Amphenol SOCAPEX

USB3 FTV Amplifier / Extender

Extend your USB3 cordset over long distances

NEW

Description

The USB3.2 Gen1 protocol is limited to 3 meters. Our USB3.2 Gen1 amplifier allows you to extend the USB3 signal to 11 meters maximum.
We propose a standard range of amplifiers from 3 meters up to 8 meters (see How to order).

Using the USB3 amplifier selection guide below, please consider all your requirements and contact us.

Main features

Main characteristics:

- An 8 meters USB3 amplifier can be connected with a 3 meters cordset to achieve a maximum lenght of 11 meters.
- USB3 cordset is provided by Amphenol.
- Shock, vibration and traction resistance
- Improved EMI protection
- Mate with our USB3FTV™ series (MIL-DTL-38999 series III type) with anti-decoupling device - Shell size 15

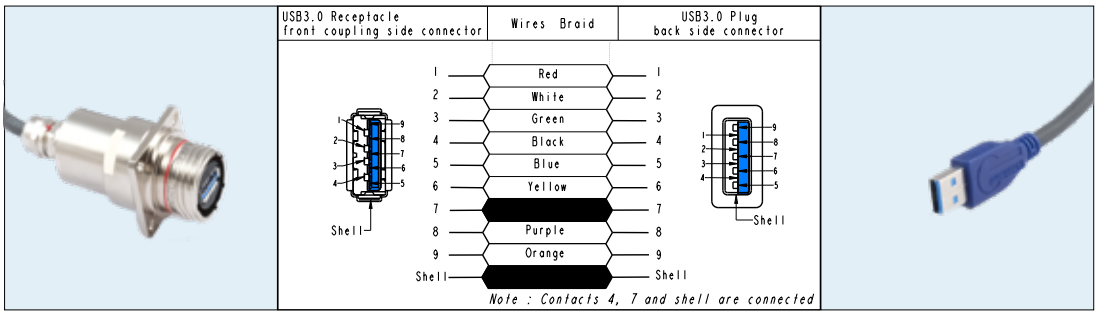
Environmental protection:

- Sealing (when mated): IP68 (temporary immersion)
- Salt spray:
  48 h - Aluminum shell with Nickel plating ✓
  500 h - Aluminum shell with Black zinc nickel plating ✓
  500 h - Aluminum shell with Olive drab cadmium plating
  500 h - Aluminum shell with Tin-zinc plating ✓ NEW
  500 h - Marine bronze shell ✓
- Humidity: 21 days, 43°C, 98% humidity
- Temperature range: - 40°C / + 85°C

✓: RoHS compliant

USB3 Amplifier wiring diagram

⚠ **Straight wirings**



⚠ **Host side must be a USB3.2Gen1 port**
Device side accepts USB3.2Gen1 and USB2.0 ports

Markets & Applications

- C6ISR, Battlefield Communication
- Ground Vehicles
- Naval

Applications :
Displays, Consoles, Visions systems, Situation awareness

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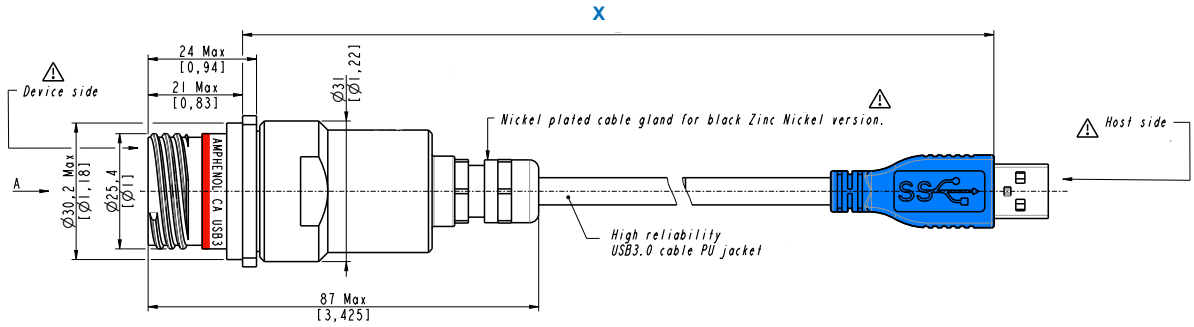
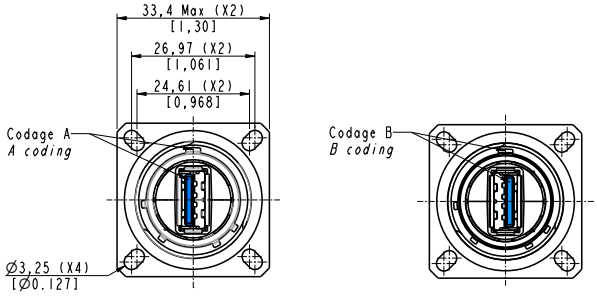
Available configurations

Square flange receptacle – Shell type 2 - 4 mounting holes

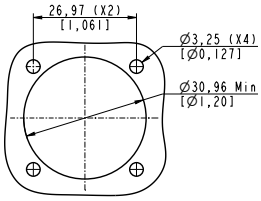
Part number type: **CA USB3 FTV 2 X X XX**

X: see the How to order to complete your part number





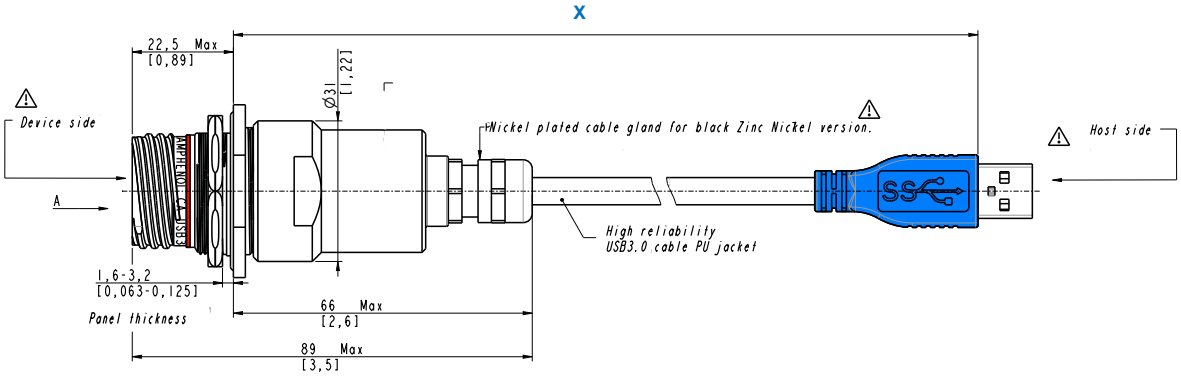
Panel Drilling

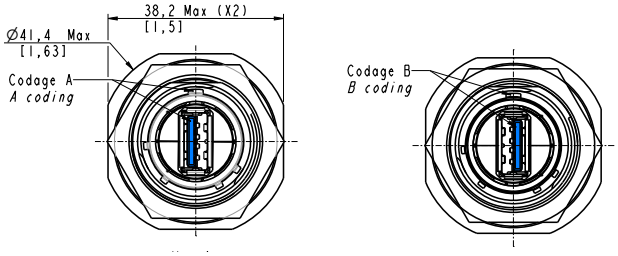


Jam nut receptacle – Shell type 7 - Hexagonal nut mounting

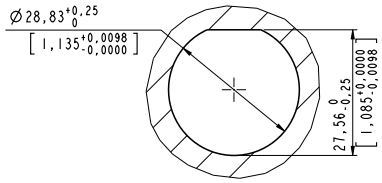
Part number type: **CA USB3 FTV 7 X X XX**

X: see the How to order to complete your part number





Panel Drilling



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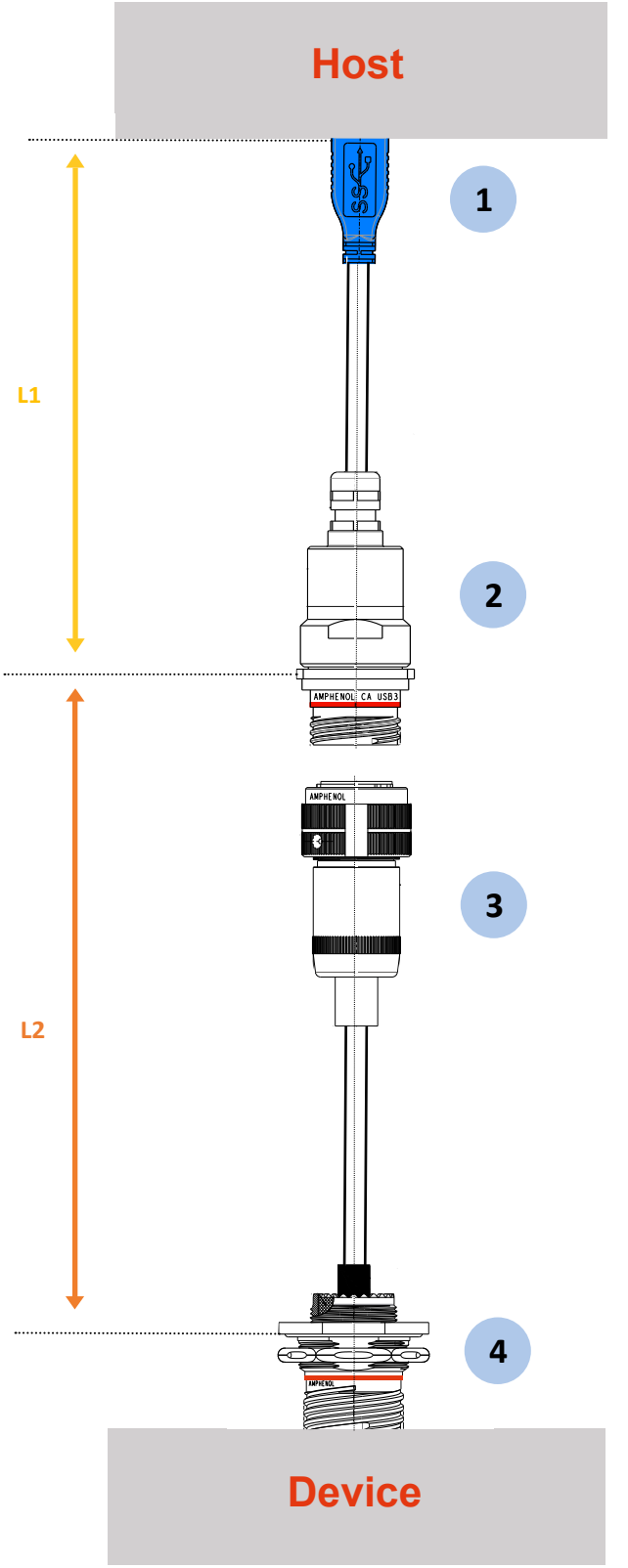
USB3 Amplifier selection guide

Define your own solution by selecting options in the scheme below



1

Define the type of USB3 cable end:
- Standard USB3 Type A plug or USB3FTV plug.

If you want a USB3 FTV plug:
- Nickel plated, Olive drab cadmium plated or Black zinc nickel plated, Tin zinc plated or Marine bronze shell.
- Protective cap or not.

L1

Define the lenght of L1:
- Standard lenghts : 3 m, 6 m, 8 m.

2

Define the USB3 amplifier shell:
- Square flange or jam nut receptacle.
- Nickel plated, Olive drab cadmium plated or Black zinc nickel plated, Tin zinc plated or Marine bronze shell.
- Protective cap or not.

3

Define the type of plug:
- Standard USB3 Type A plug or USB3FTV plug.

If you want a USB3 FTV plug:
- Nickel plated, Olive drab cadmium plated or Black zinc nickel plated, Tin zinc plated or Marine bronze shell.
- Protective cap or not.

L2

Define the lenght of L2:
- Standard lenghts : 1 m, 2 m, 3 m.

4

Define the type of USB3 cable end:
- Standard USB3 Type A plug or USB3 FTV plug.

If you want a USB3 FTV plug:
- Nickel plated, Olive drab cadmium plated or Black zinc nickel plated, Tin zinc plated or Marine bronze shell.
- Protective cap or not.

If you want a USB3 FTV receptacle:
- Square flange or jam nut receptacle.
- Female USB3 Type A or soldered cable.
- Transversally sealed for soldered cable termination or not.
- Backshell or not.
- Nickel plated, Olive drab cadmium plated or Black zinc nickel plated, Tin zinc plated or Marine bronze shell.
- Protective cap or not.

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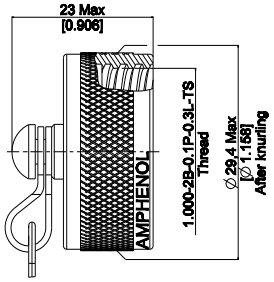
Accessories

Standard protective cap

This protective cap provides you with a permanent sealing.

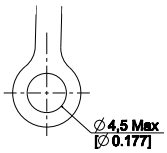
Receptacle caps

Part number: **USBFTV C 2 XX**
USBFTV C 7 XX

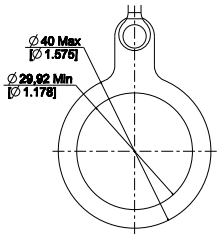


Attachment type

Small ring for square flange receptacle



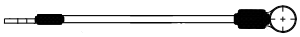
Large ring for jam nut receptacle



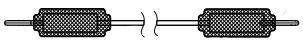
Rope material

Metallic chain

Stainless steel rope



Nylon rope



Cap type	Metallic chain length (mm)	Nylon cord length (mm)	Stainless steel rope length (mm)
Receptacle caps	127 (+13,-7)		

Metallic Self-Closing Caps

Part number: **TVSCC 17 XX**

- Only for square flange receptacle
- IP67
- Size 17

Part number	Plating
TVSCC 17 B	Black painted ✓
TVSCC 17 N	Nickel ✓
TVSCC 17 G	Olive drab cadmium
TVSCC 17 ZN	Black zinc nickel ✓

✓: RoHS compliant

Cybersecurity solutions

Amphenol Socapex has developped a dedicated solution to prevent unauthorized access to critical interconnexions. Caplocks & Pluglocks in composite material are designed to meet this need.

Suitable part numbers for your USB3 connectors:

CapLock

Part number: **CapLock 15 TX**
CapLock 15 WR

PlugLock

Part number: **PlugLock 15 TX**
PlugLock 15 WR

TX : Torx Safety screw
WR : Cable seal , metal wire to cut to unlock

CapLock and Pluglock datasheet

Scan & discover !

USB3F TV AMPLIFIER

How to order - Amplifier

1.	2.	3.	4.	5.
Series	Shell type	Coding (for plug with cordset only)	Material and platings	Cordset length (for plug with cordset only)
CA USB3F TV	2	A	G	30

1. Series

CA USB3F TV	USB3.2 Gen1 Field Series copper amplifier (USB3-A)

2. Shell type

● 2	Square flange receptacle
7	Jam nut receptacle

3. Coding (for plug with cordset only)

● A	Coding A
B	Coding B

4. Material and platings

	Shell material	Shell plating
● G	Aluminum	Olive drab cadmium
N		Nickel ✓
● ZN		Black zinc nickel ✓
TZ		Tin Zinc ✓ NEW
BZ	Bronze ✓	

✓ : RoHS compliant

5. Cordset length with plug USB3 type A

	Meters	Inch
● 30	3 m	118,11
40	4 m	157,48
50	5 m	196,85
● 60	6 m	236,22
70	7 m	275,59
● 80	8 m	314,96

● Standard configurations available from stock in our distributors network.

Examples :

Part number	Description
CA USB3F TV 7 A ZN 80	USB3.2 Gen1 Field Series copper amplifier (USB3-A), jam nut recepatcle, coding A, black zinc nickel plating, 8-meters cordset
CA USB3F TV 2 B G 60	USB3.2 Gen1 Field Series copper amplifier (USB3-A), square flange recepatcle, coding B, olive drab cadmium plating, 6-meters cordset
CA USB3F TV 2 A TZ 30	USB3.2 Gen1 Field Series copper amplifier (USB3-A), square flange recepatcle, coding A, tin zinc plating, 3-meters cordset

How to order - Accessories

Standard protective cap

1.	2.	3.	4.
Series	Connector type	Rope type	Shells material and finish
USBFTVC	7	M	G

1. Series

USBFTVC	USBFTV standard protective cap

2. Connector type

2	Square flange receptacle
7	Jam nut receptacle

3. Rope type

Blank	Nylon cord
M	Metallic chain
MR	Stainless Steel rope - Transparent teflon jacket
BMR	Stainless Steel rope - Black teflon jacket for ZN finish

4. Shell material and finish

N	Nickel plating ✓
G	Olive drab cadmium
ZN	Black zinc nickel plating ✓

✓ : RoHS compliant

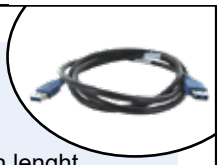
USB3F TV AMPLIFIER

Discover a selection of products compatible with your USB3 FTV Amplifier

USB3F TV

- Shell size 15
- USB specification 3.0
- Shock, vibration and traction resistant
- Sealed against fluids and dusts (IP68)
- Tri Start Thread coupling mechanism (MIL-DTL-38999 III type) with anti-decoupling device.

USB3 Cordsets



- USB3.2 Gen 1
- Up to 3 m max in lenght
- Reinforced PUR Jacket
- Halogen free
- Double shielding

USB3 Key FTV

- Reinforced memory key
- USB3.2 Gen 1 max transfer 5 Gb/s
- Available capabilities : 32, 64, 128 and 256 Gb

USB3F TV AMPLIFIER

NOTES

NOTES

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