600.2	97	RIM8S/1W/24V-	5909.3	97	RIMD4S/1W/230 ACG	6595.2	97
RIM2-16A/1W/24V-	6640.2	99	RIM8S/1W/24V+	5908.3	97	RIMD4S/1W/24 ACG	6593.2	97
RIM2-16A/1W/24V+	6016.2	99	RIMD16-16A/1W/24V-	6661.2	99	RIMD4S/1W/24V-	5907.3	97
RIM2-2S/1W/230 ACG	6612.2	97	RIMD16-16A/1W/24V+	6660.2	99	RIMD4S/1W/24V+	5906.3	97
RIM2-2S/1W/24 ACG	6610.2	97	RIMD16-2S/1W/230 ACG	6639.2	97	RIMD8-16A/1W/24V-	6657.2	99
RIM2-2S/1W/24V-	6608.2	97	RIMD16-2S/1W/24 ACG	6637.2	97	RIMD8-16A/1W/24V+	6656.2	99
RIM2-2S/1W/24V+	6606.2	97	RIMD16-2S/1W/24V-	6635.2	97	RIMD8-2S/1W/230 ACG	6629.2	97
RIM2/1W/11S ACG	6028.2	95	RIMD16-2S/1W/24V+	6633.2	97	RIMD8-2S/1W/24 ACG	6627.2	97
RIM2/1W/11SV-	6027.2	95	RIMD16/1W/11S ACG	6091.2	95	RIMD8-2S/1W/24V-	6625.2	97
RIM2/1W/11SV+	6026.2	95	RIMD16/1W/11SV-	6090.2	95	RIMD8-2S/1W/24V+	6623.2	97
RIM2/1W/230 ACG	6029.2	95	RIMD16/1W/11SV+	6089.2	95	RIMD8/1W/11S ACG	6073.2	95
RIM2/1W/24 ACG	6023.2	95	RIMD16/1W/230 ACG	6092.2	95	RIMD8/1W/11SV-	6072.2	95
RIM2/1W/24V-	6022.2	95	RIMD16/1W/24 ACG	6086.2	95	RIMD8/1W/11SV+	6071.2	95
RIM2/1W/24V+	6021.2	95	RIMD16/1W/24V-	6085.2	95	RIMD8/1W/230 ACG	6074.2	95
RIM2/1W/48V-	6025.2	95	RIMD16/1W/24V+	6084.2	95	RIMD8/1W/24 ACG	6068.2	95
RIM2/1W/48V+	6024.2	95	RIMD16/1W/48V-	6088.2	95	RIMD8/1W/24V-	6067.2	95
RIM2/2W/11S ACG	5578.2	103	RIMD16/1W/48V+	6087.2	95	RIMD8/1W/24V+	6066.2	95
RIM2/2W/11SV-	5664.2	103	RIMD16/2W/11S ACG	6188.2	103	RIMD8/1W/48V-	6070.2	95
RIM2/2W/11SV+	5662.2	103	RIMD16/2W/11SV-	6186.2	103	RIMD8/1W/48V+	6069.2	95
RIM2/2W/230 ACG	5580.2	103	RIMD16/2W/11SV+	6184.2	103	RIMD8/2W/11S ACG	6170.2	103
RIM2/2W/24 ACG	5658.2	103	RIMD16/2W/230 ACG	6190.2	103	RIMD8/2W/11SV-	6168.2	103
RIM2/2W/24V-	5568.2	103	RIMD16/2W/24 ACG	6178.2	103	RIMD8/2W/11SV+	6166.2	103
RIM2/2W/24V+	5566.2	103	RIMD16/2W/24V-	6176.2	103	RIMD8/2W/230 ACG	6172.2	103
RIM2/2W/48V-	5572.2	103	RIMD16/2W/24V+	6174.2	103	RIMD8/2W/24 ACG	6160.2	103
RIM2/2W/48V+	5570.2	103	RIMD16/2W/48V-	6182.2	103	RIMD8/2W/24V-	6158.2	103
RIM2S-16A/1W/24V-	6641.2	99	RIMD16/2W/48V+	6180.2	103	RIMD8/2W/24V+	6156.2	103
RIM2S-16A/1W/24V+	6017.2	99	RIMD16S-16A/1W/24V-	6663.2	99	RIMD8/2W/48V-	6164.2	103
RIM2S/1W/230 ACG	6590.2	97	RIMD16S-16A/1W/24V+	6662.2	99	RIMD8/2W/48V+	6162.2	103
RIM2S/1W/24V-	5901.3	97	RIMD16S/1W/230 ACG	6631.2	97	RIMD8S-16A/1W/24V-	6659.2	99
RIM2S/1W/24V+	5900.3	97	RIMD16S/1W/24 ACG	6605.2	97	RIMD8S-16A/1W/24V+	6658.2	99
RIM4-16A/1W/24V-	6642.2	99	RIMD16S/1W/24V-	6603.2	97	RIMD8S/1W/230 ACG	6599.2	97
RIM4-2S/1W/230 ACG	6620.2	97	RIMD16S/1W/24V+	6601.2	97	RIMD8S/1W/24 ACG	6597.2	97
RIM4-2S/1W/24 ACG	6618.2	97	RIMD2-16A/1W/24V-	6649.2	99	RIMD8S/1W/24V-	5911.3	97
RIM4-2S/1W/24V-	6616.2	97	RIMD2-16A/1W/24V+	6648.2	99	RIMD8S/1W/24V+	5910.3	97
RIM4-2S/1W/24V+	6614.2	97	RIMD2-2S/1W/230 ACG	6613.2	97	RIMS2S/1W/24 ACG	6588.2	97
RIM4/1W/11S ACG	6046.2	95	RIMD2-2S/1W/24 ACG	6611.2	97	RJS 45	15256.2	146
RIM4/1W/11SV-	6045.2	95	RIMD2-2S/1W/24V-	6609.2	97	RJS45-3	16135.2	147
RIM4/1W/11SV+	6044.2	95	RIMD2-2S/1W/24V+	6607.2	97	RJS45-RJS45	15775.2	147
RIM4/1W/230 ACG	6047.2	95	RIMD2/1W/11S ACG	6037.2	95	RJS45-SH	15904.2	146
RIM4/1W/24 ACG	6041.2	95	RIMD2/1W/11SV-	6036.2	95	RJU 45	15255.2	146
RIM4/1W/24V-	6040.2	95	RIMD2/1W/11SV+	6035.2	95	RJU11/RJU12	15672.2	146
RIM4/1W/24V+	6039.2	95	RIMD2/1W/230 ACG	6038.2	95	RM 1-1W/24V DC	5450.2	88
RIM4/1W/48V-	6043.2	95	RIMD2/1W/24 ACG	6032.2	95	RM-S/1S/12V DC	6349.2	90
RIM4/1W/48V+	6042.2	95	RIMD2/1W/24V-	6031.2	95	RM-S/1S/12V DC/AC	6358.2	90
RIM4/2W/11S ACG	5594.2	103	RIMD2/1W/24V+	6030.2	95	RM-S/1S/24V DC	5402.2	90
RIM4/2W/11SV-	5674.2	103	RIMD2/1W/48V-	6034.2	95	RM-S/1S/24V DC/AC	5408.2	90
RIM4/2W/11SV+	5672.2	103	RIMD2/1W/48V+	6033.2	95	RM-S/1S/48V DC	5414.2	90
RIM4/2W/230 ACG	5596.2	103	RIMD2/2W/11S ACG	5579.2	103	RM-S/1S/48V DC/AC	5420.2	90
RIM4/2W/24 ACG	5668.2	103	RIMD2/2W/11SV-	5665.2	103	RM-S/1S/60V DC	5426.2	90
RIM4/2W/24V-	5584.2	103	RIMD2/2W/11SV+	5663.2	103	RM-S/1W/12V DC	6355.2	91
			RIMD2/2W/230 ACG	5581.2	103	RM-S/1W/12V DC/AC	6364.2	91

Catalogue numbers and types *numerical*

Cat. no.	Type	Page	Cat. no.	Type	Page	Cat. no.	Type	Page
1			4966.0	SI 6,3x32 4,000A-T	179	5659.2	RIMD2/2W/24 ACG	101
1086.0	SDB 0,6x3,5	39	4967.0	SI 6,3x32 5,000A-T	179	5662.2	RIM2/2W/115V+	101
1343.9	DC-DC/24-0,5	24	4968.0	SI 6,3x32 6,300A-T	179	5663.2	RIMD2/2W/115V+	101
1373.9	DC-DC/10-3	25	4969.0	SI 6,3x32 8,000A-T	179	5664.2	RIM2/2W/115V-	101
2			4970.0	SI 6,3x32 10,000A-T	179	5665.2	RIMD2/2W/115V-	101
2385.0	BS AD/M 2,9x6,5	177	4971.0	SI 6,3x32 0,160A-F	179	5668.2	RIM4/2W/24 ACG	101
2406.0	SI 5x20 1,000A-F	178	4972.0	SI 6,3x32 0,200A-F	179	5669.2	RIMD4/2W/24 ACG	101
2407.0	SI 5x20 2,000A-F	178	4973.0	SI 6,3x32 0,250A-F	179	5672.2	RIM4/2W/115V+	101
2408.0	SI 5x20 4,000A-F	178	4974.0	SI 6,3x32 0,315A-F	179	5673.2	RIMD4/2W/115V+	101
2409.0	SI 5x20 0,063A-F	178	4975.0	SI 6,3x32 0,400A-F	179	5674.2	RIM4/2W/115V-	101
2891.0	SI 5x20 0,032A-F	178	4976.0	SI 6,3x32 0,500A-F	179	5675.2	RIMD4/2W/115V-	177
2892.0	SI 5x20 0,040A-F	178	4977.0	SI 6,3x32 1,600A-F	179	5675.3	RS-SP 0 2000 mm OG	101
2893.0	SI 5x20 0,050A-F	178	4978.0	SI 6,3x32 0,800A-F	179	5680.3	RS-SP 1 2000 mm OG	177
2894.0	SI 5x20 0,063A-F	178	4979.0	SI 6,3x32 1,000A-F	179	5681.3	AP 1/TS OG	177
2895.0	SI 5x20 0,080A-F	178	4980.0	SI 6,3x32 1,250A-F	179	5682.3	AP 1/D OG	177
2896.0	SI 5x20 0,100A-F	178	4981.0	SI 6,3x32 1,600A-F	179	5690.3	RS-SP 2 2000 mm OG	177
2897.0	SI 5x20 0,125A-F	178	4982.0	SI 6,3x32 2,000A-F	179	5691.3	AP 2/TS OG	177
2898.0	SI 5x20 0,160A-F	178	4983.0	SI 6,3x32 2,500A-F	179	5692.3	AP 2/D OG	177
2899.0	SI 5x20 0,200A-F	178	4984.0	SI 6,3x32 3,150A-F	179	5693.3	RF SP 2 OG	177
2900.0	SI 5x20 0,250A-F	178	4985.0	SI 6,3x32 4,000A-F	179	5700.2	BSM 8	139
2901.0	SI 5x20 0,315A-F	178	4986.0	SI 6,3x32 5,000A-F	179	5700.9	BSM 8/AD	139
2902.0	SI 5x20 0,400A-F	178	4987.0	SI 6,3x32 6,300A-F	179	5701.2	BSM 12	139
2903.0	SI 5x20 0,500A-F	178	4988.0	SI 6,3x32 8,000A-F	179	5701.9	BSM 12/AD	139
2904.0	SI 5x20 0,630A-F	178	4989.0	SI 6,3x32 10,000A-F	179	5702.2	DM 8	141
2905.0	SI 5x20 0,800A-F	178	5			5702.9	DM 8/AD	141
2906.0	SI 5x20 1,250A-F	178	5400.2	RM-SR/1S/24V DC	90	5703.2	DM 12	141
2907.0	SI 5x20 1,600A-F	178	5401.2	RM-SG/1S/24V DC	90	5703.9	DM 12/ AD	141
2908.0	SI 5x20 2,500A-F	178	5402.2	RM-S/1S/24V DC	90	5704.2	DM 14-A	141
2909.0	SI 5x20 3,150A-F	178	5406.2	RM-SR/1S/24V DC/AC	90	5704.9	DM 14-A/AD	141
2910.0	SI 5x20 8,000A-F	178	5407.2	RM-SG/1S/24V DC/AC	90	5705.2	DM 22-A	141
2911.0	SI 5x20 10,000A-F	178	5408.2	RM-S/1S/24V DC/AC	90	5705.9	DM 22-A/AD	141
2912.0	SI 5x20 0,032A-T	178	5412.2	RM-SR/1S/48V DC	90	5706.2	DM 14-K	141
2913.0	SI 5x20 0,040A-T	178	5413.2	RM-SG/1S/48V DC	90	5706.9	DM 14-K/AD	141
2914.0	SI 5x20 0,050A-T	178	5414.2	RM-S/1S/48V DC	90	5707.2	DM 22-K	141
2915.0	SI 5x20 0,063A-T	178	5418.2	RM-SR/1S/48V DC/AC	90	5707.9	DM 22-K/AD	141
2916.0	SI 5x20 0,080A-T	178	5419.2	RM-SG/1S/48V DC/AC	90	5708.2	LPM 8-4 K	142
2917.0	SI 5x20 0,100A-T	178	5420.2	RM-S/1S/48V DC/AC	90	5708.9	LPM 8-4 K/AD	142
2918.0	SI 5x20 0,125A-T	178	5424.2	RM-SR/1S/60V DC	90	5709.2	LPM 12-6 K	142
2919.0	SI 5x20 0,160A-T	178	5425.2	RM-SG/1S/60V DC	90	5709.9	LPM 12-6 K/AD	142
2920.0	SI 5x20 0,200A-T	178	5426.2	RM-S/1S/60V DC	90	5710.2	LPM 7-A	142
2921.0	SI 5x20 0,250A-T	178	5450.2	RM 1-1W/24V DC	88	5710.9	LPM 7-A/AD	142
2922.0	SI 5x20 0,315A-T	178	5451.2	RMD1/1W/24V DC	88	5711.2	LPM 11-A	142
2923.0	SI 5x20 0,400A-T	178	5460.2	RM1/1W/115V AC	88	5711.9	LPM 11-A/AD	142
2924.0	SI 5x20 0,500A-T	178	5461.2	RMD1/1W/115V AC	88	5712.2	SM 3-E	138
2925.0	SI 5x20 0,630A-T	178	5462.2	RM1/1W/230V AC	88	5714.2	SM 6-E	138
2926.0	SI 5x20 0,800A-T	178	5463.2	RMD1/1W/230V AC	88	5716.2	SM 3-G	138
2927.0	SI 5x20 1,000A-T	178	5550.2	RM1/2W/24V-	89	5718.2	SM 6-G	138
2928.0	SI 5x20 1,250A-T	178	5551.2	RMD1/2W/24V-	89	5738.2	GM 1-0	20
2929.0	SI 5x20 1,600A-T	178	5562.2	RM1/2W/115V AC	89	5758.2	GM 1-V/24	20
2930.0	SI 5x20 2,000A-T	178	5563.2	RMD1/2W/115V AC	89	5759.2	GM 1-V/230	20
2931.0	SI 5x20 2,500A-T	178	5564.2	RM1/2W/230V AC	89	5770.2	RM-SR/1W/24V DC	91
2932.0	SI 5x20 3,150A-T	178	5565.2	RMD1/2W/230V AC	89	5771.2	RM-SG/1W/24V-	91
2933.0	SI 5x20 4,000A-T	178	5566.2	RIM2/2W/24V+	101	5772.2	RM-S/1W/24V DC	91
2934.0	SI 5x20 5,000A-T	178	5567.2	RIMD2/2W/24V+	101	5773.2	RM-SR/1W/24V DC/AC	91
2935.0	SI 5x20 6,300A-T	178	5568.2	RIM2/2W/24V-	101	5774.2	RM-SG/1W/24V DC/AC	91
2936.0	SI 5x20 8,000A-T	178	5569.2	RIMD2/2W/24V-	101	5775.2	RM-S/1W/24V DC/AC	91
2937.0	SI 5x20 10,000A-T	178	5570.2	RIM2/2W/48V+	101	5776.2	RM-SR/1W/48V DC	91
2938.0	SI 5x20 5,000A-F	178	5571.2	RIMD2/2W/48V+	101	5777.2	RM-SG/1W/48V DC	91
3			5572.2	RIM2/2W/48V-	101	5778.2	RM-S/1W/48V DC	91
3133.3	AP 0/TS OG	177	5573.2	RIMD2/2W/48V-	101	5779.2	RM-SR/1W/48V DC/AC	91
3134.3	AP 0/D OG	177	5578.2	RIM2/2W/115 ACG	101	5780.2	RM-SG/1W/48V DC/AC	91
3808.0	BWMA 1 (0,5 x 3,5 mm)	54	5579.2	RIMD2/2W/115 ACG	101	5781.2	RM-S/1W/48V DC/AC	91
3884.7	MC GS 6x12 R WH	39	5580.2	RIM2/2W/230 ACG	101	5782.2	RM-SR/1W/60V DC	91
3885.7	MC GS 6x12 R So WH	39	5581.2	RIMD2/2W/230 ACG	101	5783.2	RM-SG/1W/60V DC	91
4			5582.2	RIM4/2W/24V+	101	5784.2	RM-S/1W/60V DC	91
4560.0	BS RS	177	5583.2	RIMD4/2W/24V+	101	5800.2	RML/1W/24V DC	92
4950.0	SI 6,3x32 0,100A-T	179	5584.2	RIM4/2W/24V-	101	5801.2	RML/1W/24V AC	92
4951.0	SI 6,3x32 0,125A-T	179	5585.2	RIMD4/2W/24V-	101	5802.2	RML/1W/48V DC	92
4952.0	SI 6,3x32 0,160A-T	179	5586.2	RIM4/2W/48V+	101	5891.0	AP AD 1	177
4953.0	SI 6,3x32 0,200A-T	179	5587.2	RIMD4/2W/48V+	101	5893.0	AD 1/1000 mm	177
4954.0	SI 6,3x32 0,250A-T	179	5588.2	RIM4/2W/48V-	101	5894.0	AD 2/1000 mm	177
4955.0	SI 6,3x32 0,315A-T	179	5589.2	RIMD4/2W/48V-	101	5895.0	AP AD 2	177
4956.0	SI 6,3x32 0,400A-T	179	5594.2	RIM4/2W/115 ACG	101	5900.3	RIM2S/1W/24V+	97
4957.0	SI 6,3x32 0,500A-T	179	5595.2	RIMD4/2W/115 ACG	101	5901.3	RIM2S/1W/24V-	97
4958.0	SI 6,3x32 0,630A-T	179	5596.2	RIM4/2W/230 ACG	101	5902.3	RIMD2S/1W/24V+	97
4959.0	SI 6,3x32 0,800A-T	179	5597.2	RIMD4/2W/230 ACG	101	5903.3	RIMD2S/1W/24V-	97
4960.0	SI 6,3x32 1,000A-T	179	5598.2	RM1/1W/24V AC	88	5904.3	RIM4S/1W/24V+	97
4961.0	SI 6,3x32 1,250A-T	179	5599.2	RMD1/1W/24V AC	88	5905.3	RIM4S/1W/24V-	97
4962.0	SI 6,3x32 1,600A-T	179	5602.2	RM1/1W/115V-	88	5906.3	RIMD4S/1W/24V+	97
4963.0	SI 6,3x32 2,000A-T	179	5603.2	RMD1/1W/115V-	88	5907.3	RIMD4S/1W/24V-	97
4964.0	SI 6,3x32 2,500A-T	179	5648.2	RM1/2W/24V AC	89	5908.3	RIM8S/1W/24V+	97
4965.0	SI 6,3x32 3,150A-T	179	5649.2	RMD1/2W/24V AC	89	5909.3	RIM8S/1W/24V-	97
			5652.2	RM1/2W/115V-	89	5910.3	RIMD8S/1W/24V+	97
			5653.2	RMD1/2W/115V-	89	5911.3	RIMD8S/1W/24V-	97
			5658.2	RIM2/2W/24 ACG	101	5945.2	OKI 4/5 DC	132
						5946.2	OKI 8/5 DC	132

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5947.2	OKI 4/24 DC	132	6089.2	RIMD16/1W/115V+	95	6481.2	PRS 1/230V AC	67
5948.2	OKI 8/24 DC	132	6090.2	RIMD16/1W/115V-	95	6482.2	PRS 2/12V DC	58
5970.3	SSOIF 8+	133	6091.2	RIMD16/1W/115 ACG	95	6483.2	PRS 2/24V DC	58
5971.3	SSOIF 8-	133	6092.2	RIMD16/1W/230 ACG	95	6484.2	PRS 2/24V AC	69
5975.0	G 4 ODC 5	134	6093.2	DM 26-A	140	6485.2	PRS 2/230V AC	69
5976.0	G 4 ODC 24	134	6093.9	DM 26-A/AD	140	6486.2	PRS 4/12V DC	74
5977.0	G 4 OAC 5 A	134	6094.2	DM 26-K	140	6487.2	PRS 4/24V DC	74
5978.0	G 4 OAC 24 A	134	6094.9	DM 26-K/AD	140	6488.2	PRS 4/24V AC	75
6			6124.9	LPM 20-10K/AD	142	6489.2	PRS 4/230V AC	75
6011.2	BSM 4	139	6125.2	LPM 20-A	142	6520.2	SD-S9 LA	150
6011.9	BSM4/AD	139	6125.9	LPM 20-A/AD	142	6521.2	SD-S15 LA	150
6012.2	RIM8-16A/1W/24V+	99	6126.2	LPM 40-A	142	6522.2	SD-S37 LA	150
6013.2	RIM8S-16A/1W/24V+	99	6126.9	LPM 40-A/AD	142	6524.2	SD-B 9 LA	150
6014.2	RIM16-16A/1W/24V+	99	6135.2	SD-S25 LA	150	6525.2	SD-B15 LA	150
6015.2	RIM16S-16A/1W/24V+	99	6136.2	SD-B25 LA	150	6526.2	SD-B37 LA	150
6016.2	RIM2-16A/1W/24V+	99	6139.2	VSTA B5	23	6584.2	RM1/1W/12V-	88
6017.2	RIM2S-16A/1W/24V+	99	6140.2	VSTA B10	23	6585.2	RMD1/1W/12V-	88
6018.2	RIM 4-16A/1W/24V+	99	6141.2	VSTA B12	23	6586.2	RM1/2W/12V-	89
6019.2	RIM4S-16A/1W/24V+	99	6142.2	VSTA B15	23	6587.2	RMD1/2W/12V-	89
6021.2	RIM2/1W/24V+	95	6143.2	VSTA B24	23	6588.2	RIMS2S/1W/24 ACG	97
6022.2	RIM2/1W/24V-	95	6144.2	GM 1 A/C	21	6589.2	RIMD2S/1W/24 ACG	97
6023.2	RIM2/1W/24 ACG	95	6149.2	IF-OF/0,5A	33	6590.2	RIM2S/1W/230 ACG	97
6024.2	RIM2/1W/48V+	95	6150.2	IF-OF/1A	33	6591.2	RIMD2S/1W/230 ACG	97
6025.2	RIM2/1W/48V-	95	6151.2	IF-OF/3A	33	6592.2	RIM4S/1W/24 ACG	97
6026.2	RIM2/1W/115V+	95	6152.2	IF-OF/6A	33	6593.2	RIMD4S/1W/24 ACG	97
6027.2	RIM2/1W/115V-	95	6155.2	RIM8/2W/24V+	101	6594.2	RIM4S/1W/230 ACG	97
6028.2	RIM2/1W/115 ACG	95	6156.2	RIMD8/2W/24V+	101	6595.2	RIMD4S/1W/230 ACG	97
6029.2	RIM2/1W/230 ACG	95	6157.2	RIM8/2W/24V-	101	6596.2	RIM8S/1W/24 ACG	97
6030.2	RIMD2/1W/24V+	95	6158.2	RIMD8/2W/24V-	101	6597.2	RIMD8S/1W/24 ACG	97
6031.2	RIMD2/1W/24V-	95	6159.2	RIM8/2W/24 ACG	101	6598.2	RIM8S/1W/230 ACG	97
6032.2	RIMD2/1W/24 ACG	95	6160.2	RIMD8/2W/24 ACG	101	6599.2	RIMD8S/1W/230 ACG	97
6033.2	RIMD2/1W/48V+	95	6161.2	RIM8/2W/48V+	101	6600.2	RIM16S/1W/24V+	97
6034.2	RIMD2/1W/48V-	95	6162.2	RIMD8/2W/48V+	101	6601.2	RIMD16S/1W/24V+	97
6035.2	RIMD2/1W/115V+	95	6163.2	RIM8/2W/48V-	101	6602.2	RIM16S/1W/24V-	97
6036.2	RIMD2/1W/115V-	95	6164.2	RIMD8/2W/48V-	101	6603.2	RIMD16S/1W/24V-	97
6037.2	RIMD2/1W/115 ACG	95	6165.2	RIM8/2W/115V+	101	6604.2	RIM16S/1W/24 ACG	97
6038.2	RIMD2/1W/230 ACG	95	6166.2	RIMD8/2W/115V+	101	6605.2	RIMD16S/1W/24 ACG	97
6039.2	RIM4/1W/24V+	95	6167.2	RIM8/2W/115V-	101	6606.2	RIM2-2S/1W/24V+	97
6040.2	RIM4/1W/24V-	95	6168.2	RIMD8/2W/115V-	101	6607.2	RIMD2-2S/1W/24V+	97
6041.2	RIM4/1W/24 ACG	95	6169.2	RIM8/2W/115 ACG	101	6608.2	RIM2-2S/1W/24V-	97
6042.2	RIM4/1W/48V+	95	6170.2	RIMD8/2W/115 ACG	101	6609.2	RIMD2-2S/1W/24V-	97
6043.2	RIM4/1W/48V-	95	6171.2	RIM8/2W/230 ACG	101	6610.2	RIM2-2S/1W/24 ACG	97
6044.2	RIM4/1W/115V+	95	6172.2	RIMD8/2W/230 ACG	101	6611.2	RIMD2-2S/1W/24 ACG	97
6045.2	RIM4/1W/115V-	95	6173.2	RIM16/2W/24V+	101	6612.2	RIM2-2S/1W/230 ACG	97
6046.2	RIM4/1W/115 ACG	95	6174.2	RIMD16/2W/24V+	101	6613.2	RIMD2-2S/1W/230 ACG	97
6047.2	RIM4/1W/230 ACG	95	6175.2	RIM16/2W/24V-	101	6614.2	RIM4-2S/1W/24V+	97
6048.2	RIMD4/1W/24V+	95	6176.2	RIMD16/2W/24V-	101	6615.2	RIMD4-2S/1W/24V+	97
6049.2	RIMD4/1W/24V-	95	6177.2	RIM16/2W/24 ACG	101	6616.2	RIM4-2S/1W/24V-	97
6050.2	RIMD4/1W/24 ACG	95	6178.2	RIMD16/2W/24 ACG	101	6617.2	RIMD4-2S/1W/24V-	97
6051.2	RIMD4/1W/48V+	95	6179.2	RIM16/2W/48V+	101	6618.2	RIM4-2S/1W/24 ACG	97
6052.2	RIMD4/1W/48V-	95	6180.2	RIMD16/2W/48V+	101	6619.2	RIMD4-2S/1W/24 ACG	97
6053.2	RIMD4/1W/115V+	95	6181.2	RIM16/2W/48V-	101	6620.2	RIM4-2S/1W/230 ACG	97
6054.2	RIMD4/1W/115V-	95	6182.2	RIMD16/2W/48V-	101	6621.2	RIMD4-2S/1W/230 ACG	97
6055.2	RIMD4/1W/115V ACG	95	6183.2	RIM16/2W/115V+	101	6622.2	RIM8-2S/1W/24V+	97
6056.2	RIMD4/1W/230 ACG	95	6184.2	RIMD16/2W/115V+	101	6623.2	RIMD8-2S/1W/24V+	97
6057.2	RIM8/1W/24V+	95	6185.2	RIM16/2W/115V-	101	6624.2	RIM8-2S/1W/24V-	97
6058.2	RIM8/1W/24V-	95	6186.2	RIMD16/2W/115V-	101	6625.2	RIMD8-2S/1W/24V-	97
6059.2	RIM8/1W/24 ACG	95	6187.2	RIM16/2W/115 ACG	101	6626.2	RIM8-2S/1W/24 ACG	97
6060.2	RIM8/1W/48V+	95	6188.2	RIMD16/2W/115 ACG	101	6627.2	RIMD8-2S/1W/24 ACG	97
6061.2	RIM8/1W/48V-	95	6189.2	RIM16/2W/230 ACG	101	6628.2	RIM8-2S/1W/230 ACG	97
6062.2	RIM8/1W/115V+	95	6190.2	RIMD16/2W/230 ACG	101	6629.2	RIMD8-2S/1W/230 ACG	97
6063.2	RIM8/1W/115V -	95	6229.2	RMD 1Au/2W/24V-	89	6630.2	RIM16S/1W/230 ACG	97
6064.2	RIM8/1W/115 ACG	95	6301.2	SD2-S9	149	6631.2	RIMD16S/1W/230 ACG	97
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6066.2	RIMD8/1W/24V+	95	6303.2	SD2-S25	149	6633.2	RIMD16-2S/1W/24V+	97
6067.2	RIMD8/1W/24V-	95	6304.2	SD2-S37	149	6634.2	RIM16-2S/1W/24V-	97
6068.2	RIMD8/1W/24 ACG	95	6306.2	SD2-B9	149	6635.2	RIMD16-2S/1W/24V-	97
6069.2	RIMD8/1W/48V+	95	6307.2	SD2-B15	149	6636.2	RIM16-2S/1W/24 ACG	97
6070.2	RIMD8/1W/48V-	95	6308.2	SD2-B25	149	6637.2	RIMD16-2S/1W/24 ACG	97
6071.2	RIMD8/1W/115V+	95	6309.2	SD2-B37	149	6638.2	RIM16-2S/1W/230 ACG	97
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6075.2	RIM16/1W/24V+	95	6347.2	RM-SR/1S/12V DC	90	6642.2	RIM4-16A/1W/24V-	99
6076.2	RIM16/1W/24V-	95	6348.2	RM-SG/1S/12V DC	90	6643.2	RIM4S-16A/1W/24V-	99
6077.2	RIM16/1W/24 ACG	95	6349.2	RM-S/1S/12V DC	90	6644.2	RIM8-16A/1W/24V DC	99
6078.2	RIM16/1W/48V+	95	6353.2	RM-SR/1W/12V DC	91	6645.2	RIM8S-16A/1W/24V-	99
6079.2	RIM16/1W/48V-	95	6354.2	RM-SG/1W/12V DC	91	6646.2	RIM16-16A/1W/24V-	99
6080.2	RIM16/1W/115V+	95	6355.2	RM-S/1W/12V DC	91	6647.2	RIM16S-16A/1W/24V-	99
6081.2	RIM16/1W/115V-	95	6356.2	RM-SR/1S/12V DC/AC	90	6648.2	RIMD2-16A/1W/24V+	99
6082.2	RIM16/1W/115 ACG	95	6357.2	RM-SG/1S/12V DC/AC	90	6649.2	RIMD2-16A/1W/24V-	99
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6086.2	RIMD16/1W/24 ACG	95	6364.2	RM-S/1W/12V DC/AC	91	6653.2	RIMD4-16A/1W/24V-	99
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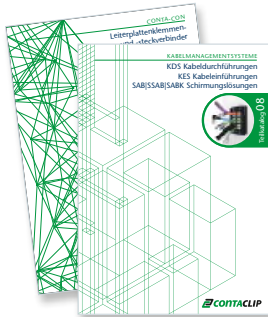
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15884.2	CMS-UI-R	165	16194.2	IRCP 60V AC/DC	42	16278.2	FIRCIU 1/125V AC/DC	45
15885.2	CMS-UI60-UI	162	16195.2	IRCP 110...125V AC/DC	42	16279.2	FIRCIU 1/240V AC	45
15886.2	CMS-F-UI	166	16196.2	IRCP 230...240V AC	43	16280.2	FIRCOU 1/6V AC/DC	47
15900.2	CMS-TC-UI	158	16197.2	IRCP 110...125V DC	43	16281.2	FIRCOU 1/12V AC/DC	47
15901.2	CMS-110A-UI	164	16198.2	IRCP 220V DC	43	16282.2	FIRCOU 1/24V AC/DC	47
15902.2	CML-DCDC/24-0,5	27	16199.2	IRCP LW 110...125V AC/DC	43	16283.2	FIRCOU 1/125V AC/DC	47
15903.2	CML-UI-UI-G	160	16200.2	IRCP LW 230...240V AC	43	16284.2	FIRCOU 1/240V AC	47
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15914.2	CML-DCDC/5-0,5	26	16202.2	IRCI 110...125V AC/DC	45	16286.2	MFR IRCPU 1/24V AC/DC	49
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