

# μCom & TVμCom

## USB3.0

### Harsh Environment Connectors



## Description

These specific adaptations of μCom and TVμCom are optimized for USB3.0 and intended for connection and disconnection in harsh environment military and aerospace application.

## Main Features

### Data Transmission :

- **USB specification 3.0.**
- **Data rate up to 5Gb/s for high speed USB.**
- **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
- Salt spray :
  - 48 h with Nickel plating ✓
  - 500 h with Olive Drab Cadmium plating
  - 500 h with Black Zinc Nickel plating ✓
  - 500 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

✓ : RoHS compliant

## Markets & Applications



C4ISR, Battlefield,  
Ground Vehicles



Navy



Commercial Aerospace



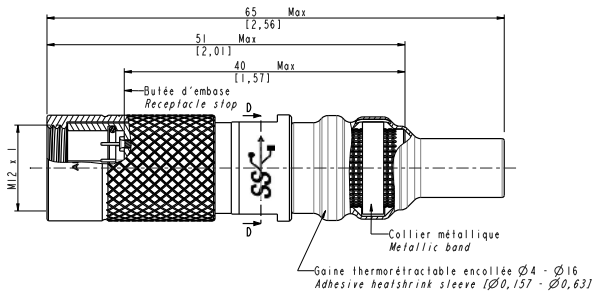
Railway

## Overall dimension



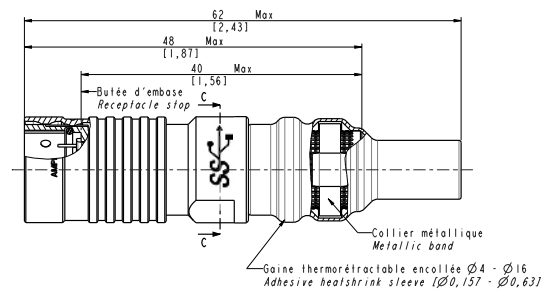
### Plug with banding platform

Part number type: **UCOM-USB3 P T X X B**



Thread version

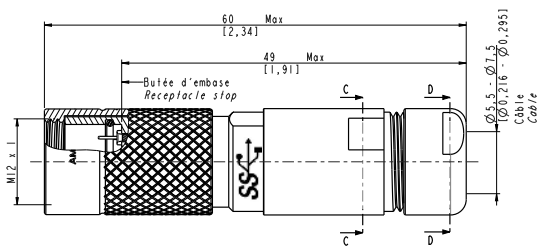
Part number type: **UCOM-USB3 P P X X B**



Push-pull version

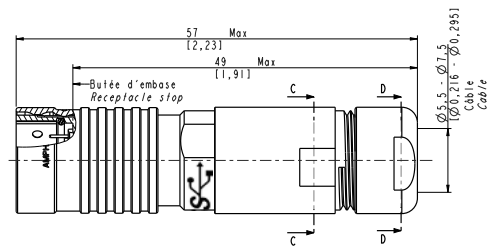
### Plug with cable gland backshell

Part number type: **UCOM-USB3 P T X X GA**



Thread version

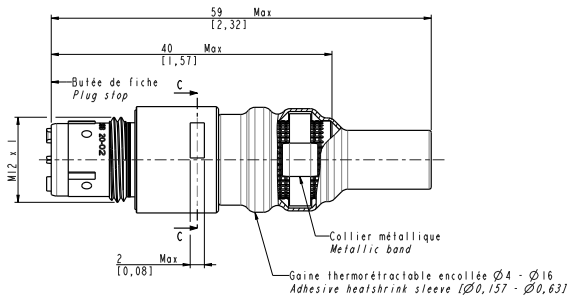
Part number type: **UCOM-USB3 P P X X GA**



Push-pull version

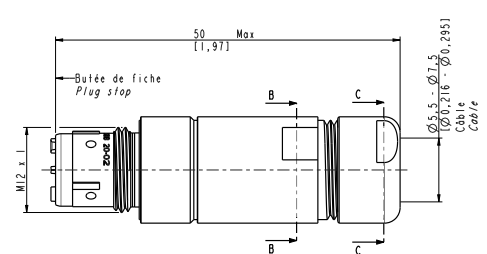
### In-line receptacle

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



Banding platform

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



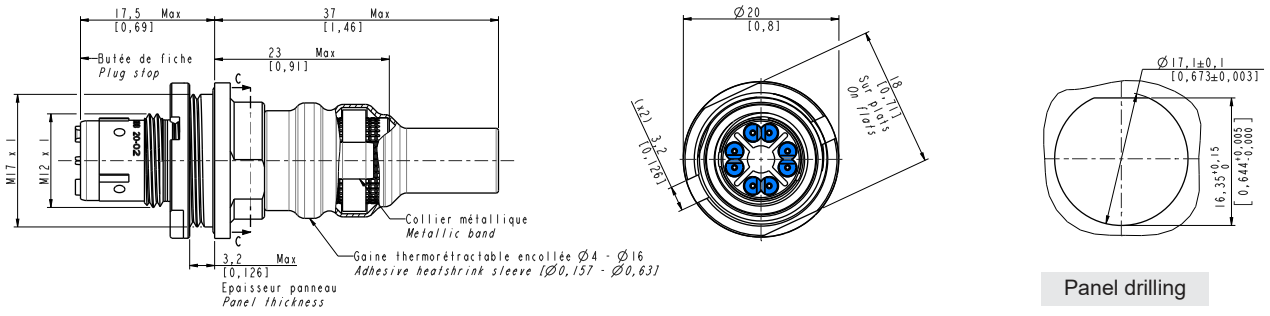
Cable gland backshell

Overall dimension



Panel mount receptacle with banding platform

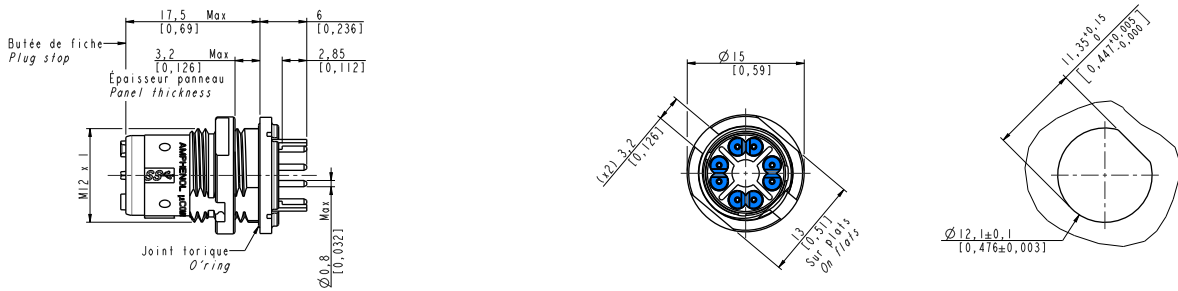
Part number type: **UCOM-USB3 R X X**



Panel drilling

PCB receptacle for printed circuit board

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



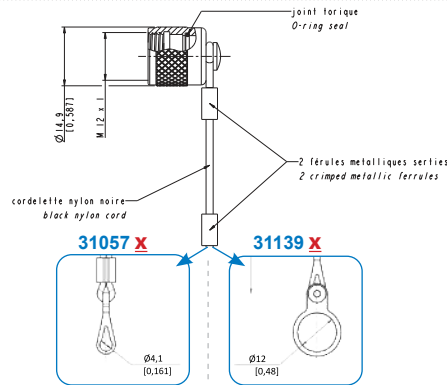
Panel drilling

Accessories

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 OR IP68 metallic cap with a Ø12 fixation ring  
 Nota: plan a hole on the panel

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



CAPS for plugs

Cap in neoprene  
 Part number: **31092**



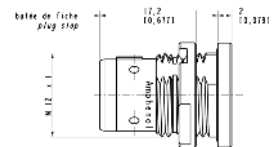
CAPS for in line receptacles

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**



Tools



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



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



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

Other tools:

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

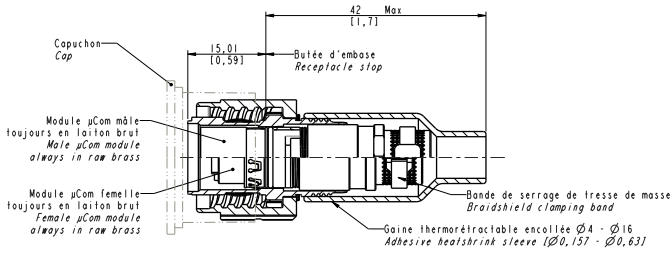
Nota: the cabling instructions are available upon demand (ref. N00-040190-00).

## Overall dimension



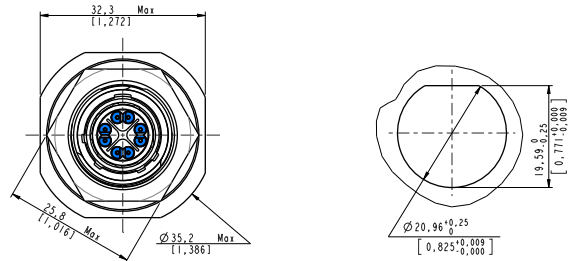
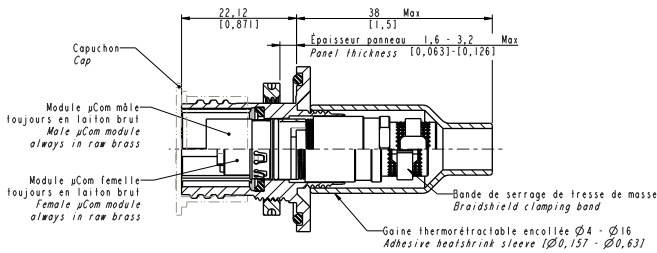
### Plug with banding platform

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



### Jam nut receptacle with banding platform

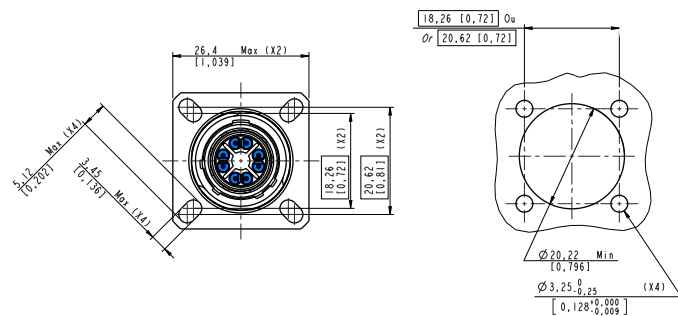
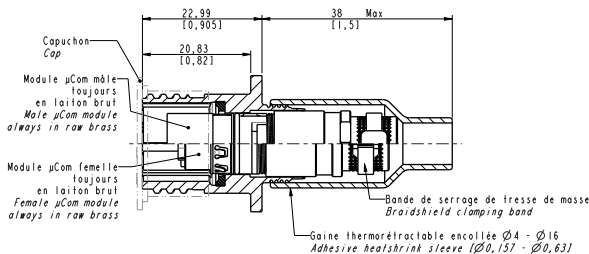
Part number type: **TV07 UCOM-USB3 X X -11 X X**



Panel drilling

### Square flange receptacle with banding platform

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



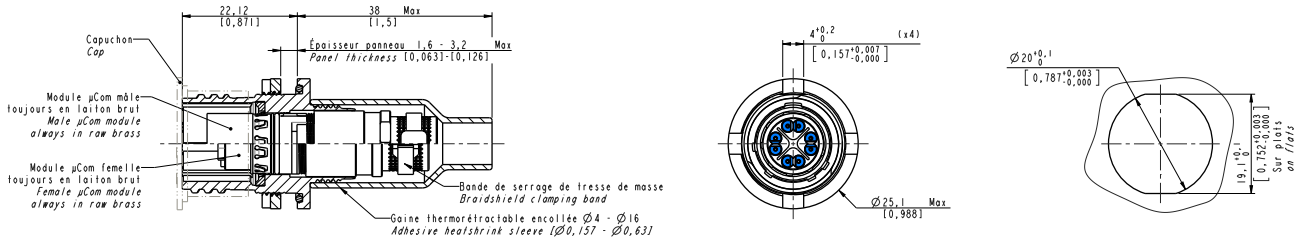
Panel drilling

## Overall dimension



### Reduced flange - Jam nut receptacle with banding platform

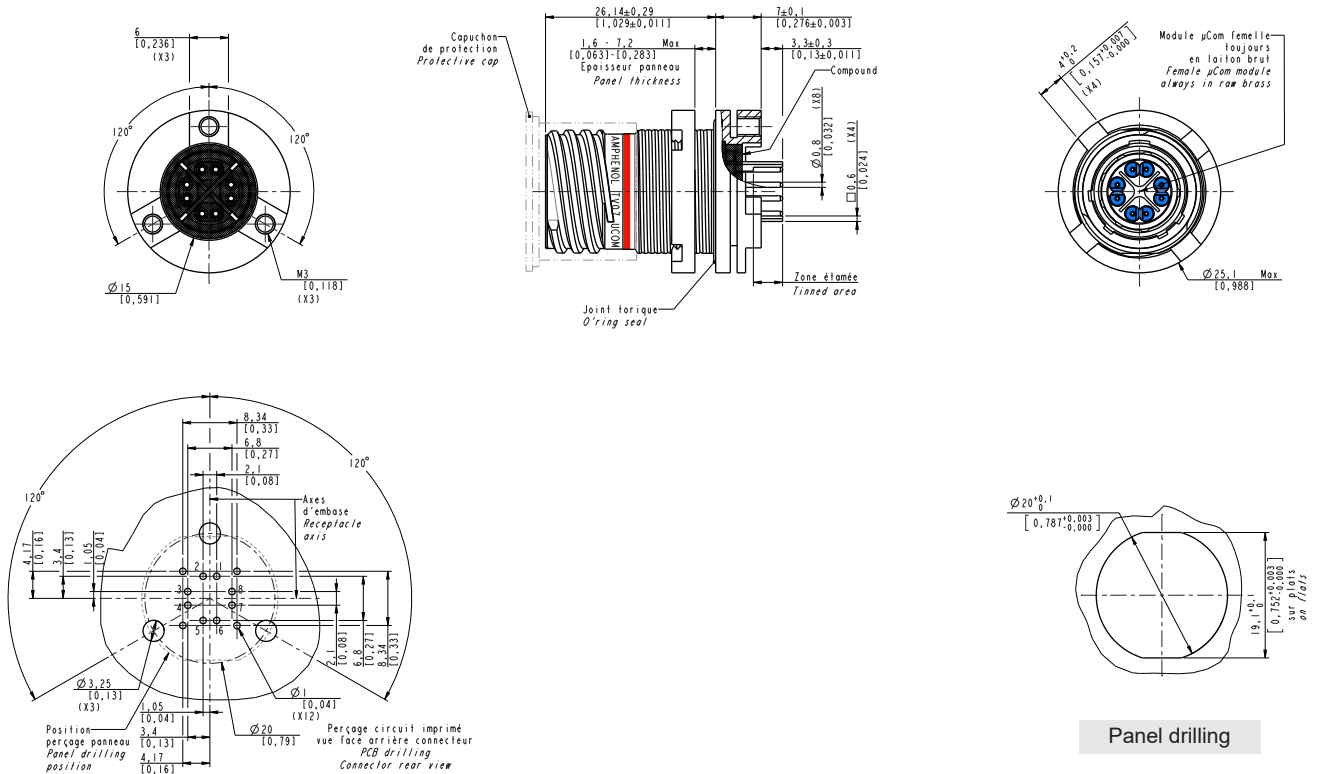
Part number type: **TV07 UCOM-USB3 X X -11 X X F312**



Panel drilling

### Stand off Reduced flange - Jam nut receptacle for PCB

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



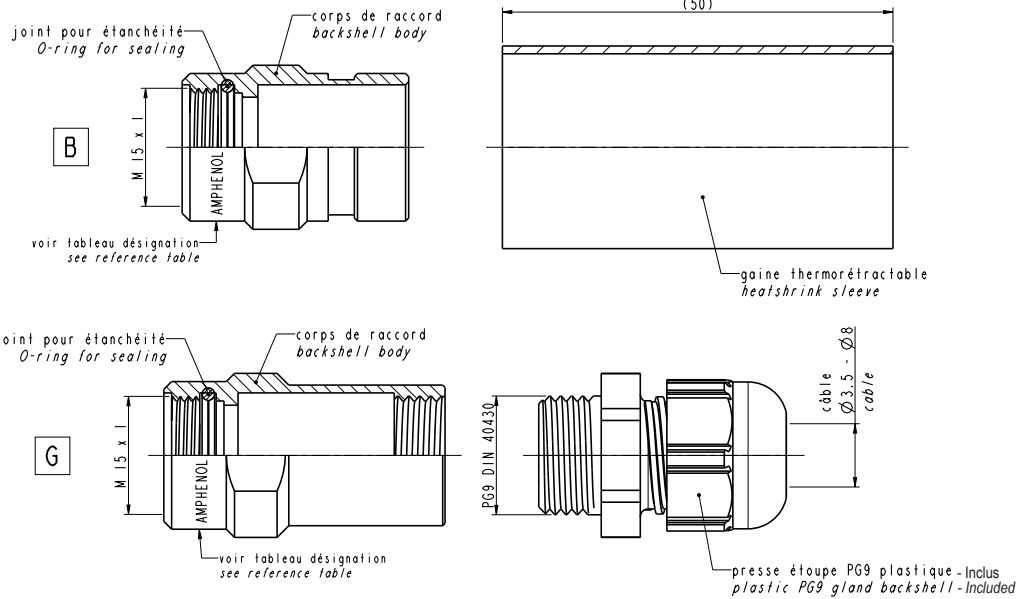
Panel drilling

PCB drilling

## Accessories



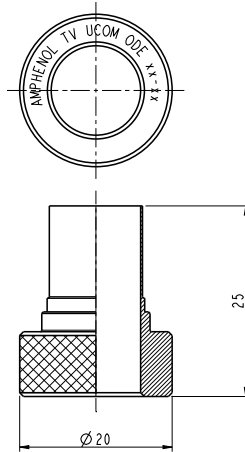
### Special Backshells



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

### Removal tool

Part number: **TV UCOM ODE**



### Panel Gasket for TVP00

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



### Spares

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



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



### Tools



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



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

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

## Accessories

### Description

Silicone protective caps against dust and water.

### Main features

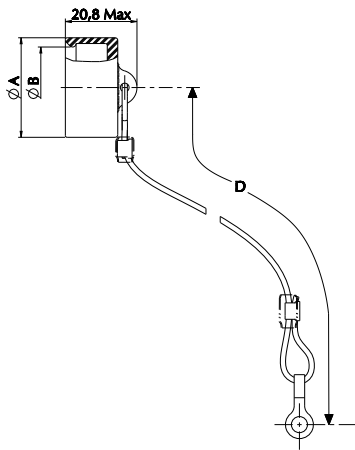
- Compatible with Jam nut and Square flange receptacles
- IP67 (1m, 1 hour sealing)
- Protection against dust and water
- Silicone 200°C
- Nylon cord
- No noise (rubber material)



### Overall dimensions

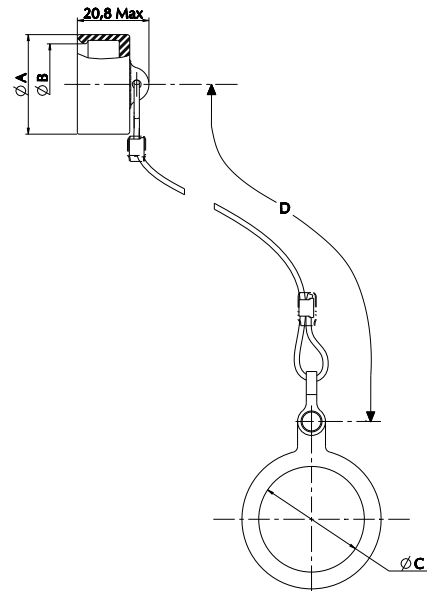
#### For Square flange receptacle

Part number : **RC00N11**



#### For Jam nut receptacle

Part number : **RC07N11**



| Size | Ø C +0,25<br>0 | Ø A<br>Max | Ø B<br>Max | D Max |
|------|----------------|------------|------------|-------|
| 11   | 22,63          | 22,55      | 17,2       | 140   |



## Accessories

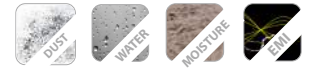
### Description

The largest range of protective caps with IP68 protection level.



### Main features

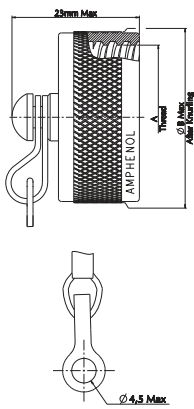
- Compatible with Plugs, Jam nut (Standard and Reduced Flange) and Square Flange receptacles
- IP 68 (permanent sealing)
- Protection against dust, water and moisture
- EMI function
- Nylon cord, stainless steel rope or metallic chain



### Overall dimensions

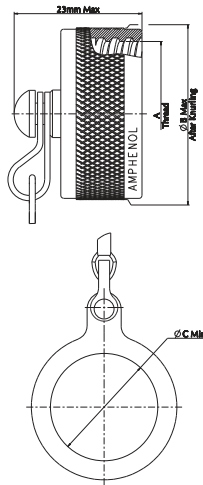
#### For Square flange receptacle

Part number type : **BEC X TV X 11**



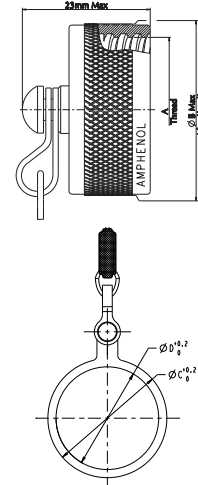
#### For Jam nut receptacle

Part number type : **BER X TV X 11**



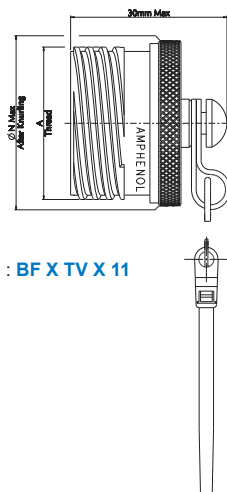
#### For Jam nut Reduced flange receptacle

Part number type : **BER X TV X 11F057**

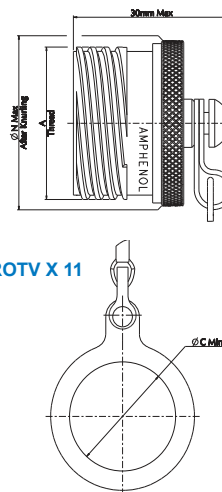


#### For Plugs

Part number type : **BF X TV X 11**



Part number type : **BFROTV X 11**



#### Lanyard (Attachment) Length

| Cap type                      | Metallic chain length | Nylon cord length | Stainless steel rope length |
|-------------------------------|-----------------------|-------------------|-----------------------------|
| <b>BEC/BER for receptacle</b> |                       | 127 (+13,-7)      |                             |
| <b>BF for plug</b>            |                       | 160±5             |                             |

| Size | A thread<br>0.1P-0.3L-TS<br>Class 2A (External) Class 2B (Internal)<br>(inch) | ØB Max<br>(After Knurling) | ØC Min | ØN Max | Ø C +0.2<br>0 | Ø D +0.2<br>0 |
|------|---|----------------------------|--------|--------|---------------|---------------|
| 11   | .7500   | 22.60                      | 21.97  | 20.50  | 25.5          | 20.5          |

## Accessories

## Description

High end protection with metallic self-closing function.

## Main features

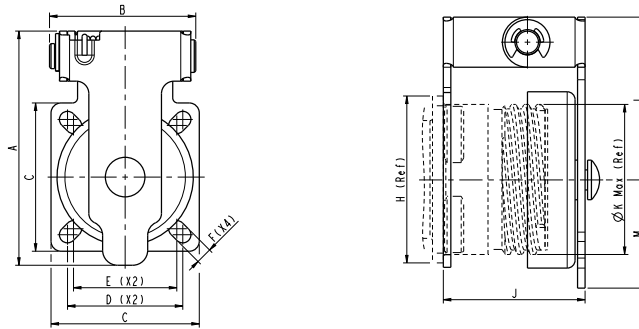
- Compatible with Square flange receptacles
- Material: Aluminum
- Platings: Olive drab cadmium, Black zinc nickel, Electroless nickel and Black electrophoresis
- IP67 (1m, 1 hour sealing)
- Protection against dust, water and moisture
- EMI function
- Fast self-closing function
- Space and weight saving: no need for Dummy receptacle
- No noise from pending cap



## Overall dimensions

For Square flange receptacle

Part number type : **TV SCC11 X**



| 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      |

# HIGH RELIABILITY USB3.0 CORDSETS

## Description

This USB3.0 cable is specifically designed for fixed or portable military or industrial application.



## Design

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

## Electrical characteristics at 20°C

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

## Other characteristics

Halogen Free Flame Retardant

Oil resistance acc. to 1584, sec. 480 (60°)

Flame retardant acc. to UL 1581, sec. 1090 (H)

Flame retardant acc. to IEC 60332-1-2

RoHS compliant (Directive 2011/65/EC)

Resistance to microbial/fungus growth : MIL-STD-810G, method 508.6 = grade 1

Permissible temperature range for transport, installation and operating: -40°C up to 85°C

Min. bending radius allowed : repeated 10 X Ø single 5 X Ø

Weight : 46 kg/km

# UCOM-USB3 & TVUCOM-USB3

## How to order UCOM- USB3

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

| 1. Series        |                 |
|------------------|-----------------|
| <b>UCOM-USB3</b> | µcom for USB3.0 |

| 2. Shells type |  |                   |
|----------------|--|-------------------|
| <b>PT</b>      | Plug                                     | Thread version    |
| <b>PP</b>      |  | Push-pull version |
| <b>L</b>       | In line receptacle                       |                   |
| <b>R</b>       | Panel mount receptacle                   |                   |
| <b>RP</b>      | PCB receptacle for printed circuit board |                   |

| 3. Contact type (avoid for RP shell type) |                |
|---|----------------|
| <b>C</b>                                  | Crimp version  |
| <b>S</b>                                  | Solder version |

| 4. Shell material & finish |             |                    |
|----------------------------|-------------|--------------------|
| <b>B</b>                   |             | Black Nickel ✓     |
| <b>G</b>                   | Brass shell | Olive drab cadmium |
| <b>U</b>                   |             | Unplated brass ✓   |

| 5. Backshell type (avoid for receptacle) |                  |
|--|------------------|
| <b>B</b>                                 | Banding platform |
| <b>GA</b>                                | Gland backshell  |

## How to order TVUCOM- USB3

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

| 1. Shells type |            |               |
|----------------|------------|---------------|
| <b>TV06</b>    | Plug       |               |
| <b>TV07</b>    | Receptacle | Jam nut       |
| <b>TVP00</b>   |            | Square flange |

| 2. Series        |                 |
|------------------|-----------------|
| <b>UCOM-USB3</b> | µcom for USB3.0 |

| 3. Contact type (avoid for RP shell type) |  |
|---|--|
| <b>C</b>                                  | Crimp version  |
| <b>S</b>                                  | Solder version   |
| <b>CI</b>                                 | PCB contact (only with TV07 shell type and F059 deviation) |

| 4. Shells material and finish |                              |                            |
|-------------------------------|------------------------------|----------------------------|
| <b>W</b>                      |                              | Olive Drab Cadmium plating |
| <b>F</b>                      | Aluminium shell              | Nickel plating ✓           |
| <b>ZN</b>                     |                              | Black Zinc Nickel ✓        |
| <b>B</b>                      | Marine bronze shell ✓        |                            |
| <b>K</b>                      | Passivated stainless steel ✓ |                            |

| 5. Shell size |                |
|---------------|----------------|
| <b>11</b>     | Shells size 11 |

| 6. Contact gender |                |
|-------------------|----------------|
| <b>P</b>          | Pin contact    |
| <b>S</b>          | Socket contact |

| 7. Coding |          |          |          |
|-----------|----------|----------|----------|
|           | Coding N | <b>C</b> | Coding C |
| <b>A</b>  | Coding A | <b>D</b> | Coding D |
| <b>B</b>  | Coding B | <b>E</b> | Coding E |

| 8. Deviation (only for TV07 shell type) |  |
|---|--|
| <b>F312</b>                             | Jam nut Reduced flange receptacle with banding platform                                |
| <b>F059</b>                             | Stand off - Jam nut Reduced flange receptacle for PCB (mandatory with CI contact type) |

✓: RoHS compliant

# UCOM-USB3 & TVUCOM-USB3

## How to order - Special Backshells

| 1.                                   |                       | 2.                         |                          | 3.                              |  |
|--------------------------------------|-----------------------|----------------------------|--------------------------|---------------------------------|--|
| Series                               |                       | Shell material and finish  |                          | Backshell type                  |  |
| TVUCOM                               |                       | W                          |                          | B                               |  |
| <b>1. Series</b>                     |                       |                            | <b>3. Contact gender</b> |                                 |  |
| TVUCOM                               | Backshell             |                            | B                        | Backshell for heatshrink sleeve |  |
|                                      |                       |                            | G                        | Backshell for PG gland          |  |
| <b>2. Shells material and finish</b> |                       |                            |                          |                                 |  |
| W                                    |                       | Olive Drab Cadmium plating |                          |                                 |  |
| F                                    | Aluminium shell       | Nickel plating ✓           |                          |                                 |  |
| ZN                                   |                       | Black Zinc Nickel ✓        |                          |                                 |  |
| B                                    | Marine bronze shell ✓ |                            |                          |                                 |  |

## How to order Protective caps - Silicone Caps

| 1.                            |                              | 2.                  |  | 3.                   |                | 4.         |  |
|-------------------------------|------------------------------|---------------------|--|----------------------|----------------|------------|--|
| Series                        |                              | Protection cap type |  | Wire type            |                | Shell size |  |
| RC                            |                              | 00                  |  | N                    |                | 11         |  |
| <b>1. Series</b>              |                              |                     |  | <b>3. Wire type</b>  |                |            |  |
| RC                            | Rubber caps                  |                     |  | N                    | Nylon cord     |            |  |
| <b>2. Protection cap type</b> |                              |                     |  | <b>4. Shell size</b> |                |            |  |
| 00                            | For square flange receptacle |                     |  | 11                   | Shells size 11 |            |  |
| 07                            | For jam nut receptacle       |                     |  |                      |                |            |  |

## How to order Protective caps - Standard Metallic Caps

| 1.                            |   | 2.                  |  | 3.   |  | 4.             |  | 5.                  |  | 6.                                 |  | 7.        |  |
|-------------------------------|---|---------------------|--|--|--|----------------|--|---------------------|--|------------------------------------|--|-----------|--|
| Series                        |   | Protection cap type |  | Wire type  |  | Connector type |  | Material and finish |  | Corresponding connector shell size |  | Deviation |  |
| B                             |   | EC                  |  | N  |  | TV             |  | W                   |  | 11                                 |  | -         |  |
| <b>1. Series</b>              |   |                     |  | <b>5. Material and finish</b>                                    |  |                |  |                     |  |                                    |  |           |  |
| B                             | Cap   |                     |  | 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) ✓  |                |  |                     |  |                                    |  |           |  |
| <b>2. Protection cap type</b> |   |                     |  | <b>6. Corresponding connector shell size</b>                     |  |                |  |                     |  |                                    |  |           |  |
| EC                            | For square flange receptacle                                  |                     |  | 11   | Shells size 11                                   |                |  |                     |  |                                    |  |           |  |
| ER                            | For jam nut receptacle  |                     |  |  |  |                |  |                     |  |                                    |  |           |  |
| F                             | For plug  |                     |  |  |  |                |  |                     |  |                                    |  |           |  |
| <b>3. Wire type</b>           |   |                     |  | <b>7. Deviation (only for Jam nut Reduced flange receptacle)</b> |  |                |  |                     |  |                                    |  |           |  |
| -                             | Blank for metallic chain                                      |                     |  | F057   | For Jam nut Reduced flange receptacle            |                |  |                     |  |                                    |  |           |  |
| N                             | Nylon cord  |                     |  |  |  |                |  |                     |  |                                    |  |           |  |
| R                             | Jacketed stainless steel rope                                 |                     |  |  |  |                |  |                     |  |                                    |  |           |  |
| RO                            | Jacketed stainless steel rope with washer end (only for plug) |                     |  |  |  |                |  |                     |  |                                    |  |           |  |
| <b>4. Connector type</b>      |   |                     |  | TV Cap   |  |                |  |                     |  |                                    |  |           |  |

✓: RoHS compliant

# UCOM-USB3 & TVUCOM-USB3

## How to order Protective caps - Metallic Self-Closing Caps

| 1.     | 2.                  | 3.                | 4.         | 5.                  |
|--------|---------------------|-------------------|------------|---------------------|
| Series | Protection cap type | Self closing type | Shell size | Material and finish |
| TV     | -                   | SCC               | 11         | F                   |

|                               |                                    |                               |  |
|-------------------------------|------------------------------------|-------------------------------|--|
| <b>1. Series</b>              |                                    | <b>4. Shell size</b>          |  |
| TV                            | Metallic Self-Closing Caps         | 11                            | Shells size 11                                   |
| <b>2. Protection cap type</b> |                                    | <b>5. Material and finish</b> |  |
| -                             | Blank for square flange receptacle | W                             | Olive Drab Cadmium plating on aluminium (175°C)  |
| <b>3. Self closing type</b>   |                                    | ZN                            | Black zinc nickel plated on aluminium (175°C) ✓  |
| Metallic Self-Closing Caps    |                                    | F                             | Electroless nickel plated on aluminium (200°C) ✓ |
|                               |                                    | B                             | Black electrophoresis on aluminium (125°C) ✓     |

## How to order HIGH RELIABILITY USB3.0 CORDSETS

| 1.     | 2.   | 3.            | 4.     | 5.        |
|--------|------|---------------|--------|-----------|
| Series | Type | USB3.0 wiring | Length | Mandatory |
| USB3   | AA   | CROSSED       | 050    | PU HFFR   |

|  |   |                     |                              |  |
|--|---|---------------------|------------------------------|--|
| <b>1. Series</b>                       |   | <b>4. Length</b>    |                              |  |
| USB3                                   | USB3.0 Cordset                                      | 050                 | 0.5 m / 1.64 ft              |  |
| <b>2. Shell type</b>                   |   | 100                 | 1 m / 3.28 ft                |  |
| AA                                     | Cordset with overmolded USB type A plug on each end | 150                 | 1.50 m / 4.92 ft             |  |
| <b>3. Wiring (USB3.0 cordset only)</b> |   | 180                 | 1.80 m / 5.91 ft             |  |
| CROSSED                                | Crossed wiring                                      | 200                 | 2 m / 6.56 ft                |  |
| STRAIGHT                               | Straight wiring                                     | 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              |  |
|  |   | <b>5. Mandatory</b> |                              |  |
|  |   | PU HFFR             | Halogen Free Flame Retardant |  |

### Important note :

- To define a crossed or straight USB3.0 cordset, please refer to p.61
- Crossed cordset will have a black overmolding while straight cordset will have a blue overmolding.
- **USB3.0 cordset will be out of his specification over 3,00m length.**

## How to order HIGH RELIABILITY USB3.0 CABLE

| Part number   | USB    | Length |
|---------------|--------|--------|
| 191-030943-00 | USB3.0 | 300m   |

