Amphenol SOCAPEX

USB FIELD™





AMPHENOL-SOCAPEX.COM

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TABLE OF CONTENT

About Amphenol Socapex	**4**
Markets and applications	8
Other solutions and related documentations	9
Concept overview and benefits	10
USB standards and appropriate solutions	11
USB3.2 GEN1	**13**
USB3CFTV™	14
USB3FTV™	20
USB3FTV™ - Transversally sealed and hermetic receptacle	24
USB3FTV™ - Stand-off receptacle	27
USB3FTV™ - Reduced flange receptacle	29
USB3FTV™ - VG96949	31
USB3 Type A - Type C - Adapter	32
µCom-USB3.2 & TVµCom-USB3.2	37
µCom-USB3.2	38
TVµCom-USB3.2	40
USB2.0	**43**
USBFTV™	44
USBFTV™ - Transversally sealed and hermetic receptacle	49
USBFTV™ - Stand-off receptacle	44
USBFTV™ - Through-bulkhead receptacle	56
USBFTV™ - Receptacle with 360° EMI backshell	57
USBFTV™ - Atex Zone 2	58
USBBFTV	60
USBBFTV - Transversally sealed receptacle	64
USBBFTV - Stand-off receptacle	65
CABLES AND CORDSETS	**69**
USB3.2 Gen1 cable and cordset	70
USB2.0 cable and cordset	71
ADAPTORS AND ACCESS POINTS	**73**
Composite USB3.2 Gen 1 access point	74
USB3.2 Gen1 and USB2.0 access point	77
Composite USB2.0 access point	79
USB2.0 to type EN3646 - PT/451 - ABS1547 adaptor	84
RUGGED ELECTRONICS	**86**
USB3CFTV Memory key	87
USB3FTV™ Memory key	88
USB3FTV™ Memory key high capacity	89
ROK - Rugged Oval Key	91
USB3FTV™ - USB3.2 Gen 1 amplifier	92
USBFTV™ - USB2.0 amplifier	95

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TABLE OF CONTENT

ACCESSORIES	99
Standard protective cap - USBFTV™	100
Silicone protective cap - TVμCom-USB3.2	101
Self-closing cap - USBFTV™	102
Accessories - μCom-USB3.2	103
Accessories - TVμCom-USB3.2	104
Panel gasket and tool	105

ASSEMBLY INSTRUCTIONS	108
USB3FTV™	109
USBFTV™ and USBBF TV	111

HOW TO ORDER	114
USB3CFTV™ - Plug and receptacle	115
USB3FTV™ - Plug and receptacle	116
USB3FTV™ - Transversally sealed and hermetic receptacle	117
USB3FTV™ - VG96949	118
μCom-USB3.2 & TVμCom-USB3.2	119
USBFTV™ - Plug and receptacle	121
USBFTV™ - Transversally sealed and hermetic receptacle	122
USBFTV™ - Atex Zone 2	123
USBBFTV™ - Plug and receptacle	124
USBBFTV™ - Transversally sealed receptacle	125
Cable	126
Cordset	127
Composite USB3.2 Gen 1 access point	128
USB3CFTV Memory Key	129
USB3FTV™ Memory Key	130
ROK - Rugged Oval Key	131
USB3FTV™ - USB3.2 Gen 1 amplifier	132
Standard protective cap	133
Standard protective cap - TVμCom-USB3.2	134
Silicone protective cap - TVμCom-USB3.2	135

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OUR COMPANY

Since 1947, Amphenol Socapex has prescribed, designed and manufactured reliable and innovative interconnection solutions for harsh environments, specializing in standard and customized electrical and fiber optic connectors, contacts, accessories and cabling solutions.

Amphenol Socapex, based in the Mont Blanc region of France and with operations in India and Tunisia, has a global presence in over 100 countries.

OUR MARKETS



BATTLEFIELD COMMUNICATION



GROUND VEHICLES



MILITARY AIRCRAFT / STRUCTURE



COMMERCIAL AVIATION



AUTRES



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TECHNOLOGIES & INNOVATIONS

RESEARCH & DEVELOPMENT






- **ENGINEERING LABORATORY:** 320m2 state-of-the-art facilities in France and India with advanced testing and analysis equipment.
- **EXPERTISE:** 30+ specialists handling 300+ product tests and 1,400+ metrology requests annually.
- **TECHNOLOGY**: Plating engineering, material development, high voltage analysis, 3D EM simulation, fiber optics, and assembly.
- **METROLOGY:** Internal verification of the conformity of measuring instruments and ensuring that our measurement management system complies with the recommendations of ISO 10012.

OUR WORKSHOPS






Our workshops located in France & India provide consistent quality adapted to your volume requirements.

- **MOLDING:** Solid expertise in thermoplastic elastomer and thermoset molding
- **MACHINING:** Manufacturing of cylindrical shells and rectangular shells
- **SCREW MACHINING:** Manufacturing of electrical contacts
- **PLATING:** Plating with cadmium, nickel, electroless nickel, silver, black zinc nickel, gold
- **ASSEMBLY:** Connector and harness assembly (electrical & optical)
- **AUTOMATION & TOOLING:** Tools for our different activities : molding, machining, assembly

JOIN US ! WE'RE HIRING

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OUR RESOURCES

Access everything you need to simplify your projects. More than just a technical guide, our catalog opens the door to a multitude of services and practical tools.
All the information below is available on our website or by clicking on the digital PDF.

CAD FILES & PRODUCT SELECTOR
Streamline your design process with our 3D connector models. Downloadable in many formats.

FIND PRODUCT AVAILABILITY AT OUR DISTRIBUTORS
With your part number, find product availability in just a few clicks!

TECHNICAL SUPPORT
We'll answer all your questions.

ONLINE QUOTATION
Simply fill out our online form to receive your pricing

TECHNICAL CATALOGS

PRODUCT FAQ
Answers to your most important questions.

PRODUCT ASSEMBLY VIDEO

MY AMPHENOL
Follow your orders and delivery dates

OUR CERTIFICATIONS

EXPORT CONTROL CLASSIFICATION

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OUR OFFER

38999 SERIES



RUGGED ETHERNET, USB & DISPLAY CONNECTORS



2M MICRO MINIATURE



ACCESSORIES



PT/451 - 26482 SERIES



SL61 & SOCA



RFM SERIES



PCB CONNECTORS



FIBER OPTIC SOLUTIONS



CONTACTS



ETHERNET SWITCH & MEDIA CONVERTER



USB KEYS & EXTENDERS



PS SERIES :
Power Devices Solutions



CORDSETS & JUMPERS



CABLE ASSEMBLY



HARNESS IN THE BOX



CUSTOMIZED
PRODUCTS AND SOLUTIONS

From cable assembly to customized solutions, we're here to add value to your projects.
We look forward to hearing from you.

CONSULT US

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MARKETS AND APPLICATIONS



MILITARY VEHICLES
Ground radios shelters
Ground vehicles
Battlefield
Communication systems



C5ISR
Threat detection system
Soldier wearable equipment
Rugged computer & digital radio
Satellite reception unit



MILITARY AVIONICS & AIRFRAME
Power unit
Aircraft
Radar
Display unit
Flight control system



COMMERCIAL AVIONICS & AIRFRAME
Landing gear
Cockpit
Ground power supply
Engine Flowmeter



MISSILES & UAVS
Air missiles and UAVS
Ground control station & launchers



NAVAL
Navigation guidance



INDUSTRIAL
Automation
Transportation
Nuclear power station
Robotics

Due to technical modifications, all information provided is subject to change without prior notice
Designed by Amphenol Socapex

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OTHER SOLUTIONS AND RELATED DOCUMENTATIONS

All our documentations are available in PDF format on our website : www.amphenol-socapex.com



Catalog RJ Field™
DOC-001041-ANG



Catalog Rugged Ethernet Switch and Media Converters
DOC-001034-ANG



Brochure µCom-10Gb+
DOC-000015-ANG



Brochure TV µCom-10Gb+
DOC-001014-ANG



Brochure RJF TV Reduced Flange
DOC-001013-ANG



Brochure USB3F TV Reduced Flange
DOC-001012-ANG



Brochure MDP FTV
DOC-001025-ANG



Brochure HDMI FTV
DOC-001036-ANG



Brochure RJF 6A
DOC-001021-ANG



Brochure RJF TV6A
DOC-001020-ANG



Brochure µCom & TVµCom USB3.2 Gen1
DOC-001032-ANG



Brochure USB3CFTV
DOC-001051-ANG



Brochure USB3 FTV Amplifier / Extender
DOC-001054-ANG



Brochure USB3AP
DOC-001058-ANG



Brochure USB3CFTV Memory Keys



USB3 Type A - Type C - Adapter

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CONCEPT OVERVIEW AND BENEFITS

5 TOP REASONS to use USBFIELD™

#1 Military. Ruggedized. Connectors

Our concept is simple : use standard, well-know, military connectors as MIL-DTL-38999 series III and MIL-DTL-26482 series I to reinforce standard industrial connectors as RJ45 or USB.



#2 No tool. No cabling. Easy mounting

Our USB solution enables you to use a standard USB cordset and mount itself without any cabling operation or tool.



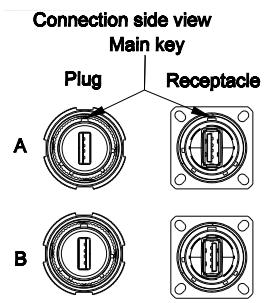
#3 Electric continuity. Metallized inserts

Our solutions provide a total shiedling continuity per the metallisation of parts in the receptacle.



#4 Two codings. Only one reference

Our connectors, plugs and receptacles, can be configured in four different codings with the same reference.



#5 Modifiable. Reparable. Removal inserts

Our parts can be changed as simply as the assembly, using a dedicated tool or simply by hands. This allows to remove the cordset, change the coding option or repair the solution.



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USB STANDARDS AND APPROPRIATE SOLUTIONS

	USB2.0	USB3.2 Gen1	USB3.2 Gen2
Data Rate	480 Mb/s	5 Gb/s	10 Gb/s
Voltage	5 V	5 V	5V
Current	1,5A	1,5A	1,5A
Power	2,5 W	2,5 W	2,5 W
Number of contacts	2 power 2 signal	2 power 6 signal	2 power 6 signal
Max cable length per USB standard	4,80 m	3 m	1 m
USB3CFTV™	✓	✓	✓
USB3FTV™	✓	✓	
USBFTV™	✓		
USBBFTV	✓	✓	
µCom & TVµCom USB3.2	✓	✓	✓
Cable and cordset	✓	✓	
Adaptor and access point	✓	✓	
USB3CFTV™ memory key	✓	✓	
USB3FTV™ memory key	✓	✓	
ROK - Memory key	✓	✓	
USBFTV™ - USB3.2 amplifier	✓	✓	
USBFTV™ - USB2.0 amplifier	✓		

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USB3.2



Table of contents

USB3.2	**13**
USB3CFTV™	14
USB3FTV™	20
USB3FTV™ - Transversally sealed and hermetic receptacle	24
USB3FTV™ - Stand-off receptacle	27
USB3FTV™ - Reduced flange receptacle	29
USB3FTV™ - VG96949	31
USB3 Type A - Type C - Adapter	32
µCom-USB3.2 & TVµCom-USB3.2	37
µCom-USB3.2	38
TVµCom-USB3.2	40

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USB3CFTV



DESCRIPTION

USB3CFTV is a ruggedized solution for USB Type-C standard connectors.
Based on MIL-DTL-38999 series III type, plugs, and receptacles are mated thanks to a Tri-Start thread coupling mechanism. This solution strengthens and protects your devices against fluids, dust, shocks, and disconnection due to vibrations.
The assembly of your standard USB type-C cordset into our ruggedized plugs does not require any tool and can be easily performed on the field. In addition, reversibility for data and power transmission is achieved for both plug and receptacles.
Benefit from USB type-C flexibility to design many different data, power delivery, and video configurations with all the advantages of Amphenol Socapex know-how in ruggedized connector solutions.

MAIN FEATURES

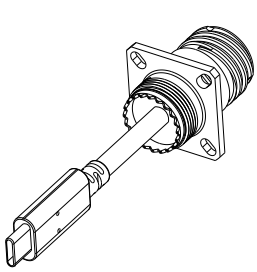
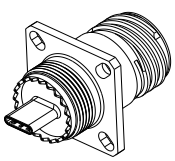
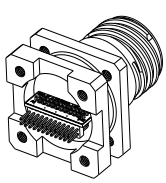
MAIN CHARACTERISTICS:
- Thread coupling, MIL-DTL-38999 series III type
- Shell size 11
- Shock, vibration, and traction resistance
- No tools are required for cabling adaptation
- EMI protection: Shielding continuity
- Mating plug/receptacle cycles: 500 at least

DATA TRANSMISSION AND POWER:
- Compatible with USB3.2 Gen 1
- Fully reversible for both plug and receptacle
- Intensity: 5A max
- Voltage: 20V max
- Dielectric: Withstanding voltage: 100 VAC
- Maximum length transmission: Up to 1 m (only for cordset versions). Amplifiers to come, please consult us.

ENVIRONMENTAL PROTECTION:
- Sealing: IP68 unmated and mated (with sealed USB3 Type-C cordset)
- Material and platings:
  - 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 ✓
  - 500 h - Stainless steel passivated ✓
- Shock resistance: IK06 onto mated pair
- Operating temperature: -40°C to +85°C (-40°F to 185°F)

✓: RoHS compliant

BACK TERMINATIONS

Cordset with USB Type-C male plug	USB3C male termination	USB Type-C with PCB: PC tails contacts
		

HOW TO ORDER : PLEASE REFER TO PAGE 115

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USB3CFTV

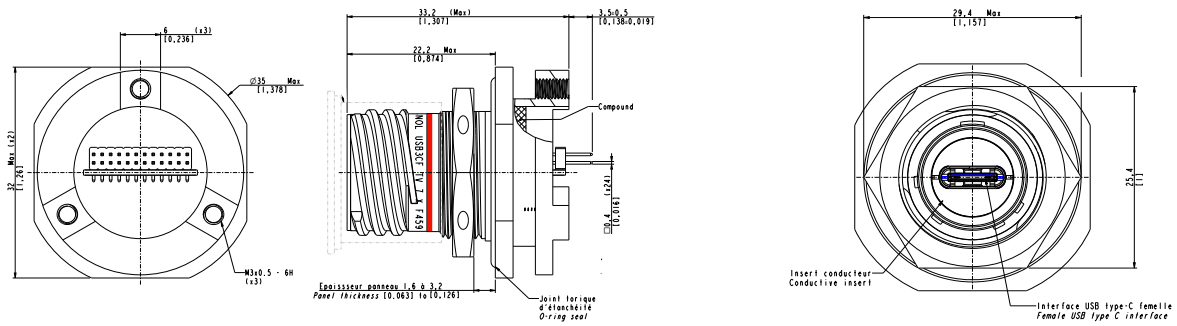


Overall dimension

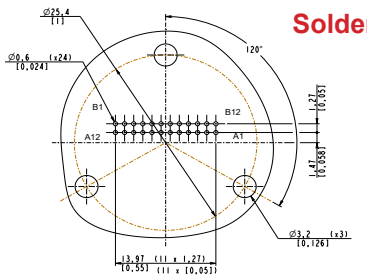
Receptacle - Stand-off Jam nut receptacle – Hexagonal nut mounting - Shell type 7 with double flange for PCB mounting

Part number type: **USB3CFTV 7 X F459**

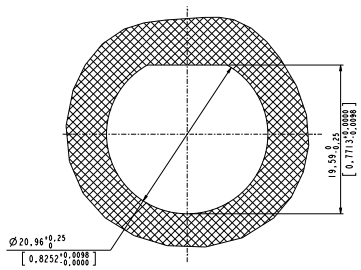
X: see the How to order to complete your part number



PCB layout



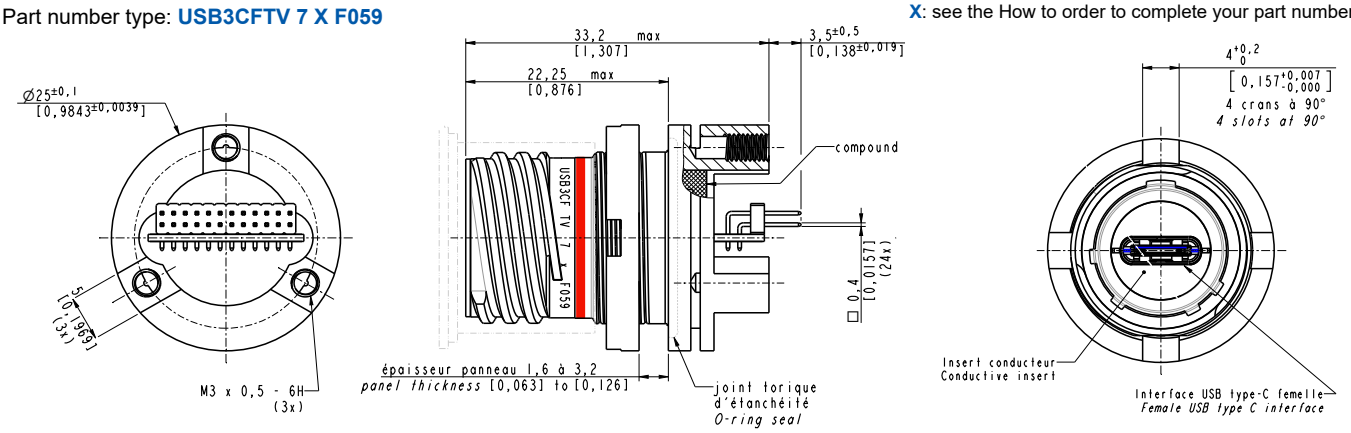
Panel Drilling



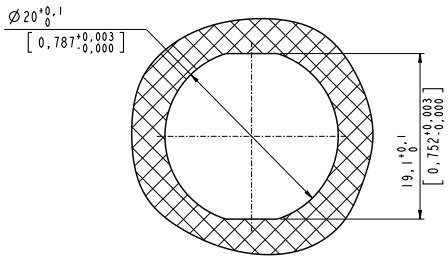
Receptacle - Stand-off Reduced flange receptacle F059 – Jam nut Shell type 7 - Castle nut mounting for PCB mounting

Part number type: **USB3CFTV 7 X F059**

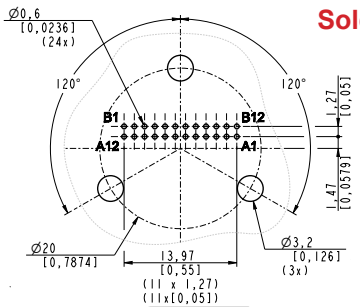
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Panel rilling



PCB layout



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USB3CFTV

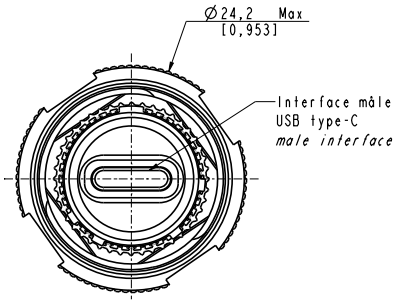


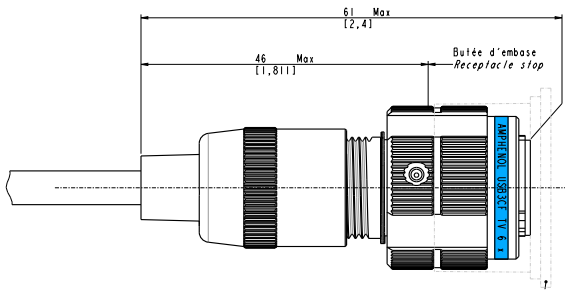
Overall dimension

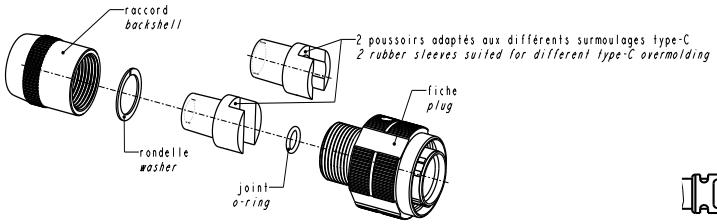
Plug - Plug without cordset – Shell type 6

Part number type: **USB3CFTV 6 X**

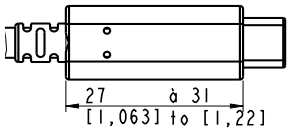
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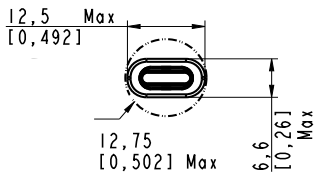






USB3 type-C plug recommended dimensions
(plug not included)



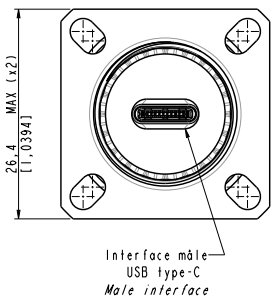


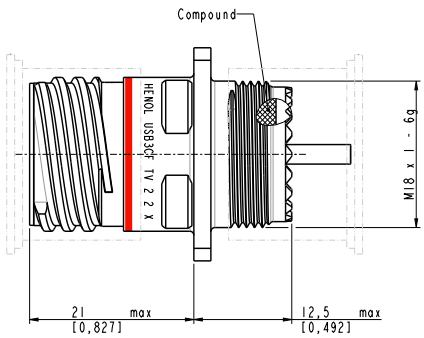
Note: USB3 Type-C cordset can be inserted in any direction.
Reversibility is managed on Receptacle side also.

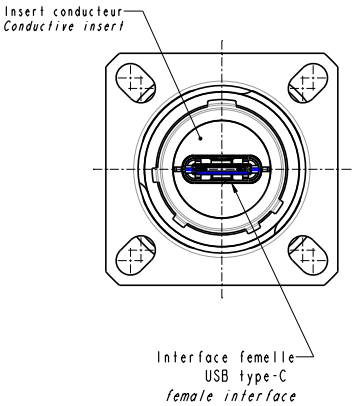
Receptacle - Square flange receptacle – Shell type 2 - 4 mounting holes - Male USB termination

Part number type: **USB3CFTV 2 2 X**

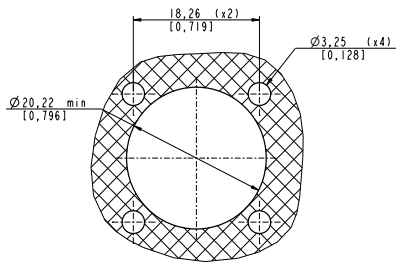
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USB3CFTV

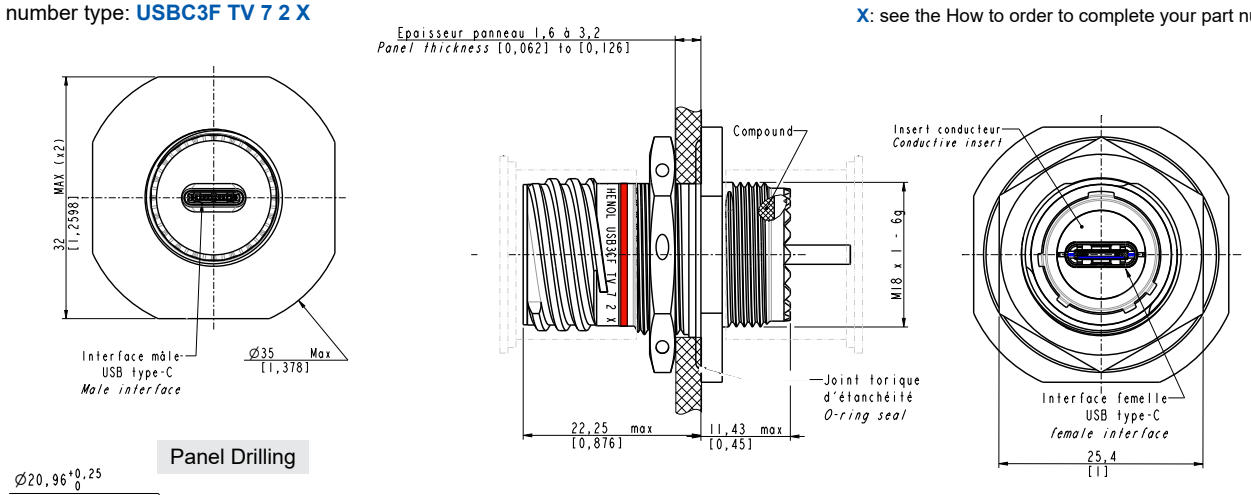


Overall dimension

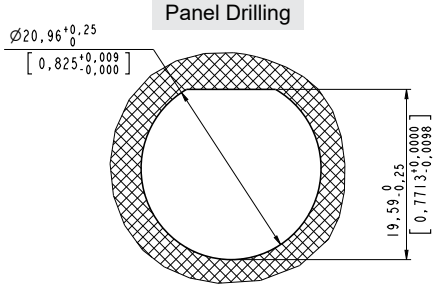
Recepatcle - Jam nut receptacle – Shell type 7 - Male USB termination - Hexagonal nut mounting

Part number type: **USBC3F TV 7 2 X**

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



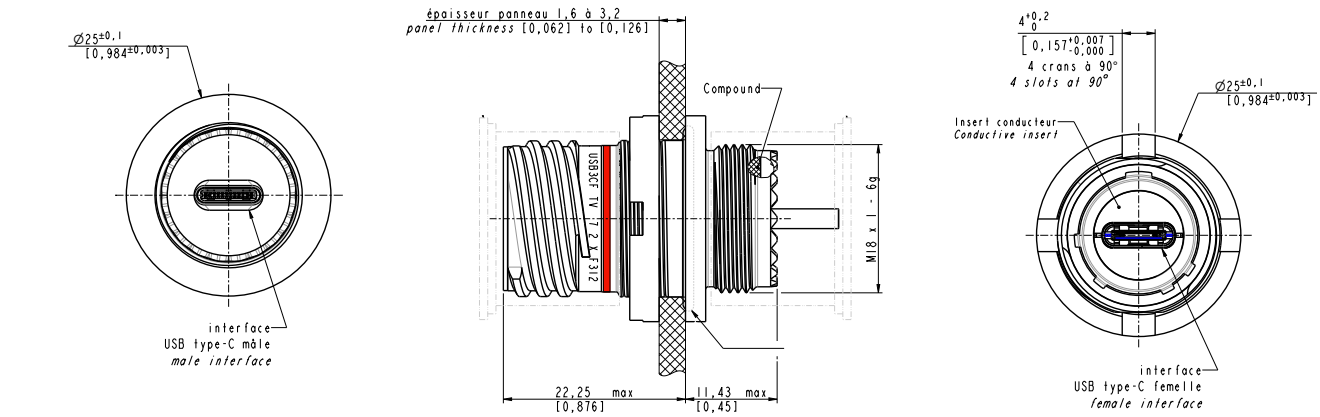
Panel Drilling



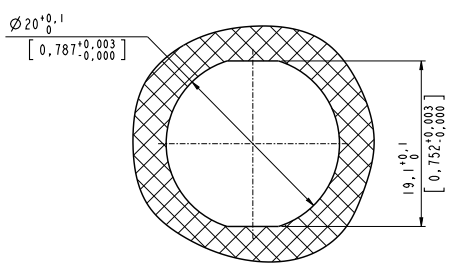
Receptacle - Reduced flange receptacle F312 – Jam nut shell type 7 - USB male termination - Castle nut mounting

Part number type: **USB3CFTV 7 2 X F312**

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



Panel Drilling



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USB3CFTV

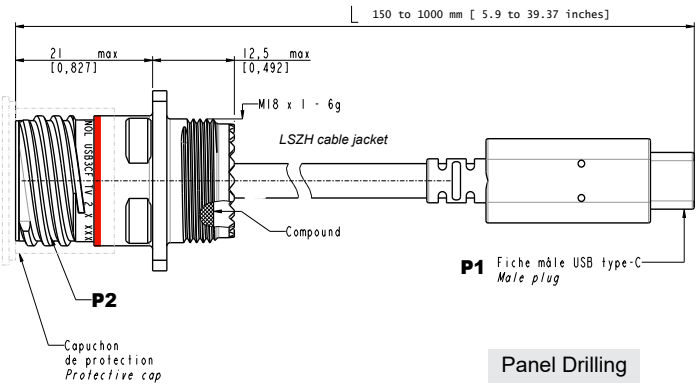


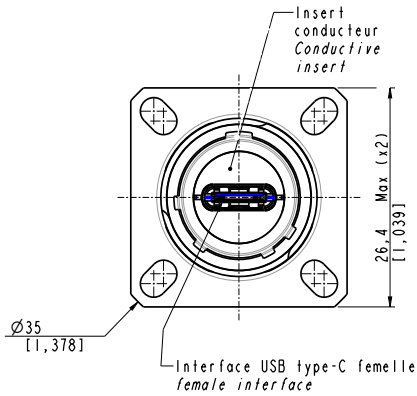
Overall dimension

Receptacle - Square flange receptacle – Shell type 2 - 4 mounting holes - Cordset with USB male plug

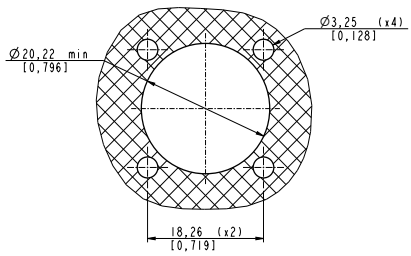
Part number type: **USB3CFTV 2 X XXX**

X: see the How to ordeto complete your part number





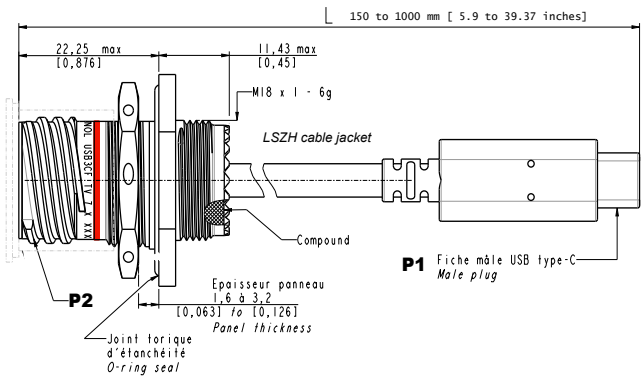
Panel Drilling

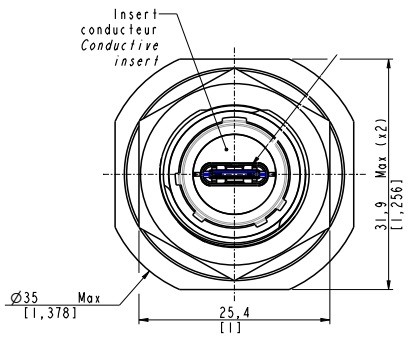


Jam nut receptacle – Shell type 7 - Cordset with USBC male plug - Hexagonal nut mounting

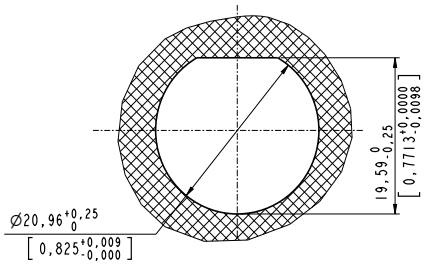
Part number type: **USB3CFTV 7 X XXX**

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





Panel Drilling



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USB3CFTV

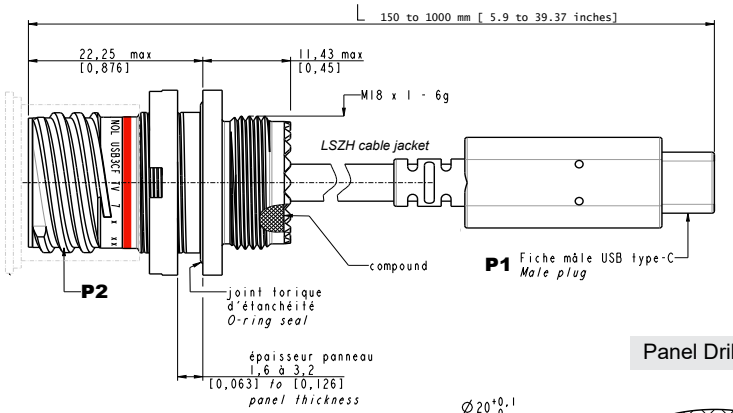


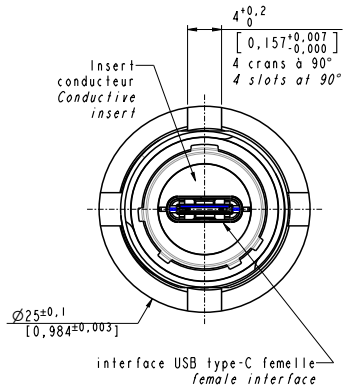
Overall dimension

Receptacle - Reduced flange receptacle F312 – Jam nut shell type 7 - Cordset with USB male plug - Hexagonal nut mounting

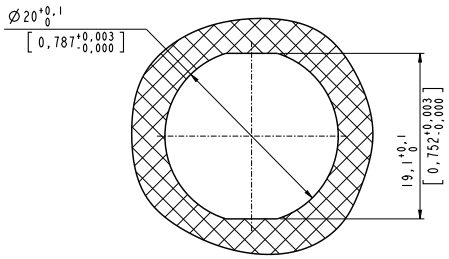
Part number type: **USB3CFTV 7 X XXX F312**

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





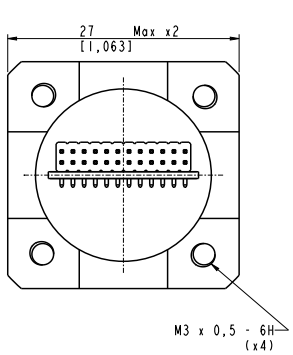
Panel Drilling

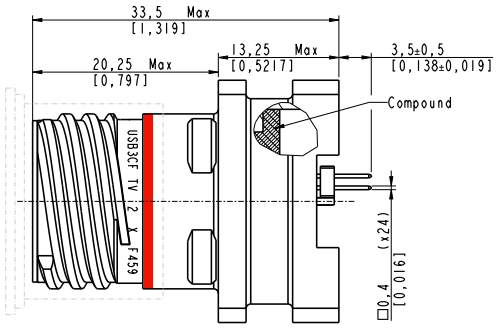


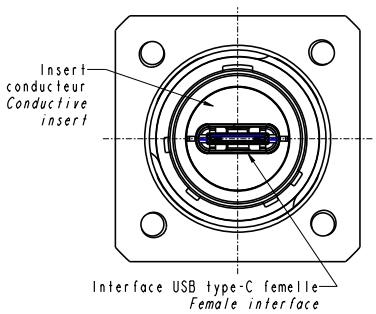
Stand-off Square flange receptacle F459 – 4 mounting holes - Shell type 2 with double flange for PCB mounting

Part number type: **USB3CFTV 2 X F459**

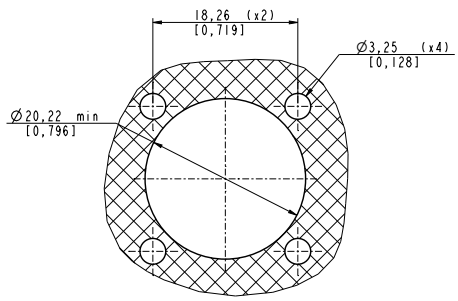
X: see the How to order to complete your part number





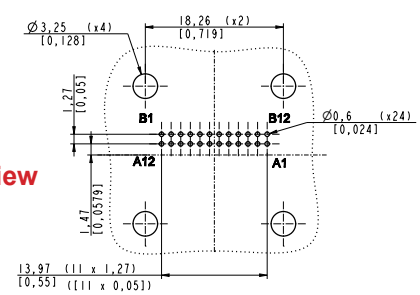


Panel Drilling



PCB layout

Solder view



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USB3FTV™



DESCRIPTION

USB3FTV™ is a complete ruggedized solution around USB3.2 Gen1 Type-A standard using a Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) to connect the plug and receptacle.
This solution allows you to insert a standard USB3.2 Gen1 cordset into a metallic plug which will protect it from shocks, dust and fluids. The assembly of this ruggedized plug doesn't require any tools and can be assembled easily in the field. Perfectly adapted to the USB3.2 Gen1 standard, you have two coding possibilities to facilitate coupling when you have several receptacles on a panel.
The corresponding USB3FTV™ receptacle dedicated to be mounted on your panel enables you to reinforce and protect your system against leakage, shocks, vibrations and much more. This receptacle part is delivered with a defined coding when ordered but can be conveniently changed with our dedicated USBF ODE tool.
You have also the possibility to order a complete solution with the included USB3.2 Gen1 cable, on the plug or the receptacle side.

MAIN FEATURES

MAIN CHARACTERISTICS

- Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) with anti-decoupling device - Shell size 15
- 2 mechanical coding / polarization possibilities (receptacle insert rotation)
- Sealed against fluids and dusts (IP68)
- Shock, vibration and traction resistant
- No cabling operation in field and no tools required
- Improved EMI protection
- USB3FTV plug retention in the receptacle: 100 N in the axis
- Mating cycles: 500 minimum

DATA TRANSMISSION

- USB-A
- USB specification 3.2 Gen1
- Data rate: up to 5Gb/s for high speed USB

ENVIRONMENTAL PROTECTION

- Sealing (when mated): IP68 (temporary immersion)
- Salt spray:
  - 48 h with nickel plating ✓ NEW
  - 500 h with Black zinc nickel ✓
  - 500 h with Olive drab cadmium
  - 500 h with Tin-zinc plating ✓
  - 1000 h with Marine bronze shell ✓
- Fire retardant / low smoke: UL94 V0 and EN45545
- Vibrations: 10 - 500 Hz, 10 g, 3 axes: no discontinuity > 1micro s
- Shocks: IK06: weight of 250 g drop from 40 cm [15.75 in] onto connectors (mated pair)
- Humidity: 21 days, 43°C, 98% humidity
- Temperature range: - 40°C / +85°C

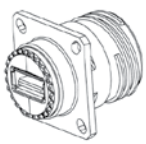
APPLICATIONS

- Battlefield communication systems
- C5ISR
- Data acquisition and transmission in harsh environment
- Navy
- Rail Mass Transit
- Industrial process control
- Robotics
- CNC machines
- Oil & Gas

✓: RoHS compliant

BACK TERMINATIONS

Type 1:
female USB-A



HOW TO ORDER : PLEASE REFER TO PAGE 116

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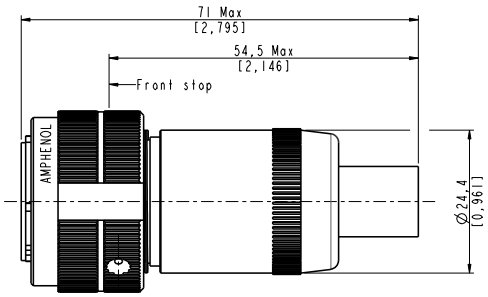
USB3FTV™



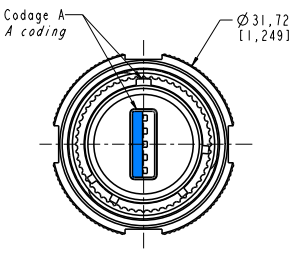
Overall dimension

Plug - Shell type 6

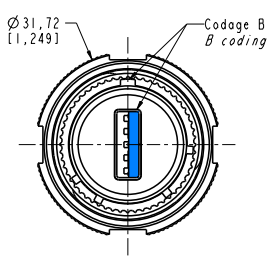
Part number type: **USB3FTV 6 X**



Coding A



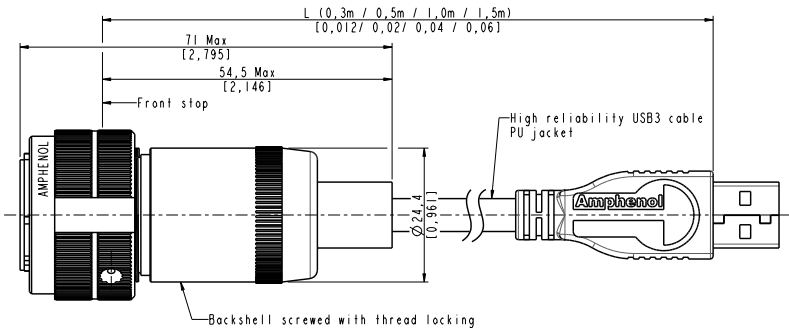
Coding B



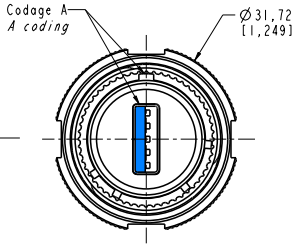
Plug - Shell type 6 - USB-A cordset

Part number type: **USB3FTV 6 X XX X CROS**

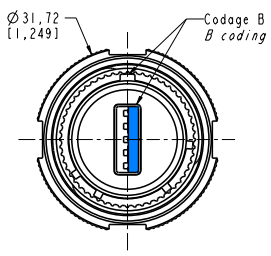
USB3FTV 6 X XX X STR



Coding A



Coding B

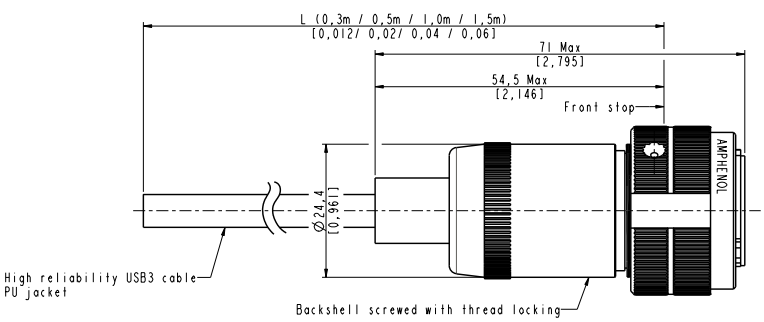


Important note:

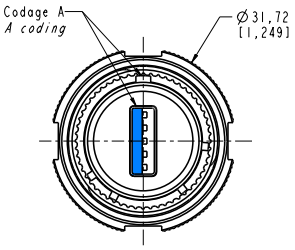
- To define a straight or crossed USB3.2 Gen1 cordset, please refer to “Assembly instructions” page 80

Plug - Shell type 6 - Open USB cordset

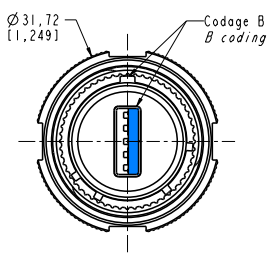
Part number type: **USB3FTV 6 X XX X OPEN**



Coding A



Coding B



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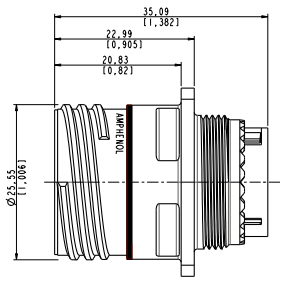
USB3FTV™



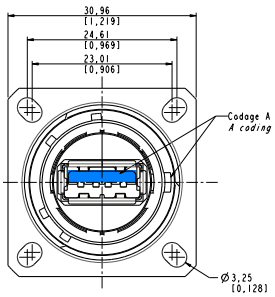
Overall dimension

Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Back termination female

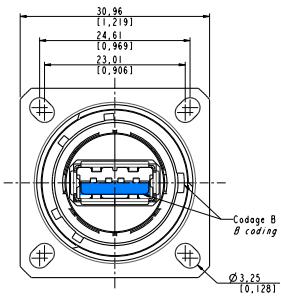
Part number type: **USB3FTV 2 X X**



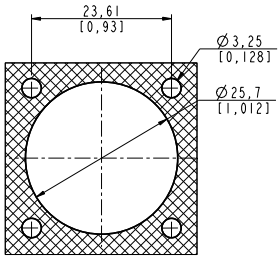
Coding A



Coding B

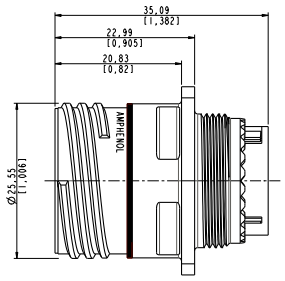


Panel Drilling

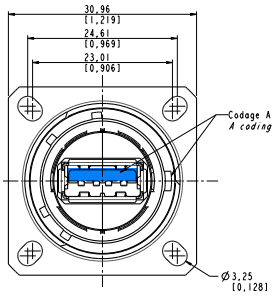


Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Back termination female - Metal backshell

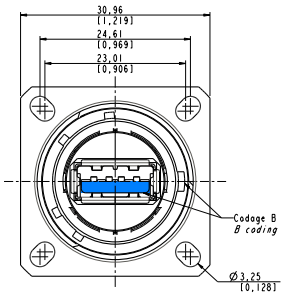
Part number type: **USB3FTV 2 X PE X**



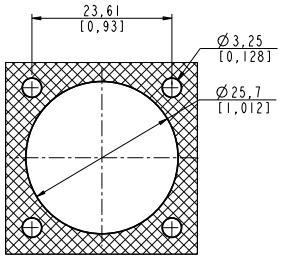
Coding A

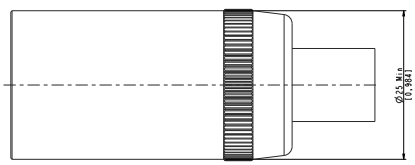


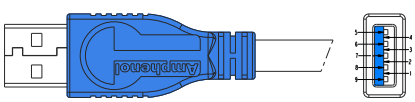
Coding B



Panel Drilling

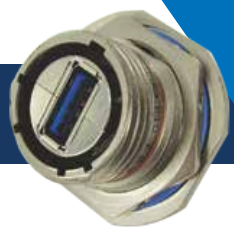






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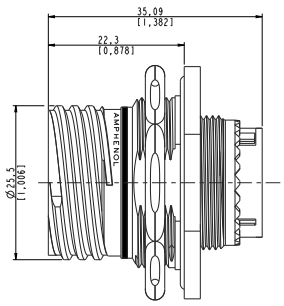
USB3FTV™



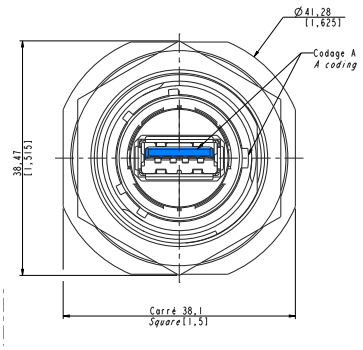
Overall dimension

Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Back termination female

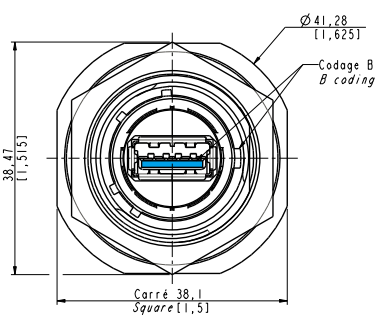
Part number type: **USB3FTV 7 X X**



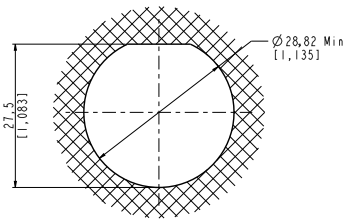
Coding A



Coding B

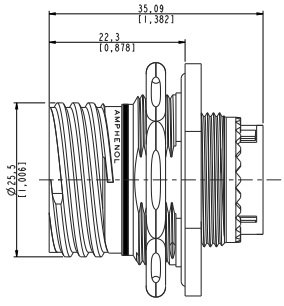


Panel Drilling

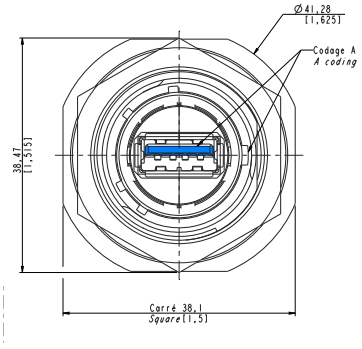


Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Back termination female - Metal backshell

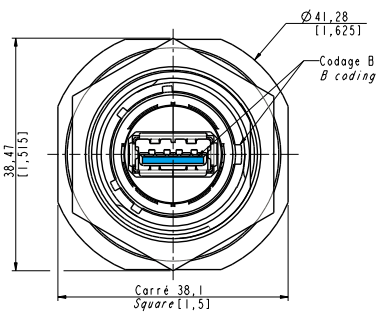
Part number type: **USB3FTV 7 X PE X**



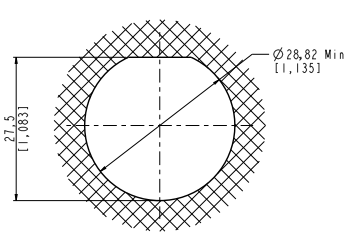
Coding A



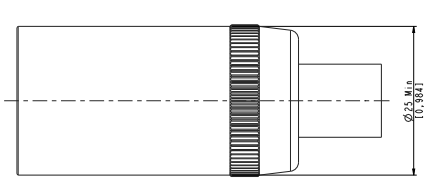
Coding B

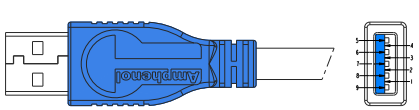


Panel Drilling



Metal backshell





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USB3FTV™ - TRANSVERSALLY SEALED AND HERMETIC RECEPTACLE



DESCRIPTION

The transversally sealed receptacle is in all aspects equivalent to the standard and in addition, is improved with compound at the rear of the receptacle. This will prevent the sealing of the receptacle when unmated with his plug or protective cap.
The hermetic solution, as the transversally sealed one is compounded at the rear of the receptacle. Helium leakage is less than 1.10-6 cm3 per second [0.1 micron cubit ft per hour] at one bar [15 psi] pressure differential. The test is performed on all of the hermetic receptacles.

MAIN FEATURES

MAIN CHARACTERISTICS

- Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) with anti-decoupling device - Shell size 15
- 2 mechanical coding/polarization possibilities by the user (receptacle insert rotation)
- Sealed against fluids and dusts (IP68)
- Shock, vibration and traction resistant
- No cabling operation in field and no tools required
- Improved EMI protection
- USB3FTV plug retention in the receptacle: 100 N in the axis
- Mating cycles: 500 minimum

DATA TRANSMISSION

- USB-A
- USB specification 3.2 Gen1
- Data rate: up to 5Gb/s for high speed USB

ENVIRONMENTAL PROTECTION

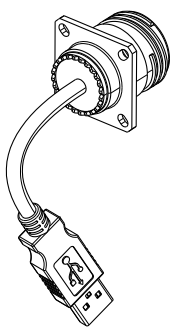
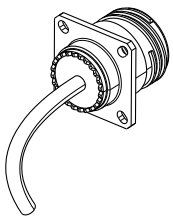
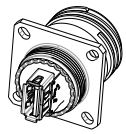
- Sealing (when mated): IP68 (temporary immersion)
- Salt spray:
  - 48 h with nickel plating ✓
  - 500 h with olive drab cadmium
  - 500 h with Tin-zinc plating ✓ NEW
  - 1000 h with marine bronze shell ✓
  - 500 h with black zinc nickel ✓
- Fire retardant / Low smoke: UL94 V0 and EN45545
- Vibrations: 10 - 500 Hz, 10 g, 3 axes: no discontinuity > 1micro s
- Shocks: IK06 > weight of 250 g drop from 40 cm [15.75 in] onto connectors (mated pair)
- Humidity: 21 days, 43°C, 98% humidity
- Temperature range: - 40°C / +85°C

APPLICATIONS

- Battlefield communication systems
- C5ISR
- Data acquisition and transmission in harsh environment
- Navy
- Rail Mass Transit
- Industrial process control
- Robotics
- CNC machines
- Oil & Gas

✓: RoHS compliant

BACK TERMINATIONS

USB cable end type A	USB cable type «OPEN»	VG96949 Female USB-A
		

HOW TO ORDER : PLEASE REFER TO PAGE 117

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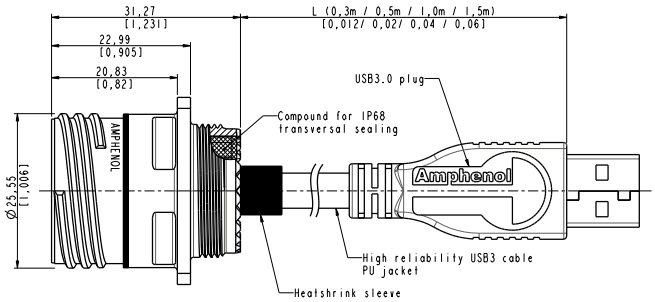
USB3FTV™ - TRANSVERSALLY SEALED AND HERMETIC RECEPTACLE



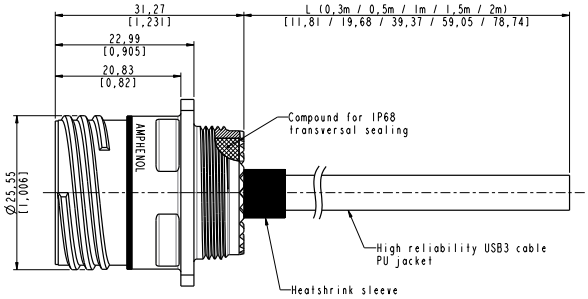
Overall dimension

Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - USB-A or Open cordset

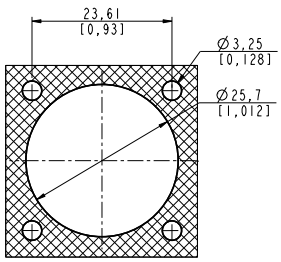
Part number type: **USB3FTV 2 S X XX X ACROS**
USB3FTV 2 S X XX X ASTR



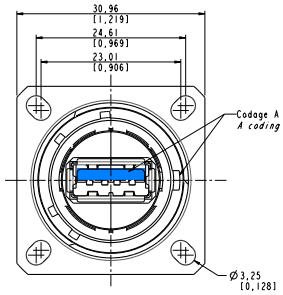
Part number type: **USB3FTV 2 S X XX X OPEN**



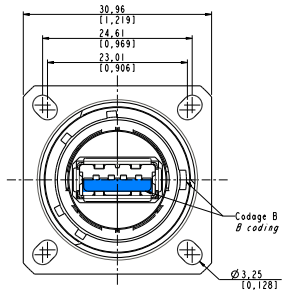
Panel drilling



Coding A

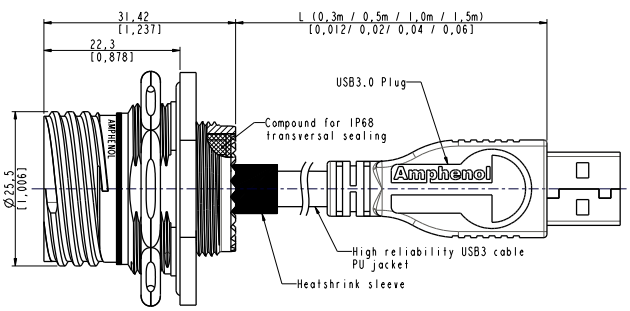


Coding B

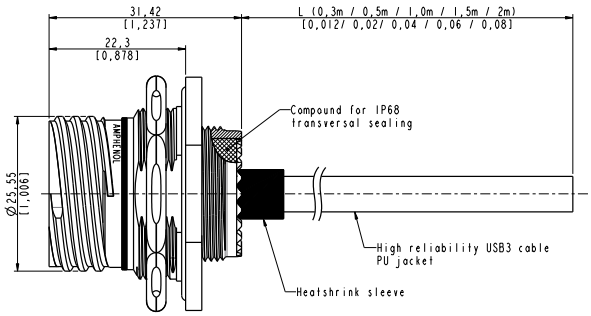


Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - USB-A or Open cordset

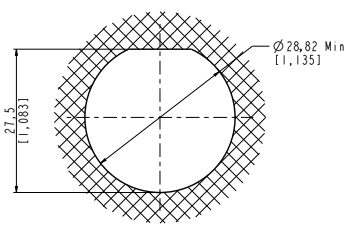
Part number type: **USB3FTV 7 S X XX X ACROS**
USB3FTV 7 S X XX X ASTR



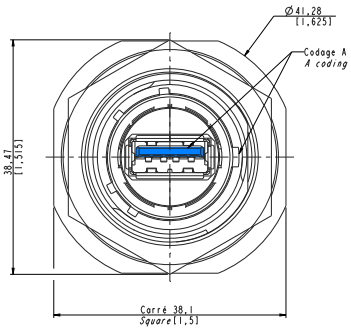
Part number type: **USB3FTV 7 S X XX X OPEN**



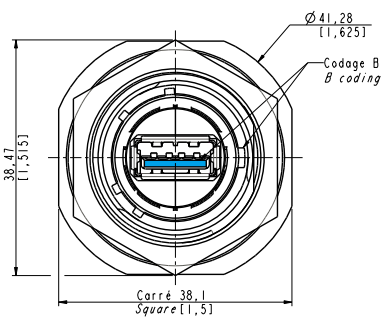
Panel drilling



Coding A



Coding B



Important note:
- To define a straight or crossed USB3.0 cordset, please refer to “Assembly instructions" page 80

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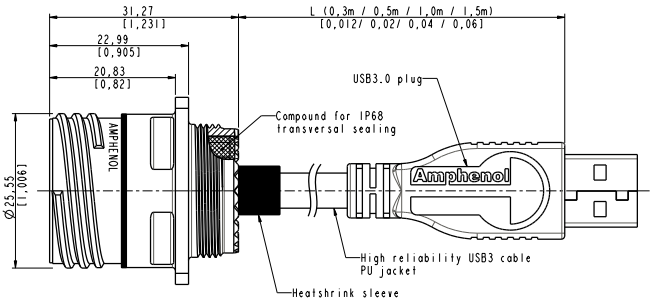
USB3FTV™ - TRANSVERSALLY SEALED AND HERMETIC RECEPTACLE



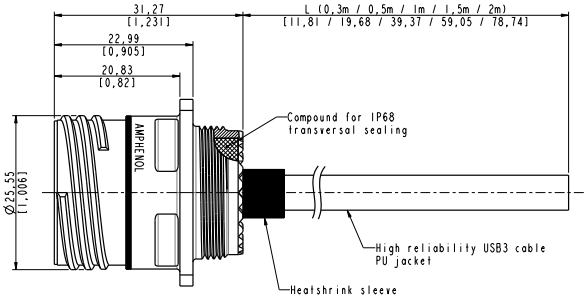
Overall dimension

Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - USB-A or Open cordset

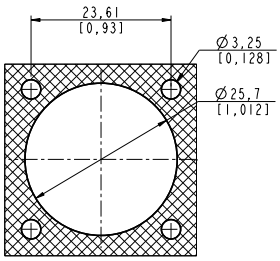
Part number type: **USB3FTV 2 H X XX X ACROS**
USB3FTV 2 H X XX X ASTR



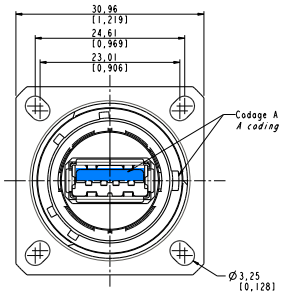
Part number type: **USB3FTV 2 H X XX X OPEN**



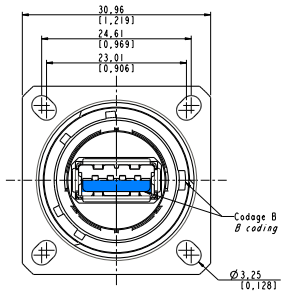
Panel drilling



Coding A

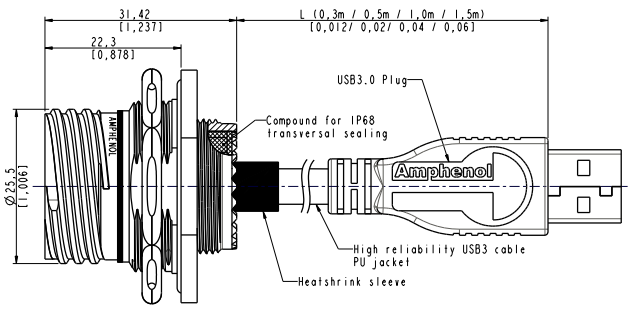


Coding B

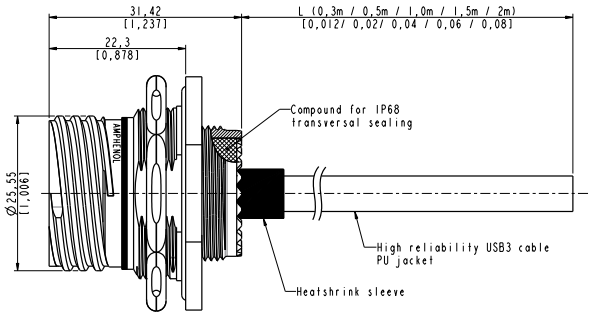


Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - USB-A or Open cordset

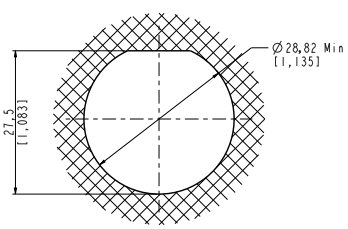
Part number type: **USB3FTV 7 H X XX X ACROS**
USB3FTV 7 H X XX X ASTR



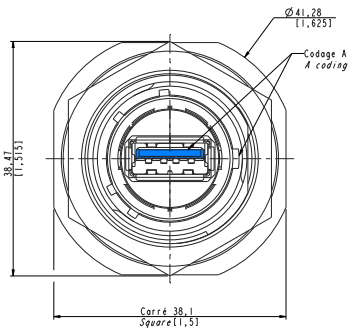
Part number type: **USB3FTV 7 H X XX X OPEN**



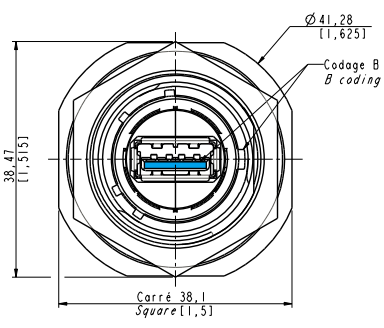
Panel drilling



Coding A



Coding B



Important note:
- To define a straight or crossed USB3.0 cordset, please refer to “Assembly instructions” page 80

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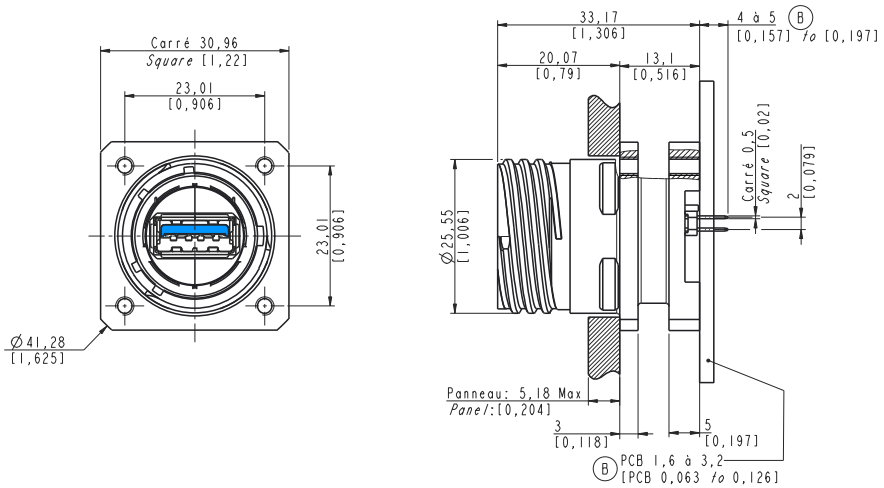
USB3FTV™ - STAND OFF RECEPTACLE

Description

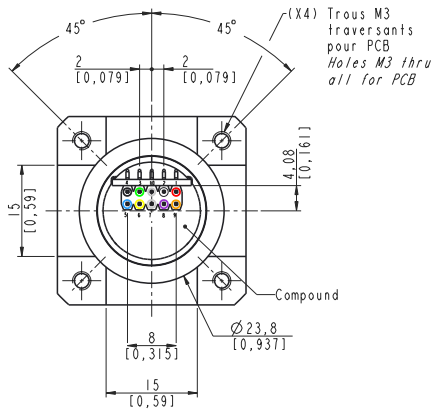
This enhanced design allows you to mount the connector shell directly on the PC board. Soldering your contacts directly on the board will save you a lot of space inside your system. As the double-flange of this connector is directly fixed on the board, mechanical stresses are absorbed by the shell and not the contacts. In addition to this benefit, the sealing is improved by the compounded receptacle.

Overall dimension

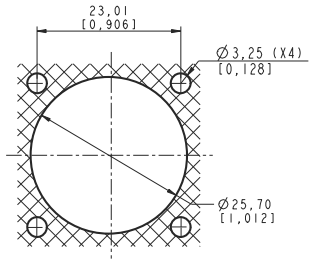
Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - PC Tails contacts

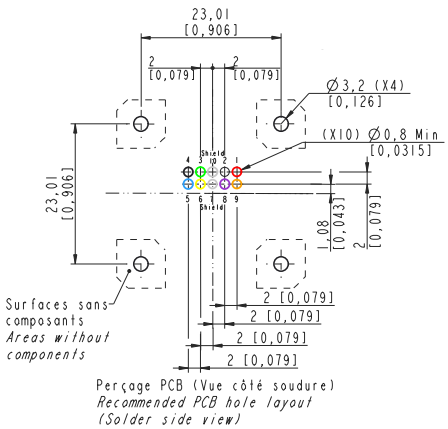


Panel drilling



PCB Layout





Part number for coding A	Part number for coding B	Plating
USB3FTV 2S A N F459	USB3FTV 2S B N F459	Nickel ✓
USB3FTV 2S A G F459	USB3FTV 2S B G F459	Olive drab cadmium
USB3FTV 2S A ZN F459	USB3FTV 2S B ZN F459	Black zinc nickel ✓

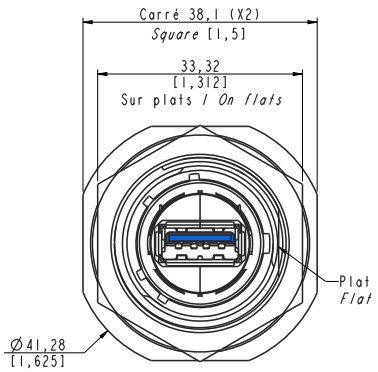
✓ : RoHS compliant

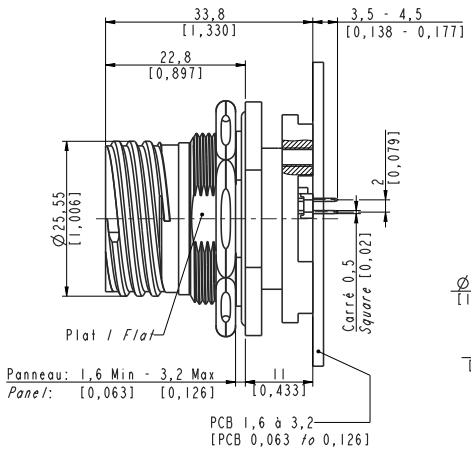
Downloaded from Arrow.com.

USB3FTV™ - STAND OFF RECEPTACLE

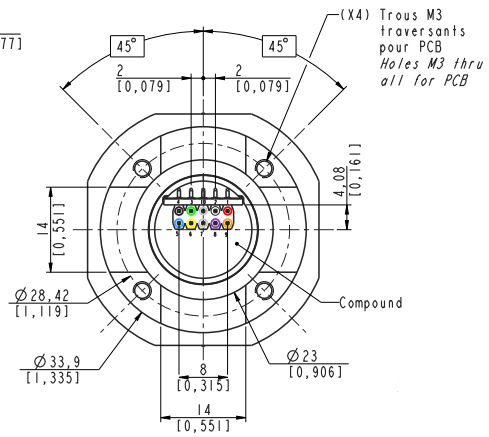
Overall dimension

Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - PC Tails contacts

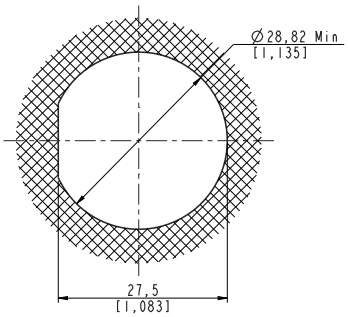


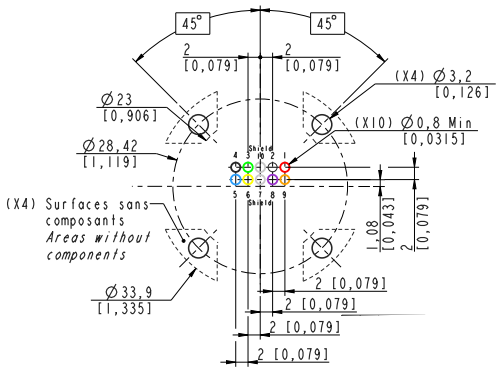


Panel drilling



PCB Layout





Part number for coding A	Part number for coding B	Plating
USB3FTV 7S A N F459	USB3FTV 7S B N F459	Nickel ✓
USB3FTV 7S A G F459	USB3FTV 7S B G F459	Olive drab cadmium
USB3FTV 7S A ZN F459	USB3FTV 7S B ZN F459	Black zinc nickel ✓

✓: RoHS compliant

Downloaded from Arrow.com.

USB3FTV™ - REDUCED FLANGE RECEPTACLE

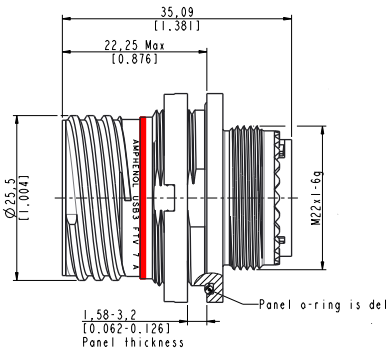


Description

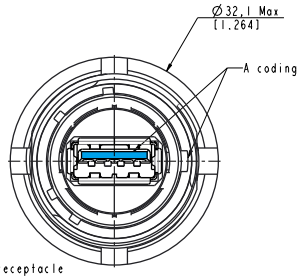
This Reduced Flange USB3FTV™ is ideal for applications where small dimensions and lower weight are critical. The flange of this receptacle is reduced in order to gain more space on the panel enabling you to mount more receptacles in the same amount of space. Internal dimensions are also modified to save some space internally, giving you more space. The reduced flange deviation saves 41% footprint surface reduction and is 15% lighter than standard USB3FTV™ receptacle. Finally, you have two castle nut options, standard castle nut and safety castle nut that anable you to add a lock wire for anti-rotation of the nut.

Overall dimension

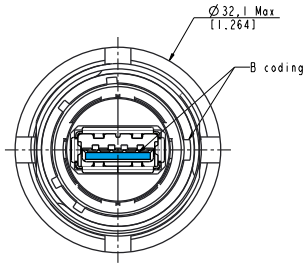
Receptacle - Reduced flange receptacle - Castle nut mounting - Shell type 7 - F312 or F311



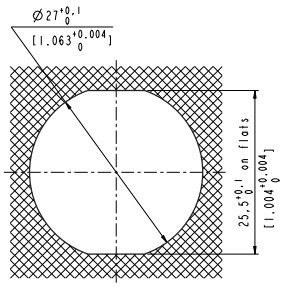
Coding A



Coding B



Panel drilling



Part number for coding A	Part number for coding B	Mounting nut option	Plating
USB3FTV 7 A N F312	USB3FTV 7 B N F312	Standard caste nut	Nickel ✓
USB3FTV 7 A G F312	USB3FTV 7 B G F312		Olive drab cadmium
USB3FTV 7 A ZN F312	USB3FTV 7 B ZN F312		Black zinc nickel ✓
USB3FTV 7 A N F311	USB3FTV 7 B N F311	Safety caste nut	Nickel ✓
USB3FTV 7 A G F311	USB3FTV 7 B G F311		Olive drab cadmium
USB3FTV 7 A ZN F311	USB3FTV 7 B ZN F311		Black zinc nickel ✓

✓ : RoHS compliant

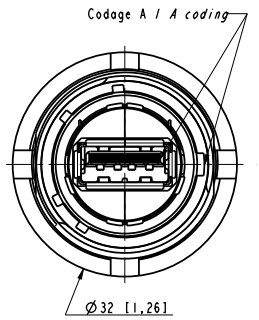
Downloaded from Arrow.com.

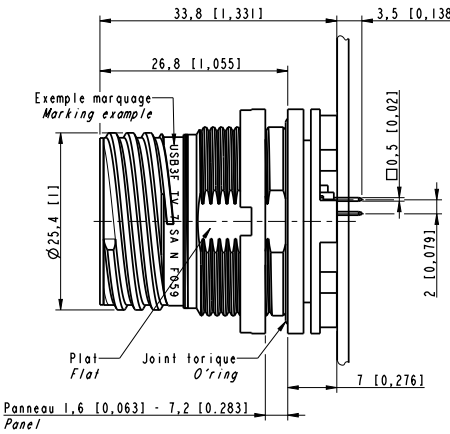
USB3FTV™ - REDUCED FLANGE RECEPTACLE

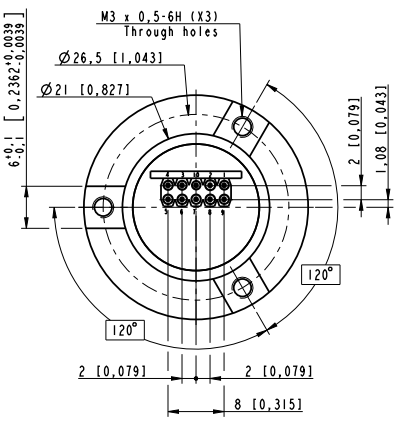


Overall dimension

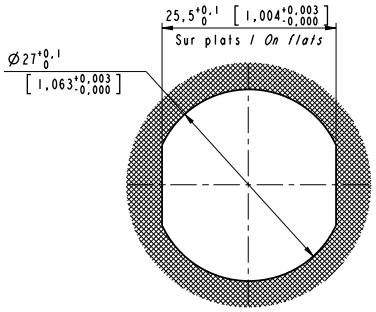
Receptacle - Reduced flange receptacle - Castle nut mounting - Shell type 7 - F059 or F058



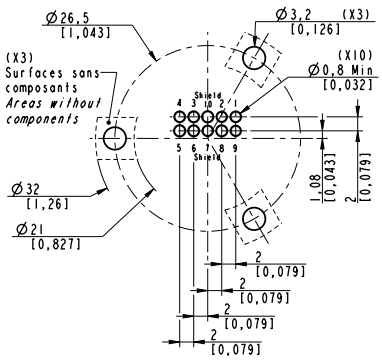




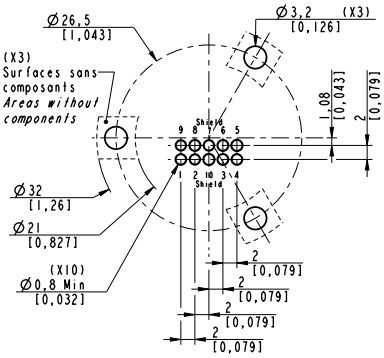
Panel drilling



PCB Layout - Coding A



PCB Layout - Coding B



Part number for coding A	Part number for coding B	Mounting nut option	Plating
USB3FTV 7 SA N F059	USB3FTV 7 SB N F059	Standard caste nut	Nickel ✓
USB3FTV 7 SA G F059	USB3FTV 7 SB G F059		Olive drab cadmium
USB3FTV 7 SA ZN F059	USB3FTV 7 SB ZN F059		Black zinc nickel ✓
USB3FTV 7 SA N F058	USB3FTV 7 SB N F058	Safety caste nut	Nickel ✓
USB3FTV 7 SA G F058	USB3FTV 7 SB G F058		Olive drab cadmium
USB3FTV 7 SA ZN F058	USB3FTV 7 SB ZN F058		Black zinc nickel ✓

✓ : RoHS compliant

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USB3FTV™ - VG96949



Description

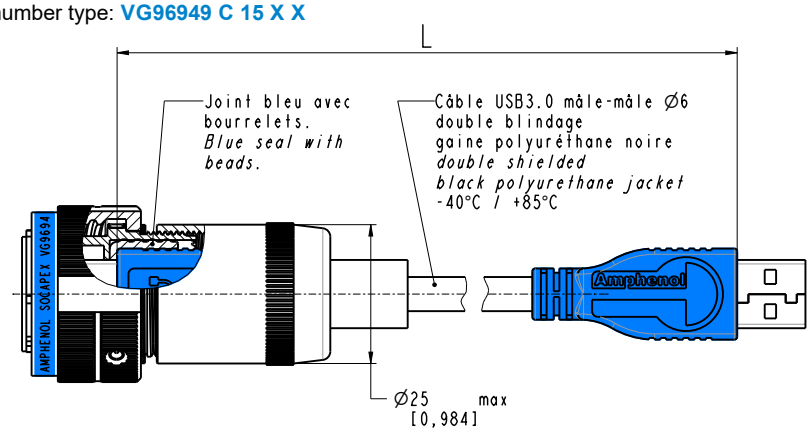
This version of our USB3FTV™ is qualified VG96949. According to this standard, receptacles are compounded, the panel nut of the jamnut receptacle version is according to VG95319 and the treatment is Tin Zinc RoHS.

HOW TO ORDER : PLEASE REFER TO PAGE 118

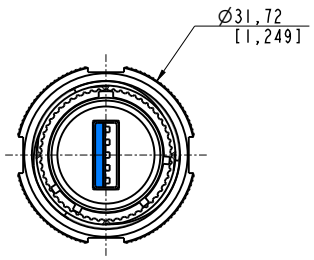
Overall dimension

Plug - Shell type 6

Part number type: **VG96949 C 15 X X**

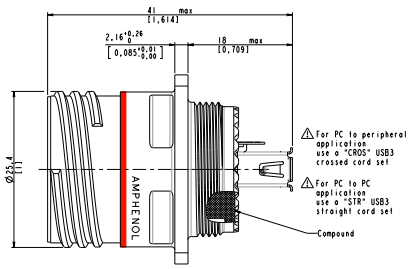


Coding N

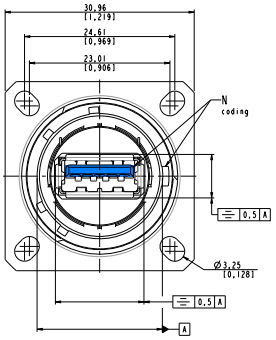


Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Compounded

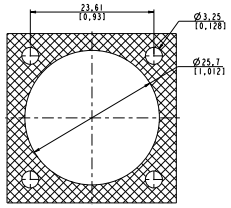
Part number type: **VG96949 A 15 X X**



Coding N

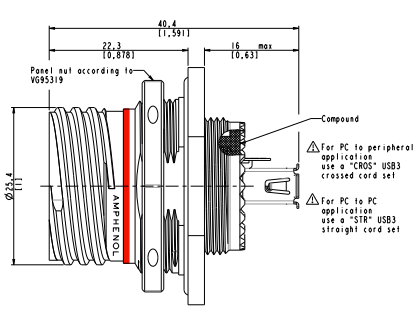


Panel drilling

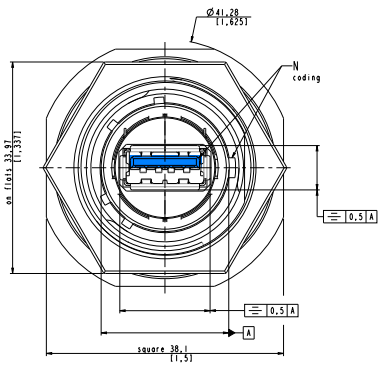


Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Compounded

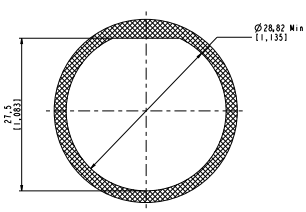
Part number type: **VG96949 B 15 X X**



Coding N



Panel drilling



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USB3 TYPE A - TYPE C - ADAPTER



DESCRIPTION

The USB3 Type A - Type C™ adapter is a complete ruggedized solution around USB3.2 Gen1 Type A and USB Type C. This solution allows you to integrate new equipment featuring a USB Type C port without disassembling an existing USB2 or USB3 Type A link. Two adaptation options are available to facilitate integration into your system: Type C host or Type C device (see description table).The USB3FTV™ receptacle dedicated to be mounted on your panel allows you to reinforce and protect your system against leakage, shock, vibration and much more. There are 2 mechanical coding possibilities (receptacle insert rotation) on the USB-A side and a fully reversible USB-C port on other side that can be integrated with our USB3CFTV™ plug.

MAIN FEATURES

MAIN CHARACTERISTICS

- Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) - Shell size 15
- 2 mechanical coding/polarization possibilities by the user (receptacle insert rotation)
- Sealed against fluids and dusts (IP68)
- Shock, vibration and traction resistant
- No cabling operation in field and no tools required
- Improved EMI protection

DATA TRANSMISSION

- USB specification 3.2 Gen1
- Data rate: up to 5Gb/s for high speed USB

ENVIRONMENTAL PROTECTION

- Sealing (when mated and unmated): IP68 (temporary immersion)
- Salt spray:
  - 48 h with nickel plating ✓
  - 500 h with olive drab cadmium
  - 1000 h with marine bronze shell ✓
  - 500 h with black zinc nickel ✓
- Fire retardant / Low smoke: UL94 V0 and EN45545
- Vibrations: 10 - 500 Hz, 10 g, 3 axes: no discontinuity > 1micro s
- Shocks: IK06 > weight of 250 g drop from 40 cm [15.75 in] onto connectors (mated pair)
- Humidity: 21 days, 43°C, 98% humidity
- Temperature range: - 40°C / +85°C

APPLICATIONS

- Battlefield communication systems
- C5ISR
- Data acquisition and transmission in harsh environment
- Navy
- Rail Mass Transit
- Industrial process control
- Robotics
- CNC machines
- Oil & Gas

✓: RoHS compliant

Square flange	Jam nut	Reduced flange







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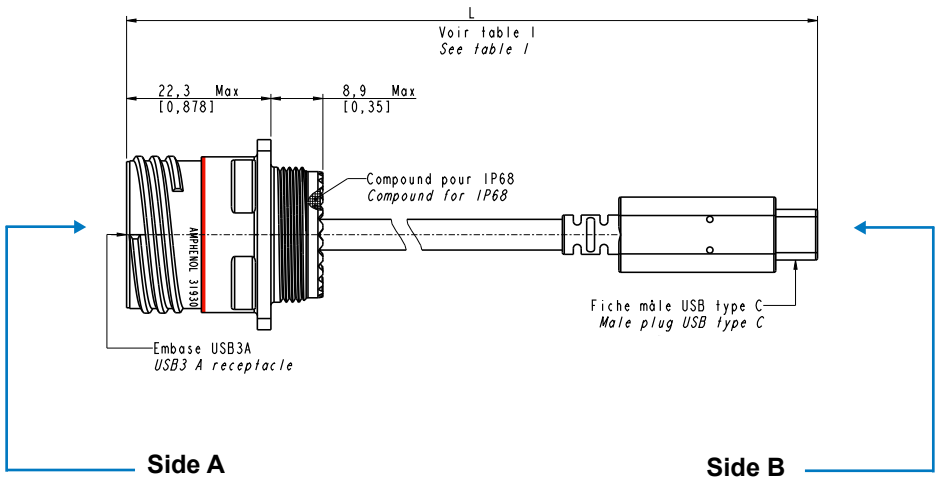
USB3 TYPE A - TYPE C - ADAPTER

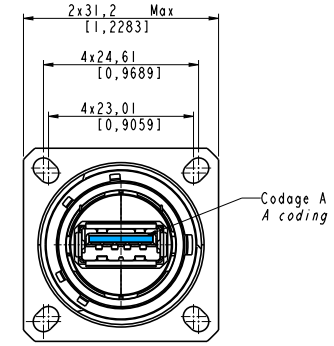


Overall dimension

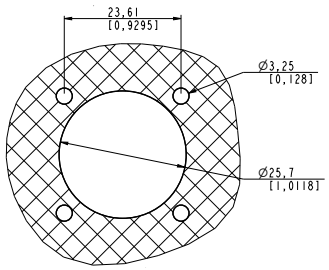
Square flange receptacle - Shell type 2 - 4 mounting holes

Part number type: **31930X-XXX**
32242X-XXX





Panel drilling



SIDE A - HOST → SIDE B DEVICE IN SQUARE FLANGE RECEPTACLE

Designation

	Plating			Lenght	
31930	G	Olive drab cadmium	–	015	15 cm (5.91 inch)
	N	Nickel		030	30 cm (11.81 inch)
	ZN	Black zinc nickel		050	50 cm (19.68 inch)
	BZ	Marine bronze		100	1 m (39.37 inch)

SIDE B - HOST → SIDE A DEVICE IN SQUARE FLANGE RECEPTACLE

Designation

	Plating			Lenght	
32242	G	Olive drab cadmium	–	015	15 cm (5.91 inch)
	N	Nickel		030	30 cm (11.81 inch)
	ZN	Black zinc nickel		050	50 cm (19.68 inch)
	BZ	Marine bronze		100	1 m (39.37 inch)

Important note:
- For other codings, please consult us.

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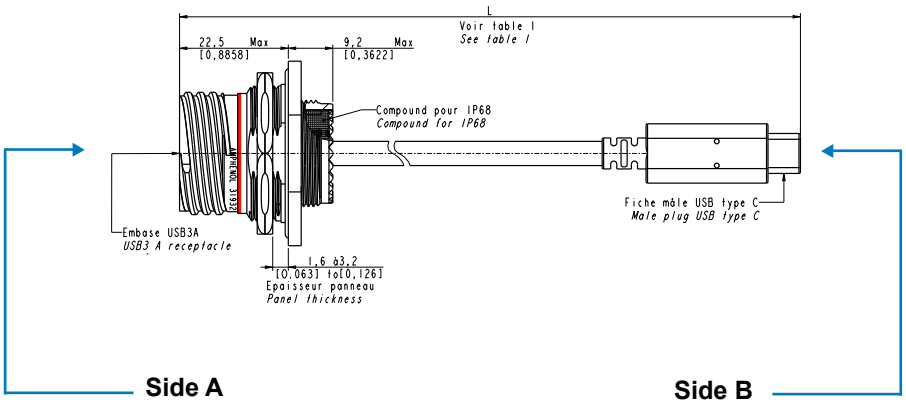
USB3 TYPE A - TYPE C - ADAPTER

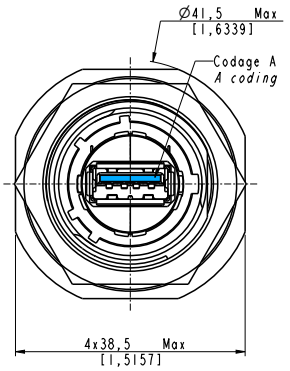


Overall dimension

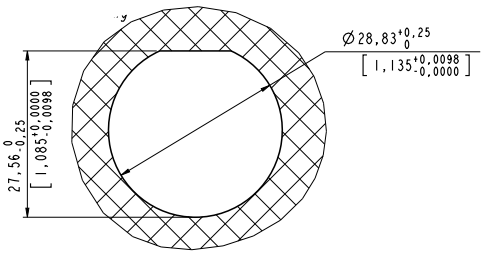
Jam nut receptacle - Shell type 7 - Hexagonal nut mounting

Part number type: **31932X-XXX**
32241X-XXX





Panel drilling



SIDE A - HOST → SIDE B DEVICE IN JAM NUT RECEPTACLE

Designation

	Plating			Lenght	
31932	G	Olive drab cadmium	–	015	15 cm (5.91 inch)
	N	Nickel		030	30 cm (11.81 inch)
	ZN	Black zinc nickel		050	50 cm (19.68 inch)
	BZ	Marine bronze		100	1 m (39.37 inch)

SIDE B - HOST → SIDE A DEVICE IN JAM NUT RECEPTACLE

Designation

	Plating			Lenght	
32241	G	Olive drab cadmium	–	015	15 cm (5.91 inch)
	N	Nickel		030	30 cm (11.81 inch)
	ZN	Black zinc nickel		050	50 cm (19.68 inch)
	BZ	Marine bronze		100	1 m (39.37 inch)

Important note:
- For other codings, please consult us.

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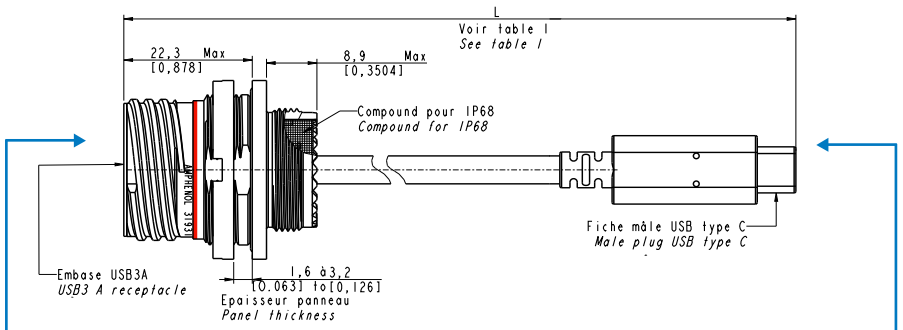
USB3 TYPE A - TYPE C - ADAPTER

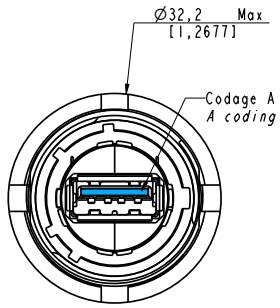


Overall dimension

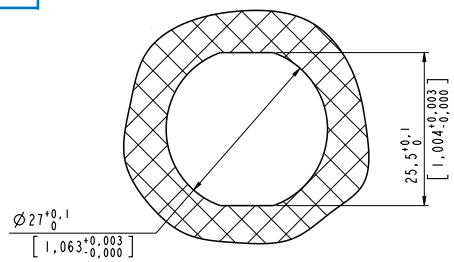
Reduced flange receptacle - Jam nut shell type 7 - Castle nut mounting

Part number type: **31931X-XXX**
32240X-XXX





Panel drilling



SIDE A - HOST ➔ SIDE B DEVICE IN REDUCED FLANGE RECEPTACLE

Designation

	Plating			Lenght	
31931	G	Olive drab cadmium	–	015	15 cm (5.91 inch)
	N	Nickel		030	30 cm (11.81 inch)
	ZN	Black zinc nickel		050	50 cm (19.68 inch)
	BZ	Marine bronze		100	1 m (39.37 inch)

SIDE B - HOST ➔ SIDE A DEVICE IN REDUCED FLANGE RECEPTACLE

Designation

	Plating			Lenght	
32240	G	Olive drab cadmium	–	015	15 cm (5.91 inch)
	N	Nickel		030	30 cm (11.81 inch)
	ZN	Black zinc nickel		050	50 cm (19.68 inch)
	BZ	Marine bronze		100	1 m (39.37 inch)

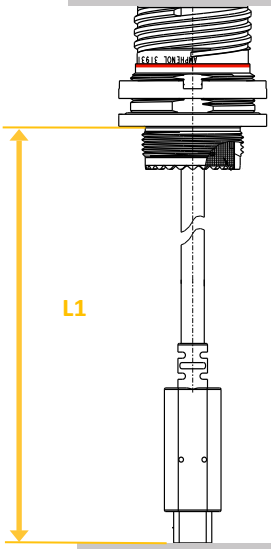
Important note:
- For other codings, please consult us.

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USB3 TYPE A - TYPE C - ADAPTER

USB3 Adapter selection guide

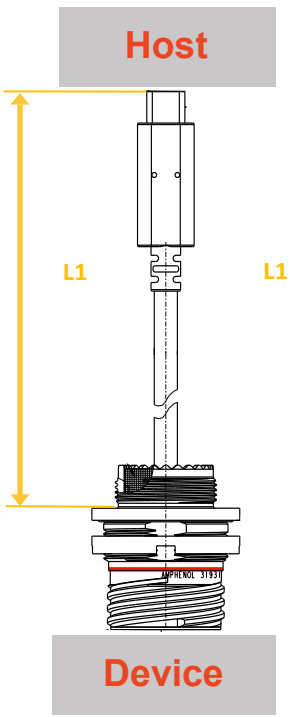
Define your own solution by selecting options in the scheme below



Part number : **31930**
31931
31932

L1 Define the lenght of L1:
- Standard lenghts : 15 cm; 30 cm; 50 cm or 1 m.

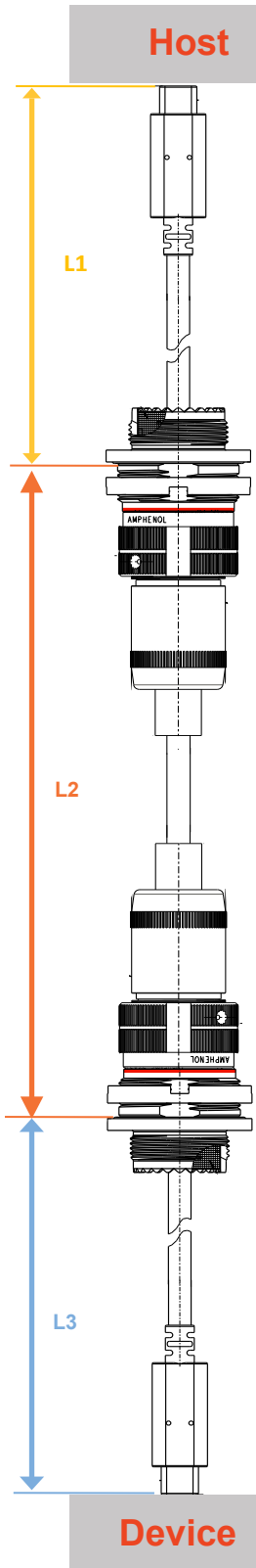
Additional possibilities on this link :
- Protective cap or not
- USB3CFTV plug on USB Type C end **USB3CFTV6X**



Part number : **32240**
32241
32242

L1 Define the lenght of L1:
- Standard lenghts : 15 cm; 30 cm; 50 cm or 1 m.

Additional possibilities on this link :
- Protective cap or not
- USB3CFTV plug on USB Type C end **USB3CFTV6X**



1 Part number : **32240**
32241
32242

L1 Define the lenght of L1:
- Standard lenghts : 15 cm; 30 cm; 50 cm or 1 m.

Additional possibilities on this link :
- Protective cap or not
- USB3CFTV plug on USB Type C end **USB3CFTV6X**

2 Define the type of USB3 cordset :
- USB3 AA straight cordset
OR
- Specific straight cordset with reinforced USB3FTV plugs.

L2 Standard lenght :
- Your total link shouldn't exceed 3m

Example : 50 cm on both ends, middle link will be 2m

3 Part number : **31930**
31931
31932

L3 Define the lenght of L1:
- Standard lenghts : 15 cm; 30 cm; 50 cm or 1 m.

Additional possibilities on this link :
- Protective cap or not
- USB3CFTV plug on USB Type C end **USB3CFTV6X**

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µCom-USB3.2 & TVµCom-USB3.2



DESCRIPTION

These specific adaptations of µCom and TVµCom are optimized for USB3.2 Gen1 and intended for connection and disconnection in harsh environment military and aerospace applications.

MAIN FEATURES

DATA TRANSMISSION:

- USB specification 3.2 Gen1.
- Data rate up to 5Gb/s for high speed USB
- Hot pluging: enables connection and disconnection while the system is running.
- 4 pairs totally insulated throughout the connector: minimum cross-talk between pairs.
- Patented special interfacial shapes: minimum perturbation at the interface of each pair.

µCOM:

- Environmental testing based on MIL-DTL-38999 series III military specifications (Thread version).
- Environmental testing based on MIL-DTL-26482 military specifications (Push-pull version).
- Miniature: 15 mm (.59″) max external diameter.
- Receptacle and in-line receptacle compatible with both Thread and Push-pull plugs.
- Machined brass shells
- Salt spray:
  - 500 h with Unplated brass shell
  - 500 h with Olive Drab Cadmium plating
  - 500 h with Black Nickel plating



TVµCOM:

- Based on MIL-DTL-38999 series III – Shell size 11
- Aluminium shells NEW
- Salt spray:
  - 48 h with Nickel plating
  - 500 h with Olive Drab Cadmium plating
  - 500 h with Black Zinc Nickel plating
  - 500 h with Tin-zinc plating
  - 1000 h with Marine Bronze shell
  - 500 h with Passivated Stainless steel shell



- Solder contact: max AWG24
- Crimp contact: AWG 24 to 28
- Temperature range: - 55°C / + 125°C
- IP68 sealing mated and unmated for PCB receptacles
- 1500 Vrms Dielectric Withstanding Voltage

HOW TO ORDER : PLEASE REFER TO PAGE 119 & 120

Due to technical modifications, all information provided is subject to change without prior notice
Designed by Amphenol Socapex

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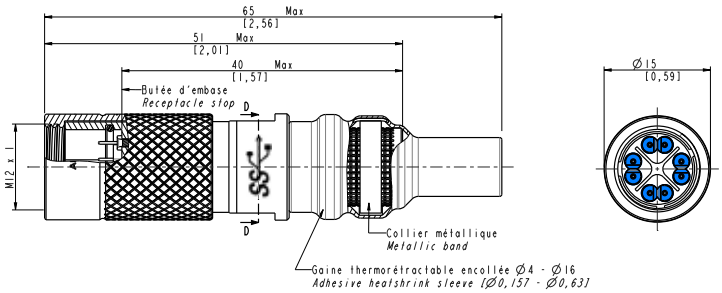
µCom-USB3.2



Overall dimension

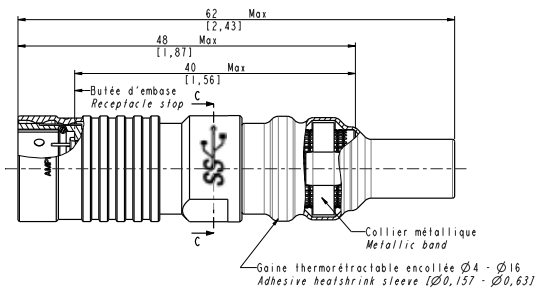
Plug with banding platform

Part number type: **UCOM-USB3 PT X X B**



Thread version

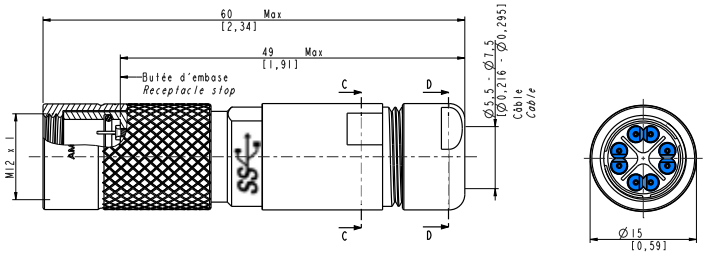
Part number type: **UCOM-USB3 PP X X B**



Push-pull version

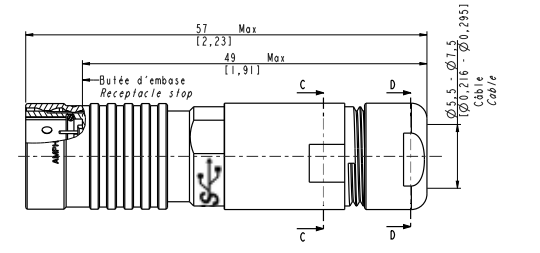
Plug with cable gland backshell

Part number type: **UCOM-USB3 PT X X GA**



Thread version

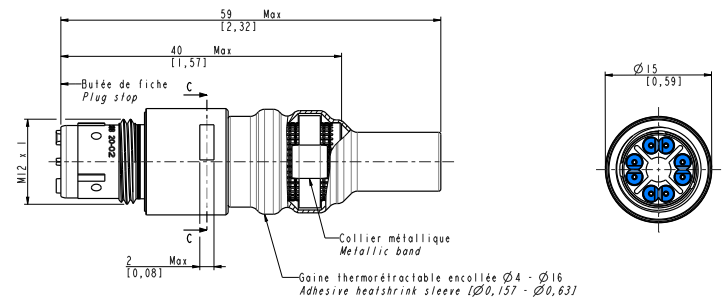
Part number type: **UCOM-USB3 PP X X GA**



Push-pull version

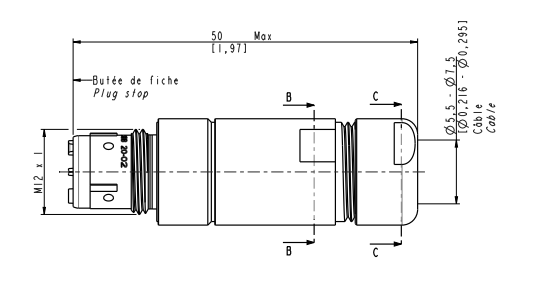
In-line receptacle

Part number type: **UCOM-USB3 L X X B**



Banding platform

Part number type: **UCOM-USB3 L X X GA**



Cable gland backshell

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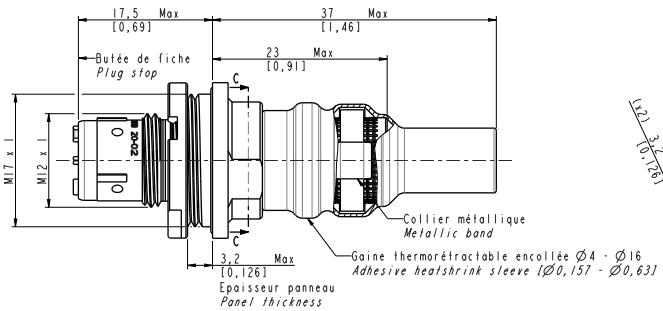
µCom-USB3.2

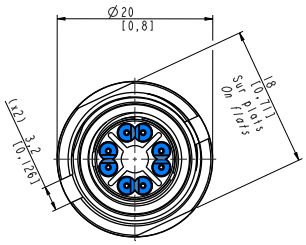


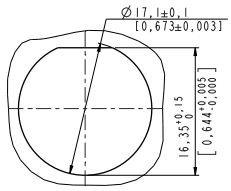
Overall dimension

Panel mount receptacle with banding platform

Part number type: **UCOM-USB3 R X X**



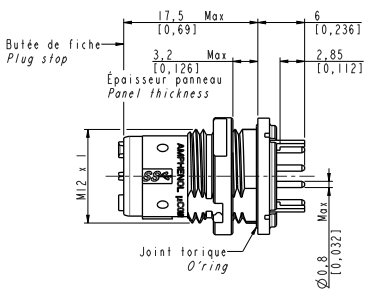


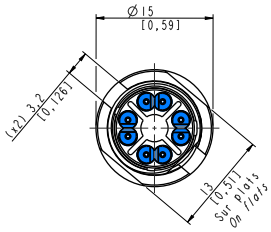


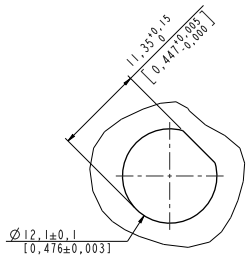
Panel drilling

PCB receptacle for printed circuit board

Part number type: **UCOM-USB3 RP X**







Panel drilling

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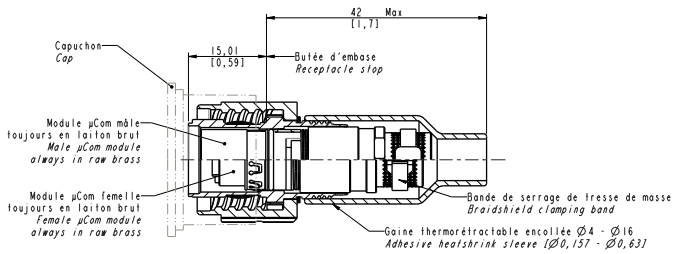
TVµCom-USB3.2

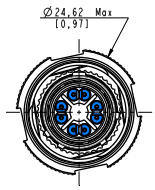


Overall dimension

Plug with banding platform

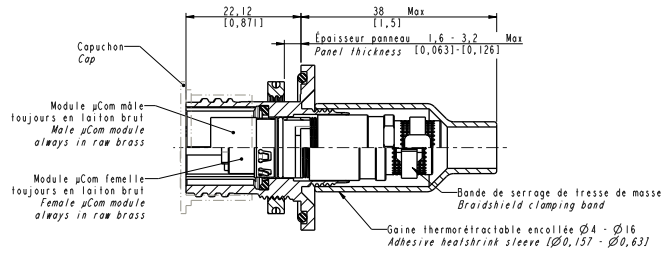
Part number type: **TV06 UCOM-USB3 X X -11 X X**

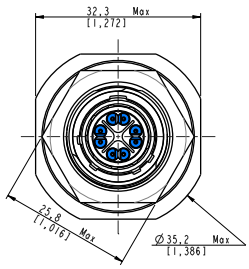


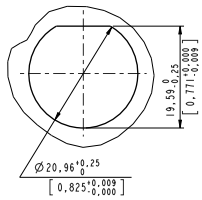


Jam nut receptacle with banding platform

Part number type: **TV07 UCOM-USB3 X X -11 X X**



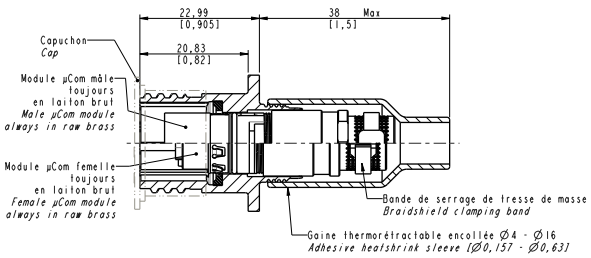


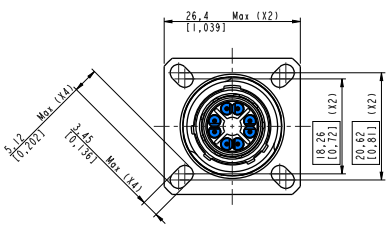


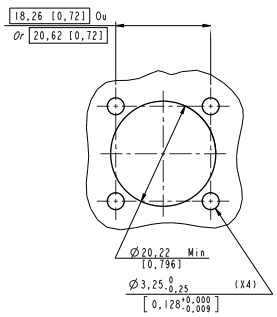
Panel drilling

Square flange receptacle with banding platform

Part number type: **TVP00 UCOM-USB3 X X -11 X X**







Panel drilling

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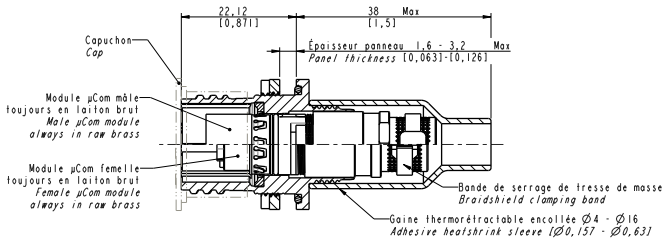
TVμCom-USB3.2

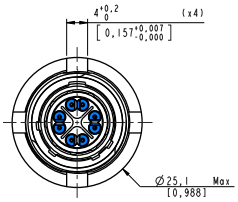


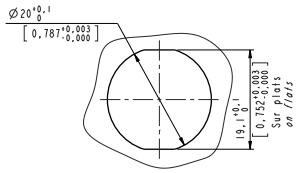
Overall dimension

Reduced flange - Jam nut receptacle with banding platform

Part number type: **TV07 UCOM-USB3 X X -11 X X F312**



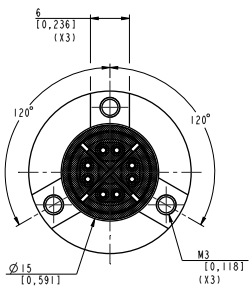


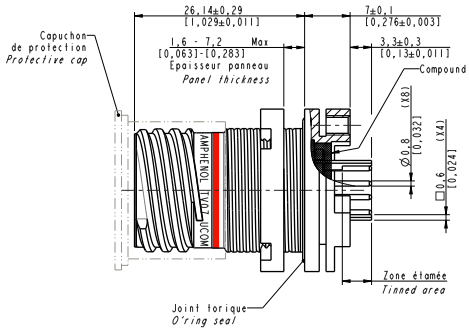


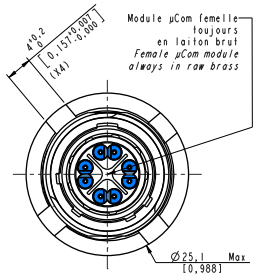
Panel drilling

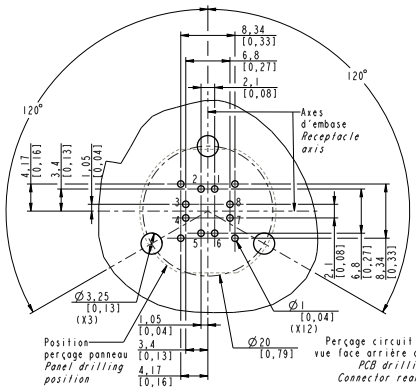
Stand off Reduced flange - Jam nut receptacle for PCB

Part number type: **TV07 UCOM-USB3 CI X -11 S X F059**

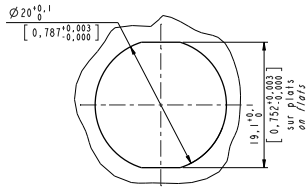








PCB drilling



Panel drilling

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USB2.0





Table of contents

USB2.0	43
USBFTV™	44
USBFTV™ - Transversally sealed and hermetic receptacle	49
USBFTV™ - Stand-off receptacle	54
USBFTV™ - Through-bulkhead receptacle	56
USBFTV™ - Receptacle with 360° EMI backshell	57
USBFTV™ - Atex Zone 2	58
USBBFTV	60
USBBFTV - Transversally sealed receptacle	64
USBBFTV - Stand-off receptacle	65

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USBFTV™



DESCRIPTION

USBFTV™ is a complete ruggedized solution around USB2.0 Type-A standard using a Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) to connect the plug and receptacle.
This solution allows you to insert a standard USB 2.0 cordset into a metallic plug which will protect it from shocks, dust and fluids. The assembly of this ruggedized plug doesn't require any tools and is easily assembled on the field.
Perfectly adapted to the USB2.0 standard, you have two coding possibilities to facilitate coupling when you have several receptacles on a panel.
The corresponding USBFTV™ receptacle dedicated to be mounted on your panel enables you to reinforce and protect your system against leakage, shocks, vibrations and much more. This receptacle part is delivered with a defined coding when ordered but can be conveniently changed with our dedicated USBF ODE tool.

MAIN FEATURES

MAIN CHARACTERISTICS

- Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) with anti-decoupling device - Shell size 15
- Sealed against fluids and dusts (IP68)
- Shock, vibration and traction resistant
- No cabling operation in field and no tools required
- Improved EMI protection
- 2 mechanical coding / polarization possibilities by the user (receptacle insert rotation)
- USBFTV™ plug retention in the receptacle: 100 N in the axis
- Mating cycles: 500 minimum

DATA TRANSMISSION

- USB-A
- USB specification 2.0
- Data rate: up to 480 Mbps for high speed USB

ENVIRONMENTAL PROTECTION

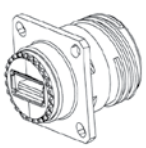
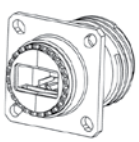
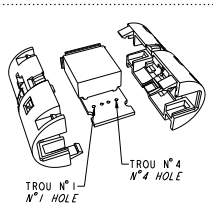
- Sealing (when mated): IP68 (temporary immersion)
- Salt spray:
  - 48 h with nickel plating ✓
  - 500 h black zinc nickel ✓
  - 500 h with olive drab cadmium
  - 500 h with Tin-zinc plating ✓
  - 1000 h with marine bronze shell ✓
- Fire retardant / low smoke: UL94 V0 and EN45545
- Vibrations: 10 - 500 Hz, 10 g, 3 axes: no discontinuity > 1micro s
- Shocks: IK06: weight of 250 g drop from 40 cm [15.75 in] onto connectors (mated pair)
- Temperature range: - 40°C / +85°C

APPLICATIONS

- Battlefield communication systems
- C5ISR
- Data acquisition and transmission in harsh environment
- Navy
- Rail Mass Transit
- Industrial process control
- Robotics
- CNC machines
- Oil & Gas

✓: RoHS compliant

BACK TERMINATIONS

Type 1: female USB-A	**Type 2:** solder 4 Tinned holes to solder your cable	View of the PCB of the Type 2 version with 4 tinned holes for solder termination
		

HOW TO ORDER : PLEASE REFER TO PAGE 117

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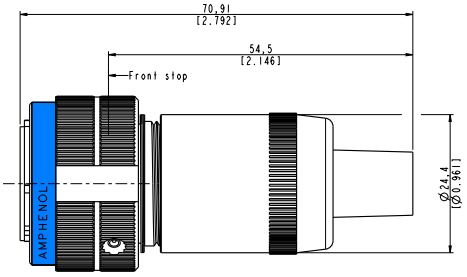


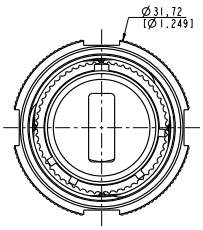
USBFTV™

Overall dimension

Plug - Shell type 6

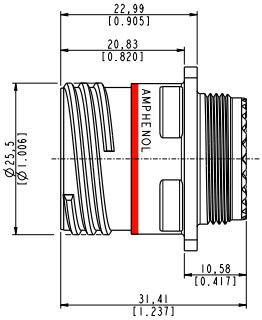
Part number type: **USBFTV 6 X**

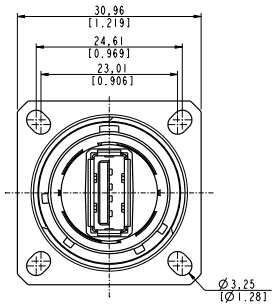




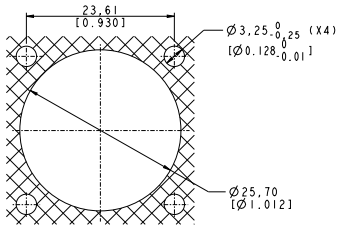
Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Back termination type 1

Part number type: **USBFTV 2 1 X**



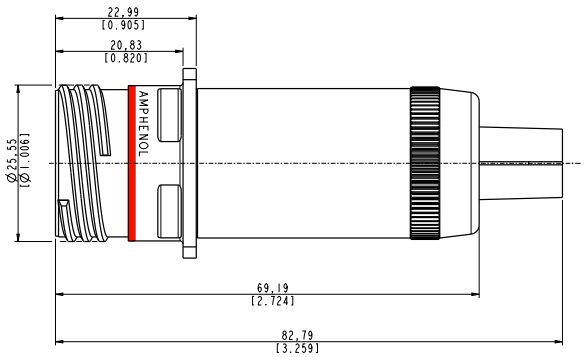


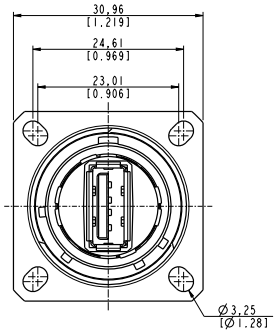
Panel Drilling



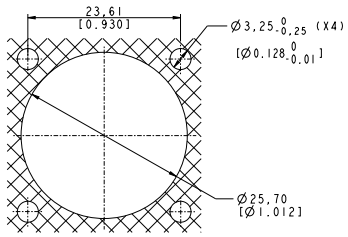
Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Back termination type 1 - Metal backshell

Part number type: **USBFTV 2 PE 1 X**





Panel Drilling



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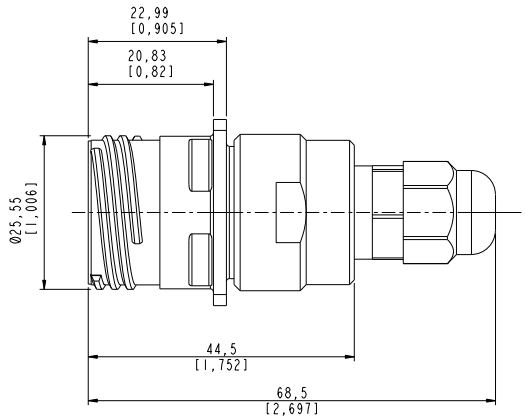
USBFTV™

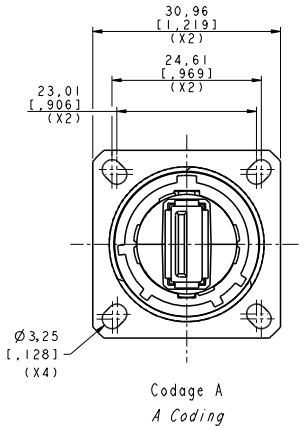


Overall dimension

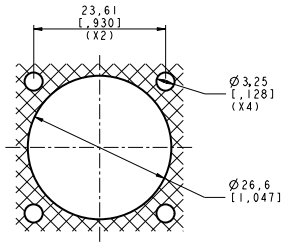
Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Back termination type 2 - Metal backshell

Part number type: **USBFTV 2 PE 2 X**

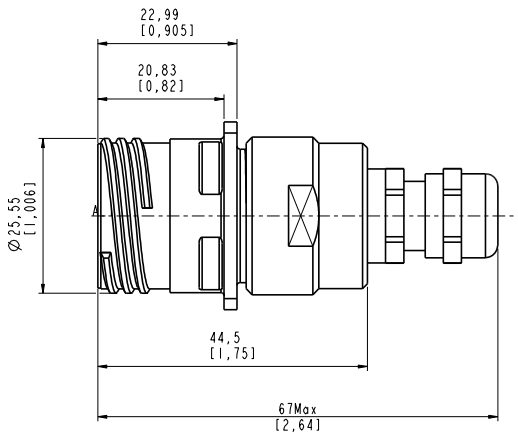


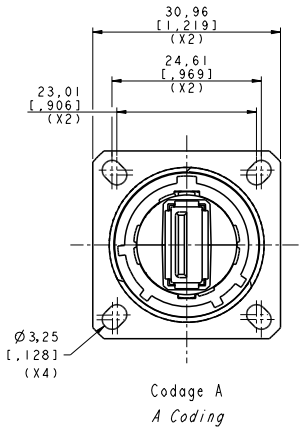


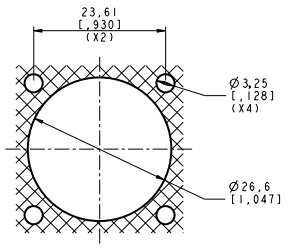
Panel Drilling



Part number type: **USBFTV 2 PEM 2 X**







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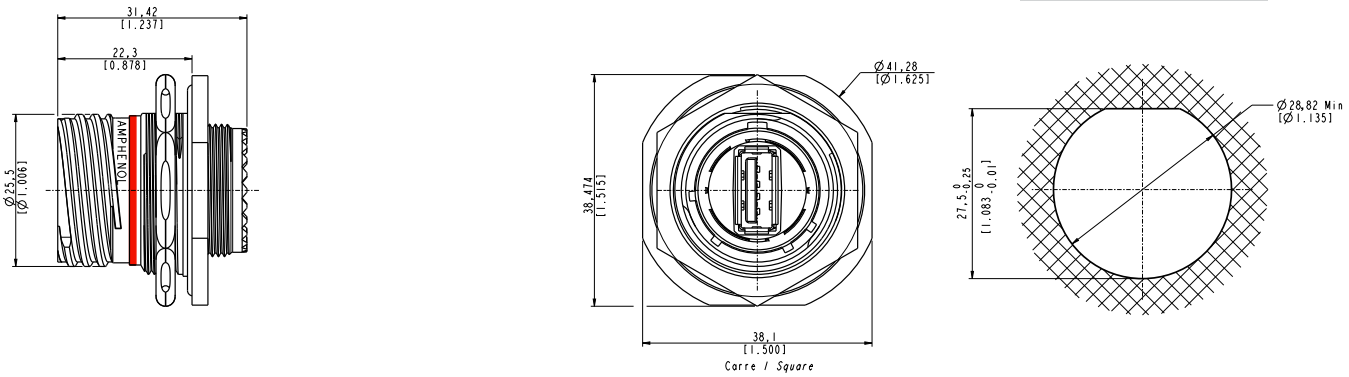
USBFTV™



Overall dimension

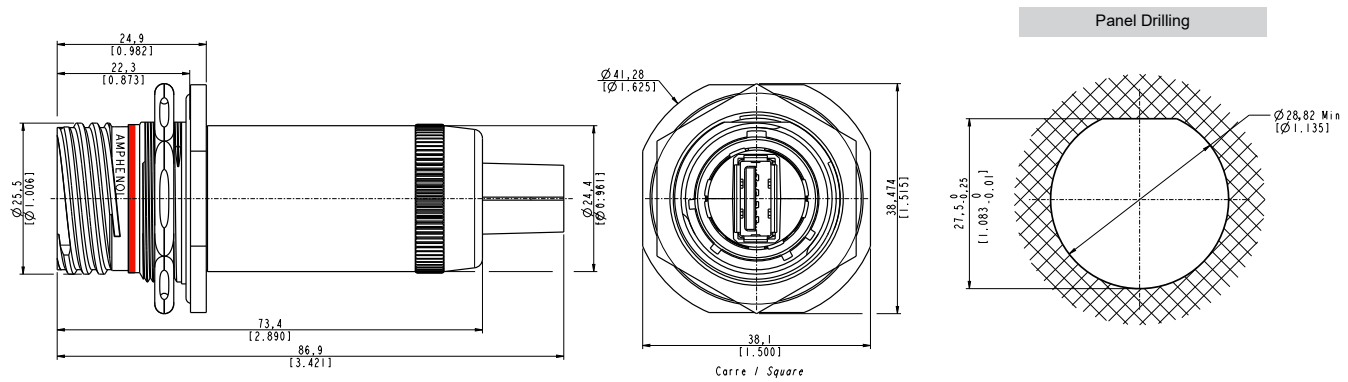
Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Back termination type 1

Part number type: **USBFTV 7 1 X**



Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Back termination type 1 - Metal backshell

Part number type: **USBFTV 7 PE 1 X**



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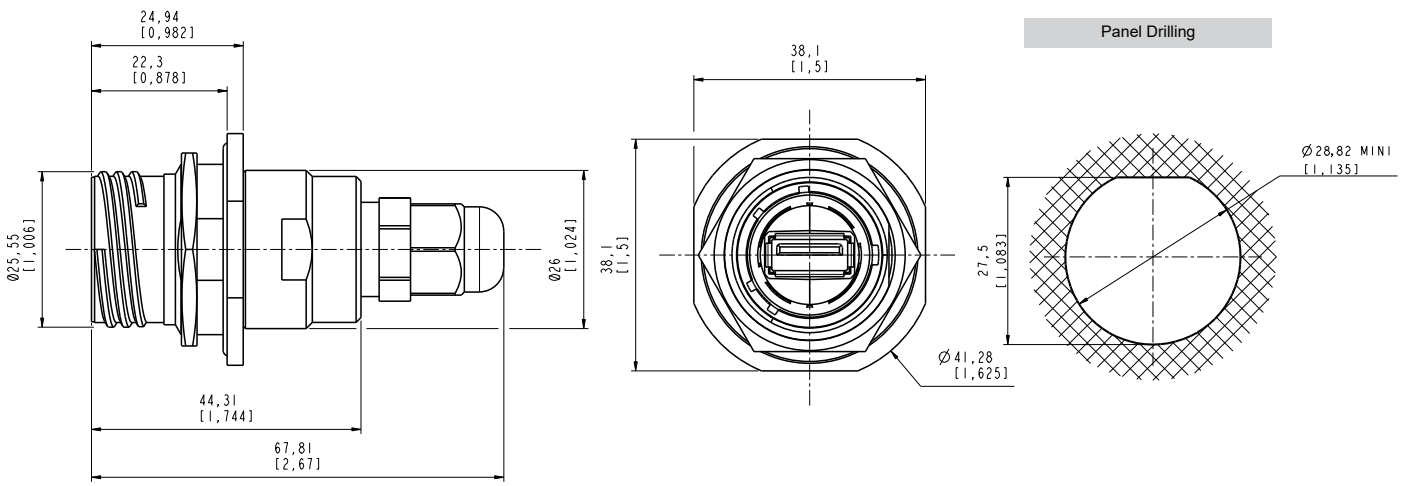


USBFTV™

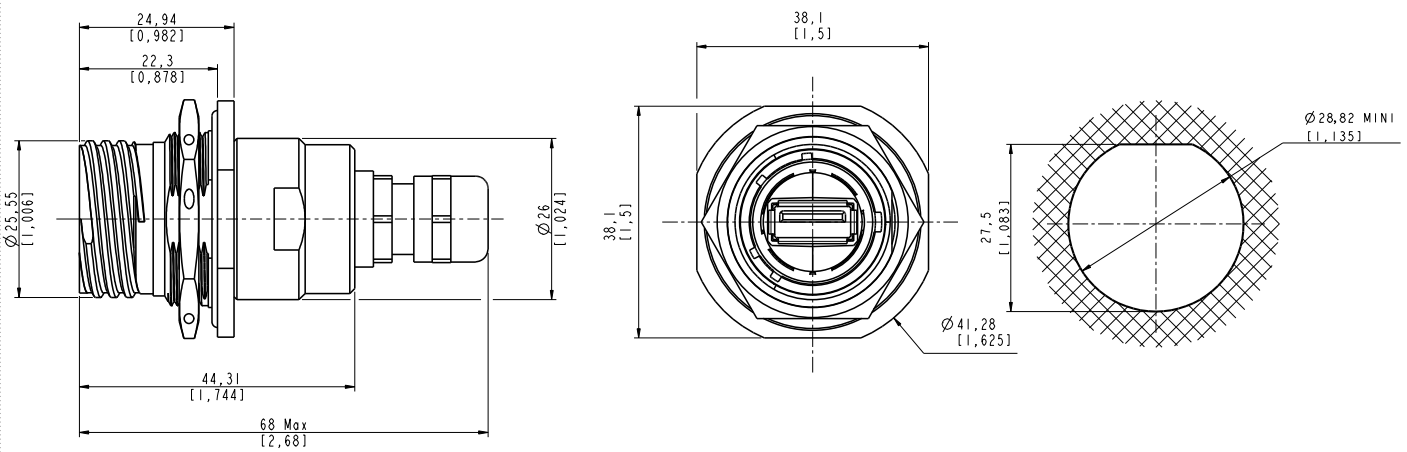
Overall dimension

Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Back termination type 2 - Metal backshell

Part number type: **USBFTV 7 PE 2 X**



Part number type: **USBFTV 7 PEM 2 X**



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USBFTV™ - TRANSVERSALLY SEALED AND HERMETIC RECEPTACLE



DESCRIPTION

The transversally sealed receptacle is in all aspect equivalent to the standard and in addition, is improved with compound at the rear of the receptacle. This will prevent the sealing of the receptacle when unmated with his plug or protective cap. The hermetic solution, as the transversally sealed one, is compounded at the rear of the receptacle. Helium leakage is less than 1.10-6 cm3 per second [0.1 micron cubit ft per hour] at one bar [15 psi] pressure differential. The test is performed on all hermetic receptacles.

MAIN FEATURES

MAIN CHARACTERISTICS

- Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) with anti-decoupling device - Shell size 15
- 2 mechanical coding/polarization possibilities by the user (receptacle insert rotation)
- Sealed against fluids and dusts (IP68)
- Shock, vibration and traction resistant
- No cabling operation in field and no tools required
- Improved EMI protection
- USBFTV™ plug retention in the receptacle: 100 N in the axis
- Mating cycles: 500 minimum

DATA TRANSMISSION

- USB-A
- USB specification 2.0
- Data rate: up to 480 Mb/s for high speed USB

ENVIRONMENTAL PROTECTION

- Sealing (when mated): IP68 (temporary immersion)
- Salt spray:
  - 48 h with nickel plating ✓
  - 500 h with olive drab cadmium
  - 500 h with black zinc nickel ✓
  - 500 h with Tin-zinc plating ✓
  - 1000 h with marine bronze shell ✓
- Fire retardant / Low smoke: UL94 V0 and EN45545
- Vibrations: 10 - 500 Hz, 10 g, 3 axes: no discontinuity > 1micro s
- Shocks: IK06 > weight of 250 g drop from 40 cm [15.75 in] onto connectors (mated pair)
- Temperature range: - 40°C / +85°C

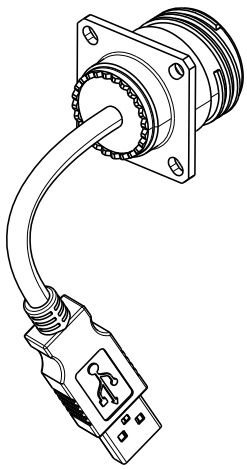
APPLICATIONS

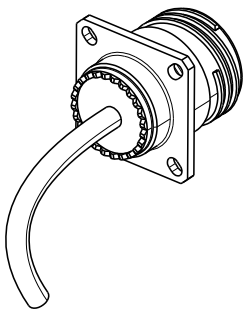
- Battlefield communication systems
- C5ISR
- Data acquisition and transmission in harsh environment
- Navy
- Rail Mass Transit
- Industrial process control
- Robotics
- CNC machines
- Oil & Gas

✓: RoHS compliant

BACK TERMINATIONS

USB cable end type A	USB cable end type «OPEN»





HOW TO ORDER : PLEASE REFER TO PAGE 122

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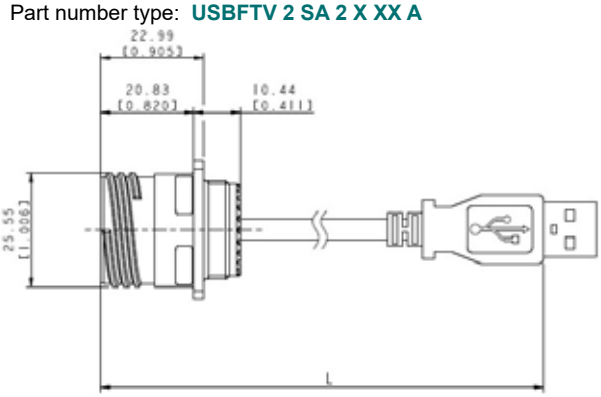
USBFTV™ - TRANSVERSALLY SEALED AND HERMETIC RECEPTACLE

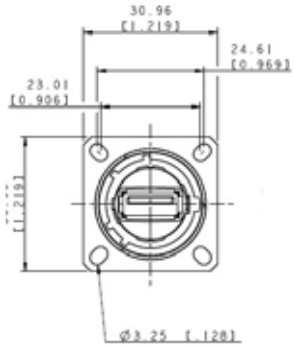


Overall dimension

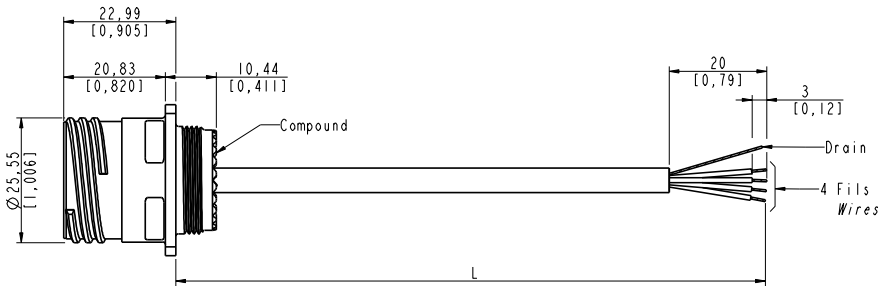
Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - USB-A or Open cordset

Part number type: **USBFTV 2 SA 2 X XX A**

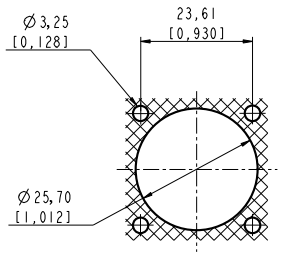




Part number type: **USBFTV 2 SA 2 X XX OPEN**

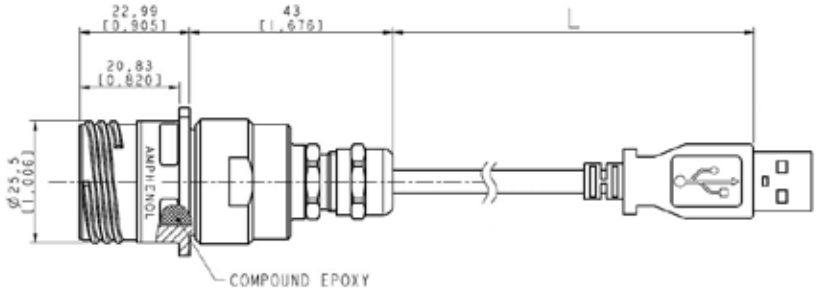


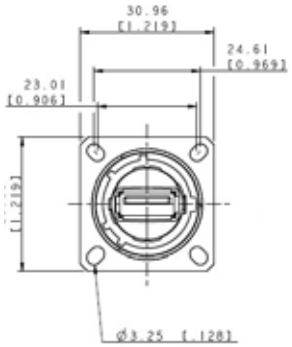
Panel Drilling



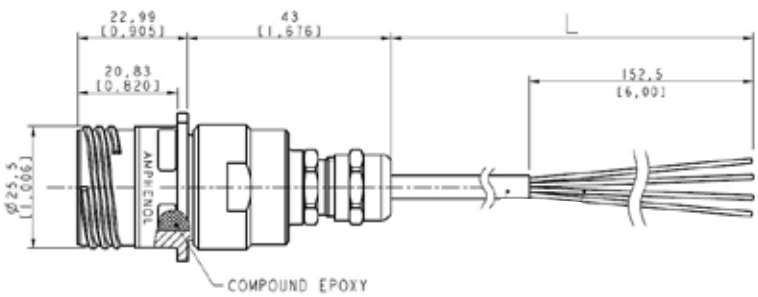
Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - USB-A or Open cordset

Part number type: **USBFTV 2 PE SA 2 X XX A**
USBFTV 2 PEM SA 2 X XX A

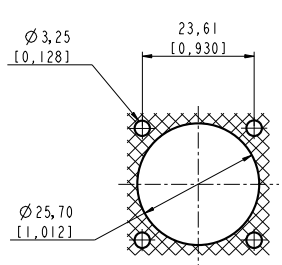




Part number type: **USBFTV 2 PE SA 2 X XX OPEN**
USBFTV 2 PEM SA 2 X XX OPEN



Panel Drilling



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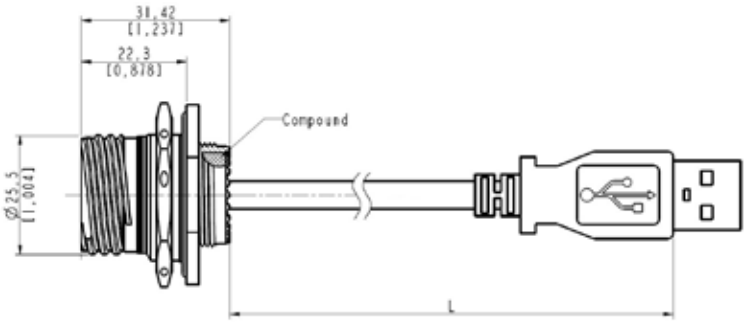
USBFTV™ - TRANSVERSALLY SEALED AND HERMETIC RECEPTACLE

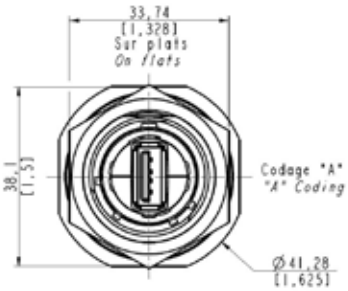


Overall dimension

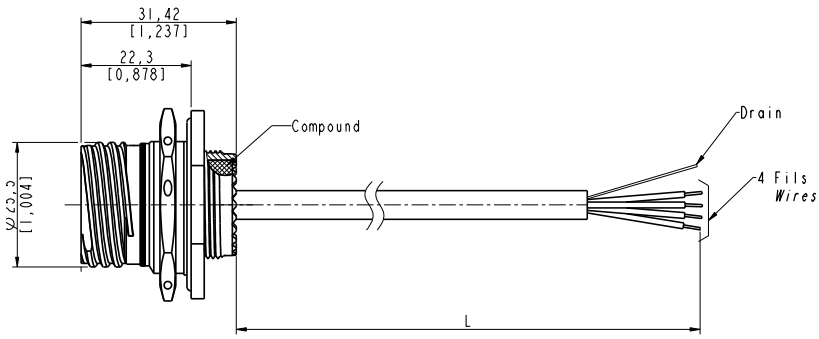
Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - USB-A or Open cordset

Part number type: **USBFTV 7 SA 2 X XX A**

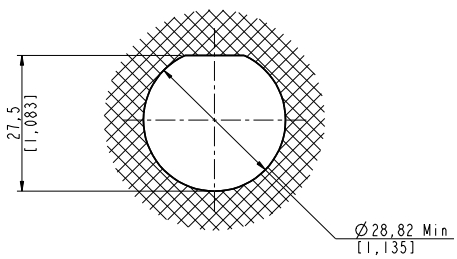




Part number type: **USBFTV 7 SA 2 X XX OPEN**

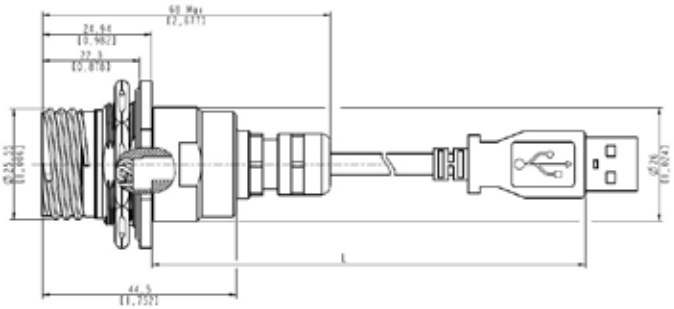


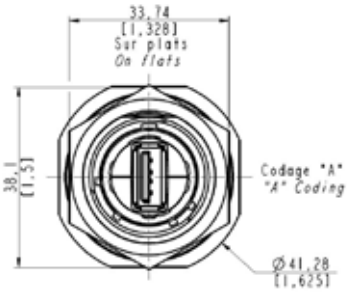
Panel Drilling



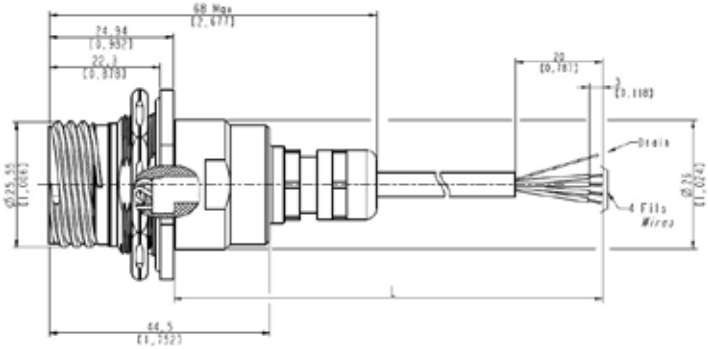
Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - USB-A or Open cordset

Part number type: **USBFTV 7 PE SA 2 X XX A**
USBFTV 7 PEM SA 2 X XX A

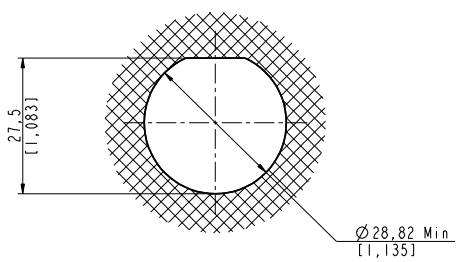




Part number type: **USBFTV 7 PE SA 2 X XX OPEN**
USBFTV 7 PEM SA 2 X XX OPEN



Panel Drilling



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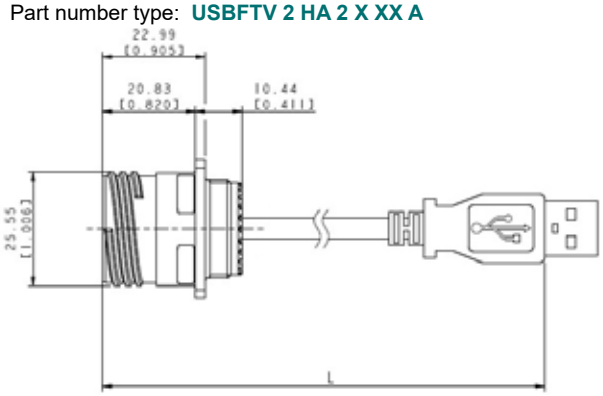
USBFTV™ - TRANSVERSALLY SEALED AND HERMETIC RECEPTACLE

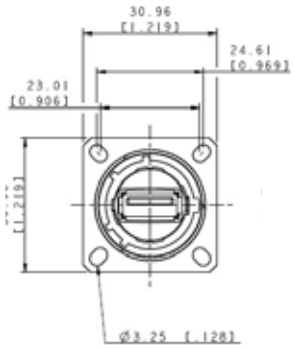


Overall dimension

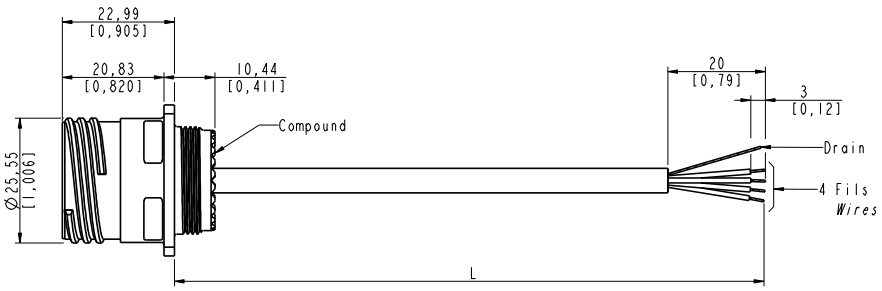
Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2- USB-A or Open cordset

Part number type: **USBFTV 2 HA 2 X XX A**

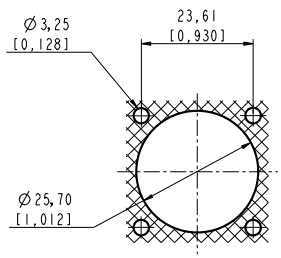




Part number type: **USBFTV 2 HA 2 X XX OPEN**

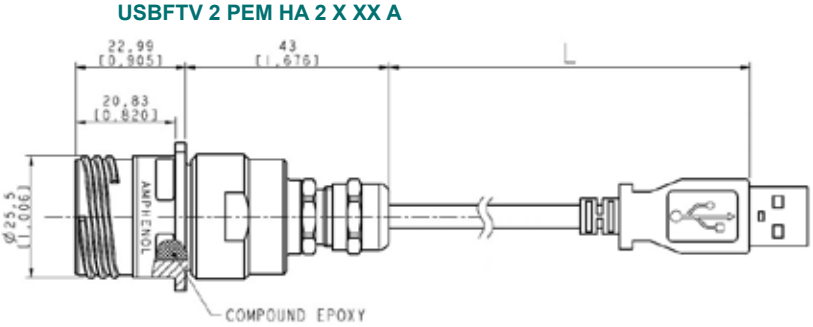


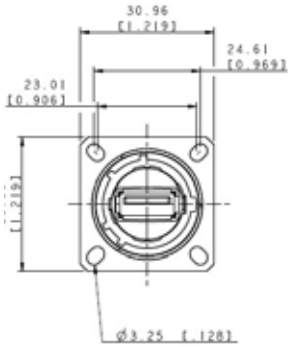
Panel Drilling



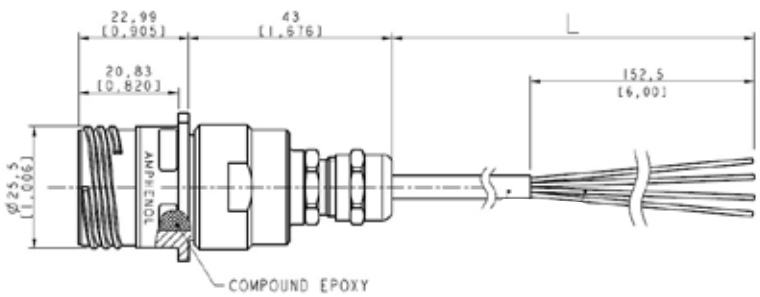
Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Metal backshell - USB-A or Open cordset

Part number type: **USBFTV 2 PE HA 2 X XX A**
USBFTV 2 PEM HA 2 X XX A

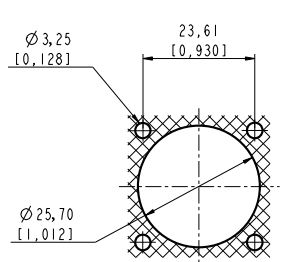




Part number type: **USBFTV 2 PE HA 2 X XX OPEN**
USBFTV 2 PEM HA 2 X XX OPEN



Panel Drilling



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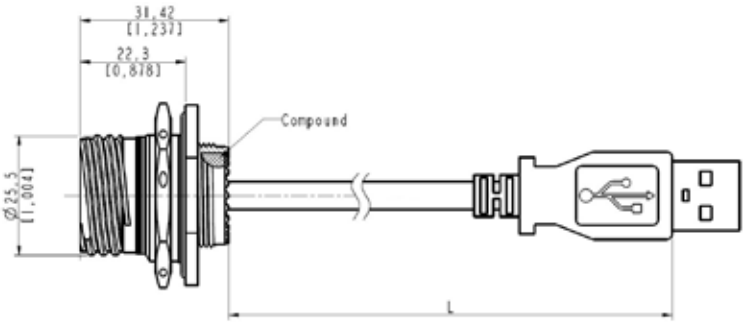
USBFTV™ - TRANSVERSALLY SEALED AND HERMETIC RECEPTACLE

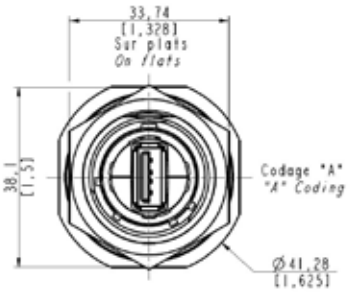


Overall dimension

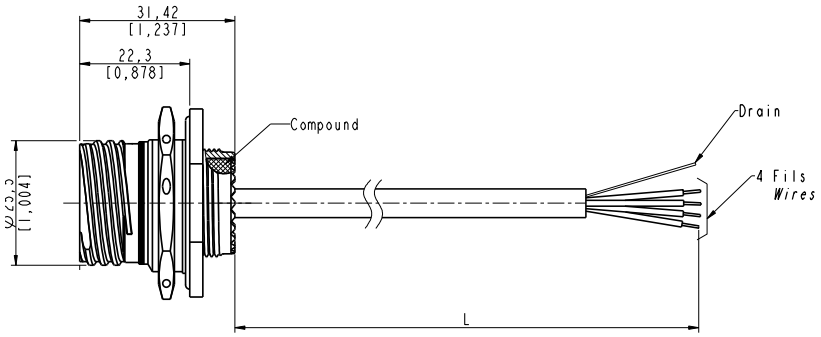
Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - USB-A or Open cordset

Part number type: **USBFTV 7 HA 2 X XX A**

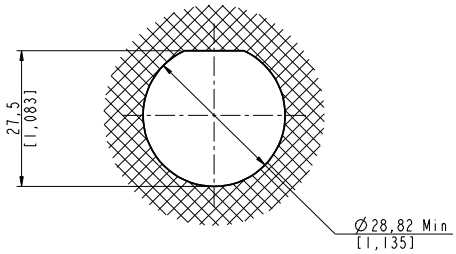




Part number type: **USBFTV 7 HA 2 X XX OPEN**

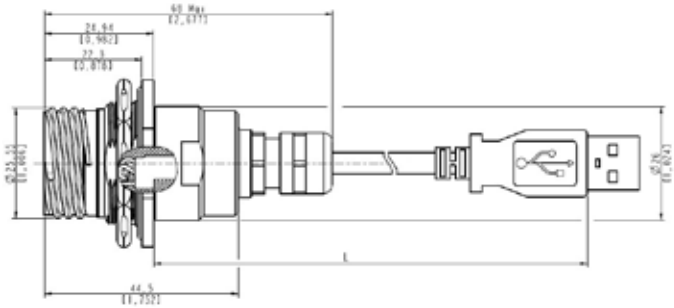


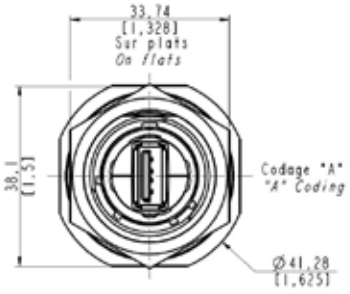
Panel Drilling



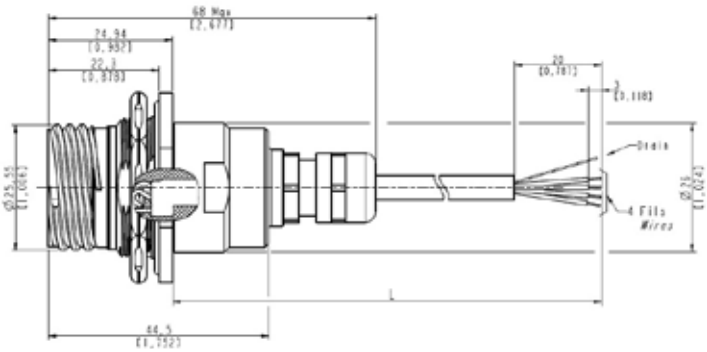
Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Metal backshell - USB-A or Open cordset

Part number type: **USBFTV 7 PE HA 2 X XX A**
USBFTV 7 PEM HA 2 X XX A

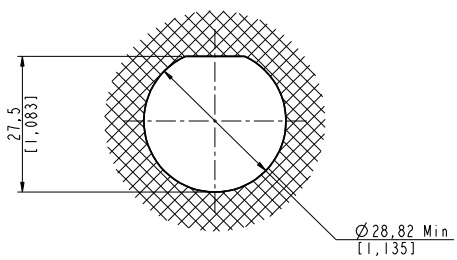




Part number type: **USBFTV 7 PE HA 2 X XX OPEN**
USBFTV 7 PEM HA 2 X XX OPEN



Panel Drilling



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USBFTV™ - STAND OFF RECEPTACLE

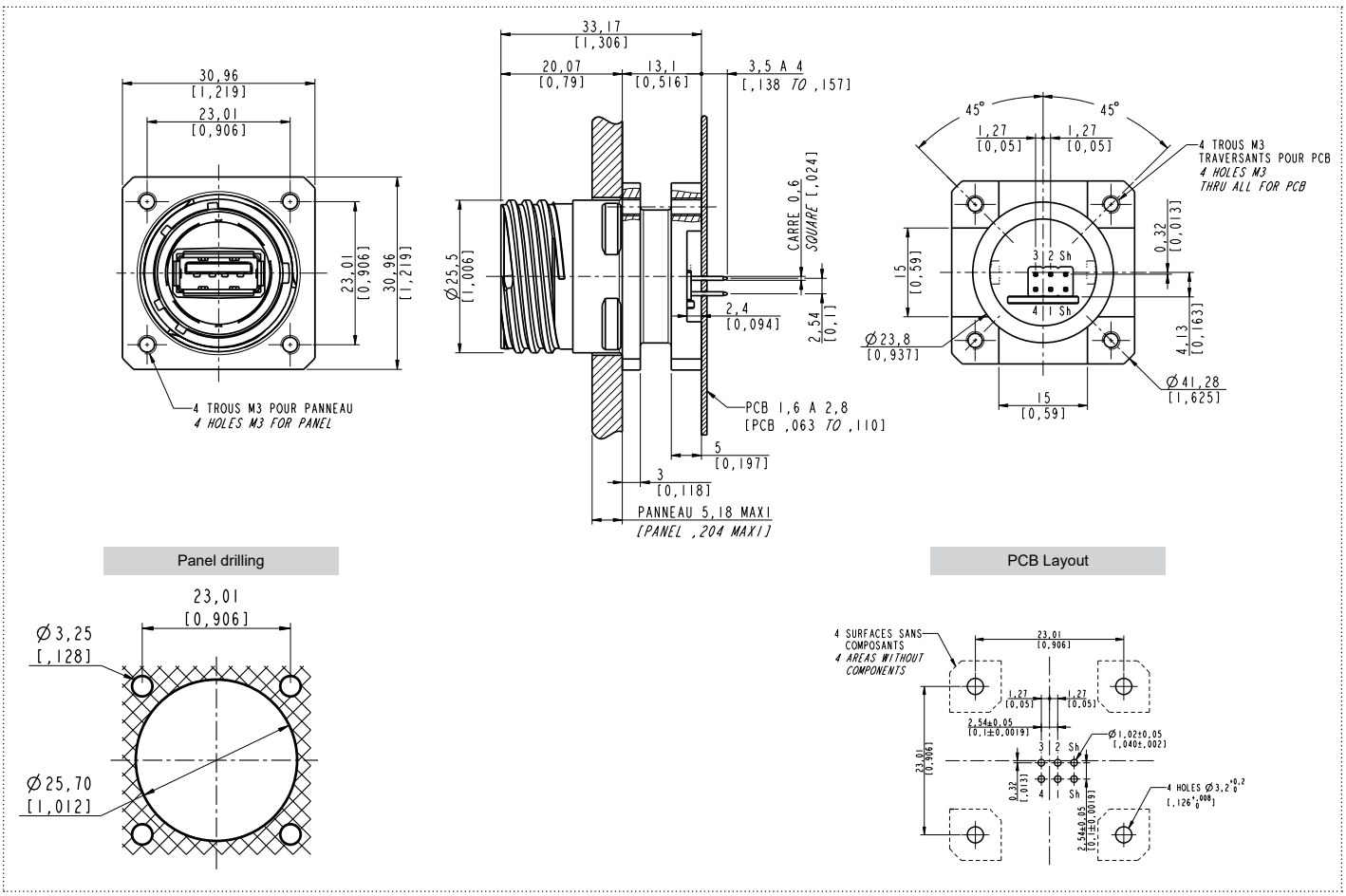


Description

This enhanced design allows you to mount the connector shell directly on your PC board. Soldering your contacts directly on the board will help to save you a lot of space inside of your system. As this double-flange of this connector is directly fixed on the board, mechanical stresses are absorbed by the shell and not the contacts. In addition to this benefit, the sealing is improved by the compounded receptacle.

Overall dimension

Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - PC Tails contacts



Part number for coding A	Part number for coding B	Plating
USBFTV 2S A 5 N F459	USBFTV 2S B 5 N F459	Nickel ✓
USBFTV 2S A 5 G F459	USBFTV 2S B 5 G F459	Olive drab cadmium
USBFTV 2S A 5 ZN F459	USBFTV 2S B 5 ZN F459	Black zinc nickel ✓

✓: RoHS compliant

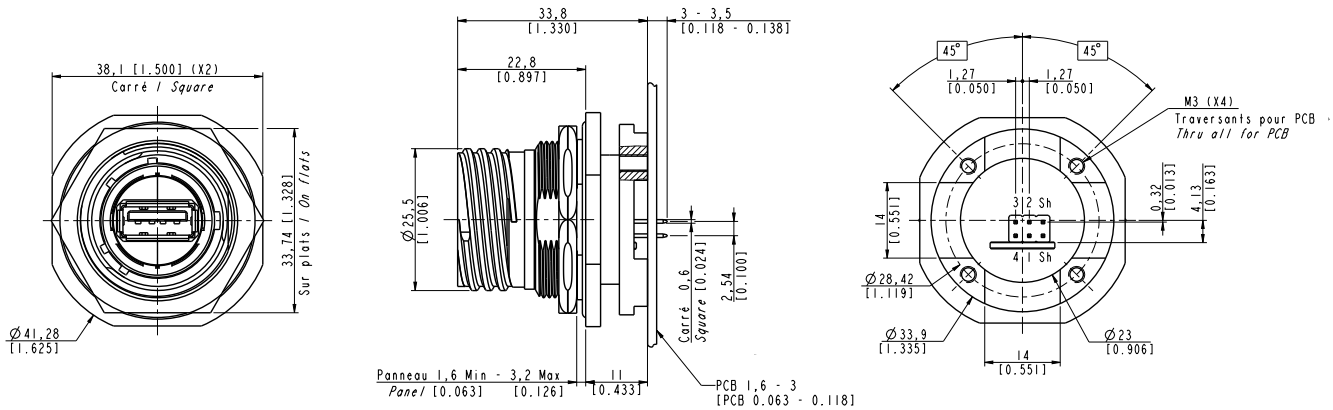
Downloaded from Arrow.com.

USBFTV™ - STAND OFF RECEPTACLE

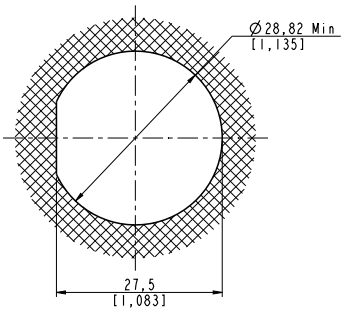


Overall dimension

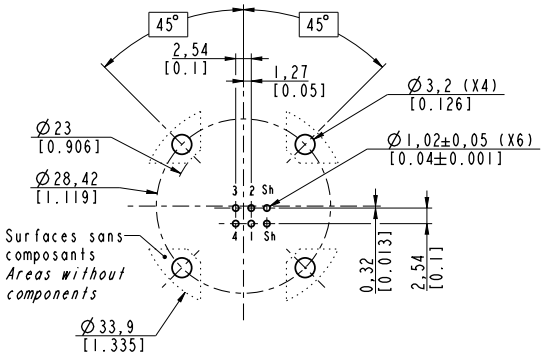
Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - PC Tails contacts



Panel drilling



PCB Layout



Part number for coding A	Part number for coding B	Plating
USBFTV 7 SA 5 N F459	USBFTV 7S B 5 N F459	Nickel ✓
USBFTV 7 SA 5 G F459	USBFTV 7S B 5 G F459	Olive drab cadmium
USBFTV 7 SA 5 ZN F459	USBFTV 7S B 5 ZN F459	Black zinc nickel ✓

✓: RoHS compliant

Downloaded from Arrow.com.

USBFTV™ - THROUGH-BULKHEAD RECEPTACLE

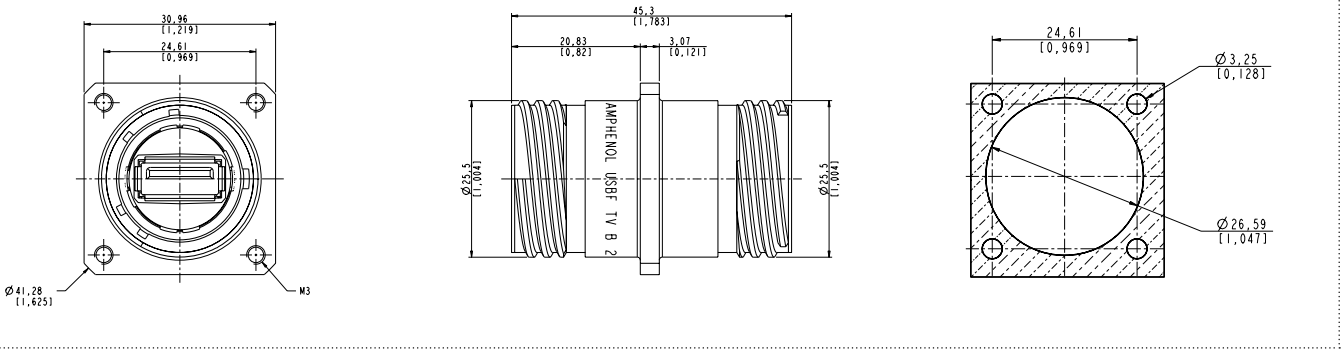


Description

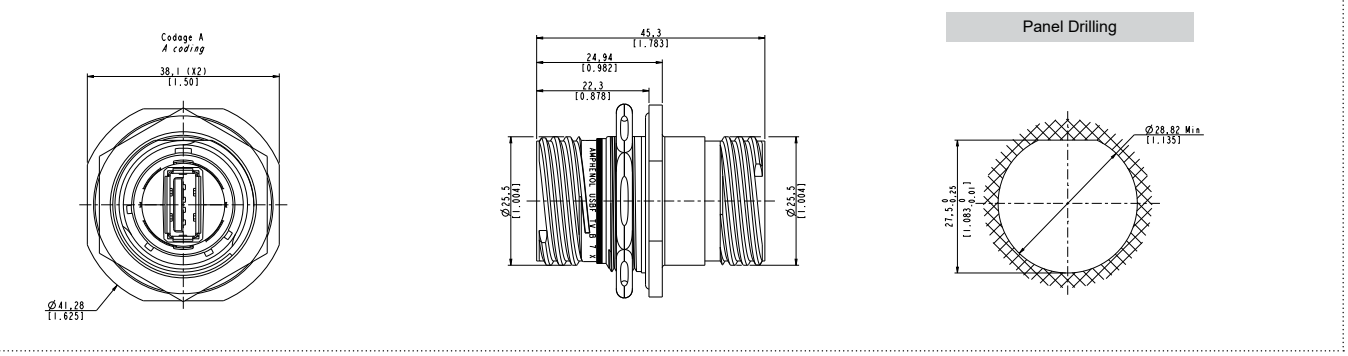
The USBFTV™ Through-bulkhead is a double-ended receptacle that enables you to connect two USBFTV plugs on both sides of your panel. In your system, it provides you the best protection and remains very easy to assemble.

Overall dimension

Receptacle - Square flange receptcle - 4 mounting holes - Shell type 2



Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7



Part number for square flange receptacle	Part number for Jam nut receptacle	Plating
USBFTV B 2 N	USBFTV B 7 N	Nickel ✓
USBFTV B 2 G	USBFTV B 7 G	Olive drab cadmium
USBFTV B 2 ZN	USBFTV B 7 ZN	Black zinc nickel ✓

✓ : RoHS compliant

Downloaded from Arrow.com.

USBFTV™ - RECEPTACLE WITH 360° EMI BACKSHELL

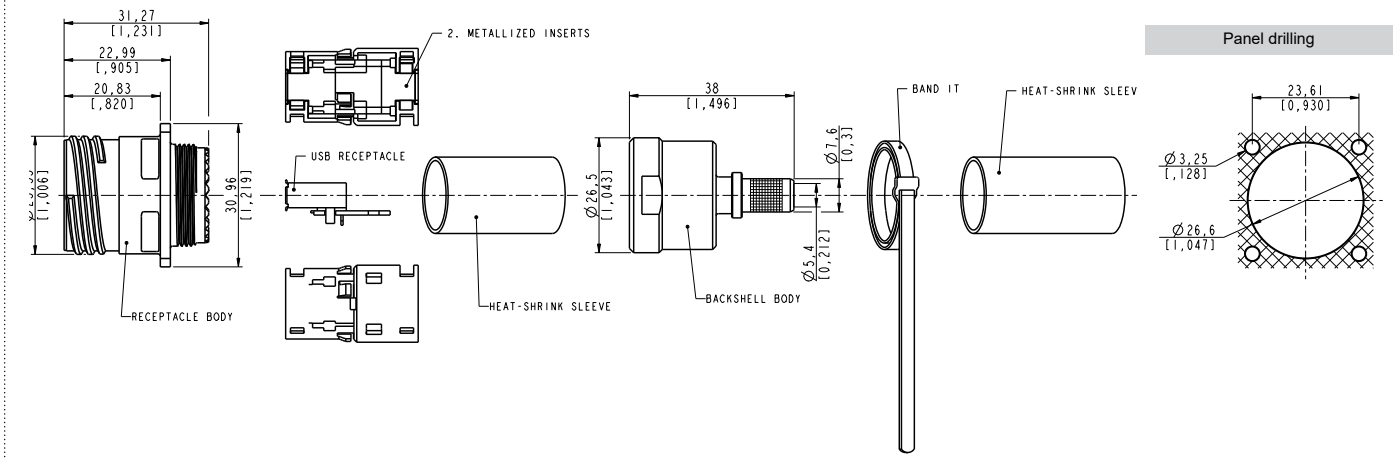


Description

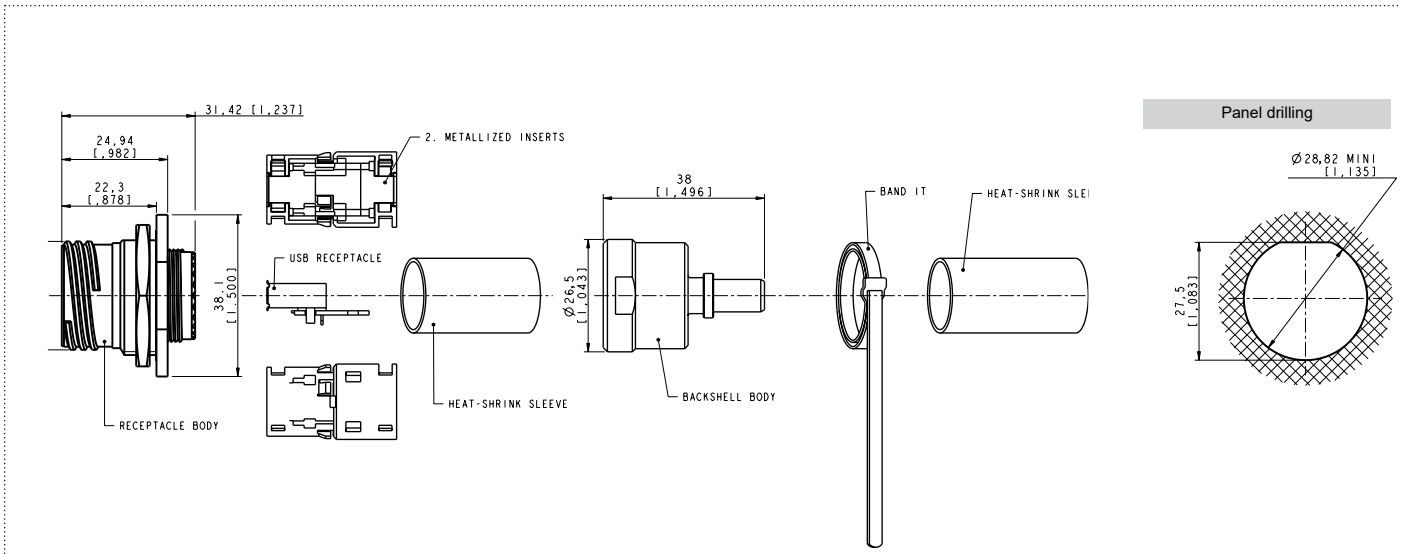
This USBFTV™ kit includes all components necessary to build up a totally 360° EMI shielded receptacle. This kit is mainly composed of an 360° backshell and the USB receptacle with PCB with 4 tinned holes for solder termination. With this receptacle kit provided without cable, you have to solder the cable on the PCB. You can find below, wires and shielding wire cabling specifications. We recommend to use our reinforced USB cable page 53. If you prefer to use your own cable, please check with us to see if your USB cable is compatible. In the case you need a complete 360° EMI shield receptacle already mounted with a define length of cable, please consult us.

Overall dimension

Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Back terminations type 2



Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Back terminations type 2



Part number for Square flange receptacle	Part number for Jam nut receptacle	Plating
KIT40263	KIT40245	Nickel ✓
KIT40263G	KIT40245G	Olive drab cadmium
KIT40263ZN	KIT40245ZN	Black zinc nickel plating ✓

✓ : RoHS compliant

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USBFTV™ - ATEX ZONE 2



Description

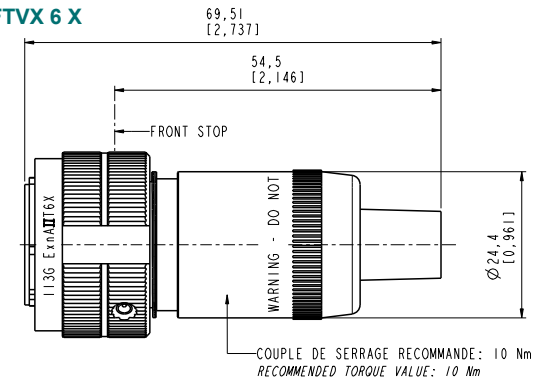
USBFTVX connectors are the same as the standard USBFTV™, but in addition, they are certified for use in explosive environments. This range is fitted to be used in Atex zone 2 environments and 100% tested at 500V during 1 minute without sparking.

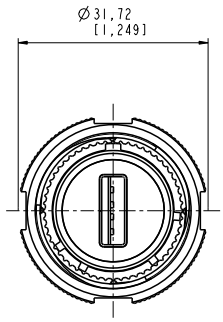
HOW TO ORDER : PLEASE REFER TO PAGE 123

Overall dimension

Plug - Shell type 6

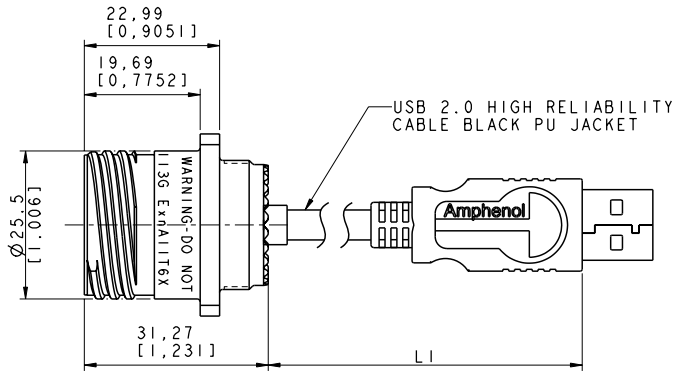
Part number type: **USBFTVX 6 X**



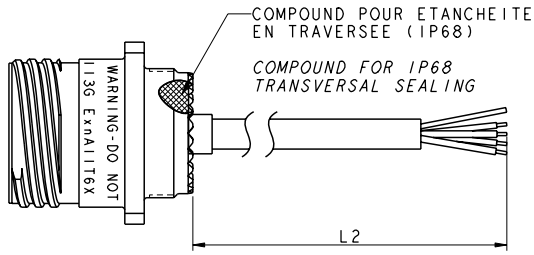


Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - USB-A or Open cordset

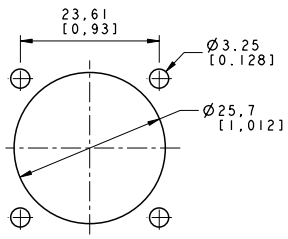
Part number type: **USBFTVX 2S X 2 X XX A**



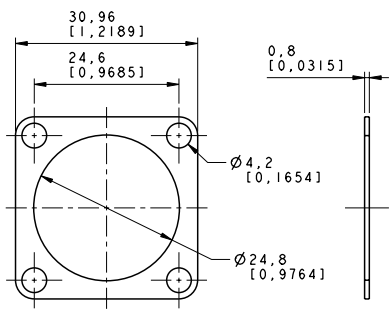
Part number type: **USBFTVX 2S X 2 X XX OPEN**

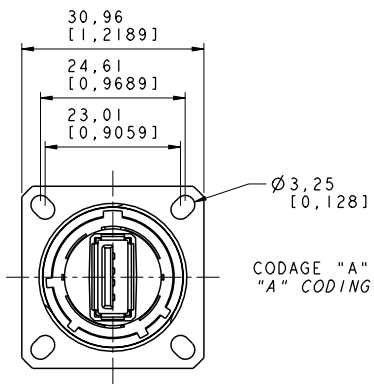


Panel drilling



JE15 Panel Gasket





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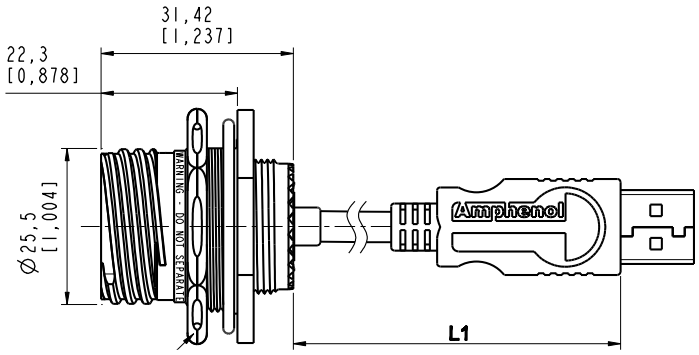
USBFTV™ - ATEX ZONE 2



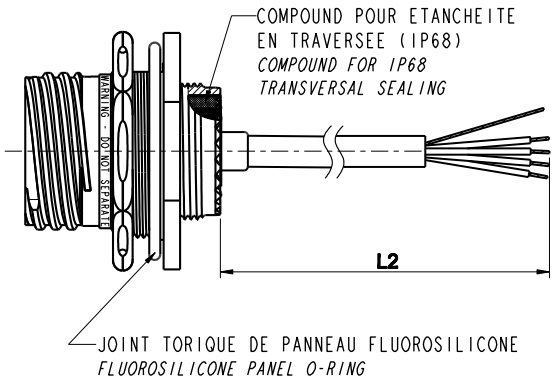
Overall dimension

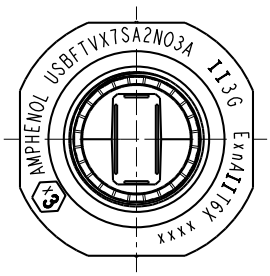
Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - USB-A or Open cordset

Part number type: **USBFTVX 7S X 2 X XX A**

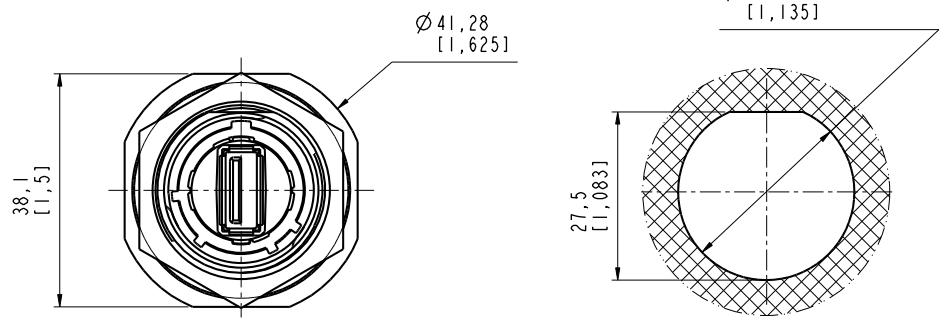


Part number type: **USBFTVX 7S X 2 X XX OPEN**





Panel drilling



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USBBFTV



DESCRIPTION

USBBFTV is a complete ruggedized solution around USB2.0 Type-B standard using a Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) to connect the two plug and receptacle parts.
This solution allows you to insert a standard USB 2.0 cordset into a metallic plug which will protect it from shocks, dust and fluids. The assembly of this ruggedized plug doesn't require any tools and can be assembled easily in the field. Perfectly adapted to the USB2.0 standard, you have two coding possibilities to facilitate coupling when you have several receptacles on a panel.
The corresponding USBBFTV receptacle dedicated to be mounted on your panel enables you to reinforce and protect your system against leakage, shocks, vibrations and much more. This receptacle part is delivered with a defined coding when ordered but can be conveniently changed with our dedicated USBF ODE tool.

MAIN FEATURES

MAIN CHARACTERISTICS

- Sealed against fluids and dusts (IP68)
- Shock, vibration and traction resistant
- No cabling operation in field and no tools required
- Improved EMI protection
- Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) with anti-decoupling device - Shell size 15
- Plug retention in the receptacle: 100N in the axis
- Mating cycles: 500 minimum

DATA TRANSMISSION

- USB-B
- USB specification 2.0
- Data rate: up to 480 Mb/s for high speed USB

ENVIRONMENTAL PROTECTION

- Sealing (when mated): IP68 (temporary immersion)
- Salt spray:
  - 48 h with nickel plating ✓
  - 500 h with olive drab cadmium
  - 500 h with black zinc nickel ✓
  - 500 h with Tin-zinc plating ✓
  - 1000 h with marine bronze shell ✓
- Fire retardant / Low smoke: UL94 V0 and EN45545
- Vibrations: 10 - 500 Hz, 10 g, 3 axes: no discontinuity > 1micro s
- Shocks: IK06 > weight of 250 g drop from 40 cm [15.75 in] onto connectors (mated pair)
- Temperature range: - 40°C / +85°C

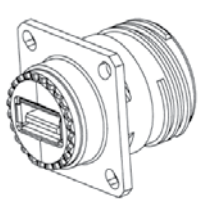
APPLICATIONS

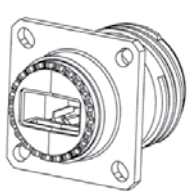
- Battlefield communication systems
- C5ISR
- Data acquisition and transmission in harsh environment
- Navy
- Rail Mass Transit
- Industrial process control
- Robotics
- CNC machines
- Oil & Gas

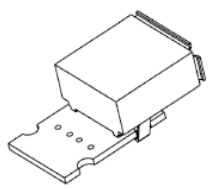
✓: RoHS compliant

BACK TERMINATIONS

Type 1: female USB-A	**Type 2:** solder 4 Tinned holes to solder your cable	View of the PCB of the Type 2 version with 4 tinned holes for solder termination







HOW TO ORDER : PLEASE REFER TO PAGE 124

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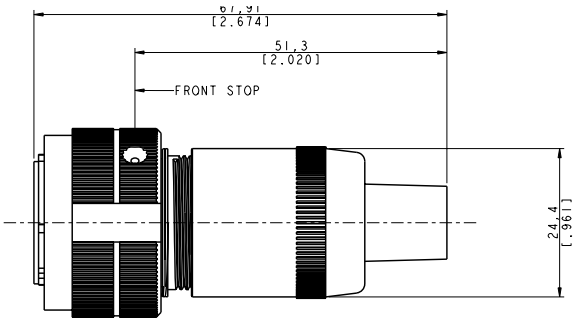
USBBFTV

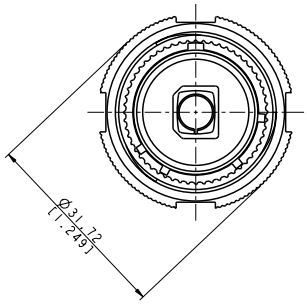


Overall dimension

Plug - Shell type 6

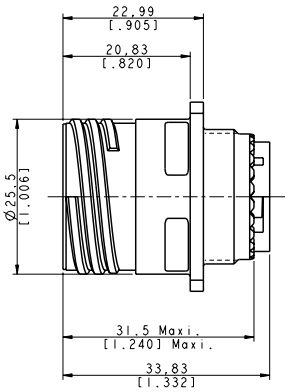
Part number type: **USBBF TV 6 X**

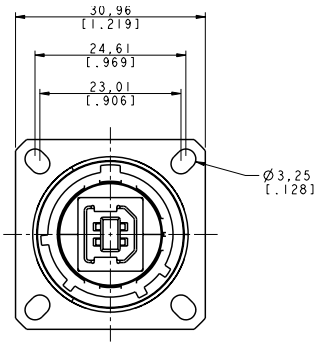


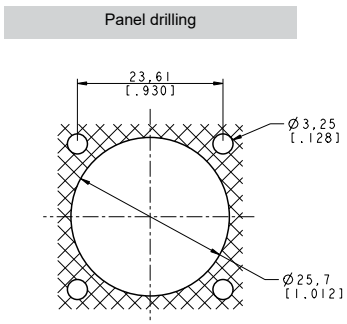


Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Back terminations type 1

Part number type: **USBBF TV 2 X X**

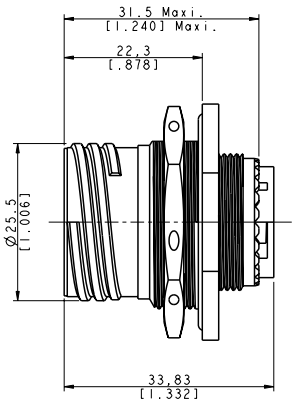


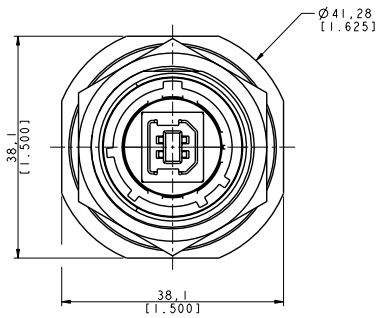


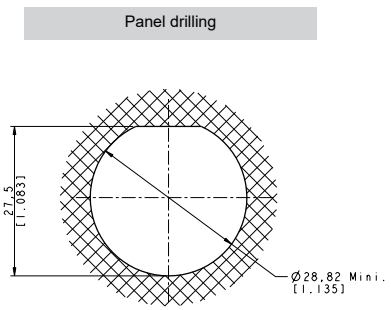


Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Back terminations type 1

Part number type: **USBBF TV 7 X X**







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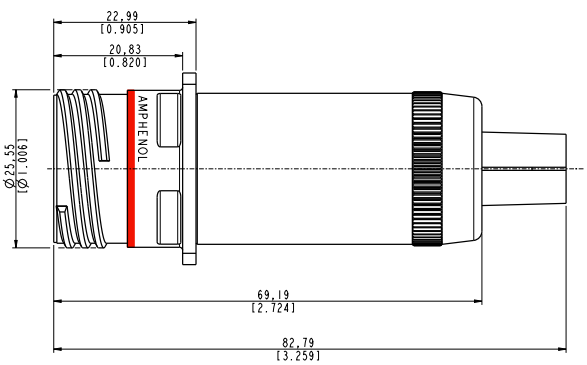
USBBFTV

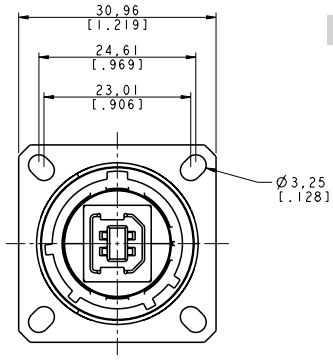


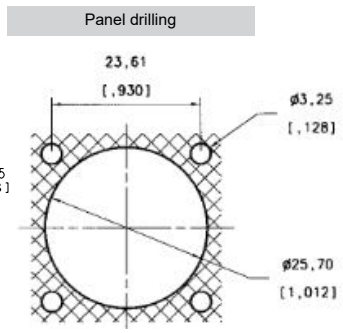
Overall dimension

Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Back termination type 1 - Metal backshell

Part number type: **USBBF TV 2PE 1 X**

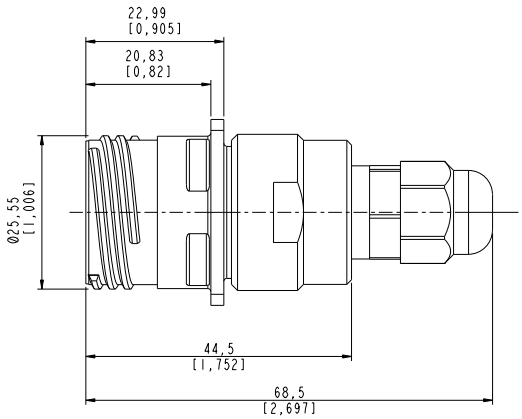


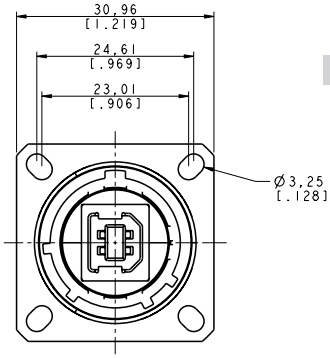


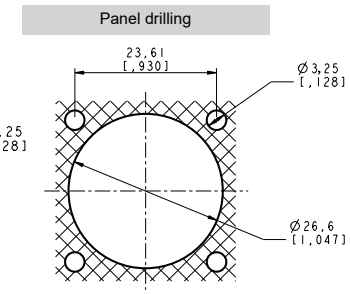


Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - Back termination type 2 - Metal backshell

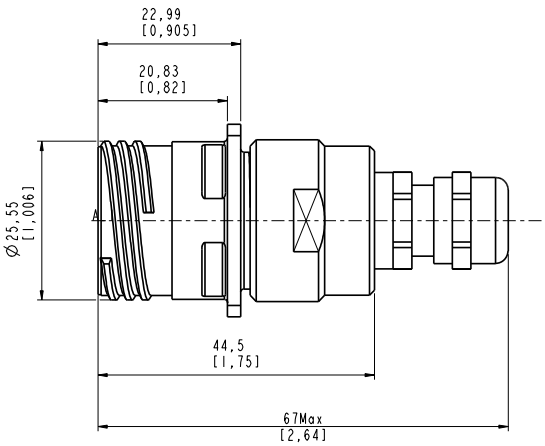
Part number type: **USBBF TV 2PE 2 X**

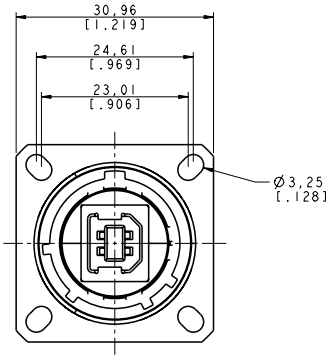


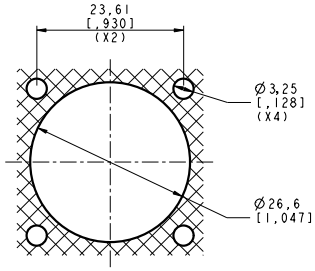




Part number type: **USBBF TV 2PEM 2 X**







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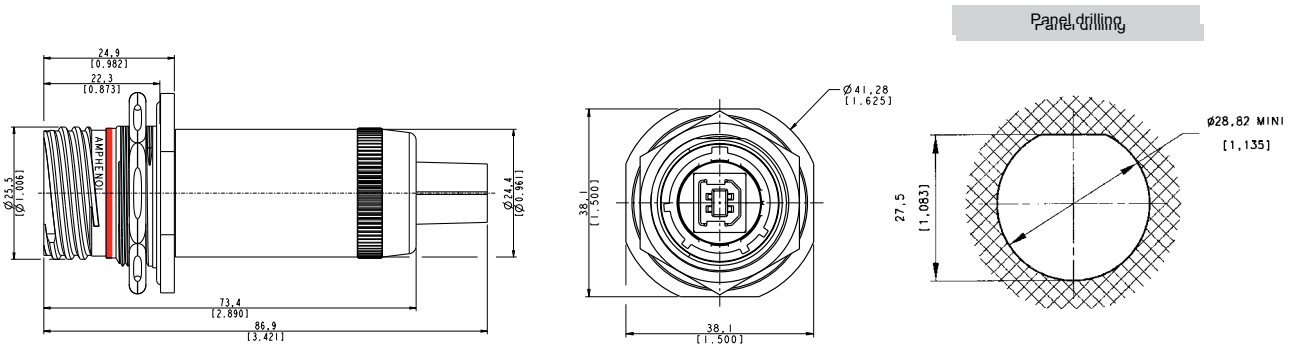
USBBFTV



Overall dimension

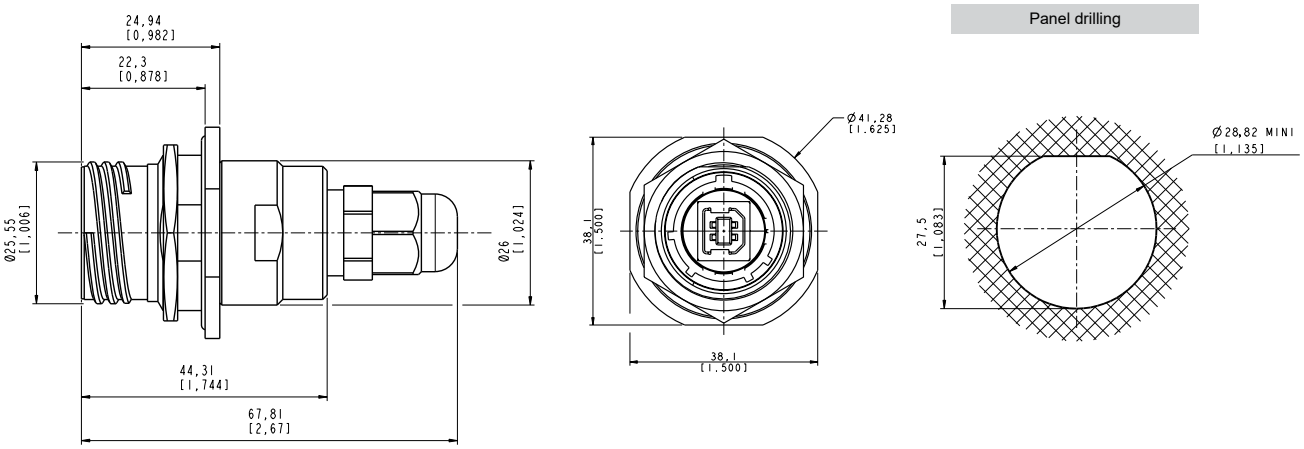
Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Back termination type 1 - Metal backshell

Part number type: **USBBF TV 7PE 1 X**

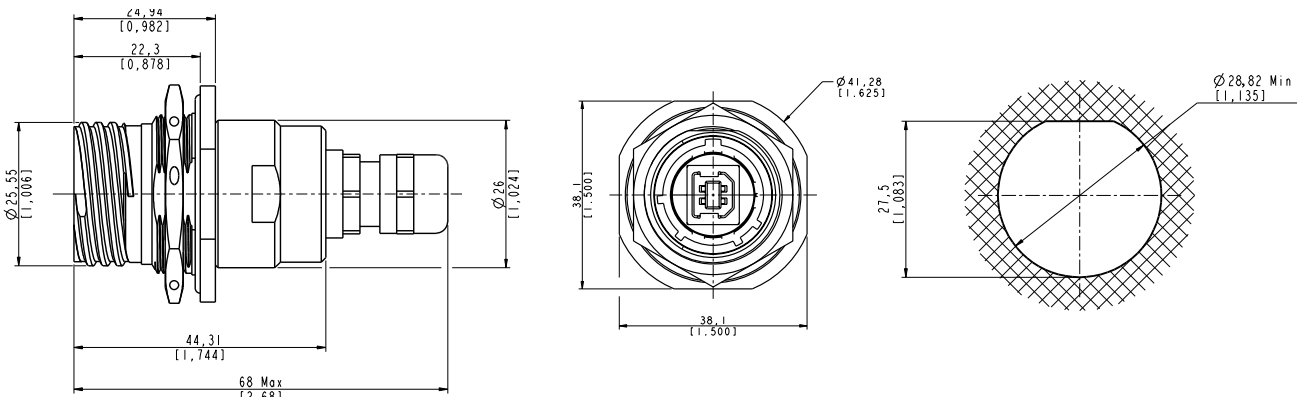


Receptacle - Jam nut receptacle - Hexagonal nut mounting - Shell type 7 - Back termination type 2 - Metal backshell

Part number type: **USBBF TV 7PE 2 X**



Part number type: **USBBF TV 7PEM 2 X**



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USBBFTV - TRANSVERSALLY SEALED RECEPTACLE



DESCRIPTION

The transversally sealed receptacle is in all aspects equivalent to the standard and in addition, is improved with compound at the rear of the receptacle. This will prevent the sealing of the receptacle when unmated with his plug or protective cap.
The hermetic solution, as the transversally sealed one is compounded at the rear of the receptacle. Helium leakage is less than 1.10-6 cm3 per second [0.1 micron cubit ft per hour] at one bar [15 psi] pressure differential. This test is performed on all of the hermetic receptacles.

MAIN FEATURES

MAIN CHARACTERISTICS

- Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) with anti-decoupling device - Shell size 15
- 2 mechanical coding/polarization possibilities by the user (receptacle insert rotation)
- Sealed against fluids and dusts (IP68)
- Shock, vibration and traction resistant
- No cabling operation in field and no tools required
- Improved EMI protection
- USBFTV plug retention in the receptacle: 100 N in the axis
- Mating cycles: 500 minimum

DATA TRANSMISSION

- USB-B
- USB specification 2.0
- Data rate: up to 480 Mb/s for high speed USB

ENVIRONMENTAL PROTECTION

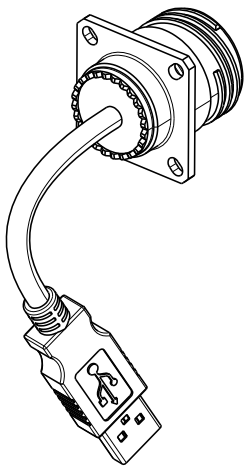
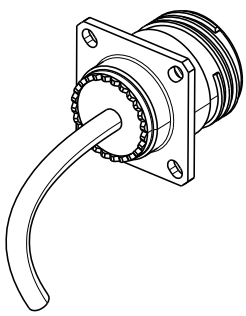
- Sealing (when mated): IP68 (temporary immersion)
- Salt spray:
  - 48 h with nickel plating ✓
  - 500 h with olive drab cadmium
  - 500 h with black zinc nickel ✓
  - 500 h with Tin-zinc plating ✓
  - 1000 h with marine bronze shell ✓
- Fire retardant / Low smoke: UL94 V0 and EN45545
- Vibrations: 10 - 500 Hz, 10 g, 3 axes: no discontinuity > 1micro s
- Shocks: IK06 > weight of 250 g drop from 40 cm [15.75 in] onto connectors (mated pair)
- Temperature range: - 40°C / +85°C

APPLICATIONS

- Battlefield communication systems
- C5ISR
- Data acquisition and transmission in harsh environment
- Navy
- Rail Mass Transit
- Industrial process control
- Robotics
- CNC machines
- Oil & Gas

✓: RoHS compliant

BACK TERMINATIONS

USB cable end type A	USB cable type «OPEN»
	

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USBBFTV - STAND OFF RECEPTACLE

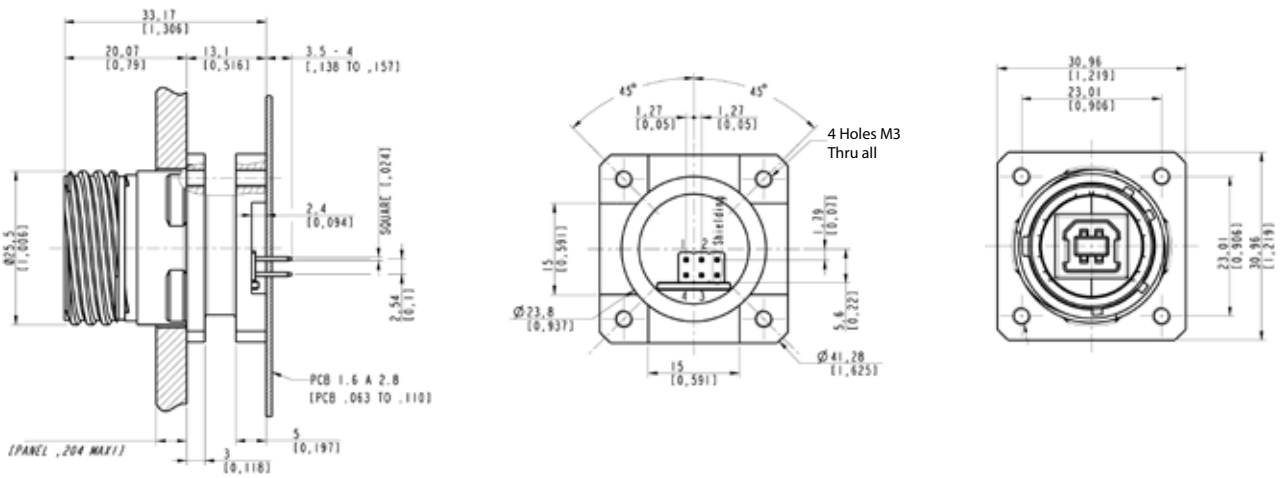


Description

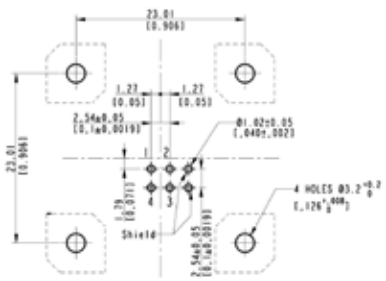
The USBBFTV enhanced design allows you to mount the connector shell directly on the PC board. Soldering your contacts directly on the board saves you a lot of space inside of your system. As this double-flange of this connector is directly fixed on the board, mechanical stresses are absorbed by the shell and not the contacts. In addition to this benefit, the sealing is improved by the compounded receptacle.

Overall dimension

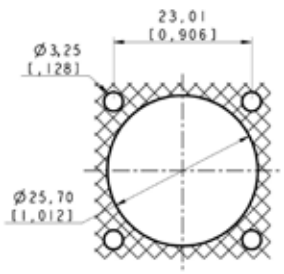
Receptacle - Square flange receptacle - 4 mounting holes - Shell type 2 - PC Tails



PCB Layout



Panel drilling



Part number	Plating
USBBF TV 2 5 N F459	Nickel ✓
USBBF TV 2 5 G F459	Olive drab cadmium
USBBF TV 2 5 ZN F459	Black Zinc Nickel ✓

✓ : RoHS compliant

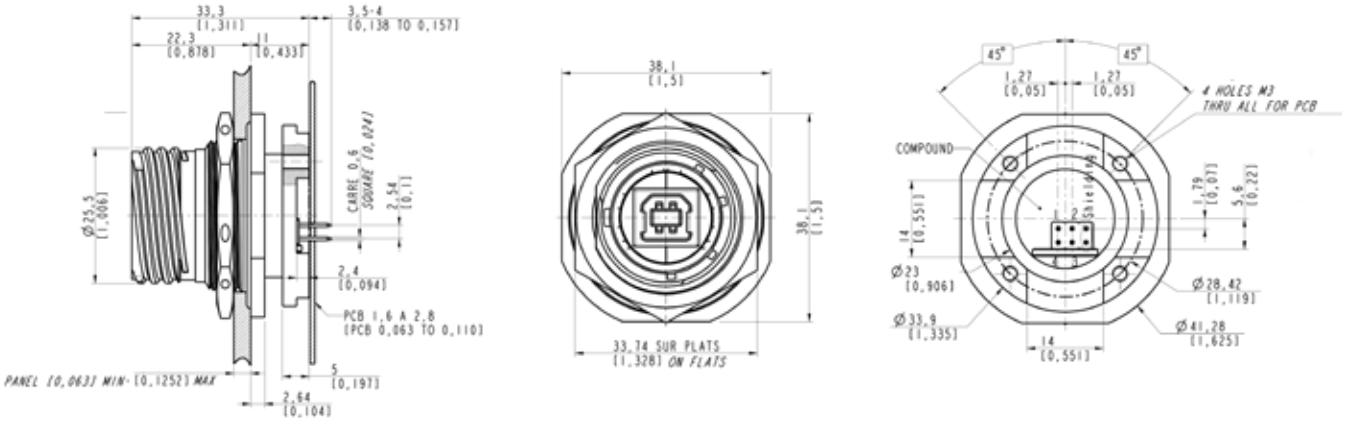
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USBBFTV - STAND OFF RECEPTACLE

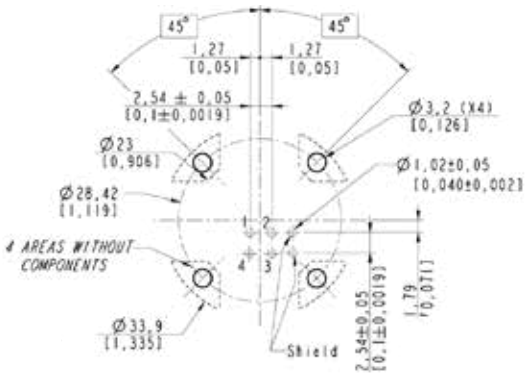


Overall dimension

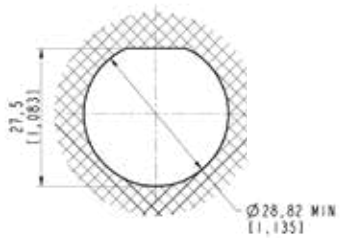
Receptacle - Jam nut receptacle - Hex nut mounting - Shell type 7 - PC Tails



PCB Layout



Panel drilling



Part number	Plating
USBBF TV 7 5 N F459	Nickel ✓
USBBF TV 7 5 G F459	Olive drab cadmium
USBBF TV 7 5 ZN F459	Black Zinc Nickel ✓

✓: RoHS compliant

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NOTES

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CABLES AND CORDSETS



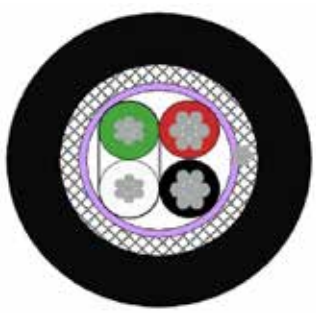


Table of contents

CABLES AND CORDSETS	69
USB3.2 Gen1 cable and cordset	70
USB2.0 cable and cordset	71

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USB3.2 GEN1 CABLE AND CORDSET



Description

This USB3.2 Gen1 cable is specifically designed for fixed or deplayable military or industrial applications. Can be ordered as cordset with USB-A at both end or as reel of 300m to be used for cabling activity. Its special polyurethane can withstand the harshest envrionement.

Design

USB3.2 Gen1 2 X Data Pair	Conductors	2 x 28 AWG Stranded tinned copper wire (Ø0,39mm)
	Insulation	Polyethylene (Ø1,0mm)
	Colors	Pair 1: Purple and orange Pair 2: Blue and yelloz
	Drain	2 x 28 AWG Stranded tinned copper drain wire (Ø0,39mm)
	Shield	Aluminate foil and plastic tape overlapped
USB2.0 1 X Data Pair	Conductors	2 x 28 AWG Stranded tinned copper wire (Ø0,39mm)
	Insulation	Polyethylene (Ø0,73mm)
	Colors	Green and White
Power 1 X Power Pair	Conductors	2 x 24 AWG Stranded tinned copper wire (Ø0,6mm)
	Insulation	Polyethylene (Ø1,1mm)
	Colors	Red and Black
Overall		Fillers, Aluminate foil overlapped and 36 AWG shield braiding of tinned copper wires
Jacket	Insulation	Polyurethane (Ø5,7±0,2mm)
	Color	Black

Electrical characteristics at 20°c

USB3.2 Gen1 2 X Data Pair	Test voltage	500 V	
	Impedance	90±7% Ohm	
	Attenuation (dB/100m)	625 MHz - 10 1 250 MHz - 15 2 500 MHz - 25	5 000 MHz - 36 7 500 MHz - 47
	Outer screen resistance	≤ 15 Ohm/km	
USB2.0 1 X Data Pair	Test voltage	500 V	
	Impedance	90±15% Ohm	
	Attenuation (dB/100m)	1 MHz - 4,0 4 MHz - 7,8 8 MHz - 11,4 12 MHz - 13,4 24 MHz - 19,0	48 MHz - 27,0 96 MHz - 38,0 200 MHz - 64,0 400 MHz - 116,0
Power Wire	Conductor resistance	≤ 85 Ohm/km	
	Insulation resistance	≥ 200 MOhm*km	
	Operating voltage	≤ 1 000 V	
	Test voltage	500 V	

Other characteristics

Halogen Free Flame Retardant	Resistance to microbial/fungus growth: MIL-STD-810G, method 508.6 = grade 1-2
Oil resitance acc. to 1584, sec. 480 (60°)	Min. bending radius allowed: repeated 10 X Ø single 5 X Ø
Flame retardant acc. to UL 1581, sec. 1090 (H) Flame retardant acc. to IEC 60332-1-2	Permissible temperature range for transport, installation and operating: -40°C up to 85°C
RoHS compliant (Directive 2011/65/EC)	Weight: 46 kg/km

HOW TO ORDER : PLEASE REFER TO PAGE 126

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USB2.0 CABLE AND CORDSET



Description

This USB2.0 cable has been specially selected for fixed or portable military or industrial applications. Can be ordered as cordset with USB-A at both end or as reel of 300m to be used for cabling activity. Its special polyurethane can withstand the harshest envrionement.

Design

USB2.0 1 X Data Pair	**Conductors**	2 x 28 AWG Stranded tinned copper wire (Ø0,39mm)
	Insulation	Polyethylene (Ø0,9mm)
	Colors	Green and White
Power 1 X Power Pair	**Conductors**	2 x 24 AWG Stranded tinned copper wire (Ø0,58mm)
	Insulation	Polyethylene (Ø1,1mm)
	Colors	Red and Black
Drain Wire	**Conductor**	26 AWG Stranded tinned copper drain wire
Overall		Aluminate foil overlapped and shield braiding of tinned copper wires (16 x 5 x 0,1)
Jacket	**Insulation**	UV resistant polyurethane (Ø5,1±0,2mm)
	Color	Black

Electrical characteristics at 20°c

USB2.0 1 X Data Pair	**Test voltage**	1000 V	
	Attenuation (dB/100m)	1 MHz - 4,0 4 MHz - 5,5 8 MHz - 8,2 12 MHz - 9,9 24 MHz - 14,1	48 MHz - 19,8 96 MHz - 28,6 200 MHz - 39,2 400 MHz - 56,5
Power Wire	**Conductor resistance**	≤ 90 Ohm/km	
	Insulation resistance	≥ 20 MOhm*km	
	Operating voltage	≤ 100 V	
	Test voltage	1000 V	

Other characteristics

Halogen Free Flame Retardant	Resistance to microbial/fungus growth: MIL-STD-810G, method 508.6 = grade 1-2
Oil resitance acc. to 1584, sec. 480 (60°)	Min. bending radius allowed: repeated 10 X Ø single 5 X Ø
Flame retardant acc. to UL 1581, sec. 1090 (H) Flame retardant acc. to IEC 60332-1-2	Permissible temperature range for transport, installation and operating: -40°C up to 85°C
RoHS compliant (Directive 2011/65/EC)	Weight: 46 kg/km

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Table of contents

ADAPTORS AND ACCESS POINTS	73
Composite USB3.2 Gen 1 access point	74
USB3.2 Gen1 and USB2.0 access point	77
Composite USB2.0 access point	79
USB2.0 to type EN3646 - PT/451 - ABS1547 adaptor	84

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COMPOSITE USB3.2 GEN1 ACCESS POINT



DESCRIPTION

The rugged USB3.2 Gen1 plastic access point is a rugged USB access point solution designed to be used in any industrial harsh environments.

The Self Closing Cap enclosure protects the USB-A receptacle from splash and dust when the plug or the USB Memory key is unmated.

MAIN FEATURES

MAIN CHARACTERISTICS

- Data transmission: USB specification 3.2 Gen 1
- Data rate: up to 5GB/s for high speed USB
- USB-A interface
- USB2.0 backward compatible

ENVIRONMENTAL PROTECTION

- Sealing level: IP54 when not mated
- Temperature range: - 40°C / + 85°C
- RoHS compliant

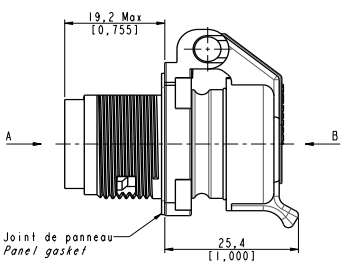
APPLICATIONS

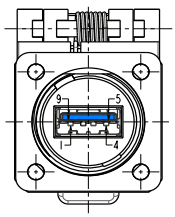
- Access point
- Telecom equipments
- Video control
- Robotics
- Industrial process control
- CNC machines
- Special machines

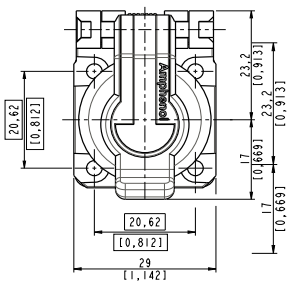
OVERALL DIMENSION

Square flange receptacle – Shell type 2 - 4 mounting holes

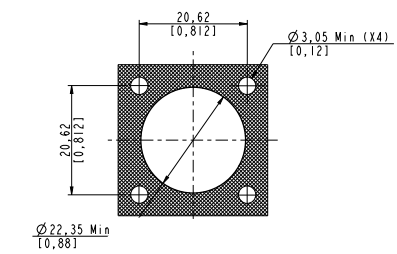
Part number type: **USB3APSCC 2 1**







Panel Drilling



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COMPOSITE USB3.2 GEN1 ACCESS POINT

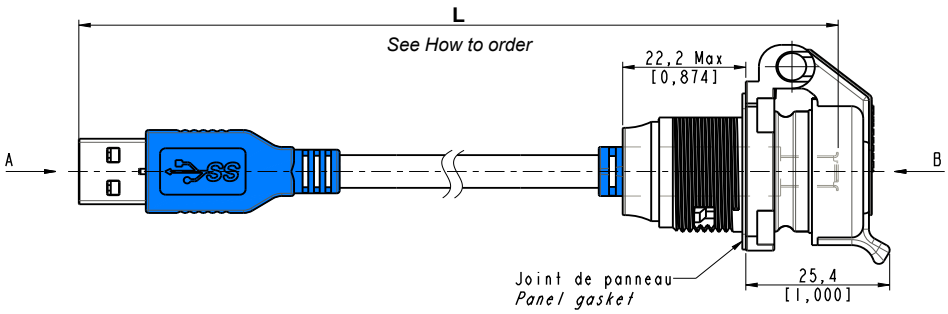


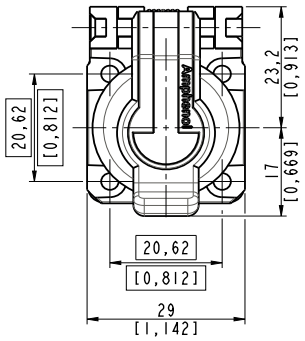
Overall dimension

Square flange receptacle – Shell type 2 - With cordset - 4 mounting holes

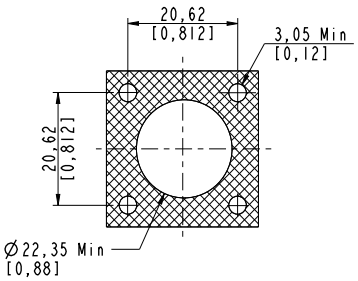
Part number type: **USB3APSCC 2 2 XX A**

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



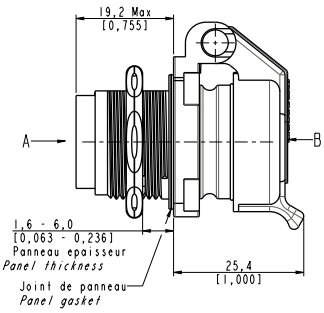


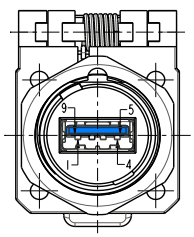
Panel Drilling

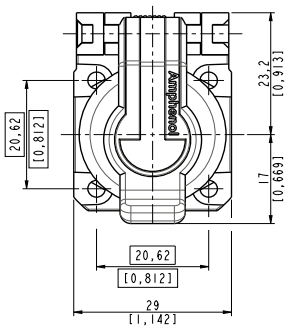


Jam nut receptacle – Shell type 7

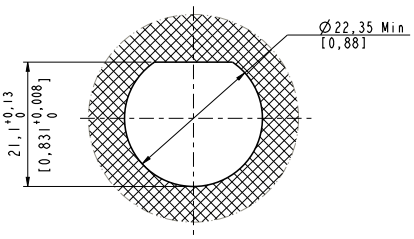
Part number type: **USB3APSCC 7 1**







Panel Drilling



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COMPOSITE USB3.2 GEN1 ACCESS POINT

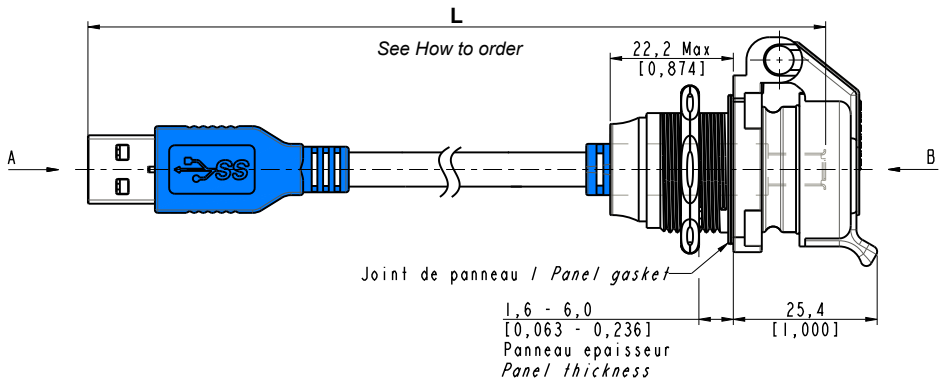


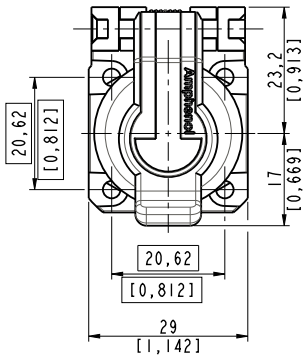
Overall dimension

Jam nut receptacle – Shell type 7 - With cordset

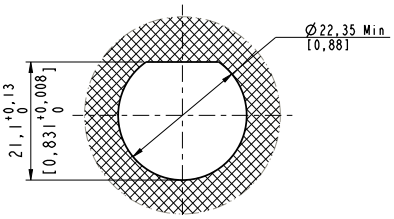
Part number type: **USB3APSCC 7 2 XX A**

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





Panel Drilling



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USB3.2 GEN1 AND USB2.0 ACCESS POINT

DESCRIPTION

This USB receptacle is perfectly suitable for access point applications to connect a standard USB key or a USB cable. These receptacles are available on USB3.2 Gen1 - Type A and USB2.0 - Type A or B.
The square flange receptacle is a derivate from MIL-DTL-26482 series size 18. The included composite self-closing cap protects your receptacle against splash and dust.

MAIN FEATURES

MAIN CHARACTERISTICS

- Sealing level: IP54 when not mated
- Temperature range: -40°C / +85°C
- RoHS compliant

DATA TRANSMISSION

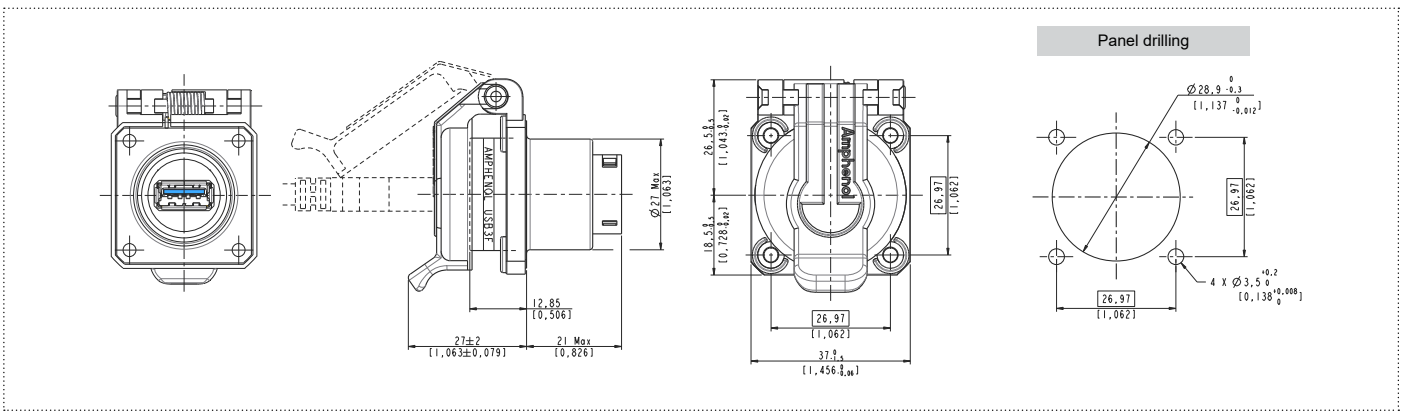
- UBS-A
- USB specification 3.2 Gen1
- Data rate: up to 5 Gb/s for high speed USB
- USB specification 2.0
- Data rate: up to 480 Mb/s for high speed USB

APPLICATIONS

- Access point
- Telecom equipments
- Video control
- Robotics
- ndustrial process control
- CNC machines
- Special machines

OVERALL DIMENSION

USB3.2 Gen1 access point - With self-closing cap



Important note:
- The part number included the receptacle and the self-closing cap.
- This version is with USB-A in front and back termination.

Part number	Plating	Metallized inserts (EMI)
USB3 F 2 B SCC	Black coated ✓	No
USB3 F 2 N SCC	Nickel plated ✓	Yes
USB3 F 2 G SCC	Olive drab cadmium plated	Yes
USB3 F 2 ZN SCC	Black Zinc Nickel ✓	No

✓: RoHS compliant

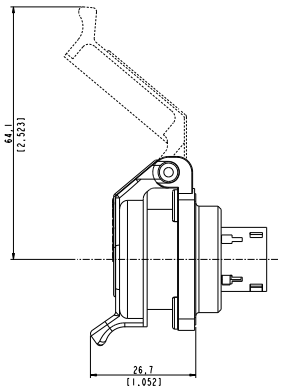
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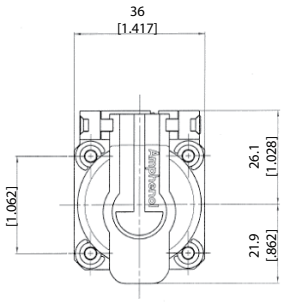
USB3.2 GEN1 AND USB2.0 ACCESS POINT

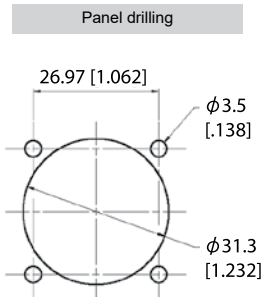


Overall dimension

USB2.0 access point - With self-closing cap



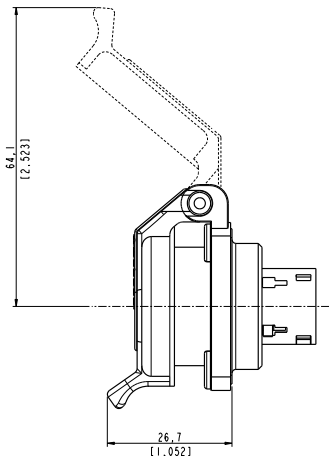


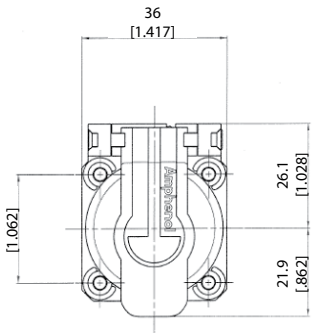


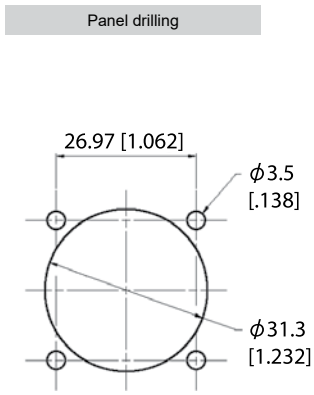
Important note:
- The part number included the receptacle and the self-closing cap.
- This version is with USB-B in front and USB-A in back termination.

Part number	Plating	Metallized inserts (EMI)
USB F 2 1 B SCC	Black coated ✓	No (blank insert)
USB F 2 1 N SCC	Nickel plated ✓	Yes
USB F 2 1 G SCC	Olive drab cadmium plated	Yes
USB F 2 1 ZN SCC	Black zinc nickel ✓	No

USBB access point - With self-closing cap







Important note:
- The part number included the receptacle and the self-closing cap.
- This version is with USB-B in front and USB-A in back termination.

Part number	Plating	Metallized inserts (EMI)
USBB F 2 1 B SCC	Black coated ✓	No (blank insert)
USBB F 2 1 N SCC	Nickel plated ✓	Yes
USBB F 2 1 G SCC	Olive drab cadmium plated	Yes
USBB F 2 1 ZN SCC	Black Zinc Nickel ✓	No

✓: RoHS compliant

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COMPOSITE USB2.0 ACCESS POINT



DESCRIPTION

The rugged USB plastic access point is a rugged USB access point solution designed to be used in any industrial harsh environments.
The Self Closing Cap enclosure protects the USB-A Field receptacle from splash and dust when the plug or the USB Memory key is unmated.

MAIN FEATURES

MAIN CHARACTERISTICS

- Data transmission: USB specification 2.0
- Data rate: up to 480 Mb/s for high speed USB
- UBS-A
- Sealing level: IP54 when not mated
- Temperature range: -40°C / +85°C
- RoHS compliant

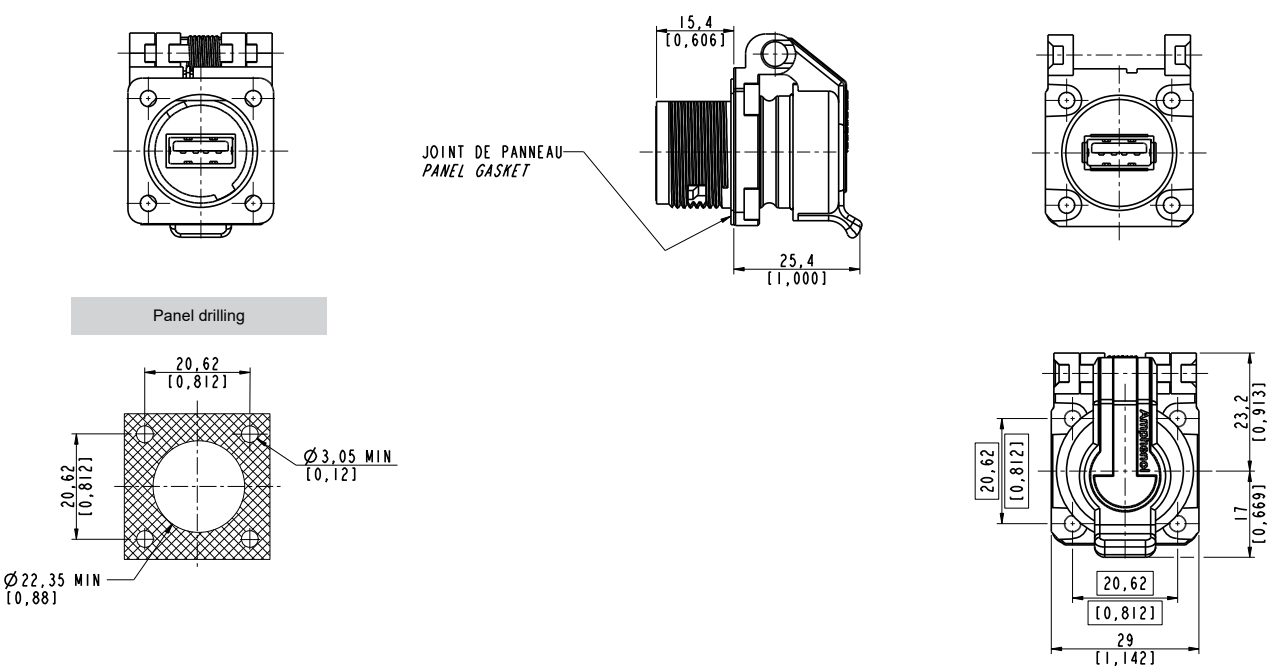
APPLICATIONS

- Access point
- Telecom equipments
- Video control
- Robotics
- Industrial process control
- CNC machines
- Special machines

OVERALL DIMENSION

Square flange access point

Part number : **USB AP SCC 21**



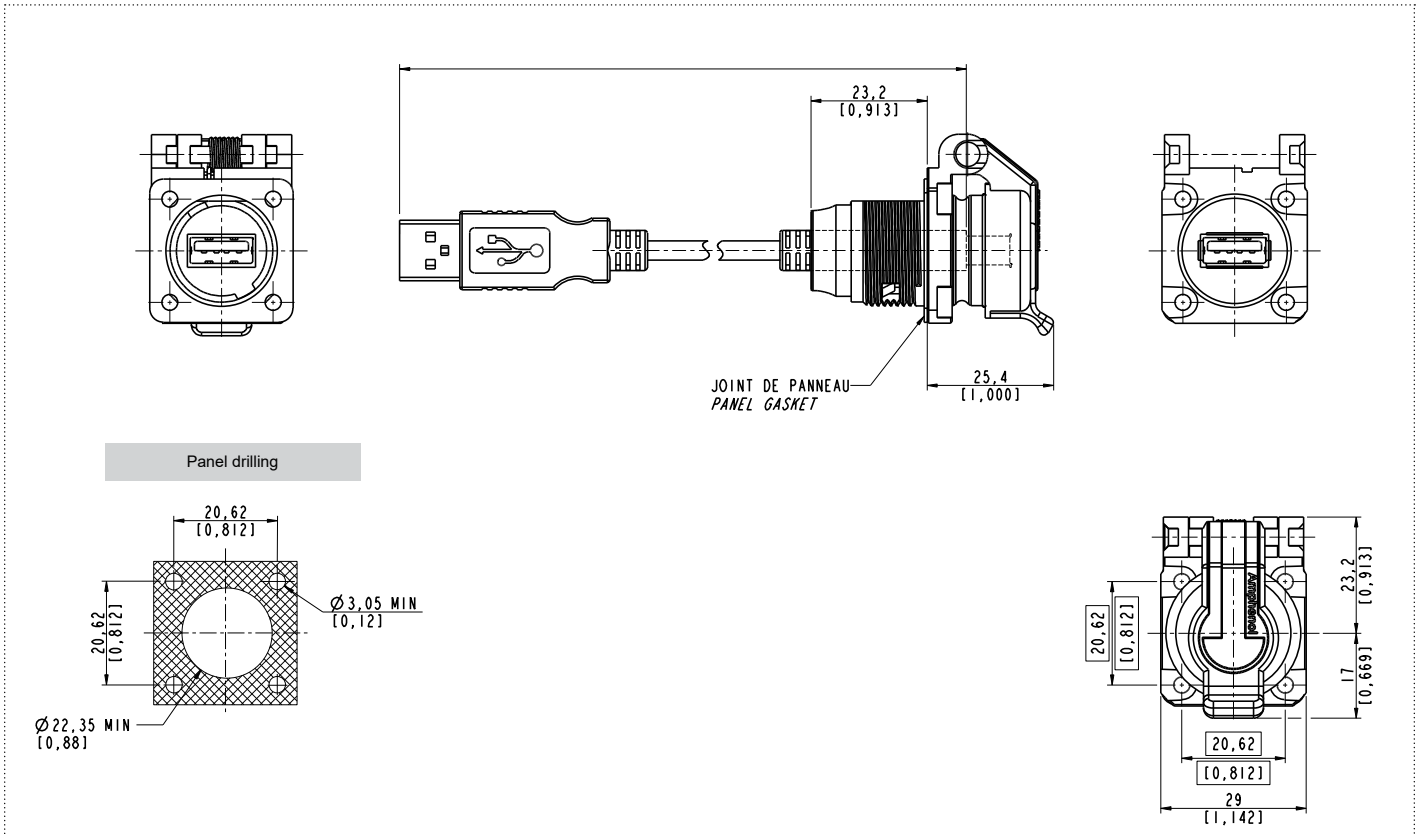
Downloaded from Arrow.com.

COMPOSITE USB2.0 ACCESS POINT



Overall dimension

Square flange access point - USB-A cordset



Part number	Cordset length (Meters)	Cordset length (Feet)
USB AP SCC 22 02 A	0.2	0.66
USB AP SCC 22 03 A	0.3	0.98
USB AP SCC 22 05 A	0.5	1.65
USB AP SCC 22 10 A	1.0	3.28

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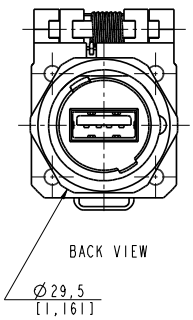
COMPOSITE USB2.0 ACCESS POINT

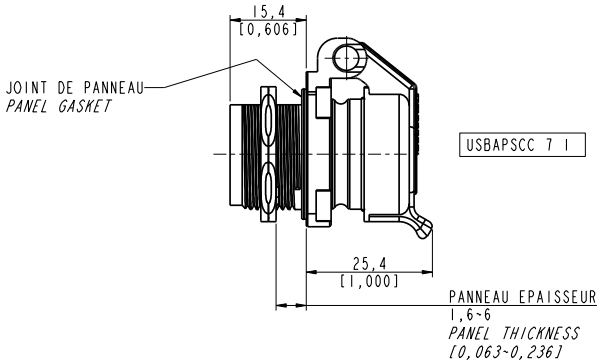


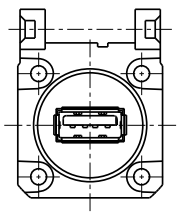
Overall dimension

Jam nut access point

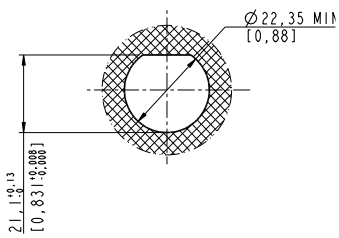
Part number : **USB AP SCC 7 1**

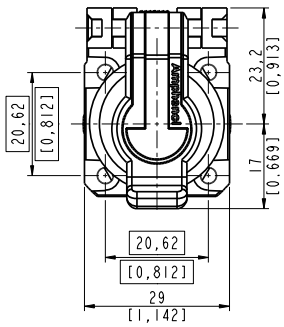




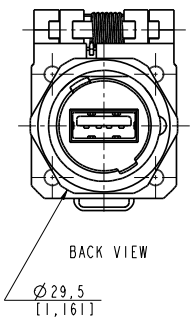


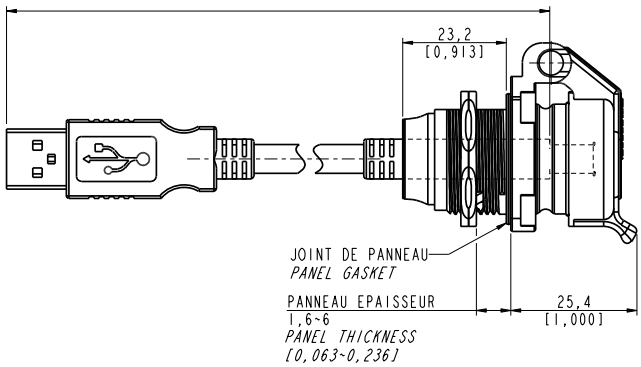
Panel drilling

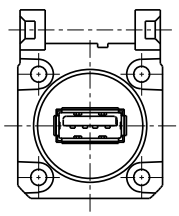




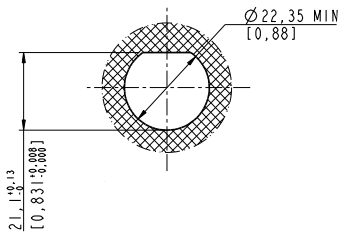
Jam nut access point - USB-A cordset

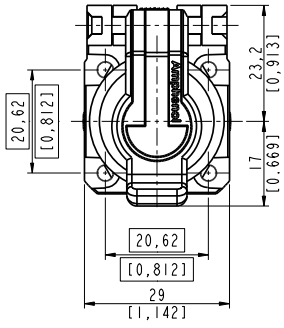






Panel drilling





Part number	Cordset length (Meters)	Cordset length (Feet)
USB AP SCC 7 2 02 A	0.2	0.66
USB AP SCC 7 2 03 A	0.3	0.98
USB AP SCC 7 2 05 A	0.5	1.65
USB AP SCC 7 2 10 A	1.0	3.28

Due to technical modifications, all information provided is subject to change without prior notice
Designed by Amphenol Socapex

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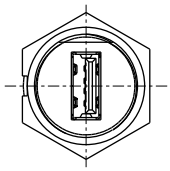
COMPOSITE USB2.0 ACCESS POINT

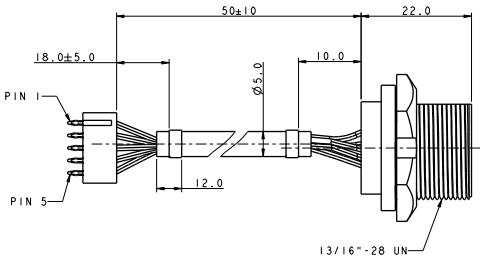


Overall dimension

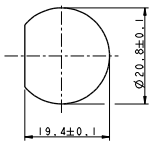
USB-A receptacle and plug

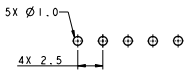
Part number : **USB AF 7**

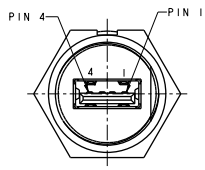




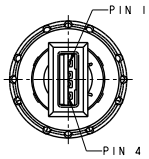
Panel drilling	PCB layout	Pin assigments

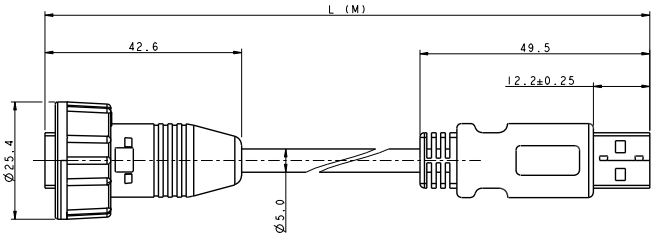


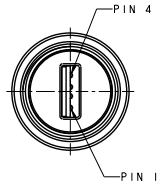




Part number type: **USB AF 6A XXX**







Part number	Cordset length (Meters)	Cordset length (Feet)
USB AF 6A 200	2.0	3.28
USB AF 6A 500	5.0	16.40

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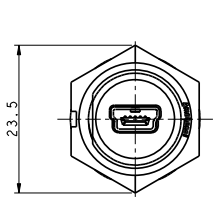
COMPOSITE USB2.0 ACCESS POINT

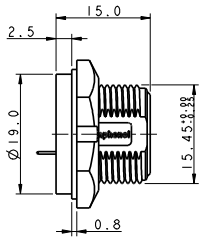


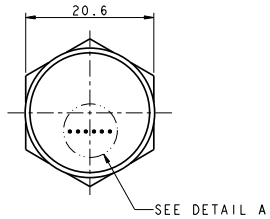
Overall dimension

USB Mini B receptacle and plug

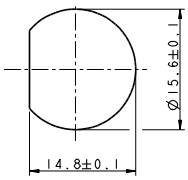
Part number : **USB MINI BF 7 PCB**

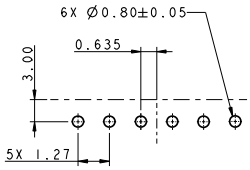


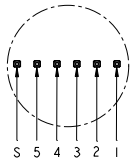


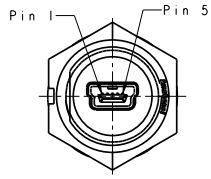


Panel drilling	PCB layout	Detail A	Pin assigments

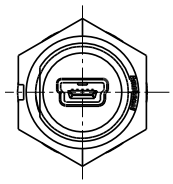


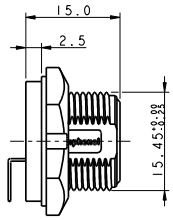


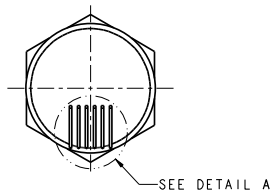




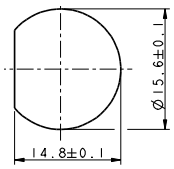
Part number : **USB MINI BF 7 PCB 90**

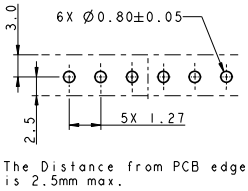


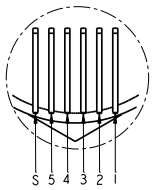


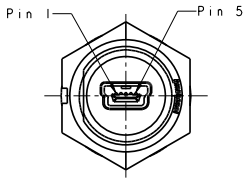


Panel drilling	PCB layout	Detail A	Pin assigments

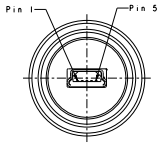


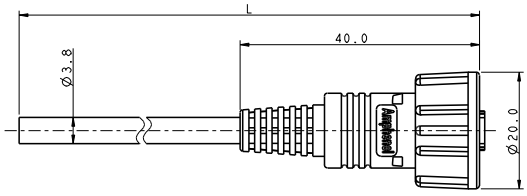


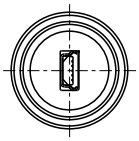




Part number type: **USB MINI BF 6 XXX OPEN**







Part number	Cordset length (Meters)	Cordset length (Feet)
USB MINI BF 6 200 OPEN	2.0	3.28
USB MINI BF 6 500 OPEN	5.0	16.40

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USB2.0 TO TYPE EN3646 - PT/451 - ABS1547 ADAPTOR

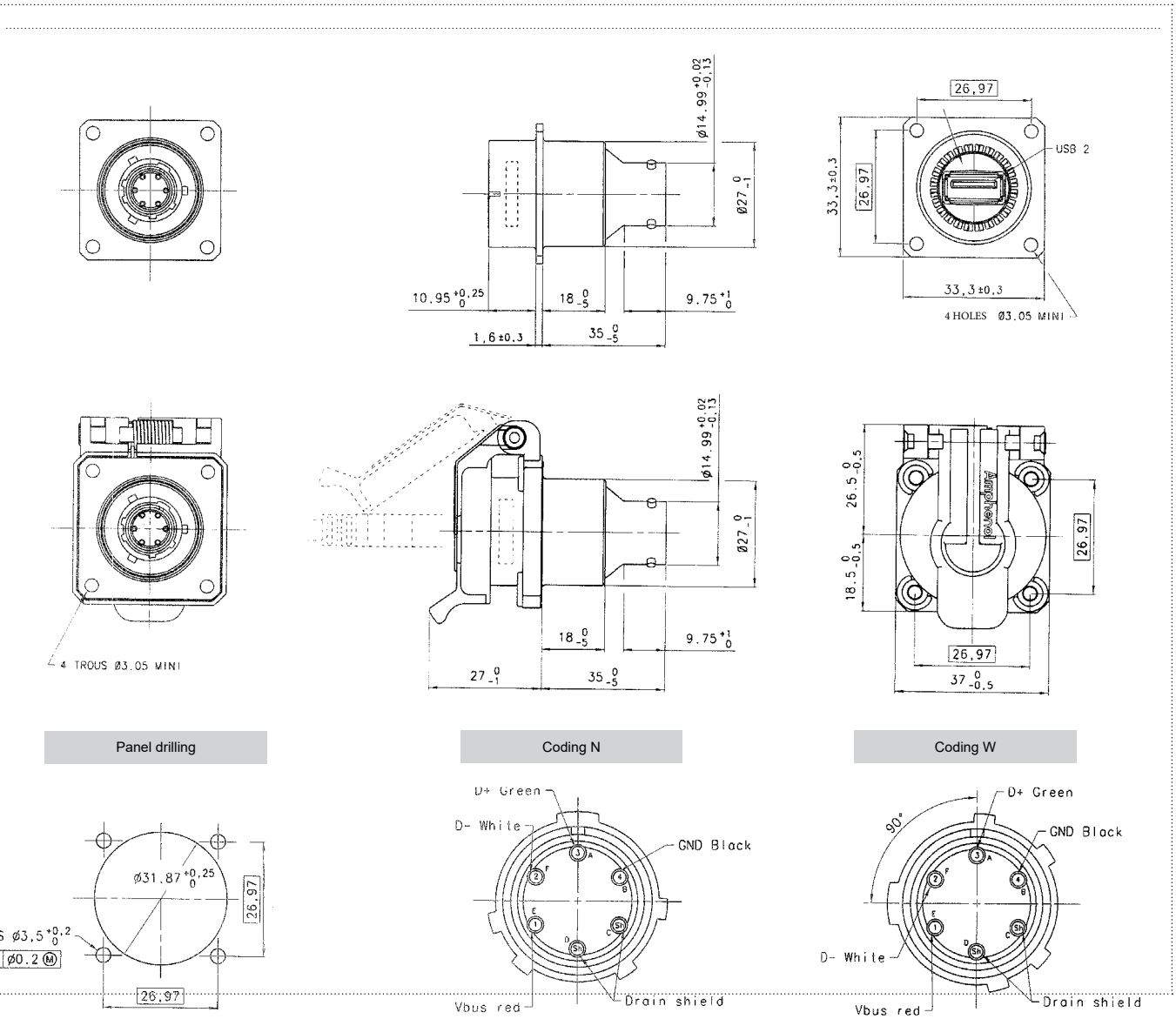


Description

This special USB adaptor is the easiest way to connect your EN3646 and PT/451 connector to a USB 2.0 - Type A. Connector. The arrangement of this connector is 10-6 as below. If you want to use this adaptor as an access point, you can include a composite self-closing cap to protect your receptacle against splash and dust. This adaptor is qualified ABS1547.

Overall dimension

USB adaptor to EN3646 - PT/451 with 10-6 arrangement - With or whithout self-closing cap



Part number	ABS1547 part number	Plating	Coding	Self-closing cap
35608N	ABS1547-003A02N	Black anodized ✓	N	No
35615W	ABS1547-003A02W		W	
35616N	ABS1547-003A03N		N	Yes
35617	ABS1547-003A03W		W	

✓: RoHS compliant

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RUGGED ELECTRONICS



Table of contents

RUGGED ELECTRONICS	86
USB3CFTV Memory key	87
USB3FTV™ Memory key	88
USB3FTV™ Memory key high capacity	89
ROK - Rugged Oval Key	91
USB3FTV™ - USB3.2 Gen 1 amplifier	92
USBFTV™ - USB2.0 amplifier	95

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USB3CFTV™ MEMORY KEY



DESCRIPTION

USB3.2 Gen1 Type C reinforced memory keys allows you to carry sensitive information in total security in harsh military, avionics/airframe or industrial environment. Its design, based on MIL-DTL-38999 series III can only be mated to our USB3CF TV receptacles and is available, as standard, in capacities from 16 to 256Gb.

Electronics used in our reinforced USB keys are from the latest generation, using TLC 3D flash technology (BiCS3) and benefit from PLM "Product Life Management" which means that we can inform in advance about future possible evolutions.

MAIN FEATURES

MAIN CHARACTERISTICS

- Available capacities : 16, 32, 64, 128 & 256Gb.
- Compatible only with USB3CFTV receptacles.
- Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) with anti-decoupling device.
- Shell size 11.
- PLM "Product Life Management" : future evolution and obsolescence notification.

DATA TRANSMISSION

- USB3.2 Gen1 max transfer rate : 5 Gb/s.
- Compatible with USB2.0 transfer with 480Mb/s.
- TLC 3D flash technology (BiCS3).
- MTBF: >4 000 000 hours.
- Global Wear Leveling.
- Flash bad-block management.

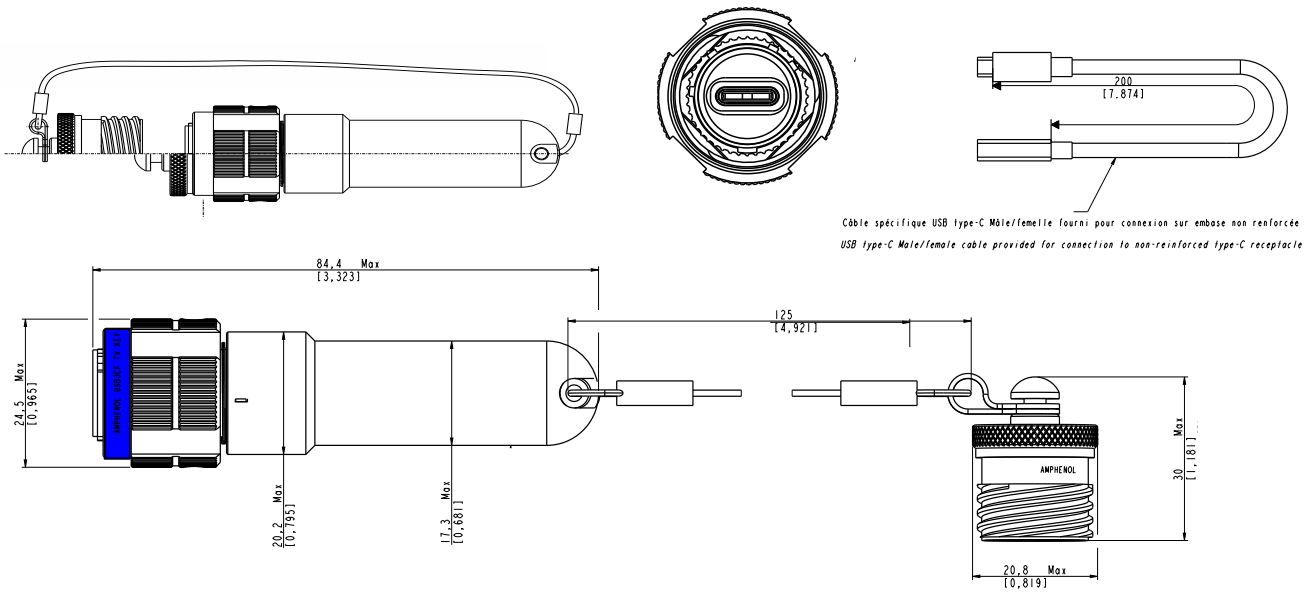
ENVIRONMENTAL PROTECTION :

- Sealed against fluids and dusts : IP68 mated.
- Salt spray: Aluminium shell :
  - Nickel plating √ : 48h
  - Black zinc nickel plating √ : 500h
  - Olive drab cadmium plating : 500h
  - Tin-zinc plating √ : 500h NEW
- Vibrations: MIL-STD-810-H, Method 514.8, Category 14
- Temperature range: - 40°C / +85°C (MIL-STD-810F)
- Data transmission during vibration & temperature tests

√ : RoHS compliant

OVERALL DIMENSION

Part number type: **USB3CF TV KEY 6 XX X XXX**



HOW TO ORDER : PLEASE REFER TO PAGE 129

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USB3FTV™ MEMORY KEY



DESCRIPTION

The USB3.2 Gen1 reinforced memory key allows you to carry sensitive information in total security. Its design, based on MIL-DTL-38999 series III can only be mated to our USB3FTV™ or USBFTV™ receptacles and is available, as standard, in capacities from 32 to 256Gb. We provide reinforced USB memory keys available in different capacities.

MAIN FEATURES

MAIN CHARACTERISTICS

- Type: USB3.2 Gen1 (capacities 512 GB)
- Only compatible with USB3FTV and USBFTV receptacle
- UBS-A
- Voltage: 5V DC - 500 mA max

SPECIFIC FEATURES

- Engineering control (Product change notice & end of life Policy)
- Flash technology : 3D-BiSC4 TLC
- Wear Leveling function
- MTBF: 4,000,000 hours

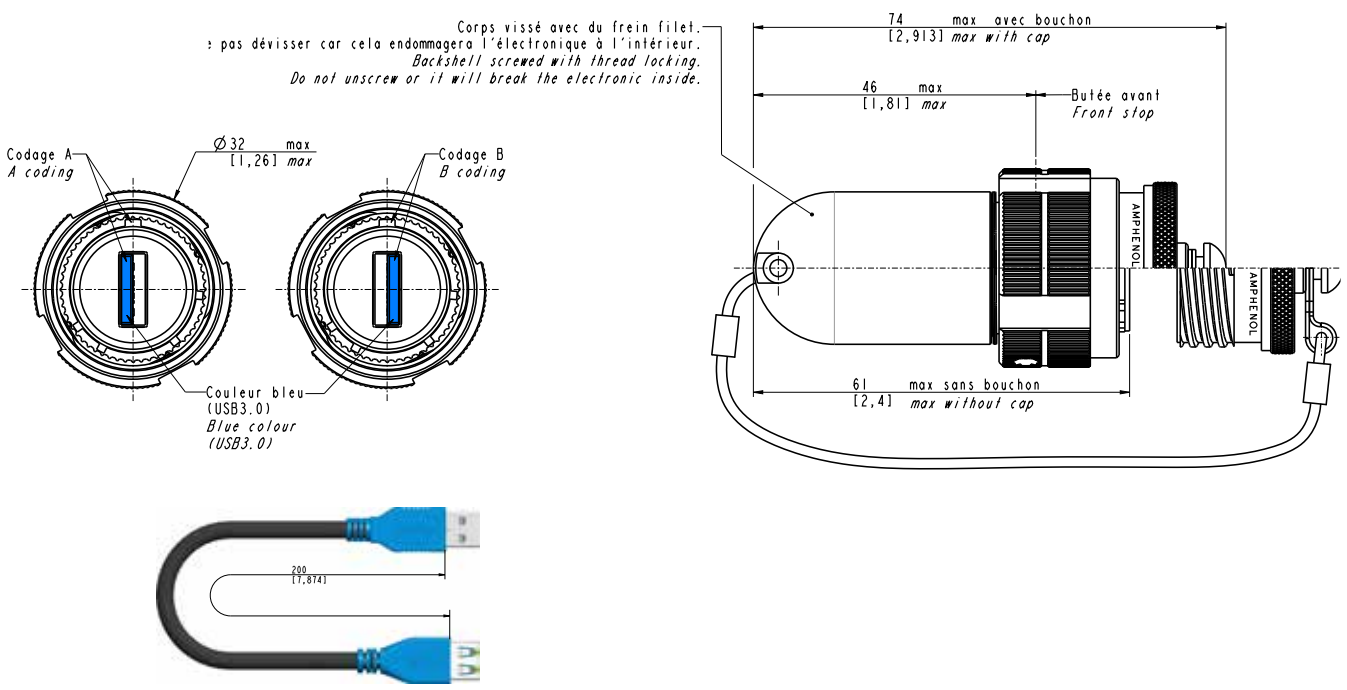
ENVIRONMENTAL PROTECTION

- Sealing: IP68 (when mated)
- Salt spray:
  - 48 h with nickel plating ✓
  - 500 h with olive drab cadmium
  - 500 h with black zinc nickel ✓ NEW
- Vibrations: MIL-STD-810H method 514.8
- Temperature range: - 40°C / +85°C (MIL-STD-810F)
- Data transmission during vibration & temperature tests

✓: RoHS compliant

OVERALL DIMENSION

Part number type: USB3FTV KEY X XXX X XXX APA UV



IMPORTANT NOTE:

- - Under request, we can provide you with electronic manufacturer details so you can check if their specific configuration will work with the electronic (please specify memory capacity).
- - USB3FTV memory key has to be used with USBFTV receptacle (3.2 Gen1 and 2.0).

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USB3FTV™ MEMORY KEY HIGH CAPACITY



DESCRIPTION

The USB3.2 Gen1 reinforced memory key allows you to carry sensitive information in total security. Its design, based on MIL-DTL-38999 series III can only be mated to our USB3FTV™ or USBFTV™ receptacles. The USB3.2 Gen1 reinforced memory key is available in high-capacitiy 512 Gb.

MAIN FEATURES

MAIN CHARACTERISTICS

- Type: USB3.2 Gen1 (capacities 512 GB)
- Only compatible with USB3FTV and USBFTV receptacle
- UBS-A
- Voltage: 5V DC - 500 mA max

SPECIFIC FEATURES

- Engineering control (Product change notice & end of life Policy)
- Flash technology : 3D-BiSC4 TLC
- Wear Leveling function
- MTBF: 4,000,000 hours

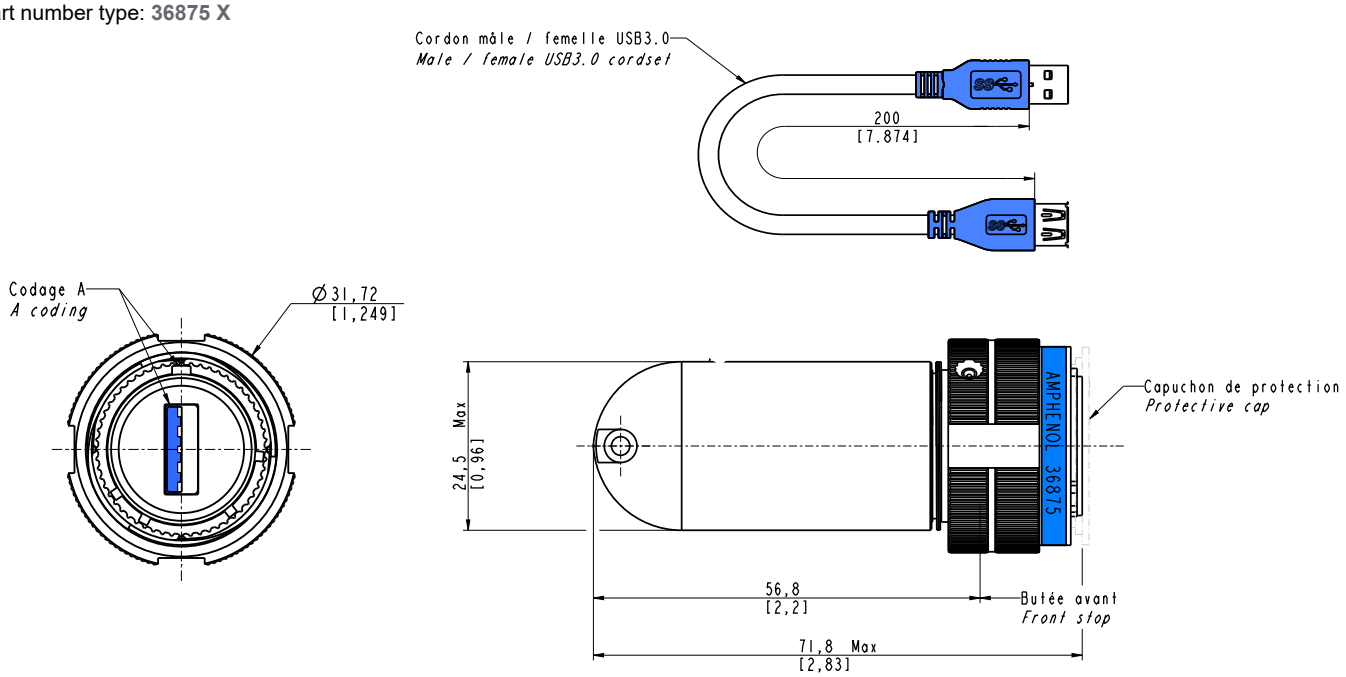
ENVIRONMENTAL PROTECTION

- Sealing: IP68 (when mated)
- Salt spray:
  - 48 h with nickel plating ✓
  - 500 h with olive drab cadmium
  - 500 h with black zinc nickel ✓
- Vibrations: MIL-STD-810H method 514.8
- Temperature range: - 40°C / +85°C (MIL-STD-810F)
- Data transmission during vibration & temperature tests

✓: RoHS compliant

OVERALL DIMENSION

Part number type: **36875 X**



Plating		
Black zinc nickel ✓	Nickel ✓	Olive drab cadmium
36 875 ZN	36 875	36 875 G

IMPORTANT NOTE:

- Under request, we can provide you with electronic manufacturer details so you can check if their specific configuration will work with the electronic (please specify memory capacity).
- USB3FTV memory key has to be used with USBFTV receptacle (3.2 Gen1 and 2.0).

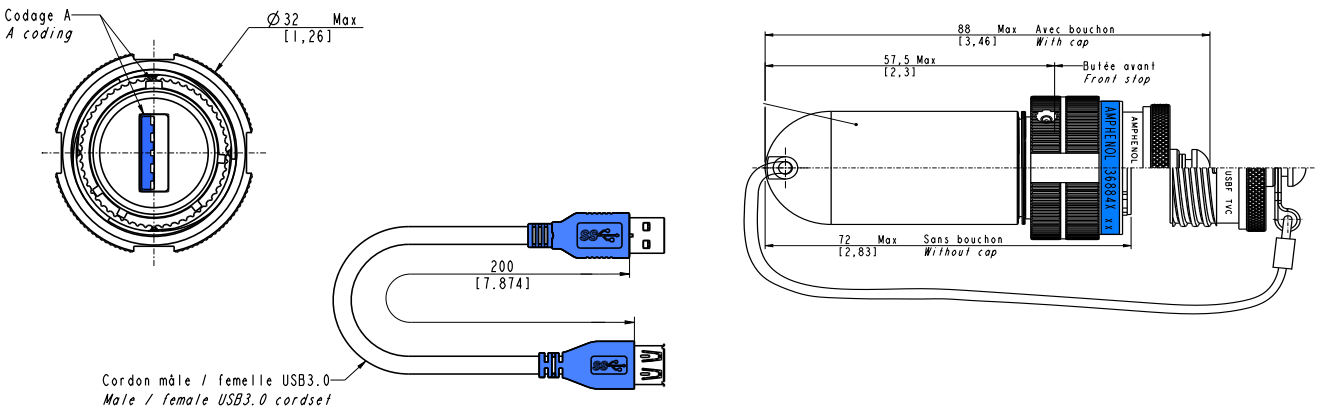
Downloaded from Arrow.com.

USB3FTV™ MEMORY KEY HIGH CAPACITY



Overall dimension

Part number type: **36884 X**



Plating		
Black zinc nickel ✓	Nickel ✓	Olive drab cadmium
36 884 ZN	**36 884 N**	**36 884 G**

✓ : RoHS compliant

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ROK - RUGGED OVAL KEY



DESCRIPTION

ROK, Rugged Oval Key is a reinforced memory key that allows you to save and carry your information in total security. This memory key cannot be damaged. It is fire proof and so durable that it can be run over by truck and remain undamaged. This rugged memory key is available in capacities from 16 to 256Gb, fast with a USB3.2 Gen1 transfer rate of 5 Gb/s and can be connected to any USB port.

MAIN FEATURES

MAIN CHARACTERISTICS

- Type: USB3.2 Gen1 (capacities 32, 64, 128 & 256 GB)
- Compatible with any USB port receptacle.
- Black painting ✓

DATA TRANSMISSION

- USB3.2 Gen1 max transfer rate : 5 Gb/s
- Compatible with USB2.0 transfer with 480Mb/s.

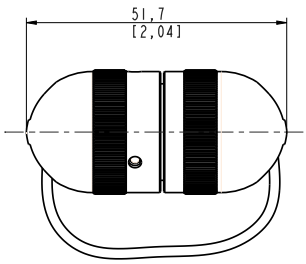
ENVIRONMENTAL PROTECTION

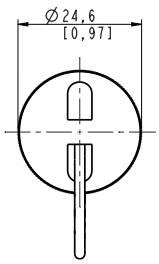
- Resitance against shocks, fire, vibrations.
- Sealed against fluids and dusts : IP68 mated.
- Storage temperature : - 10°C / +70°C.
- Operating temperature : 0°C / +35°C.

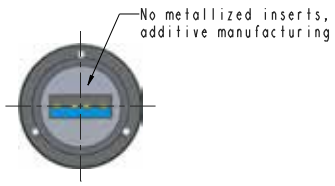
✓: RoHS compliant

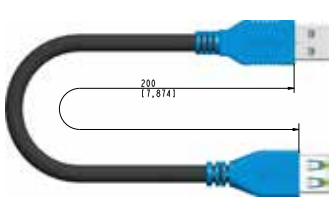
OVERALL DIMENSION

Part number type: USB3F KEY XXX X











HOW TO ORDER : PLEASE REFER TO PAGE 131

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USB3FTV - USB3.2 GEN 1 AMPLIFIER



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

✓: RoHS compliant

ENVIRONMENTAL PROTECTION

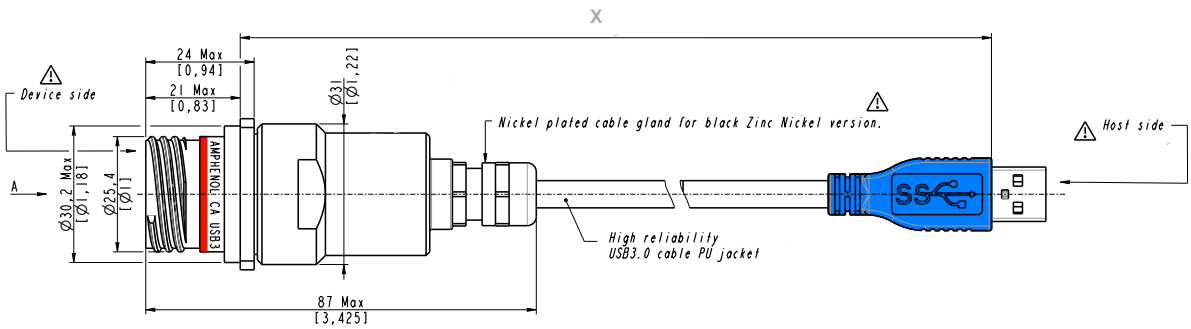
- Sealing (when mated): IP68 (temporary immersion)
- Salt spray:
  - 48 h - Aluminum shell with Nickel plating ✓
    - 500 h - Aluminum shell with Black zinc nickel plating ✓
    - 500 h - Aluminum shell with Olive drab cadmium plating
  - 500 h - Aluminum shell with Tin-zinc plating ✓ NEW
    - 500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

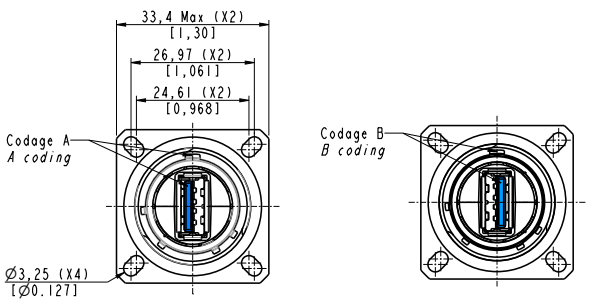
OVERALL DIMENSION

Square flange receptacle – Shell type 2 - 4 mounting holes

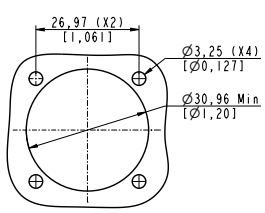
Part number type: CA USB3 FTV 2 X X XX

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





Panel Drilling



HOW TO ORDER : PLEASE REFER TO PAGE 132

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USB3FTV - USB3.2 GEN 1 AMPLIFIER

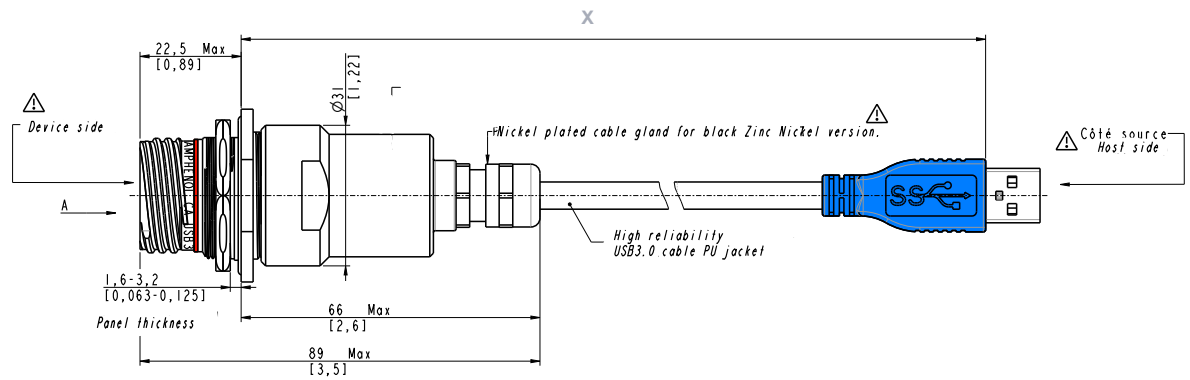


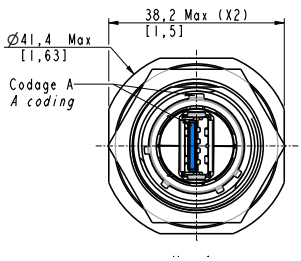
Overall dimension

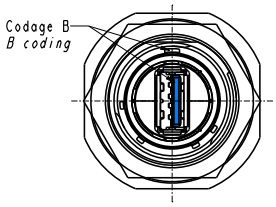
Jam nut receptacle – Shell type 7 - Hexagonal nut mounting

Part number type: CA USB3 FTV 7 X X XX

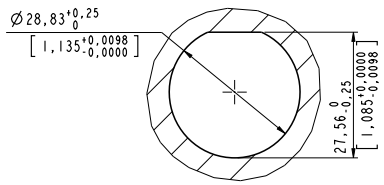
X: see the How to order to complete your part number







Panel Drilling



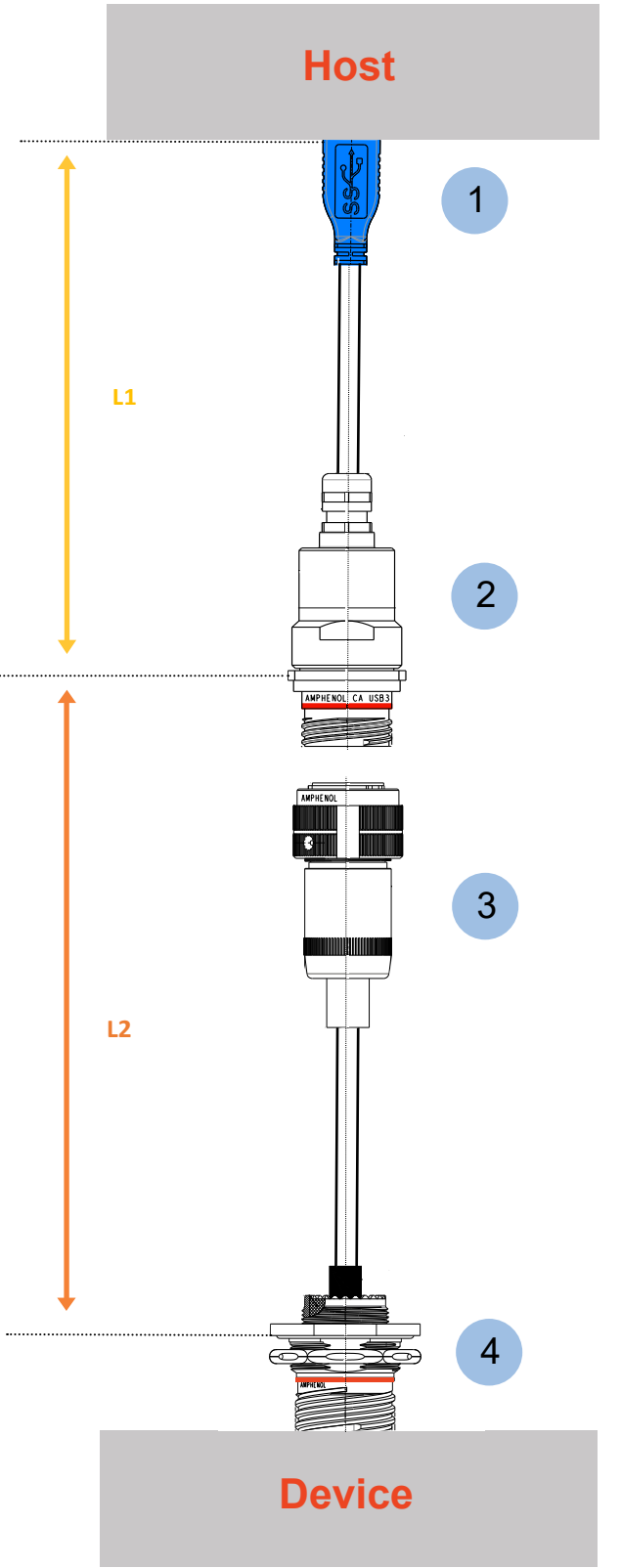
Downloaded from Arrow.com.

USB3FTV - USB3.2 GEN 1 AMPLIFIER



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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USBFTV - USB2.0 AMPLIFIER



DESCRIPTION

As the USB2.0 protocol is limited to 4.8 meters, the reinforced USB2.0 amplifier enables you to extend your USB signal to five times as much, almost 20 meters. This product is subject to custom design. With the help of the USB amplifier selection guide below, please consider all your requirements and reach out to us with your request.

MAIN FEATURES

MAIN CHARACTERISTICS

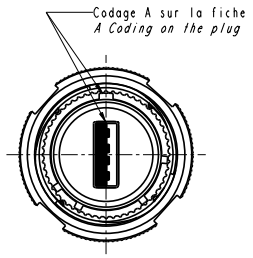
- Maximum 5 USB2.0 amplifier can be connected in order to reach 20 meters.
- USB2.0 cordset is provided by Amphenol.
- Sealed against fluids and dusts (IP68)
- Improved EMI protection
- Mate with our USBFTV™ series (MIL-DTL-38999 series III type) with
- anti-decoupling device - Shell size 15

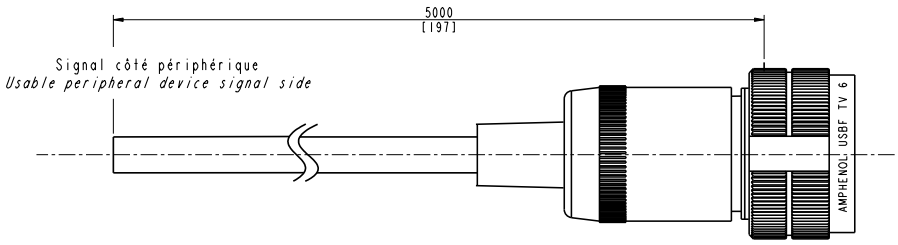
ENVIRONMENTAL PROTECTION

- Sealing (when mated): IP68 (temporary immersion)
- alt spray:
  - 48 h with nickel plating ✓
  - 500 h with olive drab cadmium
  - 500 h with black zinc nickel ✓
- Humidity: 21 days, 43°C, 98% humidity
- Temperature range: - 40°C / +85°C

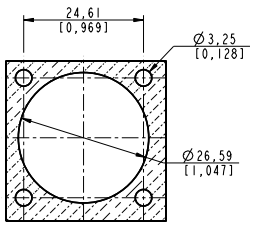
✓: RoHS compliant

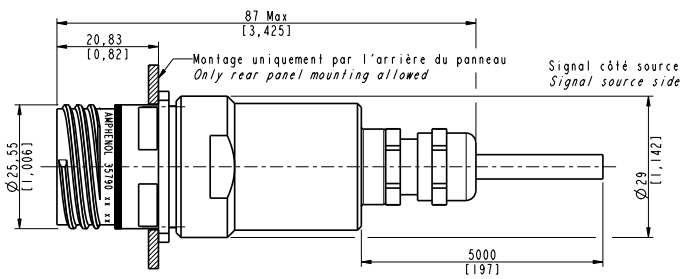
EXAMPLE OF CONFIGURATIONS

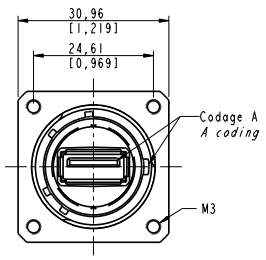




Panel drilling





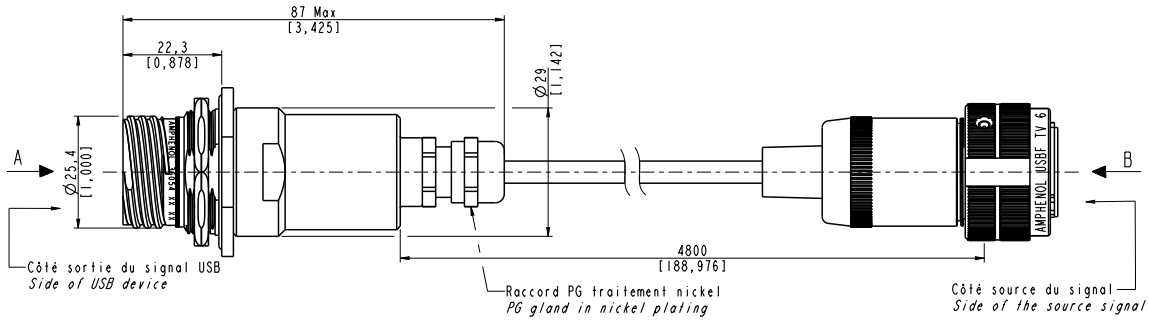


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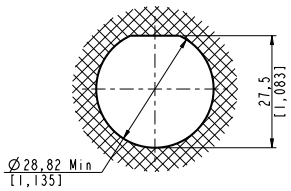
USBFTV - USB2.0 AMPLIFIER

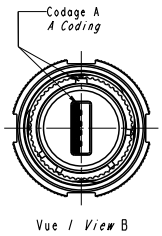


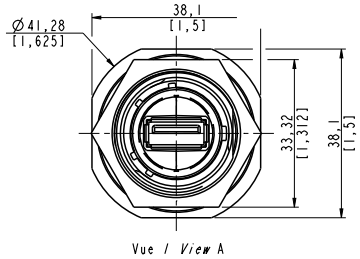
Example of configurations



Panel drilling	Coding A	Coding B







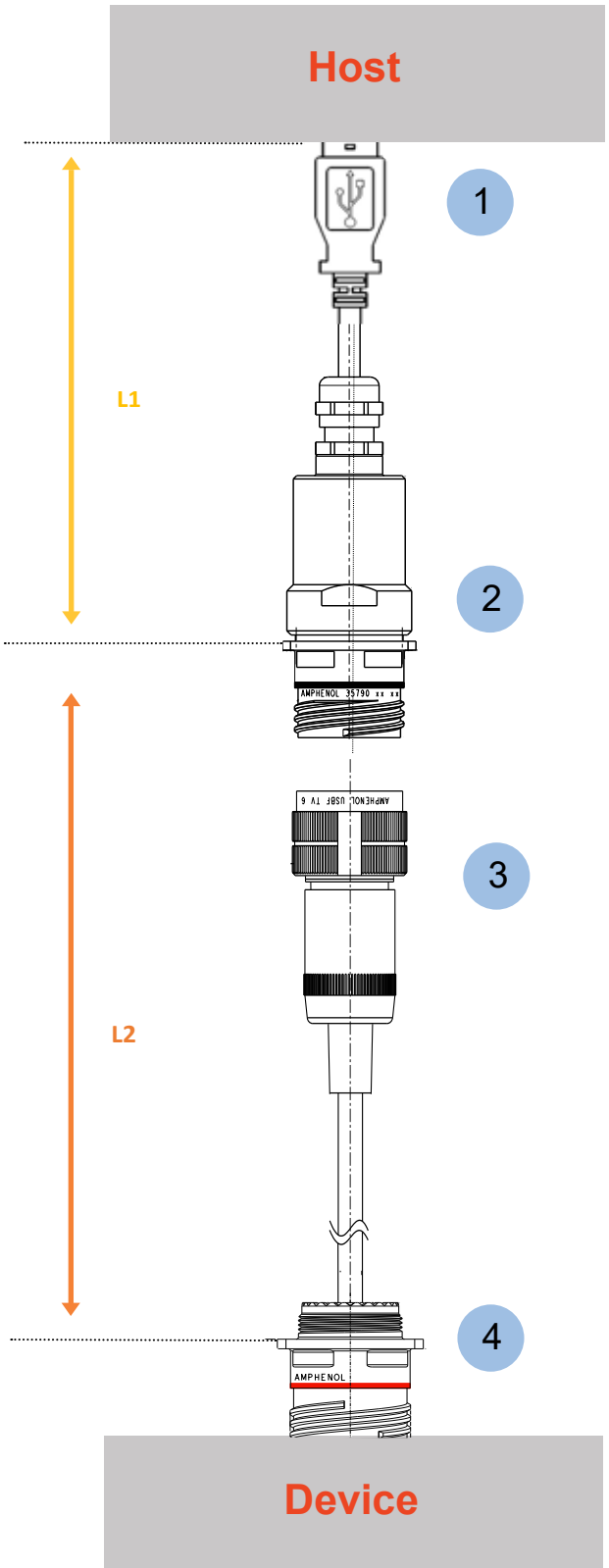
Downloaded from Arrow.com.

USBFTV - USB2.0 AMPLIFIER



USB amplifier selection guide

Define your own solution by selecting options in the scheme below



1

Define the type of USB cable end:
- Open end (without connector), standard USB Type A plug or USBFTV plug.

If you want a USBFTV plug:
- Nickel plated, Olive drab cadmium plated or Black zinc nickel plated.
- Protective cap or not.

L1

Define the lenght of L1:
- Maximum 4,8 meters

2

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

3

Define the type of plug:
- Standard USB Type A plug or USBFTV plug.

If you want a USBFTV plug:
- Nickel plated, Olive drab cadmium plated or Black zinc nickel plated.
- Protective cap or not.

L2

Define the lenght of L1:
- Maximum 4,8 meters

4

Define the type of USB cable end:
- Open end (without connector), standard USB Type A plug, USBFTV receptacle or USBFTV plug.

If you want a USBFTV plug:
- Nickel plated, Olive drab cadmium plated or Black zinc nickel plated.
- Protective cap or not.

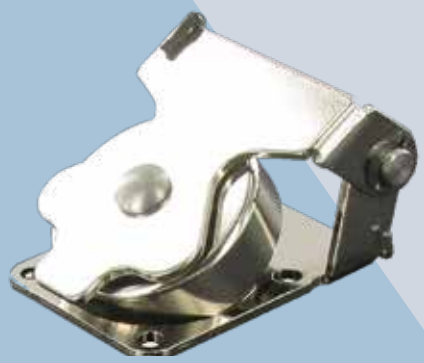
If you want a USBFTV receptacle:
- Square flange or jam nut receptacle.
- Female USB Type A or soldered cable.
- Transversally sealed for soldered cabble termination or not.
- Backshell or not.
- Nickel plated, Olive drab cadmium plated or Black zinc nickel plated.
- Protective cap or not.

Due to technical modifications, all information provided is subject to change without prior notice
Designed by Amphenol Socapex

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ACCESSORIES





Table of contents

ACCESSORIES	99
Standard protective cap - USBFTV™	100
Silicone protective cap - TVµCom-USB3.2	101
Self-closing cap - USBFTV™	102
Accessories - µCom-USB3.2	103
Accessories - TVµCom-USB3.2	104
Panel gasket and tool	105

Compatibility table

	Connectors			
	USB3FTV™	USBFTV™	USBBFTV	USB3CFTV™
STANDARD PROTECTIVE CAP	USBFTV C	USBFTV C	USBFTV C	USBCFTV C
REDUCED FLANGE PROTECTIVE CAP	USBFTV C F057	USBFTV C F057	/	/
METALLIC SELF-CLOSING CAP	USBFTV SCC	USBFTV SCC	USBFTV SCC	TV SCC
PANEL GASKET	JE15	JE15	JE15	JE11
TOOL	USBF ODE	USBF ODE	/	/
REDUCED FLANGE TOOL	809684	/	/	809682

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STANDARD PROTECTIVE CAP - USBFTV™



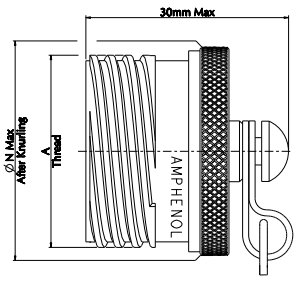
Standard protective cap

This standard protective cap derivate from MIL-DTL-38999 series III provide you a permanent sealing for plugs or receptacles.

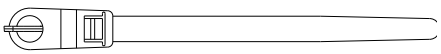
HOW TO ORDER : PLEASE REFER TO PAGE 115

Overall dimension

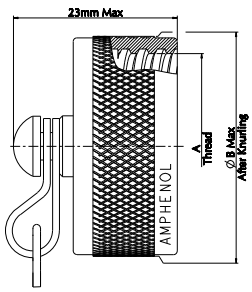
Plug



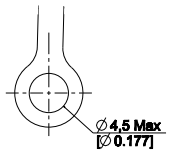
Tie wrap for plug cap



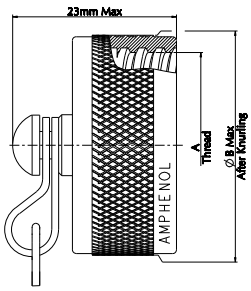
Square flange receptacle



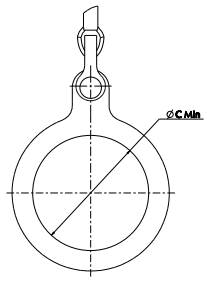
Small ring for square flange receptacle



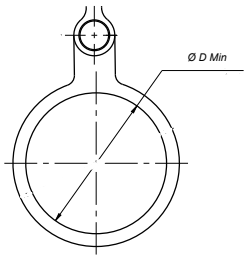
Jam nut receptacle



Large ring for jam nut receptacle



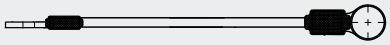
Ring for reduced flange jam nut receptacle



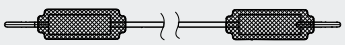
Metallic chain



Stainless steel rope



Nylon rope



Shell size	Lanyard lenght		A Thread Class 2A (Extenal) Class 2B (Internal) (inch)	ØB (+0.5)	ØN (-0.3)	ØC MIN	ØD MIN
	Plug	Receptacles					
11	160±5	127 (+13,-7)	.7500 0.1P-0.3L-TS	22.60	20.50	21.97	20.70
15			1.0000 0.1P-0.3L-TS	28.90	27.40	29.92	27.70

: RoHS compliant

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SILICONE PROTECTIVE CAP - TVUCOM-USB3.2



Silicone protective cap

Silicone protective caps against dust and water.

Main features

- **Compatible with Jam nut and Square flange receptacles**
- IP67 (1m, 1 hour sealing)
- Protection against dust and water
- Silicone 200°C
- Nylon cord
- No noise (rubber material)

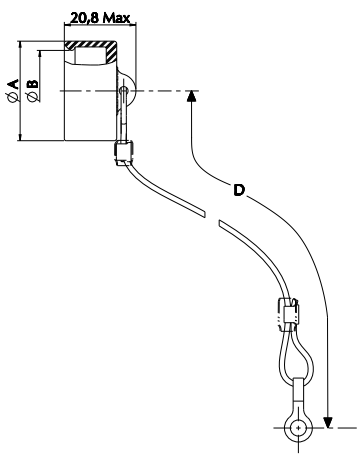


How to order : Please refer to page 135

Overall dimensions

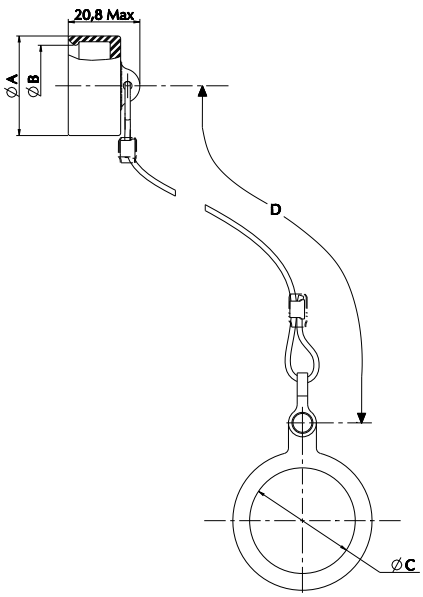
For Square flange receptacle

Part number : **RC00N11**



For Jam nut receptacle

Part number : **RC07N11**



Size	Ø C +0,25 0	Ø A Max	Ø BMax	D Max
11	22,63	22,55	17,2	140

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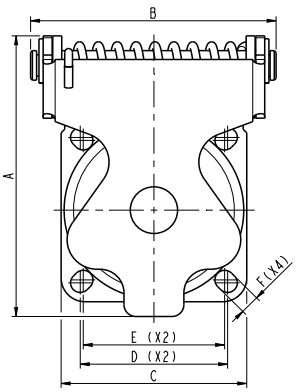
SELF-CLOSING CAP - USBFTV™

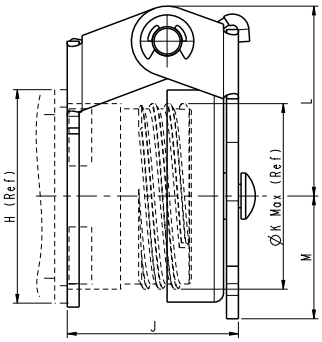


Metallic Self-Closing cap

With the metallic self-closing cap, your standard receptacles are protected with an IP67 and EMI protection with an integrated self-closing function.

Overall dimension





Size	A	B	C	D	E	F	H	J	ØK MAX	L	M	N	ØP MIN	ØQ + 0.13
11	43.0	27.2	27.2	20.62	18.26	3.25	26.19	31.2	19.05	27.0	16.0	20.62	15.88	3.25
15	47.5	41.0	31.0	24.61	23.61		30.96	30.9	25.4	29.5	18.0	24.61	23.01	

Size		Plating			
		Black coating ✓	Nickel ✓	Olive drab cadmium	Black Zinc Nickel ✓
11	Jam nut receptacle	/	TV 07 SCC 11 F	TV 07 SCC 11 W	TV 07 SCC 11 ZN
	Square flange receptacle	/	TV SCC 11 F	TV SCC 11 W	TV SCC 11 ZN
15	Jam nut receptacle	USBFTV 7 SCC B	USBFTV 7 SCC N	USBFTV 7 SCC G	USBFTV 7 SCC ZN
	Square flange receptacle	USBFTV SCC B	USBFTV SCC N	USBFTV SCC G	USBFTV SCC ZN

✓: RoHS compliant

Important note:
- Metallic self-closing cap must be used with a reinforced plug

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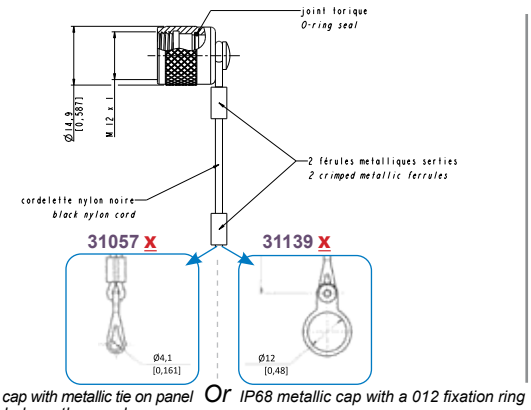
ACCESSORIES - UCOM-USB3.2

Caps

CAPS for receptacles

IP68 metallic cap

x to be replaced by
B *for Black electrophoresis plating*
G *for Olive drab cadmium plating*
U *for Unplated brass*



IP68 metallic cap with metallic tie on panel
Nota: plan a hole on the panel
Or
IP68 metallic cap with a 012 fixation ring

IP68 neoprene cap - Part number: **31091**
Nota: plan a type M3 hole on the panel



CAPS for plugs

Cap in neoprene
Part number: **31092**



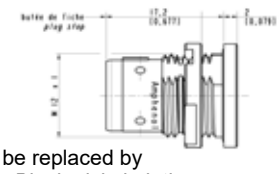
CAPS for in line receptacles

Cap in neoprene
Part number: **31093**



Dummy female receptacle

Part number: **31131 x**



x to be replaced by
B *for Black nickel plating*
G *for Olive drab cadmium plating*
U *for Unplated brass*

Spares

Crimp Pin **(10 pcs)**
Part number: **31537**



Crimp Socket **(10 pcs)**
Part number: **31074**



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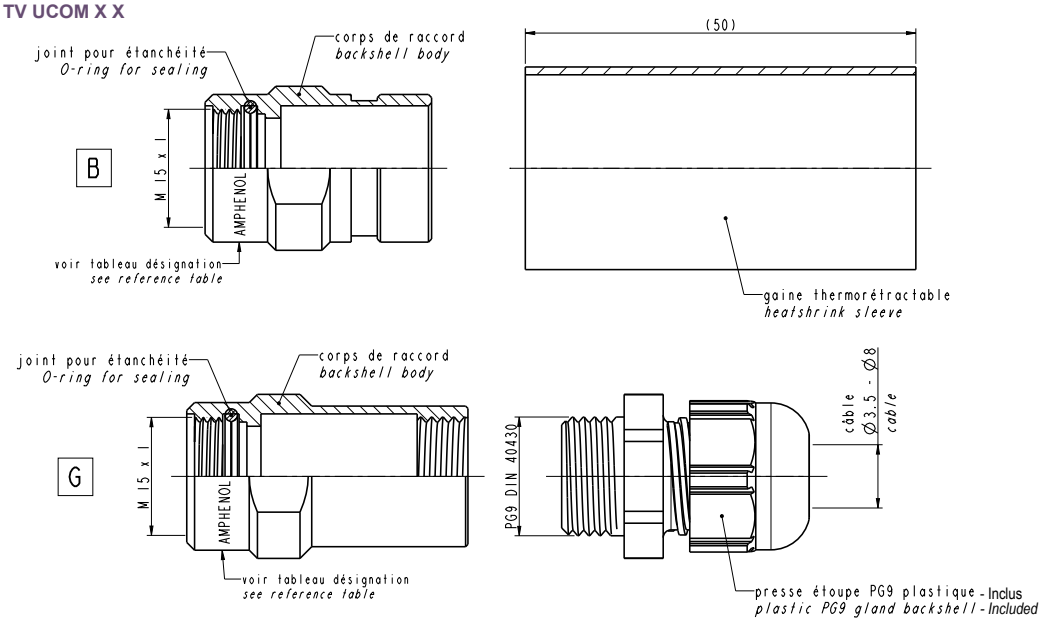
ACCESSORIES - TVUCOM-USB3.2



Accessories

Special Backshells

Part number type: **TV UCOM X X**



Spares

Crimp Pin **(10 pcs)**
Part number: **31537**



Crimp Socket **(10 pcs)**
Part number: **31074**



Panel Gasket for TVP00

Part number: **JE11**
(thickness: 0,8 mm [.031])



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PANEL GASKET AND TOOL

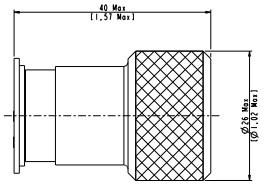


Panel gasket for square flange receptacle

Part number	Thickness (mm)	Color	Picture
JE15 JE11 (USB3CFTV)	0.6	Blue	

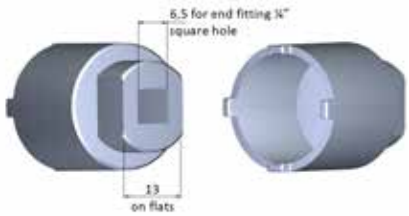
Tools - USBFTV

Part number: **USBF ODE**



Important note:
- USBF ODE is used to remove the module of the receptacle. Insert the slot face part of the USBF ODE part into the front of the receptacle and push.
- For more details, please refer to “Assembly instructions” page 80 to 82.

Part number: **809684**



Important note:
- This tool is used to tighten the castle nut of the reduced flange receptacle.
- Insert the four theeth face of the tool into the castle nut and tighten at the recommended force.
- For more details, please refer to “Assembly instructions” page 80 to 82.

Tools - µCom-USB3.2



- Insertion tool for crimp contacts
  Part number: **31056**



- Contact positioner for M22520/2-01 crimping tool
  Part number: **31095**



- Nut clamping tool for receptacle
  Part number: **31055**
  Only for RPx receptacles

Other tools:

- Brazing tool for receptacle & in-line receptacle
  Part number: **31132**
- Brazing tool for plug
  Part number: **31133**

***Nota:** the cabling instructions are available upon demand (ref. N00-040190-00).*

Tools - TVµCom-USB3.2



- Insertion tool for crimp contacts
  Part number: **31056**

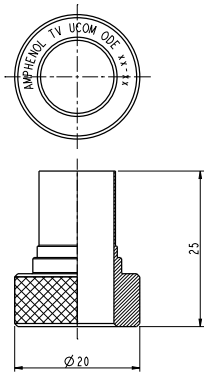


- Contact positioner for M22520/2-01 crimping tool
  Part number: **31095**

Removal tool



Part number: **TV UCOM ODE**



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NOTES

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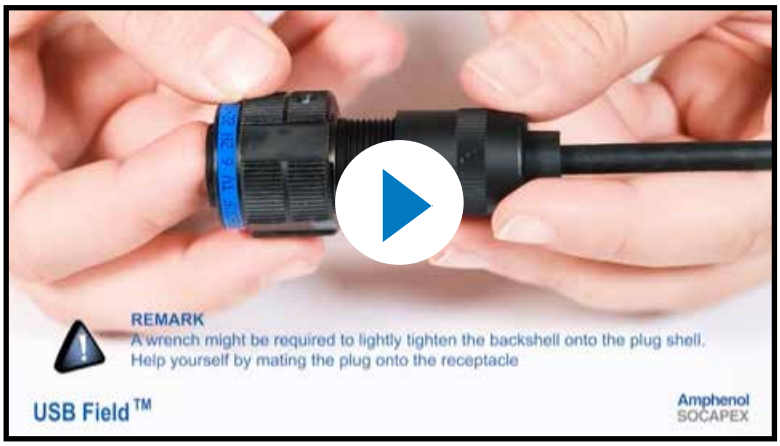






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ASSEMBLY INSTRUCTIONS



USB Field Assembly

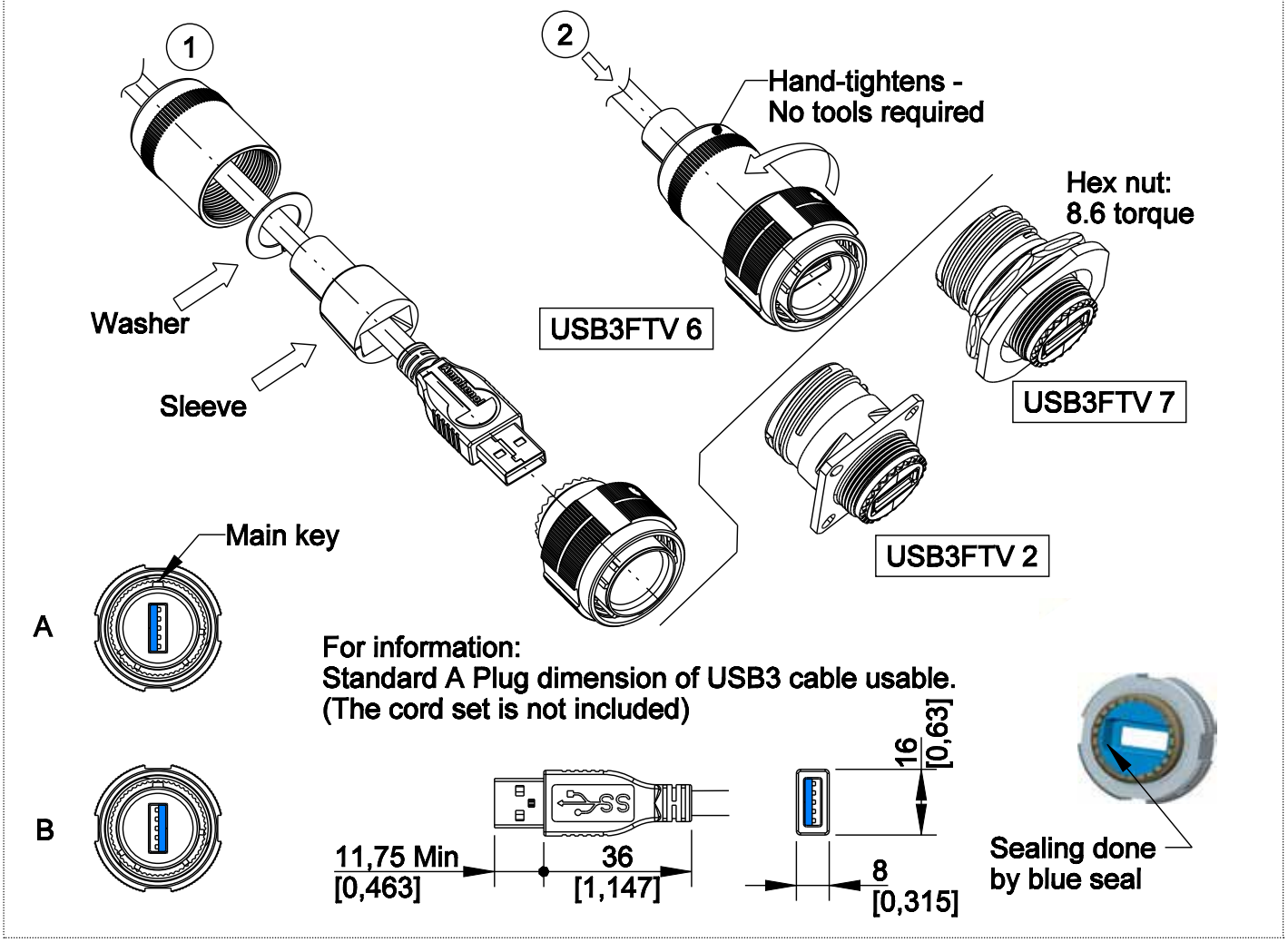
USB Type-C Assembly

Table of contents

ASSEMBLY INSTRUCTIONS	108
USB3FTV™	109
USBFTV™ and USBBF TV	111

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ASSEMBLY INSTRUCTION - USB3FTV™



Notes:
- Can be assemble with all standard USB cordset.
- No tool required.

Recommend Torque value:		Body	Gland	Hex-nut
Plug	USB3FTV 6	/	Hand-tightens - No tool required	/
Receptacle	USB3FTV 2 PE	/	Hand-tightens - No tool required	/
	USB3FTV 2 PEM	7.5 Nm	2.5 to 3 Nm max	/
	USB3FTV 7	/	/	8.6 Nm
	USB3FTV 7 PE	/	Hand-tightens - No tool required	8.6 Nm
	USB3FTV 7 PEM	7.5 Nm	2.5 to 3 Nm max	8.6 Nm

Assembly video



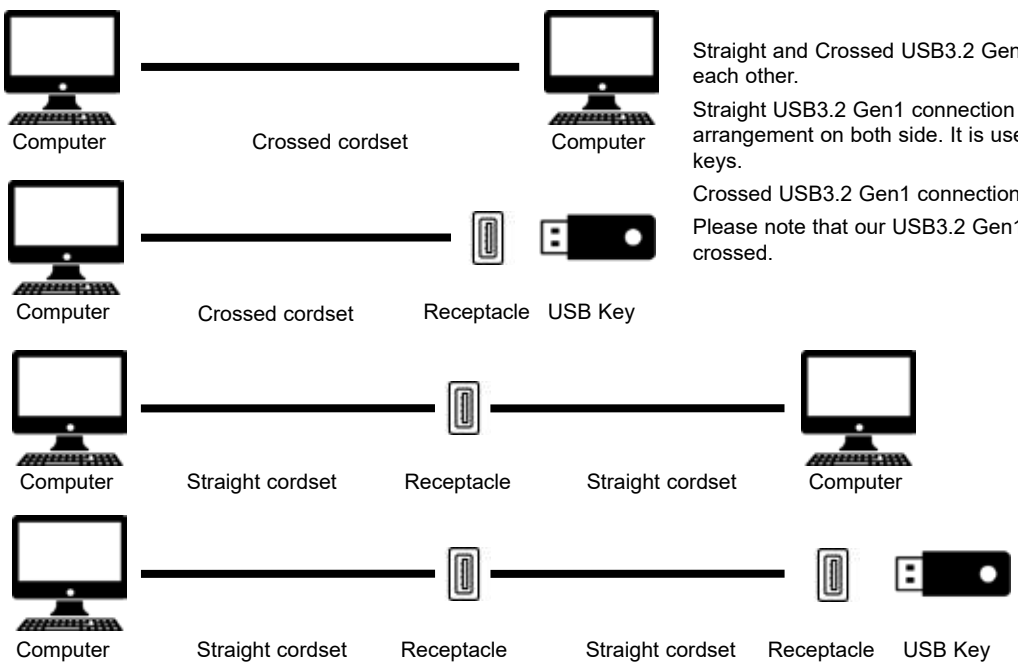
See our assembly video on youtube :
www.youtube.com\AmphenolSocapex

- Amphenol USBFIELD assembly - Rugged USB connector

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ASSEMBLY INSTRUCTION - USB3FTV™

Crossed or straight



Straight and Crossed USB3.2 Gen1 cables are wired differently from each other.

Straight USB3.2 Gen1 connection has the exact same wire arrangement on both side. It is used to connect computers to USB keys.

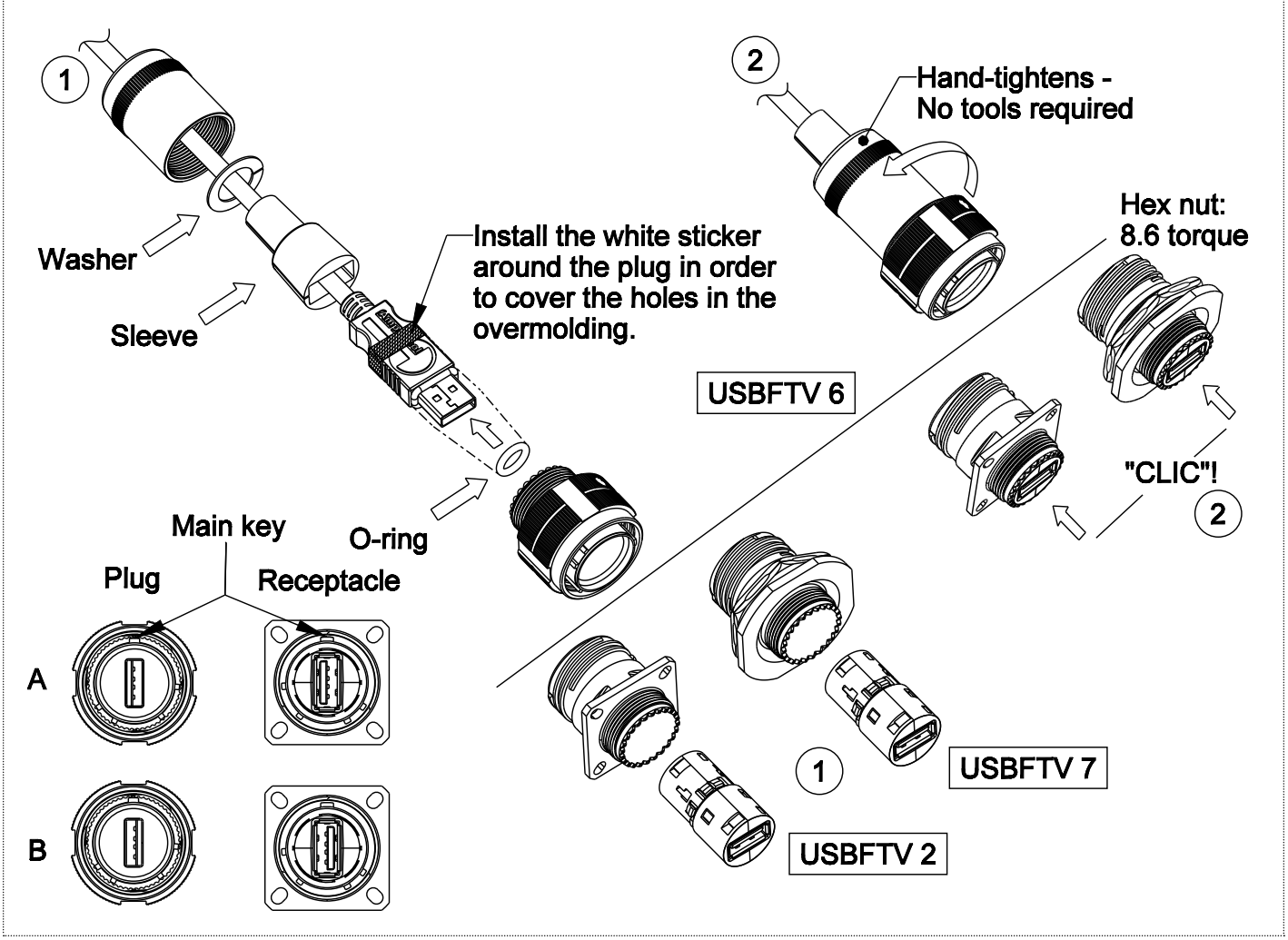
Crossed USB3.2 Gen1 connection is used to connect two computers.

Please note that our USB3.2 Gen1 receptacle are, by conception, crossed.

 : Amphenol receptacle is always crossed.

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ASSEMBLY INSTRUCTION - USBFTV™ AND USBBFTV



Notes:
- Can be assemble with all standard USB cordset.
- No tool required.

Recommend Torque value:		Body	Gland	Hex-nut
Plug	USBFTV 6	/	Hand-tightens - No tool required	/
Receptacle	USBFTV 2 PE	/	Hand-tightens - No tool required	/
	USBFTV 2 PEM	7.5 Nm	2.5 to 3 Nm max	/
	USBFTV 7	/	/	8.6 Nm
	USBFTV 7 PE	/	Hand-tightens - No tool required	8.6 Nm
	USBFTV 7 PEM	7.5 Nm	2.5 to 3 Nm max	8.6 Nm

Assembly video



See our assembly video on Youtube :
www.youtube.com\AmphenolSocapex

- Amphenol USBFIELD assembly - Rugged USB connector

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NOTES

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HOW TO ORDER

HOW TO ORDER	114
USB3CFTV™ - Plug and receptacle	115
USB3FTV™ - Plug and receptacle	116
USB3FTV™ - Transversally sealed and hermetic receptacle	117
USB3FTV™ - VG96949	118
µCom-USB3.2 & TVµCom-USB3.2	119
USBFTV™ - Plug and receptacle	121
USBFTV™ - Transversally sealed and hermetic receptacle	122
USBFTV™ - Atex Zone 2	123
USBBFTV™ - Plug and receptacle	124
USBBFTV™ - Transversally sealed receptacle	125
Cable	126
Cordset	127
Composite USB3.2 Gen 1 access point	128
USB3CFTV Memory Key	129
USB3FTV™ Memory Key	130
ROK - Rugged Oval Key	131
USB3FTV™ - USB3.2 Gen 1 amplifier	132
Standard protective cap	133
Standard protective cap - TVµCom-USB3.2	134
Silicone protective cap - TVµCom-USB3.2	135

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HOW TO ORDER - USB3CFTV™ PLUG AND RECEPTACLE

1. Series	2. Shell type	3. USB output	4. Material and platings	5. Cordset length	6. Deviation
USB3CFTV	7		G	100	F312

1. Series

USB3CFTV	USB3CFTV series

2. Shell type

6	Plug
2	Square flange receptacle
7	Jam nut receptacle

3. USB output (only for receptacle)

2	Male USB type-C termination
Blank	Cordset or PC tail contacts

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 ✓	
S	Stainless steel	Passivated ✓

5. Cordset length (for receptacle with cordset only)

015	0,15 m [5.9 inches]
030	0,30 m [11.81 inches]
050	0,50 m [19.69 inches]
100	1,0 m [39.37 inches]

6. Deviation (only for receptacle)

F459	Stand-off receptacle for PCB with PC tail contacts
F312	Reduced flange receptacle
F311	Reduced flange receptacle with safety castle nut
F059	Stand-off Reduced flange receptacle for PCB with PC tail contacts
F058	Stand-off Reduces flange receptacle with safety castle nut

✓: RoHS compliant

Examples :

Part number	Description
USB3CFTV6ZN	USB3CFTV serie, plug, aluminum shell with black zinc nickel plating
USB3CFTV72BZF312	USB3CFTV serie, jam nut receptacle with reduced flange, male USB type-C termination, bronze shell
USB3CFTV2G100	USB3CFTV serie, square flange receptacle, aluminium shell with olive drab cadmium plating, 1-meter cordset with USB-C male plug
USB3CFTV7NF059	USB3CFTV serie, jam nut receptacle, aluminium shell with nickel plating, stand-off reduced flange receptacle for PCB.

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HOW TO ORDER - USB3FTV™ PLUG AND RECEPTACLE

1.	2.	3.	4.	5.	6.	7.
Series	**Shell type**	**Coding (for plug with cordset only)**	**Cordset lenght (for plug with cordset only)**	**Backshell (for receptacle only)**	**Shells material & finish**	**Type of cable (for plug with cordset only)**
USB3FTV	6	A	03		G	CROS

1. Series

USB3FTV	USB3.2 Gen1 Field Series (USB-A)

2. Shell type

6	Plug
2	Square flange receptacle
7	Jam nut receptacle

3. Coding (avoid for plug without cordset)

A	Coding A
B	Coding B

4. Cordset lenght (for plug with cordset only)

03	0,3 m [11.81 inches]
05	0,5 m [19.68 inches]
10	1,0 m [39.37 inches]
15	1,5 m [59.05 inches]
20	2,0 m [78.74 inches]
25	2,5 m [98.43 inches]
30	3,0 m [118.11 inches]

5. Backshell (for receptacle only)

	Without backshell
PE	Metal backshell

6. Shell material and finish

G	Aluminium shell	Olive Drab Cadmium plating
N		Nickel plating ✓
ZN		Black Zinc Nickel plating ✓
TZ		Tin Zinc ✓ NEW
BZ	Marine bronze shell ✓	
S	Stainless steel	Passivated ✓

7. Type of cable (for plug with cordset only)

CROS	Crossed USB3.0 cable - USB-A plug
STR	Straight USB3.0 cable - USB-A plug
OPEN	Open USB3.0 cable without plug at the end

✓ : RoHS compliant

Examples :

Part number	Description
USB3FTV6A10GOPEN	USB3FTV, plug, coding A, olive drab cadmium plating, 1,0m cordset with open end
USB3FTV2APEG	USB3FTV, square flange receptacle with metal backshell, coding A, olive drab cadmium plating
USB3FTV7AZN	USB3FTV, jam nut receptacle, coding A, black zinc nickel plating

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HOW TO ORDER - USB3FTV™ - TRANSVERSALLY SEALED AND HERMETIC RECEPTACLE

1.	2.	3.	4.	5.	6.
Series	**Shell type**	**Coding**	**Cordset lenght**	**Shells material & finish**	**Type of cable**
USB3FTV	2S	A	03	G	ACROS

1. Series	
USB3FTV	USB3.2 Gen1 Field Series (USB-A)

2. Shell type		
2S	Square flange receptacle	Transversally sealed
2H		Hermetic
7S	Jam nut receptacle	Transversally sealed
7H		Hermetic

3. Coding	
A	Coding A
B	Coding B

4. Cordset lenght	
03	0,3 m [11.81 inches]
05	0,5 m [19.68 inches]
10	1,0 m [39.37 inches]
15	1,5 m [59.05 inches]
20	2.0 m [78.74 inches]
25	2,5 m [98.43 inches]
30	3.0 m [118.11 inches]

5. Shell material and finish		
G	Aluminium shell	Olive Drab Cadmium plating
N		Nickel plating ✓
ZN		Black Zinc Nickel plating ✓
TZ		Tin Zinc ✓ NEW
BZ	Marine bronze shell ✓	
S	Stainless steel	Passivated ✓

6. Type of cable	
ACROS	Crossed USB3.0 cable - USB-A plug
ASTR	Straight USB3.0 cable - USB-A plug
OPEN	Open USB3.0 cable without plug at the end

✓ : RoHS compliant

Examples :

Part number	Description
USB3FTV2SA03ZNOPEN	USB3FTV, transversally sealed square flange receptacle, coding A, black zinc nickel plating, 0,3m cable with open end
USB3FTV7HA05GASTR	USB3FTV, hermetic jam nut receptacle, coding A, olive drab cadmium plating, 0,5m straight USB3.0 cable with USB-A plug at the end
USB3FTV2HA15NACROS	USB3FTV, hermetic square flange receptacle, coding A, nickel plating, 1,5m crossed USB3.0 cable with USB-A plug at the end

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HOW TO ORDER - USB3FTV™ - VG96949

1.	2.	3.	4.	5.
Series	**Shell type**	**Shell size**	**Coding**	**Shell material & finish**
VG96949-03	A	15	A	HI

1. Series

VG96949-03	VG96949-03 standard

2. Shell type

B	Jam nut receptacle

3. Shell size

15	Shell size 15

4. Coding

N	Coding N

5. Shell material and finish

J	Aluminium shell	Tin Zinc plating ✓

✓ : RoHS compliant

Examples :

Part number	Description
VG96949-03C15NJ	VG96949-03 USB3FTV, plug, coding N, tin zinc plating
VG96949-03A15NA	VG96949-03 USB3FTV, square flange receptacle , coding N, olive drab cadmium plating
VG96949-03B15NB	VG96949-03 USB3FTV, jam nut receptacle, coding N, marine bronze shell

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HOW TO ORDER - UCOM-USB3.2 & TVUCOM-USB3.2

How to order UCOM- USB3.2 Gen1

1. Series	2. Shell type	3. Contact type (avoid for RP shell type)	4. Shells material and finish	5. Backshell type (avoid for receptacle)
UCOM-USB3	PT	C	B	B

1. Series

UCOM-USB3	µcom for USB3.0

2. Shells type

PT	Plug	Thread version
PP		Push-pull version
L	In line receptacle	
R	Panel mount receptacle	
RP	PCB receptacle for printed circuit board	

3. Contact type (avoid for RP shell type)

C	Crimp version
S	Solder version

4. Shell material & finish

B	Brass shell	Black Nickel ✓
G		Olive drab cadmium
U		Unplated brass ✓

5. Backshell type (avoid for receptacle)

B	Banding platform
GA	Gland backshell

✓: RoHS compliant

How to order TVUCOM- USB3.2 Gen1

1. Shell type	2. Series	3. Contact type	4. Shells material and finish	5. Shell size	6. Contact gender	7. Coding	8. Deviation (only for TV07 shell type)
TV06	UCOM-USB3	C	W	11	P	-	-

1. Shells type

TV06	Plug	
TV07	Receptacle	Jam nut
TVP00		Square flange

2. Series

UCOM-USB3	µcom for USB3.0

3. Contact type (avoid for RP shell type)

C	Crimp version
S	Solder version
CI	PCB contact (only with TV07 shell type and F059 deviation)

4. Shells material and finish

W	Aluminium shell	Olive Drab Cadmium plating
F		Nickel plating ✓
ZN		Black Zinc Nickel ✓
TZ		Tin zinc ✓ NEW
B	Marine bronze shell ✓	
K	Passivated stainless steel ✓	

5. Shell size

11	Shells size 11

6. Contact gender

P	Pin contact
S	Socket contact

7. Coding

	Coding N	C	Coding C
A	Coding A	D	Coding D
B	Coding B	E	Coding E

8. Deviation (only for TV07 shell type)

F312	Jam nut Reduced flange receptacle with banding platform
F059	Stand off - Jam nut Reduced flange receptacle for PCB (mandatory with CI contact type)

✓: RoHS compliant

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HOW TO ORDER - UCOM-USB3.2 & TVUCOM-USB3.2

How to order - Special Backshells

1.	2.	3.
Series	**Shell material and finish**	**Backshell type**
TVUCOM	W	B

1. Series

TVUCOM	Backshell

2. Shells material and finish

W	Aluminium shell	Olive Drab Cadmium plating
F		Nickel plating ✓
ZN		Black Zinc Nickel ✓
TZ		Tin zinc ✓ NEW
B	Marine bronze shell ✓	

3. Contact gender

B	Backshell for heatshrink sleeve
G	Backshell for PG gland

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HOW TO ORDER - USBFTV™ - PLUG AND RECEPTACLE

1.	2.	3.	4.	5.
Series	**Shell type**	**Backshell (receptacle only)**	**Back terminations (receptacle only)**	**Shells material & finish**
USBFTV	7	PEM	2	G

1. Series

USBFTV	USB2.0 Field Series (USB-A)

2. Shell type

6	Plug
2	Square flange receptacle
7	Jam nut receptacle

3. Backshell (receptacle only)

	Without backshell	
PE	Metal backshell	Plastic gland
PEM		Metal gland (back termination 2 only)

4. Back terminations (receptacle only)

1	Female USB-A
2	Solder (4 tinned holes)

5. Shell material & finish

G	Aluminium shell	Olive Drab Cadmium plating
N		Nickel plating ✓
ZN		Black Zinc Nickel ✓
TZ		Tin Zinc ✓ NEW
BZ	Marine bronze shell ✓	
S	Stainless steel	Passivated ✓

✓ : RoHS compliant

Examples :

Part number	Description
USBFTV6G	USBFTV, plug, olive drab cadmium plating
USBFTV2PE2N	USBFTV, square flange receptacle with metal backshell and plastic gland, solder back termination, nickel plating
USBFTV7PEM2N	USBFTV, jam nut receptacle with metal backshell and metal gland, solder back termination, nickel plating

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HOW TO ORDER - USBFTV™ - TRANSVERSALLY SEALED AND HERMETIC RECEPTACLE

1.	2.	3.	4.	5.	6.	7.	8.	9.
Series	**Shell type**	**Backshell**	**Sealing type**	**Coding**	**Back terminations**	**Shells material and finish**	**Cordset lenght**	**USB Cable end**
USBFTV	2	PE	S	A	2	G	03	OPEN

1. Series

USBFTV	USB2.0 Field Series (USB-A)

2. Shell type

2	Square flange receptacle
7	Jam nut receptacle

3. Backshell

	Without backshell	
PE	Metal backshell	Plastic gland
PEM		Metal gland

4. Sealing type

S	Transversally sealed receptacle
H	Hermetic receptacle

5. Coding

A	Coding A
B	Coding B

6. Back terminations

2	USB2.0 cable

7. Shell material & finish

G	Aluminium shell	Olive Drab Cadmium plating
N		Nickel plating ✓
ZN		Black Zinc Nickel ✓
TZ		Tin Zinc ✓ NEW
BZ	Marine bronze shell ✓	
S	Stainless steel	Passivated ✓

8. Cordset lenght

03	0,3 m [11.81 inches]
05	0,5 m [19.68 inches]
10	1,0 m [39.37 inches]
15	1,5 m [59.05 inches]
20	2,0 m [inches]
30	3,0 m [inches]
40	4,0 m [inches]

9. USB Cable end

A	USB-A plug
OPEN	Open USB2.0 cable without plug at the end

✓ : RoHS compliant

Examples :

Part number	Description
USBFTV2SA2G03OPEN	USBFTV, transversally sealed square flange receptacle, coding A, olive drab cadmium plating, 0,3m USB2.0 cable with open end
USBFTV2PESA2N05A	USBFTV, transversally sealed square flange receptacle with metal backshell and plastic gland, coding A, nickel plating, 0,5m USB2.0 cable with USB-A plug at the end
USBFTV2PEMSA2N03A	USBFTV, transversally sealed square flange receptacle with metal backshell and metal gland, coding A, nickel plating, 0,3m USB2.0 cable with USB-A plug at the end

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HOW TO ORDER - USBFTV™ - ATEX ZONE 2

1.	2.	3.	4.	5.	6.	7.
Series	**Shell type**	**Coding (for receptacle only)**	**Back terminations (for receptacle only)**	**Shell material and finish**	**Cordset lenght (for receptacle only)**	**USB Cable end (for receptacle only)**
USBFTVX	2S	A	2	G	03	A

1. Series

USBFTVX	USB2.0 Field Series (USB-A) for Atex Zone 2

2. Shell type

6	Plug	
2S	Square flange receptacle	Transversally sealed
7S	Jamp nut receptacle	

3. Coding (for receptacle only)

A	Coding A
B	Coding B

4. Back terminations (for receptacle only)

2	USB2.0 cable

5. Shell material & finish

G	Aluminium shell	Olive Drab Cadmium plating
N		Nickel plating ✓
ZN		Black Zinc Nickel ✓
BZ	Marine bronze shell ✓	

6. Corset lenght (for receptacle only)

03	0,3 m [11.81 inches]
05	0,5 m [19.68 inches]
10	1,0 m [39.37 inches]
15	1,5 m [59.05 inches]

7. USB Cable end (for receptacle only)

A	USB-A plug
OPEN	Open USB 2.0 cable without plug at the end

✓ : RoHS compliant

Examples :

Part number	Description
USBFTVX6G	USBFTV for atex zone 2, plug, olive drab cadmium plating
USBFTVX7SA2G03A	USBFTV for atex zone 2, transversally sealed jam nut receptacle, coding A, olive drab cadmium plating, 0,3m USB2.0 cable with USB-A plug at the end
USBFTVX7SA2N03OPEN	USBFTV for atex zone 2, transversally sealed jam nut receptacle, coding A, nickel plating, 0,3m USB2.0 cable with open end

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HOW TO ORDER - USBBFTV - PLUG AND RECEPTACLE

1.	2.	3.	4.	5.
Series	**Shell type**	**Backshell (receptacle only)**	**Back terminations (receptacle only)**	**Shell material & finish**
USBBFTV	7	PEM	2	G

1. Series

USBBFTV	USB2.0 Field Series (USB-B)

2. Shell type

6	Plug
2	Square flange receptacle
7	Jam nut receptacle

3. Backshell (receptacle only)

	Without backshell	
PE	Metal backshell	Plastic gland
PEM		Metal gland (back termination 2 only)

4. Back terminations (receptacle only)

1	Female USB-A
2	Solder (4 tinned holes)

5. Shell material and finish

G	Aluminium shell	Olive Drab Cadmium plating
N		Nickel plating ✓
ZN		Black Zinc Nickel ✓
TZ		Tin Zinc ✓ NEW
BZ	Marine bronze shell ✓	
S	Stainless steel	Passivated ✓

✓: RoHS compliant

Examples :

Part number	Description
USBBFTV6ZN	USBBFTV, plug, black zinc nickel plating
USBBFTV2PE1N	USBBFTV, square flange receptacle with metal backshell and plastic gland, female USB-A back termination, nickel plating
USBBFTV22N	USBBFTV, square flange receptacle, solder back termination, nickel plating

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HOW TO ORDER - USBBFTV - TRANSVERSALLY SEALED RECEPTACLE

1.	2.	3.	4.	5.	6.	7.	8.
Series	**Shell type**	**Backshell**	**Sealing type**	**Back terminations**	**Shells material and finish**	**Cordset lenght**	**USB Cable end**
USBBFTV	2	PE	S	2	G	03	A

1. Series

USBBFTV	USB2.0 Field Series (USB-B)

2. Shell type

2	Square flange receptacle
7	Jam nut receptacle

3. Backshell

	Without backshell	
PE	Metal backshell	Plastic gland
PEM		Metal gland

4. Sealing type

S	Transversally sealed receptacle

5. Back terminations

2	USB2.0 cable

6. Shell material & finish

G	Aluminium shell	Olive Drab Cadmium plating
N		Nickel plating ✓
ZN		Black Zinc Nickel ✓
TZ		Tin Zinc ✓ NEW
BZ	Marine bronze shell ✓	
S	Stainless steel	Passivated ✓

7. Corset lenght

03	0,3 m [11.81 inches]
05	0,5 m [19.68 inches]
10	1,0 m [39.37 inches]
15	1,5 m [59.05 inches]

8. USB Cable end

A	USB-A plug
OPEN	Open USB 2.0 cable without plug at the end

✓ : RoHS compliant

Examples :

Part number	Description
USBBFTV7S2N03A	USBBFTV, transversally sealed jam nut receptacle, nickel plating, 0,3m USB2.0 cable with USB-A plug at the end
USBBFTV2S2G05OPEN	USBBFTV, transversally sealed square flange receptacle, olive drab cadmium plating, 0,5m USB2.0 cable with open end
USBBFTV7S2G10A	USBBFTV, transversally sealed jam nut receptacle, olive drab cadmium plating, 1,0m USB2.0 cable with USB-A plug at the end

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HOW TO ORDER - CABLE

Part number	USB	Lenght
191-030943-00	USB3.2 Gen1	300m
190-040567-00	USB2.0	300m

: RoHS compliant

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HOW TO ORDER - CORDSET

1.	2.	3.	4.	5.
Series	**Type**	**USB3.0 wiring**	**Lenght**	**Mandatory**
USB3	AA	CROSSED	050	PU HFFR

1. Series	
USB3	USB3.2 Gen1 Cordset
(No available for µCom-USB3.2 & TVµCom-USB3.2)	
USB2	USB2.0 Cordset

2. Shell type	
AA	Cordset with overmoldded USB type A plug on each end

3. Wiring (USB3.0 cordset only)	
CROSSED	Crossed wiring
STRAIGHT	Straight wiring

4. Lenght		
050	0.5 m / 1,64 ft	
100	1 m / 3.28 ft	
150	1.50 m / 4.92 ft	
180	1.80 m / 5.91 ft	
200	2 m / 6.56 ft	
250	2.50 m / 8.2 ft	
300	3 m / 9.84 ft	
350	3.50 m / 11.48 ft	●
400	4 m / 13.12 ft	●
450	4.5 m / 14.76 ft	●
500	5 m / 16.40 ft	● ●
600	6 m / 19,68 ft	● ●
700	7 m / 22.96 ft	● ●
800	8 m / 26.24 ft	● ●
900	9 m / 29.52 ft	● ●
1000	10 m / 32.80 ft	● ●

5. Mandatory	
PU HFFR	Black polyurethane jacket

Important note:
- Cordsets are with USB-A plug overmolded on each end.
- To define a crossed or straight USB3.2 Gen1 cordset, please refer to page 81.
- Crossed cordset will have a black overmolding while straight cordset will have a blue overmolding.

● **USB3.2 Gen1 : Exceeded 3m we don't guarantee the performance because cordset is out of standard.**

● **USB2.0 : Exceeded 4,80m we don't guarantee the performance because cordset is out of standard.**

Examples :

Part number	Description
USB2AA450PUHFFR	USB2.0 cordset with overmoldded USB type A plug on each end, 4,5m lenght
USB3AACROSSED150PUHFFR	USB3.2 Gen1 cordset with overmoldded USB type A plug on each end, 1,5m lenght with crossed wiring
USB3AASTRAIGHT200PUHFFR	USB3.2 Gen1 cordset with overmoldded USB type A plug on each end, 2,0m lenght with straight wiring

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HOW TO ORDER - COMPOSITE USB3.2 GEN 1 ACCESS POINT

1.	2.	3.	4.	5.
Series	**Shell type**	**USB output**	**Cordset lenght**	**Cordset termination**
USB3APSCC	2	2	15	A

1. Series

USB3APSCC	USB3 Access Point series

2. Shell type

2	Square flange receptacle
7	Jam nut receptacle

3. USB output

1	Female - female coupler
2	Cordset termination

4. Cordset length (only for cordset termination)

	Meters	Inch
03	0,3 m	11,82
05	0,5 m	19,69
10	1 m	39,38
15	1,5 m	59,06
18	1,8 m	70,87
20	2 m	78,75

5. Cordset termination (only for cordset termination)

A	USB3 Type-A plug

Examples :

Part number	Description
USB3APSCC7210A	USB3 Access Point series, jam nut receptacle, cordset termination, 1 meter cordset lenght, USB Type-A plug.
USB3APSCC2120	USB3 Access Point series, square flange receptacle, female - female coupler, 2 meters cordset lenght.

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HOW TO ORDER - USB3CFTV MEMORY KEYS

1.	2.	3.	4.
Series	**Capacity**	**Material and plating**	**Protective cap**
USB3F TV KEY 6	32	G	

1. Series

USB3F TV KEY 6	USB3 FTV Memory Keys

2. Capacity

16	16 Gb
32	32 Gb
64	64 Gb
128	128 Gb
256	256 Gb

3. Material and plating

	Shell material	Shell finish
G	Aluminum	Olive drab cadmium
N		Nickel ✓
ZN		Black zinc nickel ✓
TZ		Tin Zinc ✓ NEW
BZ	Marine bronze shell ✓	

4. Protective cap

	Without Cap
CAP	With Cap

✓ : RoHS compliant

Examples :

Part number	Description
USB3FTVKEY6128TZ	USB3FTV memory key, 128 Gb capacity, tin zinc plating.
USB3FTVKEY632GCAP	USB3FTV memory key, 32 Gb capacity, olive drab cadmium plating, with protective cap.
USB3FTVKEY6256N	USB3FTV memory key, 256 Gb capacity, nickel plating.

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HOW TO ORDER - USB3FTV™ MEMORY KEYS

1.	2.	3.	4.	5.	6.
Series	**Coding**	**Capacity**	**Shells material and finish**	**Protective cap**	**Mandatory**
USB3FTVKEY6	A	64	G	CAP	APA UV

1. Series	
USB3FTVKEY6	USB3.2 Gen1 Memory Keys

2. Coding	
A	Coding A
B	Coding B

3. Capacity	
32	32 Gb
64	64 Gb
128	128 Gb
256	256 Gb

4. Shell material and finish		
G	Aluminium shell	Olive Drab Cadmium plating
N		Nickel plating ✓
ZN		Black Zinc Nickel ✓
TZ		Tin zinc ✓ NEW
BZ	Marine bronze shell ✓	

5. Cap	
	Without protective cap
CAP	With protective cap

6. Mandatory	
APA UV	Mandatory

✓: RoHS compliant

Examples :

Part number	Description
USB3FTVKEY6A64GCAPAPAUV	USB3FTV memory key, coding A, 64Gb capacity, olive drab cadmium plating, with protective cap
USB3FTVKEY6A128NAPAUV	USB3FTV memory key, coding A, 128Gb capacity, nickel plating, without protective cap
USB3FTVKEY6A256ZNCAPAPAUV	USB3FTV memory key, coding A, 256Gb capacity, black zinc nickel plating, with protective cap

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HOW TO ORDER - ROK - RUGGED OVAL KEY

1.	2.	3.
Series	**Capacity**	**Plating**
USB3FKEY	16	B

1. Series	
USB3FKEY	ROK - Rugged Oval Key

2. Shell type	
16	16 Gb
32	32 Gb
64	64 Gb
128	128 Gb
256	256 Gb

3. Series	
B	Black painting

Examples :

Part number	Description
USB3FKEY16B	Rugged Oval Key, 16Gb capacity, black painting
USB3FKEY64B	Rugged Oval Key, 64Gb capacity, black painting
USB3FKEY256B	Rugged Oval Key, 256Gb capacity, black painting

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HOW TO ORDER - USB3FTV™ USB3.2 GEN 1 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 ✓	

5. Cordset length with plug USB3 type A

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]

✓ : RoHS compliant

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HOW TO ORDER - STANDARD PROTECTIVE CAP

1.	2.	3.	4.	5.
Series	**Connector type**	**Rope type**	**Shells material and finish**	**Deviation**
USBFTV C	7		G	F057

1. Series

USBFTVC	USBFTV standard protective cap (size 15)
USB3CFTVC	USB3CFTV standard protective cap (size 11)

2. Connector type

6	Plug
2	Square flange receptacle
7	Jam nut receptacle

3. Rope type

	Nylon cord
M	Metallic chain
MR	Stainless Steel rope - Transparent teflon jacket
BMR	Stainless Steel rope - Black teflon jacket

4. Shell material and finish

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

5. Deviation

F057	Reduced flange ring

✓ : RoHS compliant

Examples :

Part number	Description
USBFTVC2N	USBFTV protective cap for square flange receptacle, nylon cord, nickel plating
USBFTVC2MRN	USBFTV protective cap for square flange receptacle, stainless steel rope with teflon jacket, nickel plating
USBFTVC6ZN	USBFTV protective cap for plug, nylon cord, black zinc nickel plating

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HOW TO ORDER - STANDARD PROTECTIVE CAP - TVUCOM-USB3.2

1. Series	2. Protection cap type	3. Wire type	4. Connector type	5. Material and finish	6. Corresponding connector shell size	7. Deviation
B	EC	N	TV	W	11	-

1. Series

B	Cap

2. Protection cap type

EC	For square flange receptacle
ER	For jam nut receptacle
F	For plug

3. Wire type

-	Blank for metallic chain
N	Nylon cord
R	Jacketed stainless steel rope
RO	Jacketed stainless steel rope with washer end (only for plug)

4. Connector type

TV Cap

5. Material and finish

W	Olive Drab Cadmium plating on aluminium (175°C)
ZN	Black zinc nickel plated on aluminium (175°C) √
F	Electroless nickel plated on aluminium (200°C) √
B	Marine bronze (200°C) √
Z	Green zinc cobalt plated on aluminium (175°C) √

6. Corresponding connector shell size

11	Shell size 11

7. Deviation (only for Jam nut Reduced flange receptacle)

F057	For Jam nut Reduced flange receptacle

√: RoHS compliant

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HOW TO ORDER - SILICONE PROTECTIVE CAP TVUCOM-USB3.2

1.	2.	3.	4.
Series	**Protection cap type**	**Wire type**	**Shell size**
RC	00	N	11

1. Series

RC	Rubber caps

2. Protection cap type

00	For square flange receptacle
07	For jam nut receptacle

3. Wire type

N	Nylon cord

4. Shell size

11	Shell size 11

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NOTES

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Amphenol has a diversified presence as a leader in high growth areas of the interconnect industry and provides solutions for customers in the automotive, broadband, industrial, information technology and data communications, military ans aerospace, mobile devices, and mobile networks markets.

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