

## TV $\mu$ Com-10Gb+

### 38999 10Gb

### Ethernet Connector



### Description

$\mu$ Com-Series is a new range of connectors designed to address the latest trends of the military industry: miniaturization and high speed, with the highest resistance for use in the harshest environments. TV  $\mu$ Com combines  $\mu$ Com-10G+ speed with 38999 Series III size 11 shells robustness.

### Main Features

- **Based on MIL-DTL-38999 series III – Shell size 11**
- 10Gb+: exceeds 10Gb/s Ethernet following IEEE 802.3an-2006 : 10GBase-T
- Cat.6A connector according to TIA568C.2 and ISO/IEC11801 standard

- 4 pairs totally insulated throughout the connector
- Minimum cross-talk between the four pairs
- Patented special interfacial shapes
- Minimum perturbation at the interface of each pair
- 38999 size 11 shell
- Aluminium shell\*:
  - Olive Drab Cadmium ▶ salt spray: 500h
  - Nickel ▶ salt spray: 48h ✓
  - Black Zinc Nickel ▶ salt spray: 500h ✓
- Marine bronze shell ✓ ▶ salt spray: 500h

- Machined & gold plated Solder and Crimp contacts
- Design & performance according to the innercontact of M39029/77-429#16 M39029/76- 425#16 38999 coaxial contact
- Contacts are crimped with standard crimping tool M22520/2-01 + Amphenol  $\mu$ Com positioner
- $\mu$ Com contact module: machined brass
- Solder contact: max AWG24
- Crimp contact: AWG 24 to 28
- IP68 sealing mated and unmated for PCB receptacles
- 1500 Vrms Dielectric Withstanding Voltage
- Temperature range: - 55°C / + 125°C

\*Please contact us for other plating options

✓ : RoHS compliant

### Markets & Applications



C4ISR, Battlefield, Ground vehicles



Navy



Commercial Aerospace



Railway



Applications:

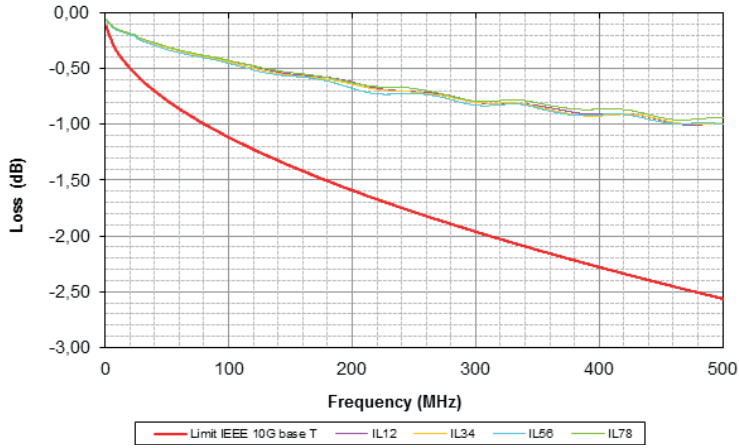
- ▶ Shipboard, In Flight Entertainment \*
- \* $\mu$ Com approved by GORE

# TV $\mu$ Com-10Gb+

## Data Transmission



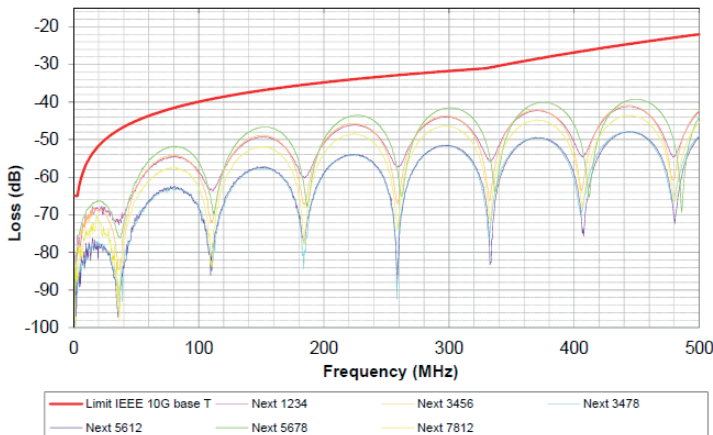
**Insertion Loss (IL) :**



← Amphenol  $\mu$ Com performance

← IEEE 802.3an Standard requirement

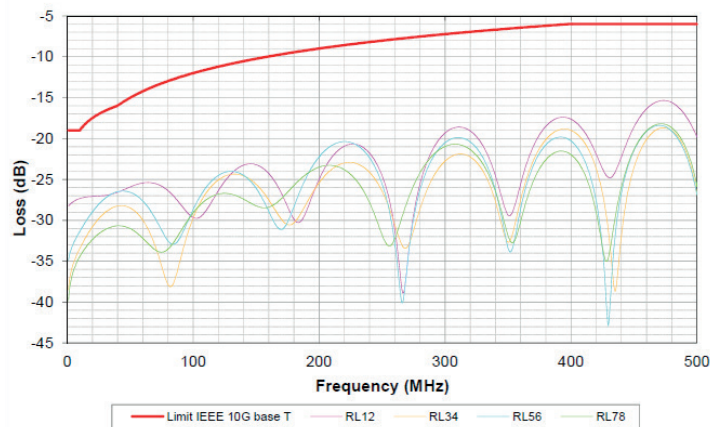
**Near End crosstalk (NEXT) :**



← IEEE 802.3an Standard requirement

← Amphenol  $\mu$ Com performance

**Return Loss (RL) :**

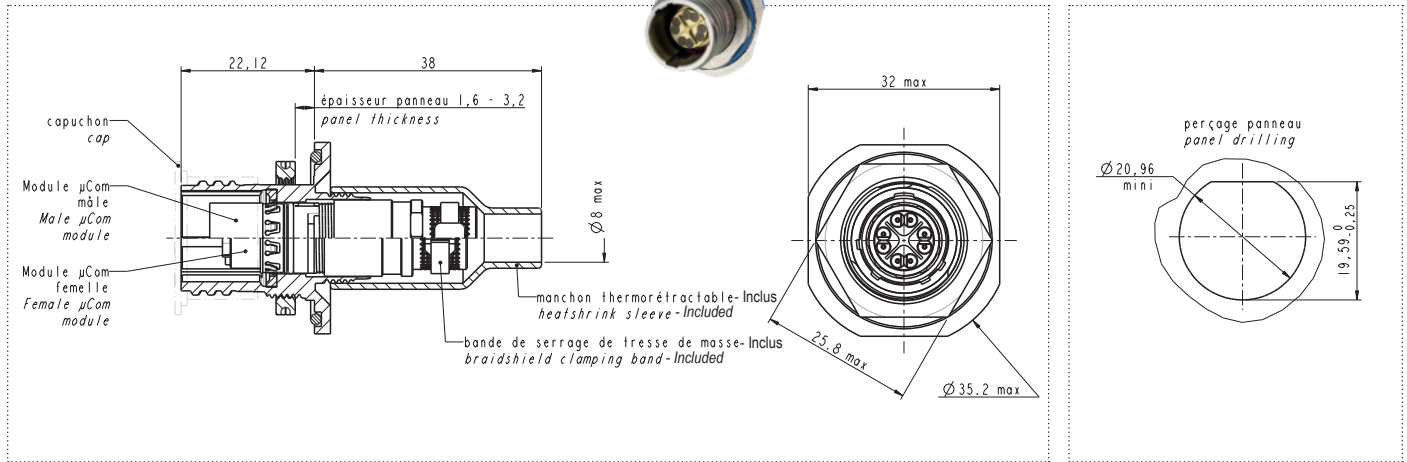


← IEEE 802.3an Standard requirement

← Amphenol  $\mu$ Com performance

# TV $\mu$ Com-10Gb+

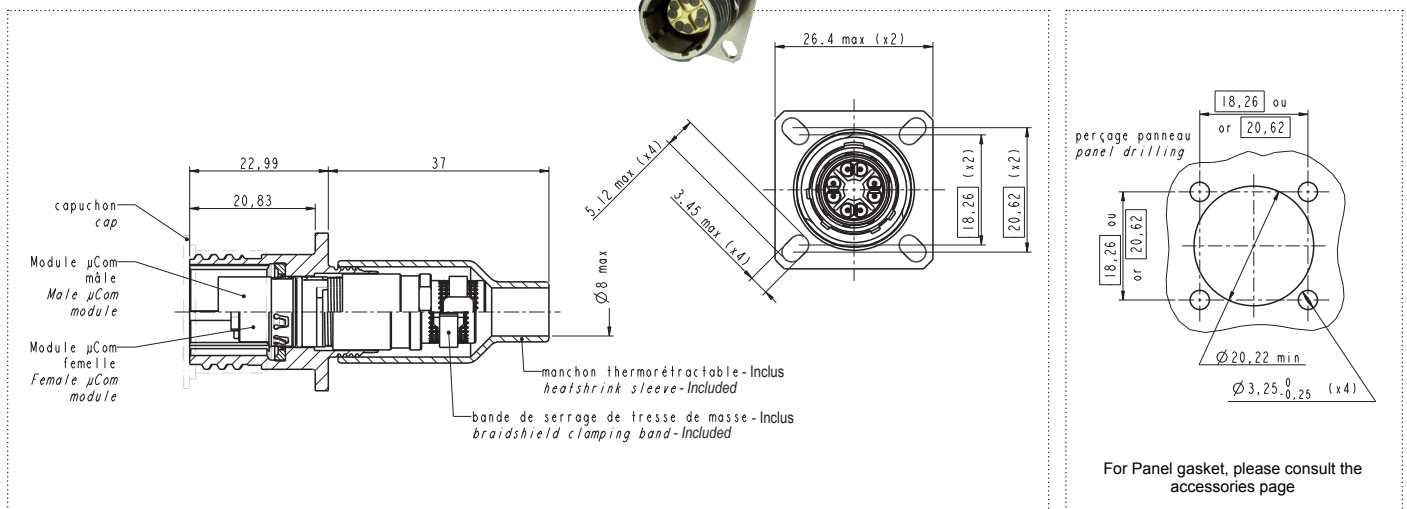
## Standard Receptacles TV07



TV07 UCOM X X -11 X

Panel Drilling

## TVP00



TVP00 UCOM X X -11 X

Panel Drilling

## How to order standard receptacles

<b>Series</b>	TV	07	UCOM	C	W	-11	S
<b>Shell type</b>							
07: Jam nut receptacle							
P00: Square flange receptacle							
<b>UCOM</b>							
<b>Contacts termination</b>							
C: Crimp							
S: Solder							
<b>Shell material and finish*</b>							
W: Aluminium shell - Olive drab cadmium plating							
F: Aluminium shell - Nickel plating ✓							
ZN: Aluminium shell - Black zinc nickel plating ✓							
B: Marine bronze shell ✓							
<b>Shell size</b>							
11							
<b>Type of contact</b>							
P: Male $\mu$ Com module							
S: Female $\mu$ Com module							

Examples: TV 07 UCOM C W -11 S; TV P00 UCOM S W -11 S

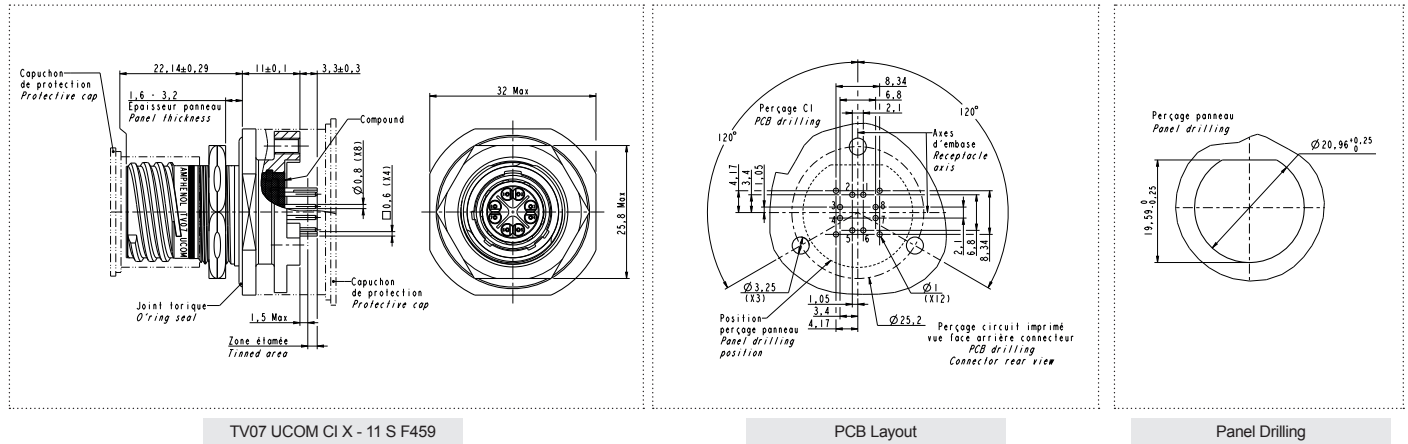
✓: RoHS compliant

\* Please contact us for other plating options

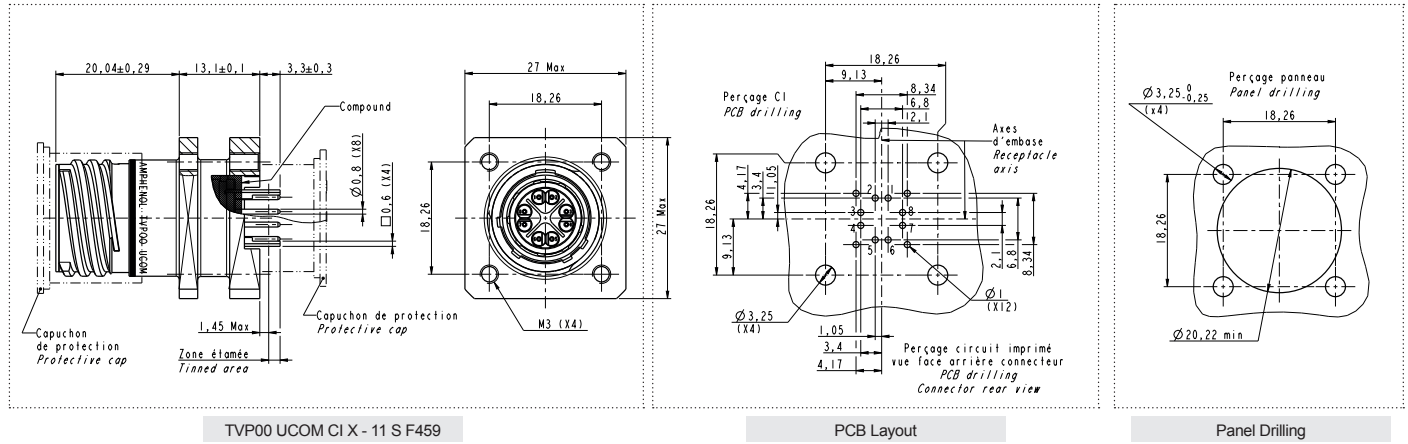
# TV $\mu$ Com-10Gb+

## Stand off Receptacles

### TV07 F459

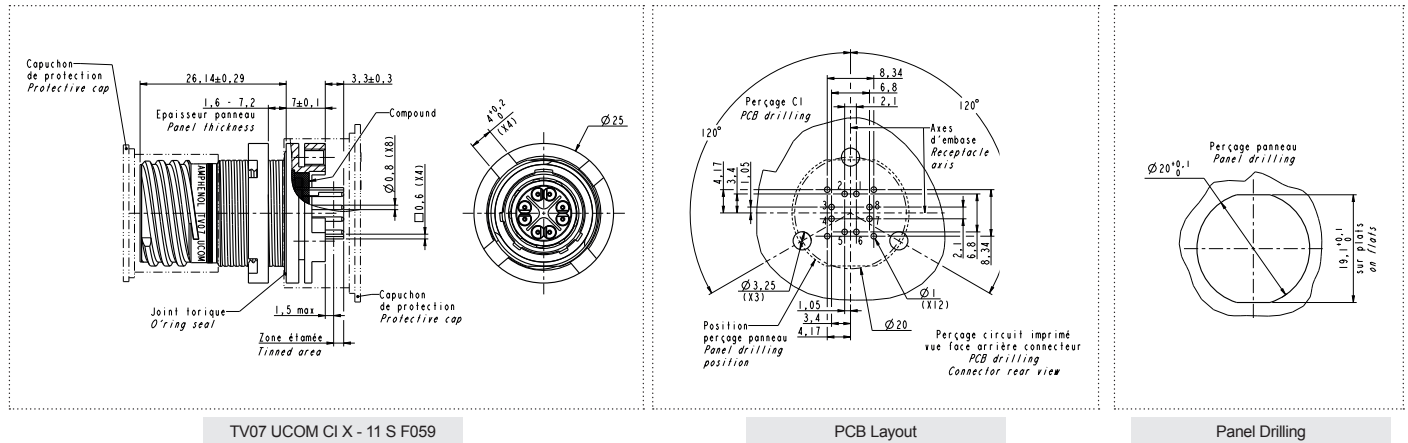


### TVP00 F459



## Stand off Reduced Flange Receptacle

### TV07 F059



# TV $\mu$ Com-10Gb+

## How to order stand off receptacles

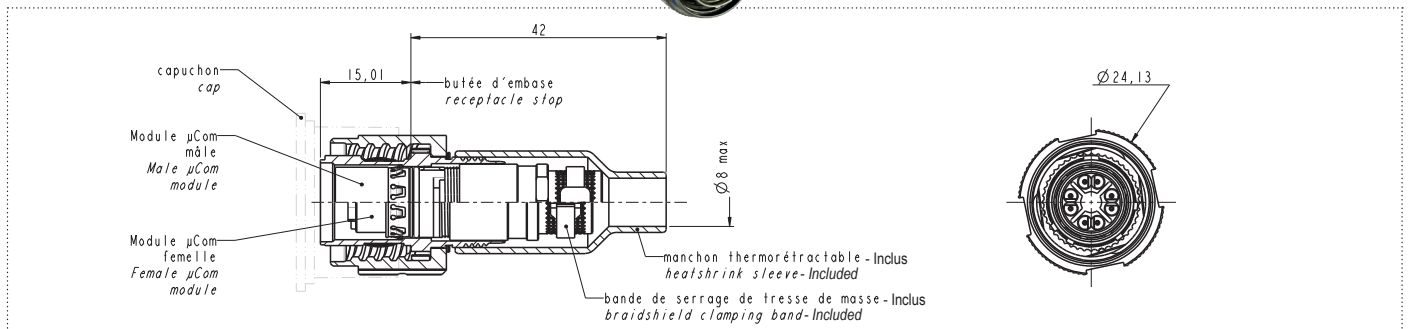
<b>Series</b>	TV	07	UCOM	CI	W	-11	S	F459
<b>Shell type</b> 07: Jam nut receptacle P00: Square flange receptacle								
<b>UCOM</b>								
<b>Contacts termination</b> CI: PCB Tail								
<b>Shell material and finish*</b> W: Aluminium shell - Olive drab cadmium plating F: Aluminium shell - Nickel plating ✓ ZN: Aluminium shell - Black zinc nickel plating ✓ B: Marine bronze shell ✓								
<b>Shell size</b> 11								
<b>Type of contact</b> S: Female $\mu$ Com module								
<b>Deviation</b> F459: Stand off F059: Stand off Reduced Flange for Jam Nut receptacle only								

Example: TV07UCOMCIF-11SF459

✓: RoHS compliant

\* Please contact us for other plating options

## Plug TV06



TV06 UCOM X X -11 X

## How to order plugs

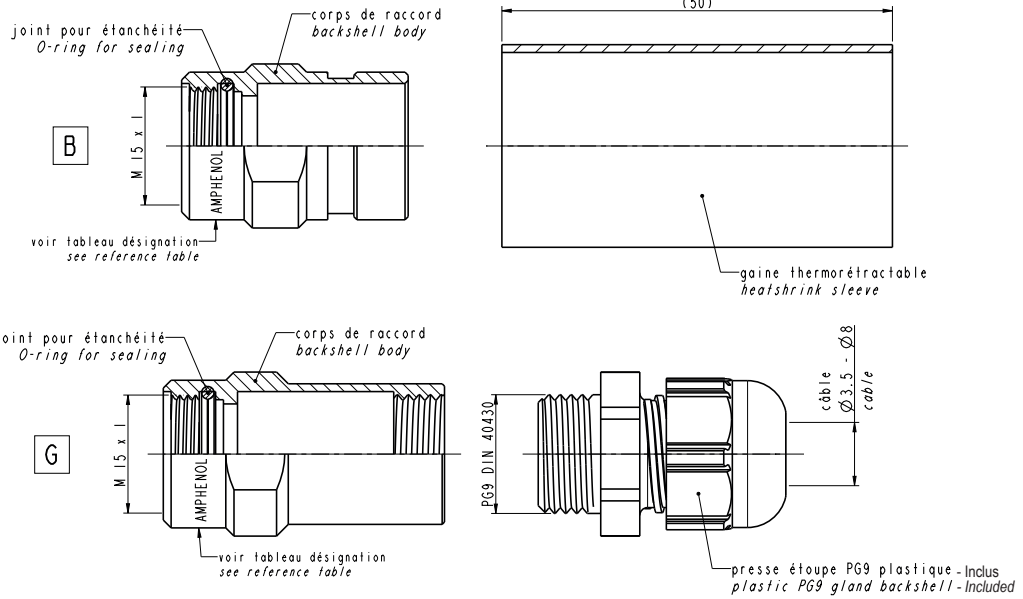
<b>Series</b>	TV	06	UCOM	C	W	-11	P
<b>Shell type</b> 06: Plug							
<b>UCOM</b>							
<b>Contacts termination</b> C: Crimp S: Solder							
<b>Shell material and finish*</b> W: Aluminium shell - Olive drab cadmium plating F: Aluminium shell - Nickel plating ✓ ZN: Aluminium shell - Black zinc nickel plating ✓ B: Marine bronze shell ✓							
<b>Shell size</b> 11							
<b>Type of contact</b> P: Male $\mu$ Com module S: Female $\mu$ Com module							

Examples: TV 06 UCOM C F -11 P; TV 06 UCOM S ZN -11 P

\* Please contact us for other plating options

✓: RoHS compliant

## Special Backshells



TV UCOM X X

## How to order - Special Backshells

Series	TV UCOM	W	B
<b>Shell material and finish*</b> W: Aluminium shell - Olive drab cadmium plating F: Aluminium shell - Nickel plating ✓ ZN: Aluminium shell - Black zinc nickel plating ✓ B: Marine bronze shell ✓			
<b>Backshell type</b> B: Backshell for heatshrink sleeve G: Backshell for PG gland			

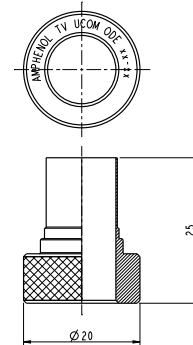
✓: RoHS compliant

\* Please contact us for other plating options

# TV $\mu$ Com-10Gb+

## Accessories Removal tool

Part number: **TV UCOM ODE**



## Spares

Crimp Pin (10 pcs)  
Part number: **31073**

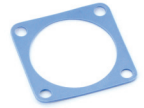


Crimp Socket (10 pcs)  
Part number: **31074**



## Panel Gasket for TVP00

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



## 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).*

## Watch our videos

### Assembly Solder Version



2:41

<http://opn.to/a/LJYuV>

Scan  
& discover !



### Assembly Crimp Version



3:32

<http://opn.to/a/6ud5l>

Scan  
& discover !



# TV µCom-10Gb+ - STANDARD METALLIC CAPS

## Description

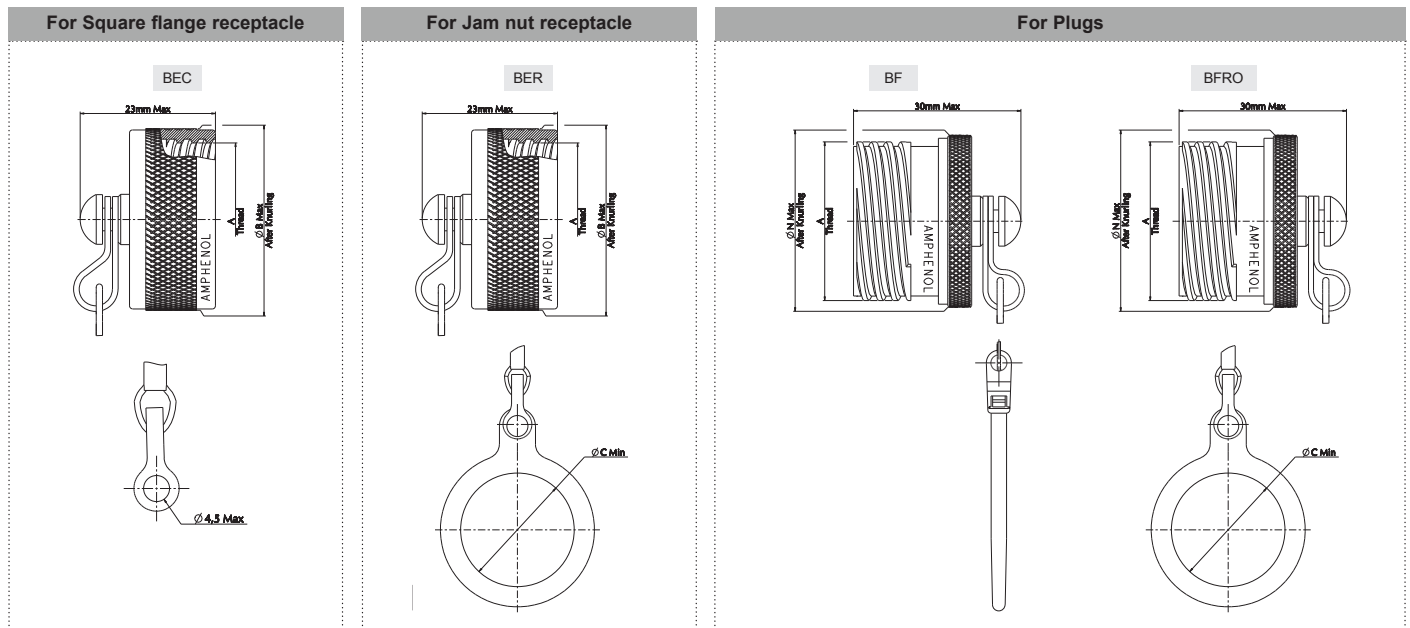
The largest range of protective caps with IP68 protection level.

## Main features

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



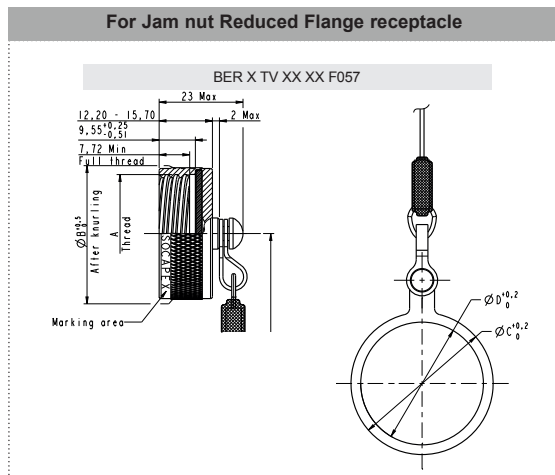
## Overall dimensions



### Lanyard (Attachment) Length

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

Size	A thread 0.1P-0.3L-TS Class 2A (External) Class 2B (Internal) (inch)	ØB Max (After Knurling)	ØC Min	ØN Max
11	.7500	22,60	21,97	20,50



Size	A Thread	Ø B +0,5 0	Ø C +0,2 0	Ø D +0,2 0
11	0.750-2B-0.1P-0.3L-TS	22,60	25,5	20,5



# TV $\mu$ Com-10Gb+ - METALLIC SELF-CLOSING CAPS

NEW

## Description

High end protection with metallic self-closing function.

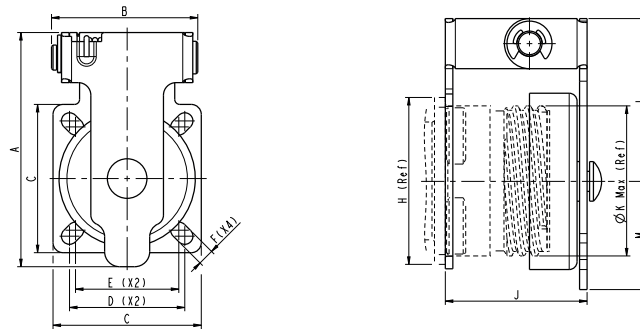
## Main features

- 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



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

# TV $\mu$ Com-10Gb+ - SILICONE CAPS

## Description

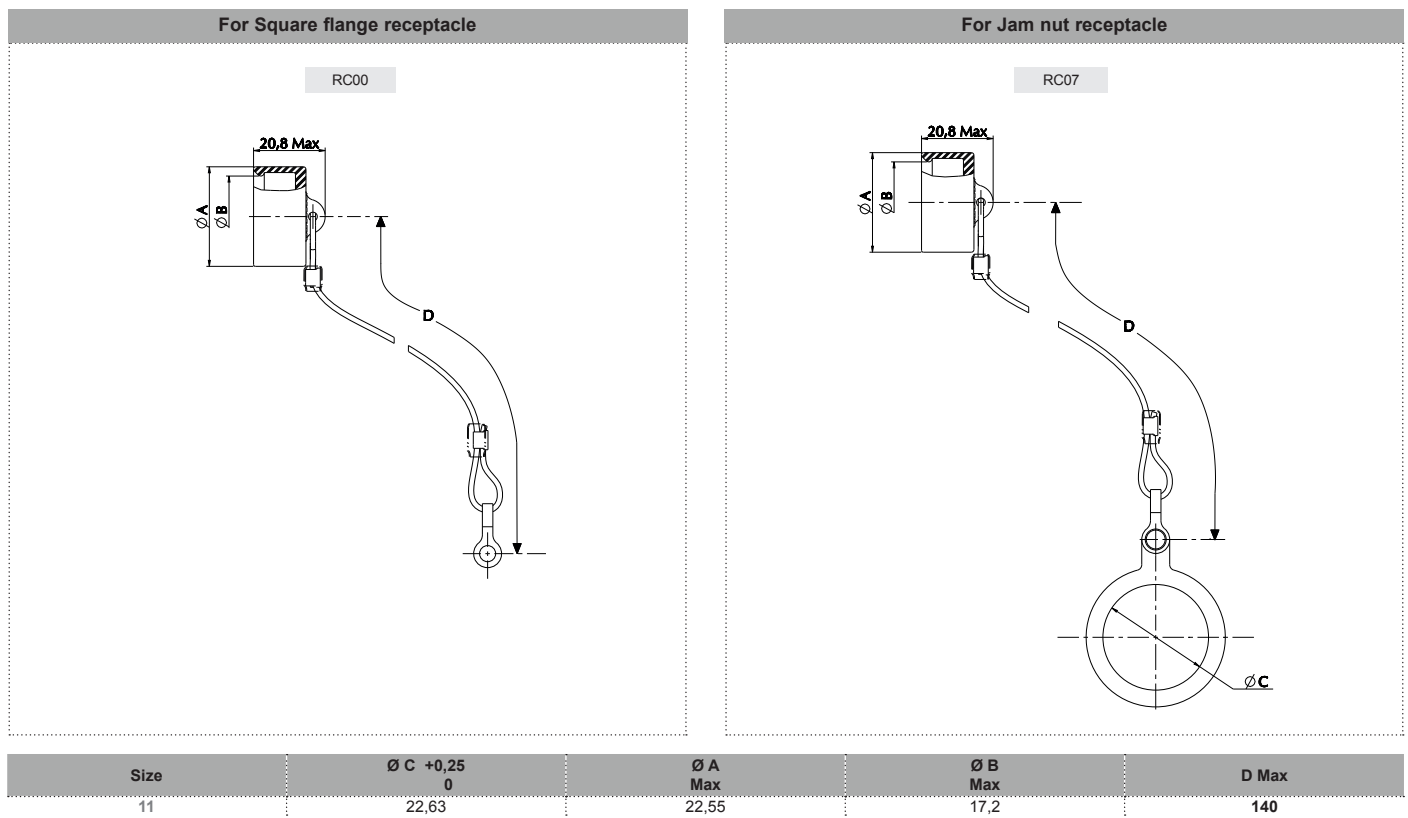
Silicone protective caps against dust and water.

## 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



# HOW TO ORDER - CAPS

## Protective Caps - Standard Metallic Caps

Standard Metallic Caps	B	EC	N	TV	W	11
<b>Protection cap type</b>						
EC: For square flange receptacle						
ER: For jam nut receptacle						
F: For plug						
<b>Wire type</b>						
Blank for metallic chain						
N: Nylon cord						
R: Jacketed stainless steel rope						
RO: Jacketed stainless steel rope with washer end (only for plug)						
<b>Connector type</b>						
<b>Material and finish</b>						
W: Olive drab cadmium plated on aluminum (175°C)						
ZN: Black zinc nickel plated on aluminum (175°C) ✓						
F: Electroless nickel plated on aluminum (200°C) ✓						
B: Marine bronze (200°C) ✓						
Z: Green zinc cobalt plated on aluminum (175°C) ✓						
<b>Corresponding connector shell size</b>						
11						
<b>Deviation</b>						
F057 for jam nut Reduced Flange receptacle only						
Blank for others						

## Protective Caps - Metallic Self-Closing Caps/Square Flange Receptacles only

Metallic Self-Closing Caps	TV	-	SCC	11	F
<b>Protection cap type</b>					
Blank for square flange receptacle					
<b>SCC</b>					
Self-closing type					
<b>Shell size</b>					
11					
<b>Material and finish</b>					
W : Olive drab cadmium on aluminum (175°C)					
ZN : Black zinc nickel on aluminum (175°C) ✓					
F : Electroless nickel on aluminum (200°C) ✓					
B : Black electrophoresis on aluminum (125°C)					

## Protective Caps - Silicone Caps/Receptacles only

Rubber Caps	RC	00	N	TV	11
<b>Protection cap type</b>					
00: For square flange receptacle					
07: For jam nut receptacle					
<b>Wire type</b>					
N: Nylon cord					
<b>Connector type</b>					
<b>Shell size</b>					
11					

✓: RoHS compliant

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