Amphenol SOCAPEX

µCom-10Gb +

Harsh Environment 10Gb Ethernet Micro Connectors

Description

µCom-Series is a new range of connectors designed to address the latest trends of the industry : miniaturization and high speed, with the highest resistance for use in the harshest environments.

Main Features:

- 10Gb+: exceeds 10Gb/s Ethernet following IEEE 802.3an-2006 : **10GBase-T**
- Cat.6A connector according to TIA568C.2 and ISO/IEC11801 standard
- 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

- 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
- Thread and Push Pull coupling mechanisms
  →2000 mating cycles & high vibration resistance
- Machined Brass shells
  →Plating available:
  Olive Drab Cadmium→not ROHS compliant
  Black Nickel, and unplated brass→ROHS compliant
  →shell to shell continuity and 500h salt spray resistance
- Machined & gold plated Solder and Crimp contacts
  →design & performance according to the innercontact of M39029/77-429#16 M39029/76-425#16 38999 contact
  →contacts are crimped with standard crimping tool M22520/2-01 + Amphenol µCom positioner
- 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

Markets & Applications

C4ISR | Ground Vehicle | Navy | Commercial Aerospace | Railways

Applications :

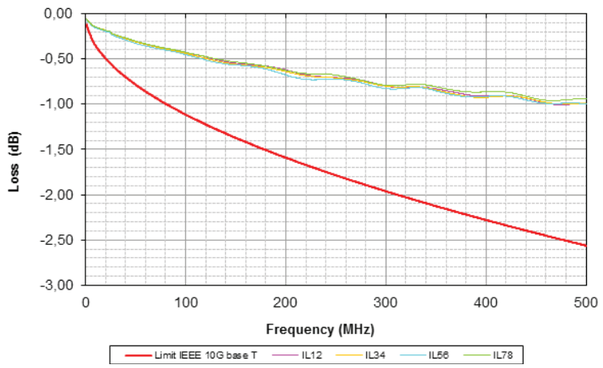
- Shipboard
- In Flight Entrertainment*

**µCom approved by GORE*

Transmission Data

Exceeds 10Gb/s Ethernet requirement √

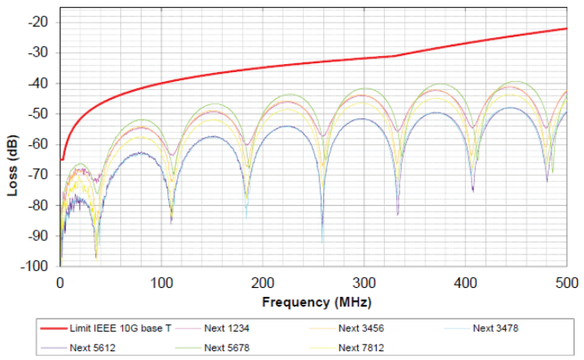
Insertion Loss (IL) :



← Amphenol performance

← IEEE 802.3an Standard requirement

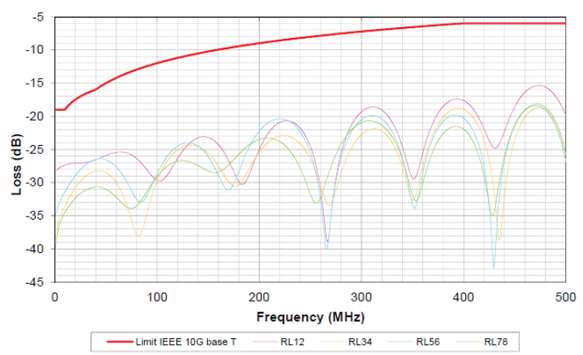
Near End crosstalk (NEXT) :



← IEEE 802.3an Standard requirement

← Amphenol performance

Return Loss (RL) :



← IEEE 802.3an Standard requirement

← Amphenol performance

µCom-10Gb +

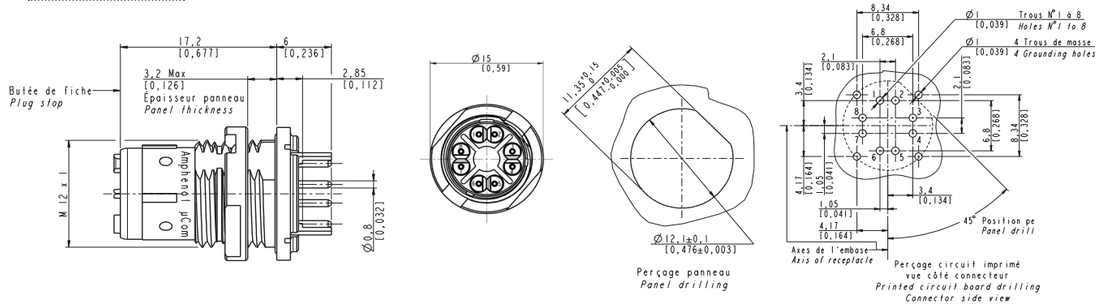
Female Receptacles

Female receptacle for printed circuit board

Compatible with both thread & push pull plugs

Part number: UCOM-10G+ R **P** x

x: see the 'How to order' below to complete your part number



Panel mount female receptacle with metallic band backshell

Compatible with both thread & push pull plugs

Part number: UCOM-10G+ R x x

x: see the 'How to order' below to complete your part number

Nota: *metallic band and heatshrink sleeve are provided with the connector*

How to Order Female Receptacles

UCOM - 10G+	R	P	B

Shell
R: receptacle (push pull or thread)

Contacts termination
P: PCB
S: solder
C: crimp

Shell plating
B: black nickel
G: olive drab cadmium
U: unplated brass

NOTA:
- **U**COM for order designation
- **µ**Com for marking on connectors

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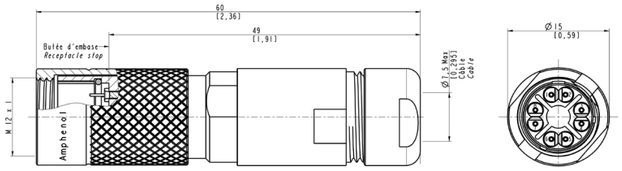
Due to technical progress, all information provided is subject to change without prior notice
Designed by Amphenol Socapex

Amphenol SOCAPEX

Male Plugs

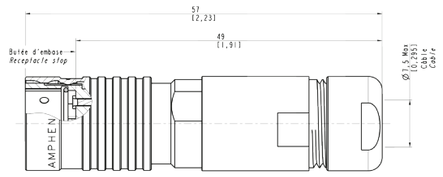
Plug with cable gland backshell

Part number: UCOM-10G+ P T x x **G** x
x: see the 'How to order' below to complete your part number



Thread version

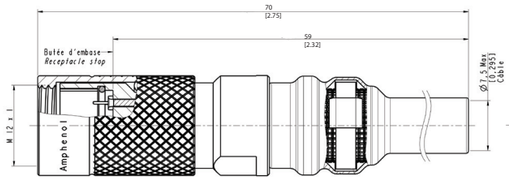
Part number: UCOM-10G+ P P x x **G** x
x: see the 'How to order' below to complete your part number



Push Pull version

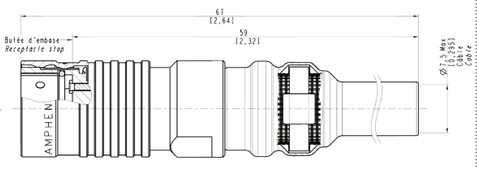
Plug with metallic band backshell

Part number: UCOM-10G+ P T x x **B**
x: see the 'How to order' below to complete your part number



Thread version

Part number: UCOM-10G+ P P x x **B**
x: see the 'How to order' below to complete your part number



Push Pull version

Nota: *Metallic band and heatshrink sleeve are provided with the connector*

How to Order Male Plugs

UCOM - 10G+	P	T	C	B	G	A

Shell
P: plug

Mating *(for plugs only)*
T: thread
P: push-pull

Contacts termination
C: crimp
S: solder

Shell plating
B: black nickel
G: olive drab cadmium
U: unplated brass

Backshell type
G: gland
B: band

Cable diameter *(for gland backshell only)*
A: for cable diam 7.5mm

NOTA:
- **U**COM for order designation
- **µ**Com for marking on connectors

For other cable diameter, please consult us

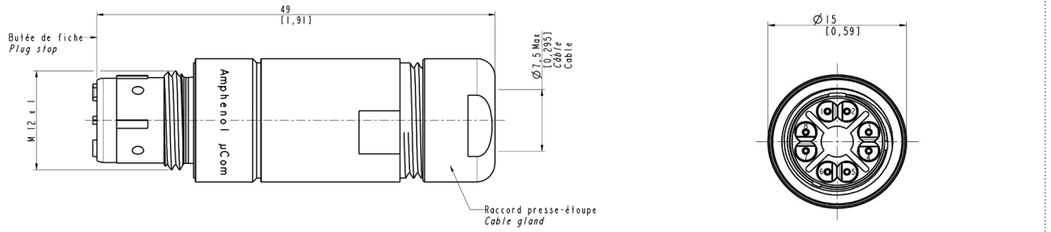
µCom-10Gb +

Female in-line Receptacles

Female in-line receptacle with cable gland backshell

Compatible with both thread & push pull plugs

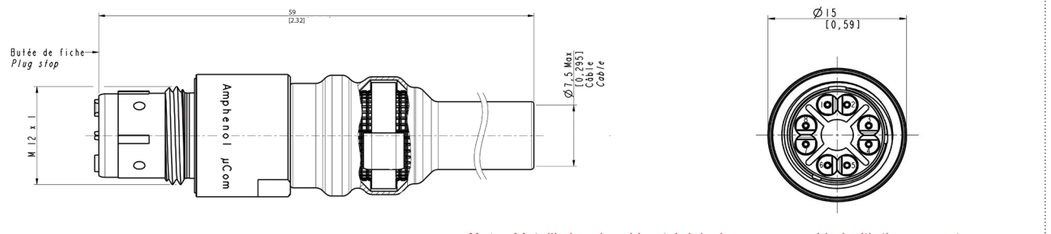
Part number: UCOM-10G+ L x x **G** x
x: see the 'How to order' below to complete your part number



Female in-line receptacle with metallic band backshell

Compatible with both thread & push pull plugs

Part number: UCOM-10G+ L x x **B**
x: see the 'How to order' below to complete your part number



Nota: *Metallic band and heatshrink sleeve are provided with the connector*

How to Order Female in-line Receptacles

UCOM - 10G+	L	S	B	G	A

Shell
L: in line receptacle (push pull or thread)

Contacts termination
C: crimp
S: solder

Shell plating
B: black nickel
G: olive drab cadmium
U: unplated brass

Backshell type
G: gland
B: band

Cable diameter *(for gland backshell only)*
A: for cable diam 7.5mm

NOTA:
- **U**COM for order designation
- **µ**Com for marking on connectors

For other cable diameter, please consult us

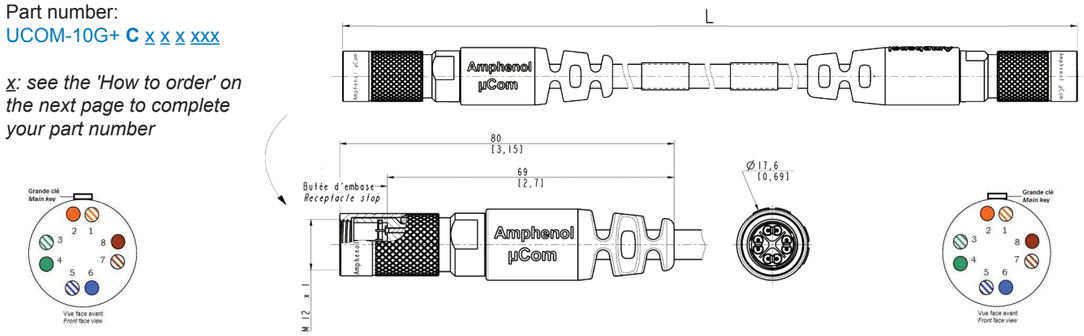
Cordsets

New cabling configuration		
Cable number		Connector number
1	White / Orange	1
2	Orange	2
3	White / green	3
6	Green	4
5	White / Blue	5
4	Blue	6
7	White / Brown	7
8	Brown	8

µCom plug - µCom plug cordset

Part number:
UCOM-10G+ **C** x x x xxx

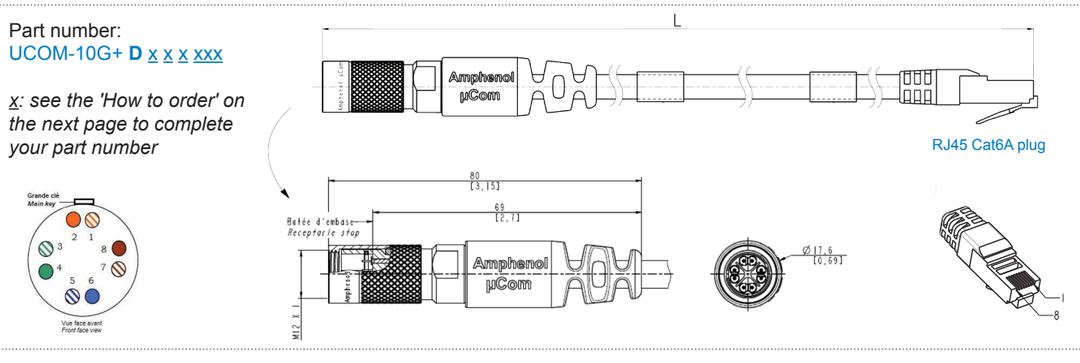
x: see the 'How to order' on the next page to complete your part number



µCom plug - RJ45 Cat6A plug cordset

Part number:
UCOM-10G+ **D** x x x xxx

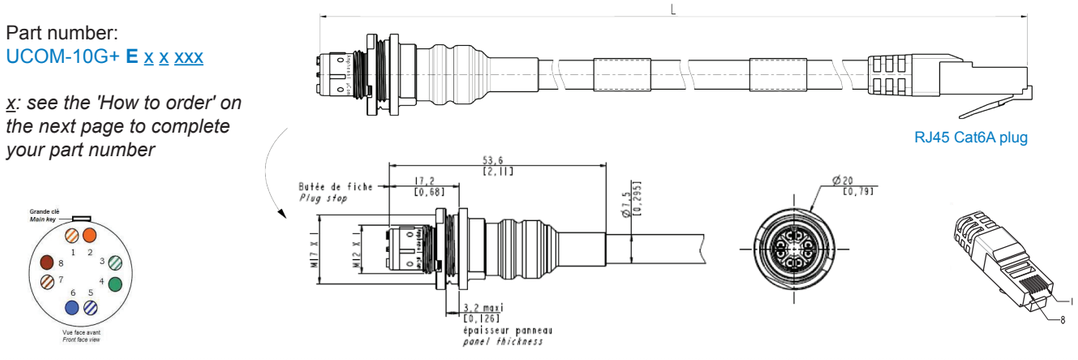
x: see the 'How to order' on the next page to complete your part number



µCom panel mount receptacle - RJ45 Cat6A plug

Part number:
UCOM-10G+ **E** x x xxx

x: see the 'How to order' on the next page to complete your part number

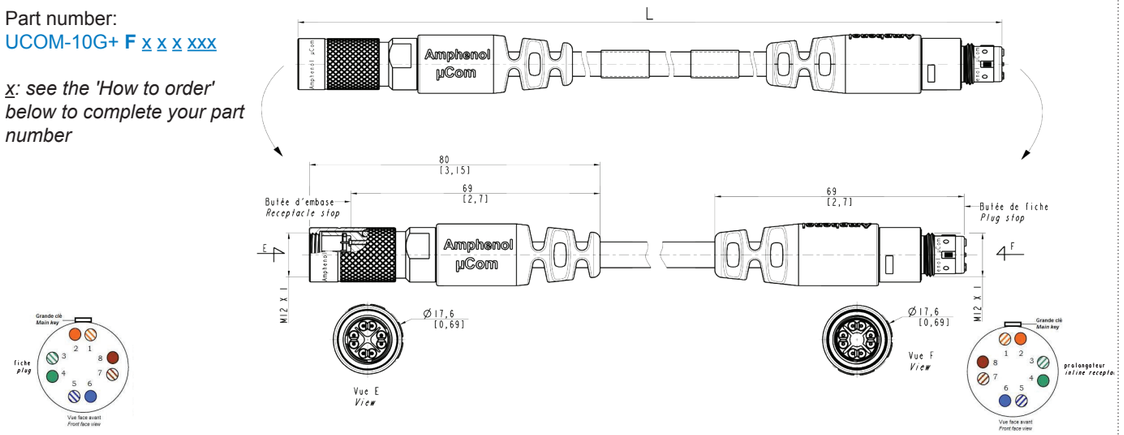


µCom-10Gb +

µCom plug - µCom inline receptacle

Part number:
UCOM-10G+ **F** x x x xxx

x: see the 'How to order' below to complete your part number



Type of cable used: CAT 7 HFFR - According to EN 50288-4-2

- Stranded bare copper wire (26 AWG)
- 4 screened twisted pairs: 2 wires twisted to a pair, Alulaminate foil overlapped
- Shield braiding of tinned copper wires, about 80% coverage
- Strain member of Kevlar
- Jacket in black Polyurethane (PUR), glossy finish, acc to DIN VDE 0282
- External diameter 7.0 +/-0.3 mm
- UV & Hydrolysis resistant, Halogen free, RoHS compliant
- Max Pull force: 800 N, Weight : about 54 kg/km
- Temperature : - 40°C / + 85°C
- Min. bending radius allowed: repeated 8 x Ø, single 4 x Ø

GORE ® has approved µCom assembled onto their cat6A cable P/N : RCN9034-24.
Information available on GORE® website.

How to Order Cordsets

UCOM - 10G+ C T C B 0 1 5

Shell
- **C**: µCom plug - µCom plug cordset
- **D**: µCom plug - RJ45 Cat6A plug cordset
- **E**: µCom panel mount receptacle - RJ45 Cat6A plug cordset
- **F**: µCom plug - µCom inline receptacle cordset

Open versions:
- **G**: µCom plug - no connector at the end
- **H**: µCom panel mount receptacle - no connector at the end
- **J**: µCom inline receptacle - no connector at the end

Mating *(for plugs only)*
- T: thread

Contacts termination
- **C**: crimp
- **S**: solder

Shell plating
- **B**: black nickel
- **G**: olive drab cadmium
- **U**: unplated brass

Total length - *For other lengths, please consult us.*
- **002**: 20 cm [7.87]
- **005**: 50 cm [19.68]
- **010**: 1.0 m [39.37]
- **015**: 1.5 m [59.05]
- **020**: 2.0 m [78.74]
- **050**: 5.0 m [196.85]
- **100**: 10.0 m [393.70]

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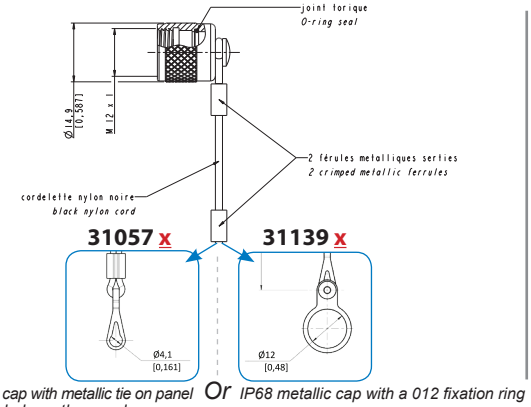
Accesories

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

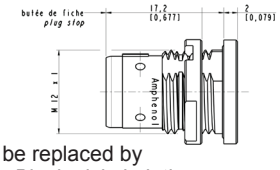
Cap in neoprene
Part number: **31092**

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
Part number: **31073**

Crimp Socket
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).*

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