

μCom-10Gb +

Harsh Environment 10Gb
Ethernet Micro Connectors



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 **harshesht environments**.

μCom-10Gb + is the first product of this new range.

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
- Miniature : **15 mm(.59") max** external diameter

FEATURES AND BENEFITS

- 4 pairs totally insulated throughout the connector
⇒ minimum cross-talk between the four pairs
- Patent pending special interfacial shapes
⇒ minimum perturbation at the interface of each pair
- Thread coupling mechanism
⇒ 2000 mating cycles & high vibration resistance
- Machined Brass shells and RoHS compliant plating
⇒ 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
- Solder contact : max AWG24
- Crimp contact : AWG 24 to 26
- IP68 sealing mated and unmated for receptacles
- 1500 Vrms Dielectric Withstanding voltage
- Temperature range : - 55°C / + 125°C

MARKETS & APPLICATIONS

- **DEFENSE** : C4ISR, Battlefield Communications, Shipboard, Ground Vehicles Vetronics.
- **AERONAUTICAL** : In Flight Entertainment, Avionics, Communication Systems.
- **RAIL MASS TRANSIT** : Passenger Information Systems, Communication Systems.



TRANSMISSION DATA



Insertion loss



← Amphenol performance

← IEEE 802.3an Standard requirement

Next 1-2



← IEEE 802.3an Standard requirement

← Amphenol performance

Return loss



← IEEE 802.3an Standard requirement

← Amphenol performance

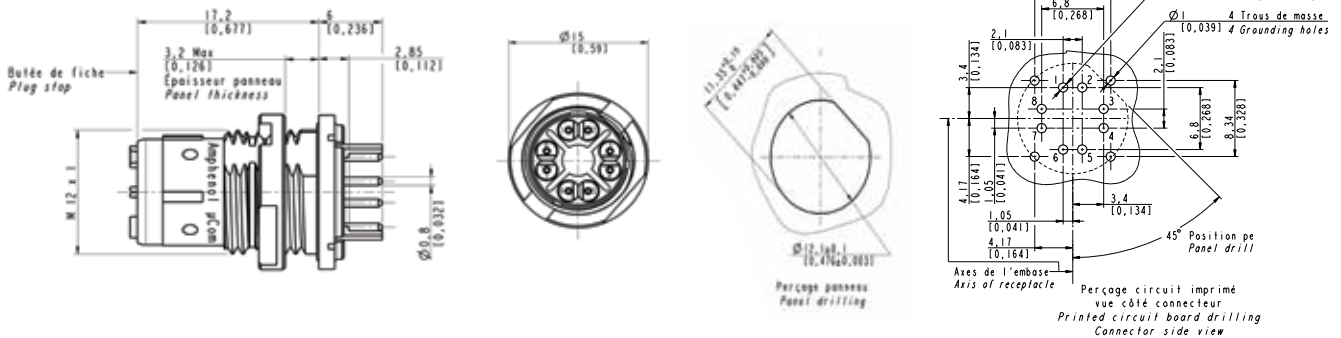
FEMALE RECEPTACLES



Female receptacle for printed circuit board

Part number: UCOM-10G+ R P X

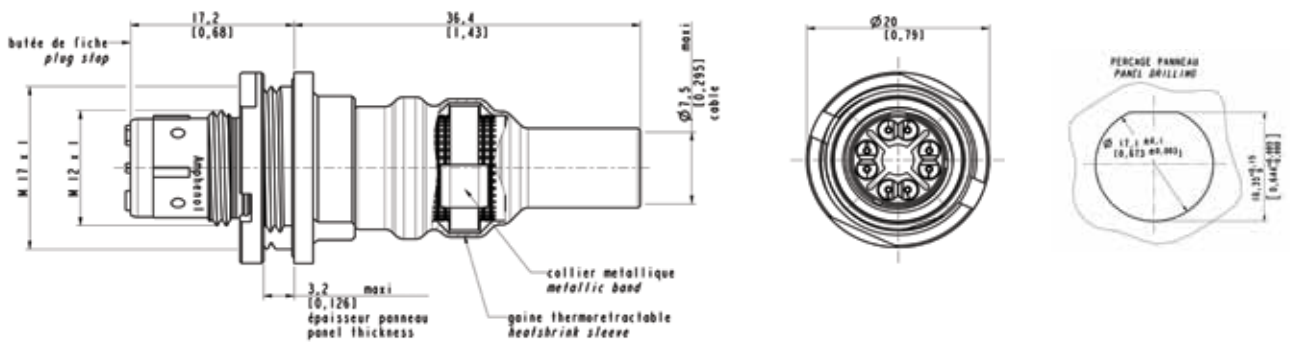
X: see the 'How to order' below to complete your part number



Panel mount female receptacle with metallic band backshell

Part number: UCOM-10G+ R X X

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



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:

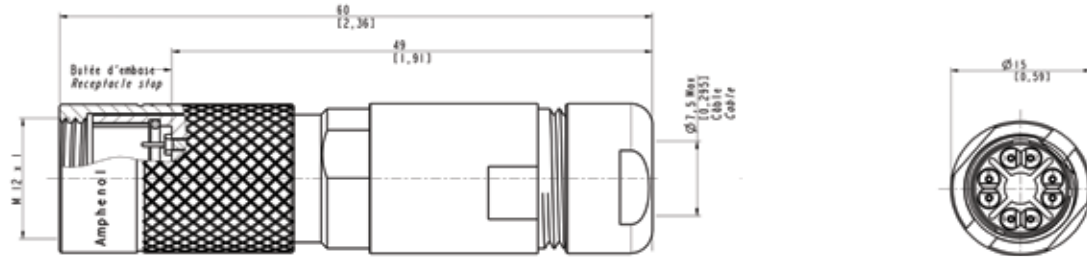
- UCOM for order designation
- µCom for marking on connectors

MALE PLUGS



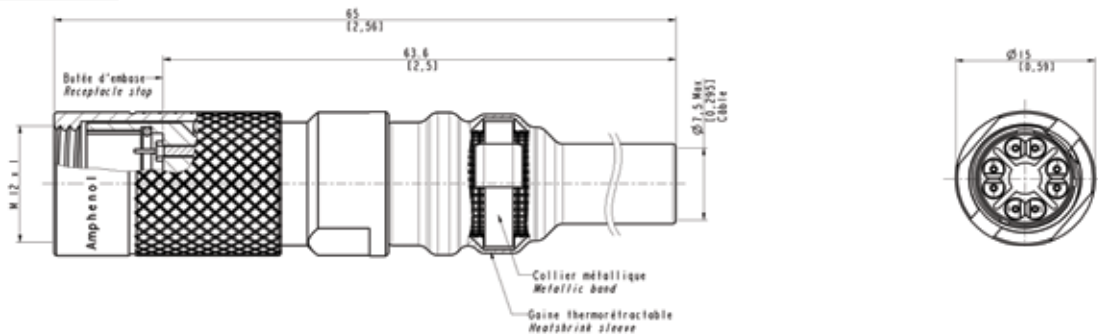
Plug with cable gland backshell

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



Plug with metallic band backshell

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



HOW TO ORDER Male plugs

UCOM - 10G+ P T C B G A

Shell	P	T	C	B	G	A
P: plug						
Mating (for plugs only)		T	C	B	G	A
T: thread						
Contacts termination			C	B	G	A
C: crimp						
S: solder						
Shell plating				B	G	A
B: black nickel						
G: olive drab cadmium						
U: unplated brass						
Backshell type				B	G	A
G: gland						
B: band						
Cable diameter (for gland backshell only)						A
A: for cable diam 7.5mm						
B: to be defined						

NOTA:

- UCOM for order designation
- μCom for marking on connectors

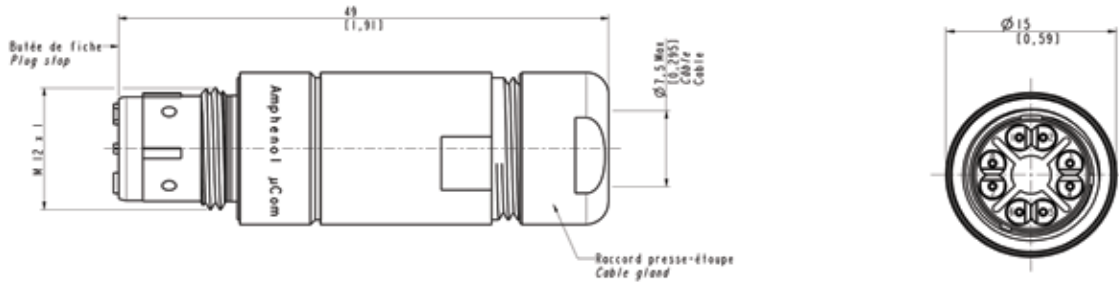
FEMALE IN-LINE RECEPTACLES



Female in-line receptacle with cable gland backshell

Part number: UCOM-10G+ L x x G x

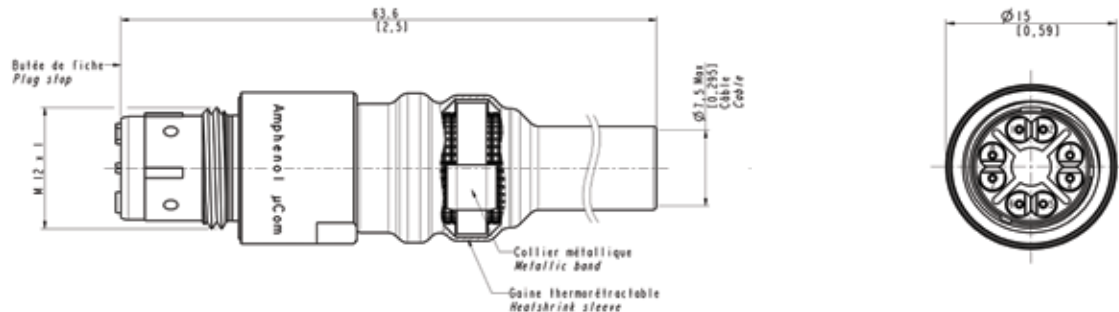
x: see the 'How to order' below to complete your part number



Female in-line receptacle with metallic band backshell

Part number: UCOM-10G+ L x x B

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



HOW TO ORDER Female in-line receptacles

UCOM - 10G+	L	S	B	G	A
Shell					
L: in line receptacle					
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					
B: to be defined					

NOTA:

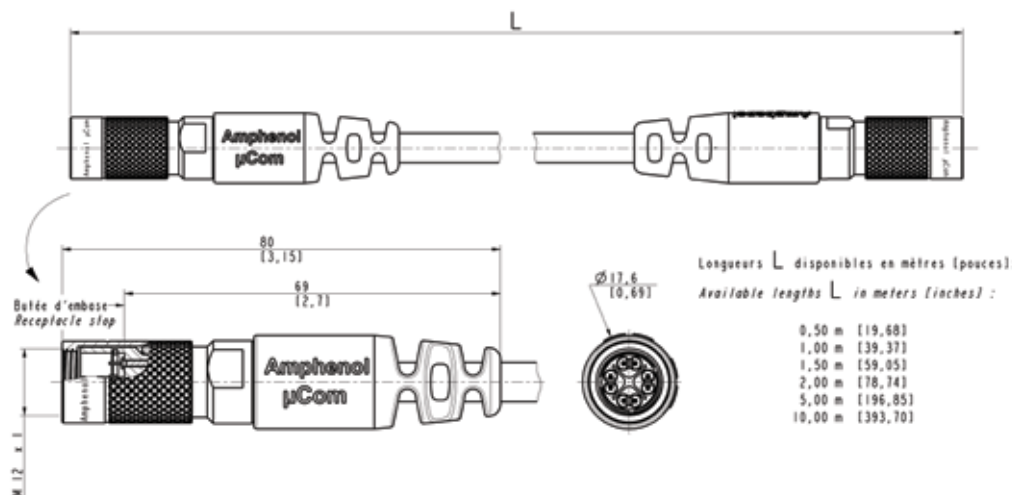
- UCOM for order designation
- μCom for marking on connectors

CORDSETS

μCom plug - μCom plug cordset

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

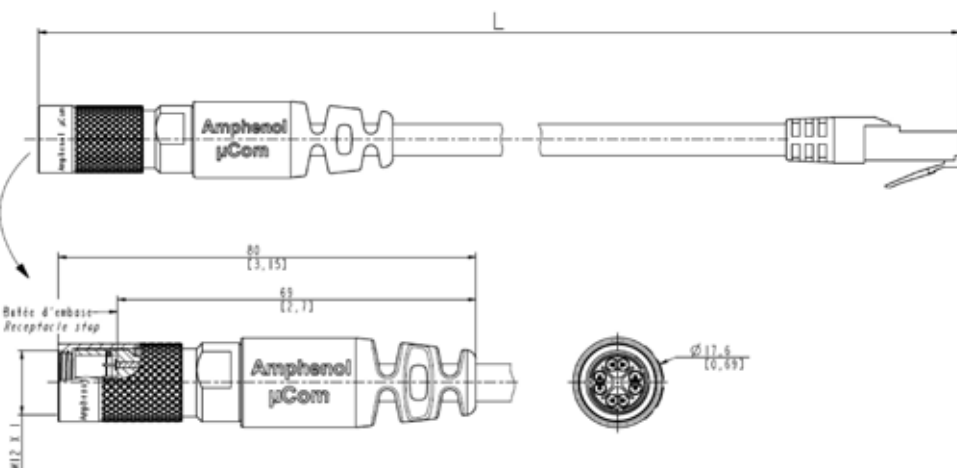
x: see the 'How to order' on the next page to complete your part number



μCom plug - RJ45 plug cordset

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

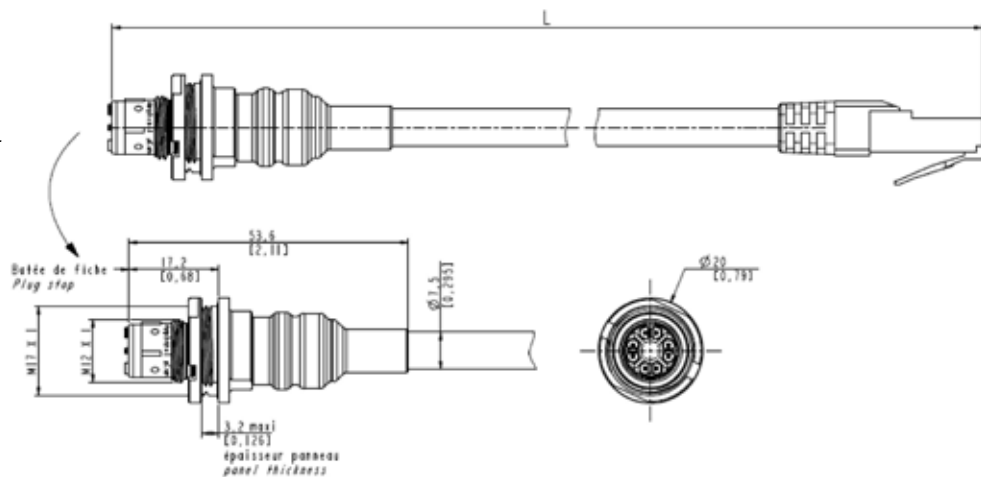
x: see the 'How to order' on the next page to complete your part number



μCom panel mount receptacle - RJ45 plug

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

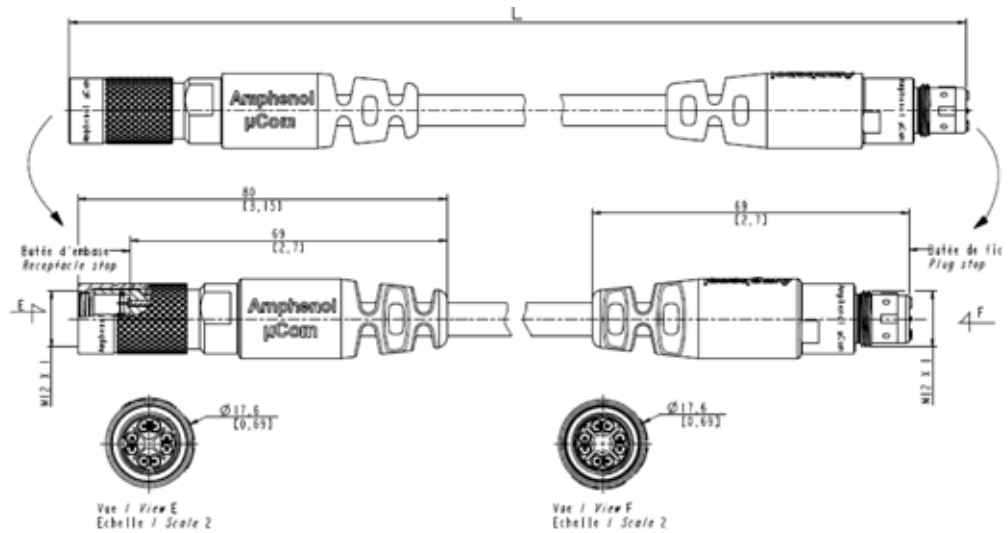
x: see the 'How to order' on the next page to complete your part number



μCom 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, Alulaminated 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

HOW TO ORDER Cordsets

	UCOM - 10G+	C	T	C	B	015
Shell						
C:	μCom plug - μCom plug cordset					
D:	μCom plug - RJ45 plug cordset					
E:	μCom panel mount receptacle - RJ45 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						
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]					

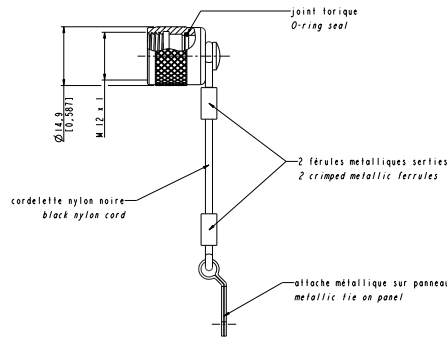
NOTA:

- UCOM for order designation
- μCom for marking on connectors

ACCESSORIES

CAPS for receptacles

IP68 metallic cap
 Part number: **31057** **X**
X to be replaced by
B for Black nickel plating
G for Olive drab cadmium plating
U for Unplated brass



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



CAPS for plugs

Cap in neoprene
 Part number: **31092**



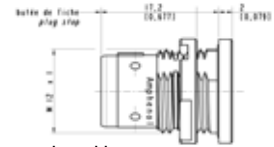
CAPS for in line receptacles

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

TOOLS



Nut clamping tool for receptacle
 Part number: **31055**



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
 Part number: **31132**

Brazing tool for plug
 Part number: **31133**

Mouser Electronics

Authorized Distributor

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[Amphenol:](#)

[31057U](#) [31091](#) [31093](#) [31057G](#) [31055](#) [31056](#) [31095](#) [31057B](#) [31092](#)