CATALOGUE

USB Connector

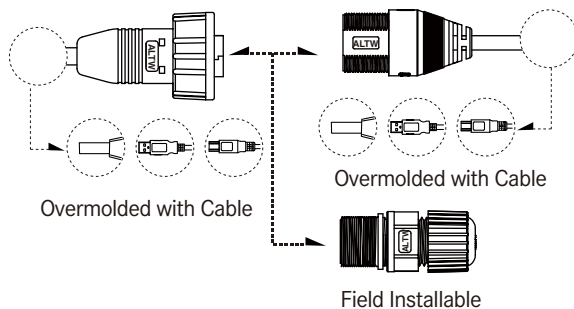# Range Overview

↘ Receptacle to Overmolded with Cable

Receptacle

Overmolded with Cable

Receptacle

Overmolded with Cable
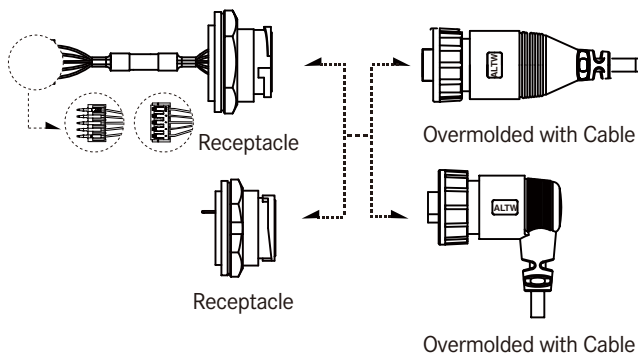
↘ Receptacle with Cable to Overmolded with Cable

Receptacle with Cable

Overmolded with Cable

↘ In Line

Overmolded with Cable

Overmolded with Cable

Field Installable

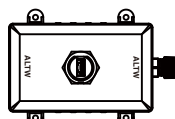## ↘ Micro USB

Available soon
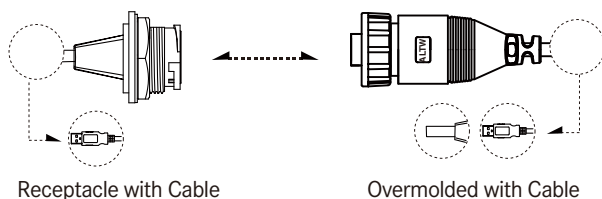
↘ Accessories

Waterproof Cap
See page 21-16

Waterproof Cap
See page 21-16

Box
See page 21-21

Specification

Identifications	USB 3.0 A Type USB 2.0 A Type, USB 2.0 B Type Mini USB 2.0 B Type Micro USB: Available soon
Description	Receptacle Receptacle With Cable Overmolded with Cable Field Installable
Current Rating / Data	1.5A
Material	Contacts: Copper Alloy, Gold Plated Connector Body (Housing) : PBT UL94V-0
Waterproof Rating	IP67~68

Temperature Range	Receptacle: Nylon+GF: -40°C~105°C
	           M-PPE: -40°C~105°C
	           ABS: -20°C~80°C
	Receptacle with cable: Nylon+GF: -20°C~105°C
	                      ABS: -20°C~80°C
	Overmolded with Cable: -20°C~80°C
	Field Installable: -20°C~80°C

Contact Resistance	≤ 30mΩ
Insulation Resistance	≥ 1000mΩ at DC500V
Breakdown Voltage	≥ AC500V / 1 minute
More to know	USB 2.0: Standard Cable Length: 01-05M USB 3.0: Standard Cable Length: 01-03M Mini USB: Standard Cable Length: 01-04M

* Design and specification are subject to change without notice.

IP 67 . 68 ⑨
Unmated or Mated

Ordering Information

① — ② ③ ④ ⑤ ⑥ — ⑦ ⑧ ⑨ ⑩

Specification
(UA) USB A Type   **(NUB)** Mini USB B
(UB) USB B Type

Data Transfer Rate
(20) 2.0   **(30)** 3.0

Connector Body (Style)
> For Receptacle   > For Overmolded with Cable
(P) Front Fastened   **(A)** With Strain Relief
> For Field installable   **(B)** Without Strain Relief
(B) Without Strain Relief

Connector (Housing) Gender
(M) Male   **(F)** Female

Contact Gender
(M) Male (Plug)   **(F)** Female (Jack)

Assemble Style
> For Receptacle   > For Overmolded with Cable
(P) 180° PCB Type   **(M)** Overmolded with Cable
(R) 90° PCB Type   > For Field Installable
(J) Jack   **(A)** Field installable (Solder)

Mating Style
(S) Screw Thread   **(L)** 2 Points Lock Bayonet (Nut OD: 28.5mm)
(N) 2 Points Lock Bayonet (Nut OD: 25.4mm)

Backshell
> For Receptacle   > For Overmolded with Cable   > For Field Installable
(C) Circular   **(L)** Straight   **(L)** Straight
(S) Square   **(R)** Right Angle

Waterproof Rating
(7) IP 67
(8) IP 68

More Information
> For Receptacle   > For Overmolded with Cable
(001) Without Cable   (□)+(■) : Cable Type + Cable Length
(002) With Cable (Harness   EX. **(A01)** = USB 2.0 Cable + 1M
(50mm))

(□) : Cable Type   (■) : Cable Length
(A) USB 2.0 Cable   USB2.0 :From 1M to 5M
(B) USB 3.0 Cable   USB3.0 :From 1M to 3M
                          Mini USB2.0: From 1M to 4M
                          EX. **(01)** = 1M

Ordering Information I Double-ended

ALTW waterproof connector to ALTW waterproof connector
## ALTW waterproof connector to Standard USB connector (None Waterproof)

①—**②** **③** **④** **⑤**—**⑥** **⑦** **⑧** **⑨**

Specification
(UA) USB A Type
(UB) USB B Type

Data Transfer Rate
(20) 2.0   **(30)** 3.0

Connector Body (Style)

> For Receptacle	> For Overmolded with Cable
(P) Front Fastened	**(A)** With Strain Relief
	(B) Without Strain Relief

Connector (Housing) Gender
(M) Male   **(F)** Female

Contact Gender
(M) Male (Plug)   **(F)** Female (Jack)

Mating Style
(S) Screw Thread   **(L)** 2 Points Lock Bayonet (Nut OD: 28.5mm)

Non-Waterproof (2ne End)
(A) USB2.0 A Type (Plug)   **(D)** USB3.0 A Type (Plug)
(B) USB2.0 B Type (Plug)

Waterproof Rating
(6) IP 66
(7) IP 67
(8) IP 68

More Information

> For Receptacle with Cable	> For Overmolded with Cable
(□)+(■) : Cable Type + Cable Length	(□)+(■) : Cable Type + Cable Length
EX. (BX10) = USB 3.0 Cable + 100mm	EX. (A01) = USB 2.0 Cable + 1M

(□) : Cable Type	(■) : Cable Length	(□) : Cable Type	(■) : Cable Length
(B) USB 3.0 Cable	USB3.0 :From 100mm to 300mm	(A) USB 2.0 Cable	USB2.0 :From 1M to 5M
	EX. (X10) = 100mm	(B) USB 3.0 Cable	USB3.0 :From 1M to 3M
			Mini USB2.0: From 1M to 4M
			EX. (01) = 1M

* Design and specification are subject to change without notice.

Physical Dimension

↘ Receptacle

Panel Cut-Out
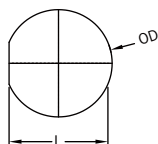
Type		Connector Gender (Housing)	L	OD
			Male	
USB2.0	Type A	Screw Thread	19.4	20.8
		2 Points Lock Bayonet	23.6	25.6
	Type B	Screw Thread	19.4	20.8
		2 Points Lock Bayonet	23.6	25.6
USB3.0	Type A	Screw Thread	19.4	20.8
		2 Points Lock Bayonet	23.6	25.6
Mini USB	-	Screw Thread	14.8	15.6

Dimensions are shown in millimeters

* Maximum Panel Thickness: USB: 4mm I Mini USB: 2.5mm
* USB: Screw I Middle Size (13/16"-28 UNS)
       2 Points Lock Bayonet I Large Size (1"20 UNEF)
* Mini USB: Screw I Standard Size (5/8"-27 UNS)

Connector Dimension
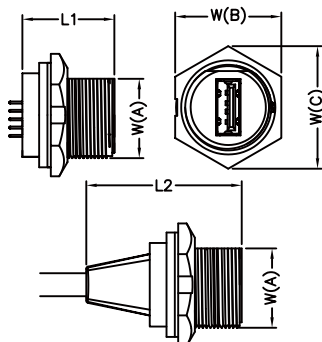
Receptacle with Cable

Type		Connector Gender (Housing)	W(A)	W(B)	W(C)	L1	L2
			Male				
USB2.0	Type A	Screw Thread	19.0	25.4	29.3	22.0	-
		2 Points Lock Bayonet	23.2	28.5	32.9	20.3	-
	Type B	Screw Thread	19.0	25.4	29.3	22.0	-
		2 Points Lock Bayonet	23.2	28.5	32.9	20.3	-
USB3.0	Type A	Screw Thread	19.0	25.4	29.3	-	37.2
		2 Points Lock Bayonet	23.2	28.5	32.9	-	37.5
Mini USB	-	Screw Thread	14.5	20.6	23.5	15.0	-

Dimensions are shown in millimeters

* USB: Screw I Middle Size (13/16"-28 UNS)
       2 Points Lock Bayonet I Large Size (1"20 UNEF)
*Mini USB: Screw I Standard Size (5/8"-27 UNS)

↘ Overmolded with Cable

Type		Connector Gender (Housing)	L		OD	
			Female	Male	Female	Male
USB2.0	Type A	Screw Thread	42.6	45.0	25.4	20.6
		2 Points Lock Bayonet	73.3	-	28.5	-
	Type B	Screw Thread	42.6	45.0	25.4	20.6
		2 Points Lock Bayonet	73.3	-	28.5	-
USB3.0	Type A	Screw Thread	42.6	45.0	42.6	20.6
		2 Points Lock Bayonet	75.0	-	28.5	-
Mini USB	-	Screw Thread	42.6	45.0	20.0	15.45

Dimensions are shown in millimeters

* USB: Screw I Middle Size (13/16"-28 UNS)
       2 Points Lock Bayonet I Large Size (1"20 UNEF)
*Mini USB: Screw I Standard Size (5/8"-27 UNS)

↘ Overmolded with Cable

Type		Connector Gender (Housing)	L(A)		L(B)		OD	
			Female	Male	Female	Male	Female	Male
USB2.0	Type A	Screw Thread	-	-	-	-	-	-
		2 Points Lock Bayonet	46.8	-	44.1	-	28.5	-
	Type B	Screw Thread	-	-	-	-	-	-
		2 Points Lock Bayonet	46.8	-	44.1	-	28.5	-

* USB: Screw I Middle Size (13/16"-28 UNS)

    2 Points Lock Bayonet I Large Size (1"20 UNEF)

Dimensions are shown in millimeters

↘ Field Installable
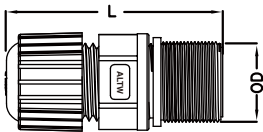
Type		Connector Gender (Housing)	L		OD	
			Female	Male	Female	Male
USB2.0	Type A	Screw Thread	-	56.0	-	20.6
		2 Points Lock Bayonet	-	-	-	-
	Type B	Screw Thread	-	56.0	-	20.6
		2 Points Lock Bayonet	-	-	-	-
Mini USB	-	Screw Thread	-	45.0	-	15.45

* USB: Screw I Middle Size (13/16"-28 UNS)

    2 Points Lock Bayonet I Large Size (1"20 UNEF)

*Mini USB: Screw I Standard Size (5/8"-27 UNS)

Dimensions are shown in millimeters

IP 67 . 68 9
Unmated or Mated

Product Features

↘ Receptacle
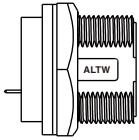
Mating Style 7	Connector Body (Style) 3
Screw Thread **(S)**	Front Fastened **(P)**
2 Points Lock Bayonet (L) (Nut OD: 28.5mm) 2 Points Lock Bayonet (N) (Nut OD: 25.4mm)	

Backshell 8
Circular **(C)**

↘ Overmolded with Cable

Mating Style 7	Connector Body (Style) 3
Screw Thread **(S)**	With Strain Relief **(A)**
2 Points Lock Bayonet (L) (Nut OD: 28.5mm) 2 Points Lock Bayonet (N) (Nut OD: 25.4mm)	Without Strain Relief **(B)**
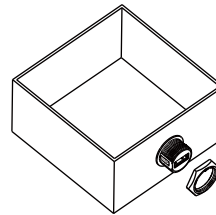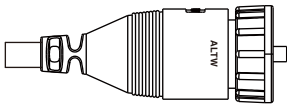
Backshell 8
Straight (L)
Right Angle (R)

↘ Field Installable

Mating Style 7	Connector Body (Style) 3
Screw Thread **(S)**	Without Strain Relief **(B)**

Backshell 8
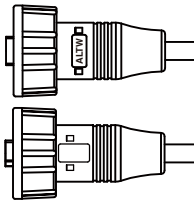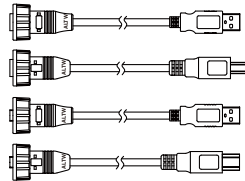Straight **(L)**

1 — 2 3 4 5 6 — 7 8 9 10
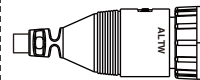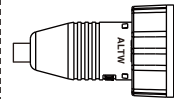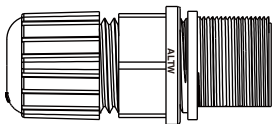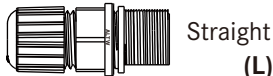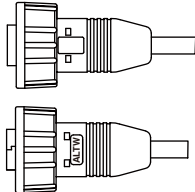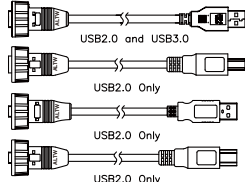
Find Our Standard Products

↘ USB > In-line

• Male Connector (Housing) • Female Contacts • Screw Thread • Middle Size (13/16"-28 UNS)	Overmolded with Cable ----> ** USB 2.0: Choose the cable length from 01~05m ** USB 3.0: Choose the cable length from 01~03m	Overmolded with Cable ** USB 2.0: Choose the cable length from 01~05m ** USB 3.0: Choose the cable length from 01~03m	Overmolded with Cable (Double-Ended) USB2.0 and USB3.0 / USB2.0 Only / USB2.0 Only / USB2.0 Only Non-Waterproof ** USB 2.0: Choose the cable length from 01~05m ** USB 3.0: Choose the cable length from 01~03m
Speed (Code)	Male Connector (M) Female Contacts (F)	Female Connector (F) Male Contacts (M)	Female Connector (F) Male Contacts (M)
USB 2.0 Type A	UA-20AMFM-SL7A**	UA-20BFMM-SL7A**	UA-20BFM-SA7A** UA-20BFM-SB7A**
USB 2.0 Type B	UB-20AMFM-SL7A**	UB-20BFMM-SL7A**	UB-20BFM-SA7A** UB-20BFM-SB7A**
USB 3.0 Type A	UA-30AMFM-SL7B**	UA-30BFMM-SL7B**	UA-30BFM-SD7B**

Refer to P4-4 for ordering information.

↘ USB > In-line

• Male Connector (Housing) • Female Contacts • Screw Thread • Middle Size (13/16"-28 UNS)	Field Installable ---->	Overmolded with Cable ** USB 2.0: Choose the cable length from 01~05m	Overmolded with Cable (Double-Ended) Non-Waterproof ** USB 2.0: Choose the cable length from 01~05m
Speed (Code)	Male Connector (M) Female Contacts (F)	Female Connector (F) Male Contacts (M)	Female Connector (F) Male Contacts (M)
USB 2.0 Type A	UA-20BMFA-SL8001	UA-20BFMM-SL7A**	UA-20BFM-SA7A** UA-20BFM-SB7A**
USB 2.0 Type B	UB-20BMFA-SL8001	UB-20BFMM-SL7A**	UB-20BFM-SA7A** UB-20BFM-SB7A**

Refer to P4-4 for ordering information.

Design and specification are subject to change without notice.

USB Connector I Find Our Standard Products
USB
In-line I Receptacle and Mating Pair
2 Points Lock Bayonet I Screw Thread
Middle Size

IP 67 . 68 ⑨
Unmated or Mated

↘ USB > In-line

• Male Connector (Housing) • Female Contacts • Screw Thread • Middle Size (13/16"-28 UNS)	Overmolded with Cable ·····> (Double-Ended)	Overmolded with Cable (Double-Ended) ------->	Field Installable
	USB2.0 and USB3.0 ** USB 2.0: Choose the cable length from 01~05m ** USB 3.0: Choose the cable length from 01~03m	USB2.0 and USB3.0 ** USB 2.0: Choose the cable length from 01~05m ** USB 3.0: Choose the cable length from 01~03m	
Speed (Code)	Male Connector (M) Female Contacts (F)	Female Connector (F) Male Contacts (M)	Female Connector (F) Male Contacts (M)
USB 2.0 Type A	UA-20AMF-SA7A**	UA-20BFM-SA7A**	-
USB 3.0 Type A	UA-30AMF-SD7B**	UA-30BFM-SD7B**	-

          * Refer to P4-4 for ordering information.   * Refer to P4-4 for ordering information.

↘ USB > Receptacle and Mating Pair

• Male Connector (Housing) • Female Contacts • Screw Thread • Middle Size (13/16"-28 UNS)	Receptacle ------------------->	Overmolded with Cable ------->	Overmolded with Cable (Double-Ended)
	Type 1 Type 2	** Choose the cable length from 01~05m	Non-Waterproof ** Choose the cable length from 01~05m
Speed (Code)	Male Connector (M) Female Contacts (F)	Female Connector (F) Male Contacts (M)	Female Connector (F) Male Contacts (M)
USB 2.0 Type A	UA-20PMFP-SC8001 UA-20PMFP-SC8002 Type1 UA-20PMFP-SC8003 Type2	UA-20BFMM-SL7A**	UA-20BFM-SA7A** UA-20BFM-SB7A**
USB 2.0 Type B	UB-20PMFP-SC8001 UB-20PMFP-SC8002 UB-20PMFP-SC8003	UB-20BFMM-SL7A**	UB-20BFM-SA7A** UB-20BFM-SB7A**

        * Refer to P4-4 for ordering information.

⬂ USB > Receptacle and Mating Pair

• **Male Connector** (Housing) • **Female Contacts** • **2 Points Lock Bayonet** (Nut OD: 28.5mm) • **Large Size** (1"20 UNEF)	**Receptacle** ‑‑‑‑‑‑‑‑> Type 1 Type 2	**Overmolded with Cable** ‑‑‑‑‑> ** Choose the cable length from 01~05m	**Field Installable**
Speed (Code)	Male Connector (M) Female Contacts (F)	Female Connector (F) Male Contacts (M)	Female Connector (F) Male Contacts (M)
USB 2.0 Type A	UA-20PMFP-LC7001 UA-20PMFP-LC7002 Type1 UA-20PMFP-LC7003 Type2	UA-20AFMM-LL7A** UA-20AFMM-LR7A**	-
USB 2.0 Type B	UB-20PMFP-LC7001 UB-20PMFP-LC7002 UB-20PMFP-LC7003	UB-20AFMM-LL7A** UB-20AFMM-LR7A**	-

⬂ USB > Receptacle and Mating Pair

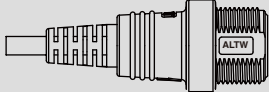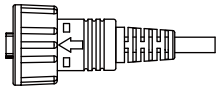| • **Male Connector** (Housing) • **Female Contacts** • **2 Points Lock Bayonet** (Nut OD: 25.4mm) • **Large Size** (1"20 UNEF)	**Receptacle** ‑‑‑‑‑‑‑‑>	**Overmolded with Cable** ‑‑‑‑‑> ** Choose the cable length from 01~05m	**Field Installable**
Speed (Code)	Male Connector (M) Female Contacts (F)	Female Connector (F) Male Contacts (M)	Female Connector (F) Male Contacts (M)
USB 2.0 Type A	UA-20PMFJ-NC7001	UA-20BFMM-NL7A**	-

IP 67 . 68 ❾
Unmated or Mated

⬊ USB > Receptacle with Overmolded Cable and Mating Pair

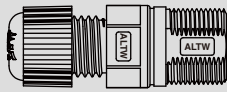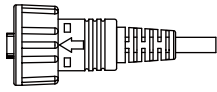| • Male Connector (Housing) • Female Contacts • Screw Thread • 2 Points Lock Bayonet (Nut OD: 28.5mm) • Large Size (1"20 UNEF)	Receptacle with Cable (Double-Ended) ┄┄> Non-Waterproof ** USB 3.0: Choose the cable length from 100~300mm	Overmolded with Cable ┄┄>	Overmolded with Cable (Double-Ended) ** USB 3.0: Choose the cable length from 01~03m
Speed (Code)	Male Connector (M) Female Contacts (F)	Female Connector (F) Male Contacts (M)	Female Connector (F) Male Contacts (M)
USB 3.0 Type A	UA-30PMF-LD7B** UA-30PMF-SD7B**	UA-30AFMM-LL7BXX UA-30BFMM-SL7BXX	UA-30BFM-SD7B** UA-30AFM-LD7A**

* Refer to P4-4 for ordering information.   * Refer to P4-4 for ordering information.
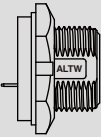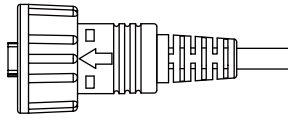
↘ Mini USB > In-line

• Male Connector (Housing) • Female Contacts • Screw Thread • Standard Size (5/8"-27 UNS)	Overmolded with Cable ----→	Overmolded with Cable ----→	Field Installable
	** Choose the cable length from 01~04m	** Choose the cable length from 01~04m	
Speed (Code)	Male Connector (M) Female Contacts (F)	Female Connector (F) Male Contacts (M)	Female Connector (F) Male Contacts (M)
Mini USB 2.0 Type B	NUB-20AMFM-SL7A**	NUB-20AFMM-SL7A**	-

↘ Mini USB > In-line

• Male Connector (Housing) • Female Contacts • Screw Thread • Standard Size (5/8"-27 UNS)	Field Installable ----→	Overmolded with Cable ----→	Field Installable
	** Choose the cable length from 01~04m	** Choose the cable length from 01~04m	
Speed (Code)	Male Connector (M) Female Contacts (F)	Female Connector (F) Male Contacts (M)	Female Connector (F) Male Contacts (M)
Mini USB 2.0 Type B	NUB-20AMFM-SL7A**	NUB-20AFMM-SL7A**	-

↘ Mini USB > Receptacle and Mating Pair

• Male Connector (Housing) • Female Contacts • Screw Thread • Standard Size (5/8"-27 UNS)	Receptacle ----→	Overmolded with Cable ----→	Field Installable
		** Choose the cable length from 01~04m	
Speed (Code)	Male Connector (M) Female Contacts (F)	Female Connector (F) Male Contacts (M)	Female Connector (F) Male Contacts (M)
Mini USB 2.0 Type B	NUB-20PMFP-SC7001 NUB-20PMFR-SC7001	NUB-20AFMM-SL7A**	-

Amphenol LTW Technology Co., Ltd. (Headquarter)

9F., No.657-12, Zhongzheng Rd., Xinzhuang Dist., New Taipei City 242, Taiwan
Telephone: +886-2-29085626   Fax: +886-2-29029787
www.amphenolltw.com

Shulin plant, Taiwan

No.10, Shutan St., Shulin Dist., New Taipei City 238, Taiwan

Kunshan plant, China

No. 62 Da Tung Road, Peng Lang Street, Kunshan City , Jiangsu Province, China
Telephone: +86-512-5761-0501
Fax: : +86-512-5761-0515

For further information, please contact :

Sales & Marketing Department | Email : sales@ltw-tech.com

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