# 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 **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

## FEATURES AND BENEFITS

- 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

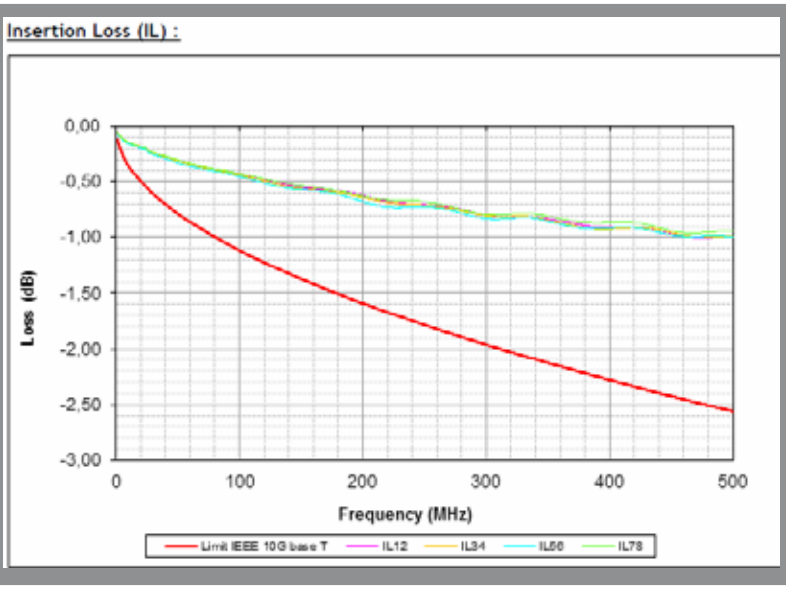
- **MILITARY:** C4ISR, Battlefield Communications, Shipboard, Ground Vehicles Vetronics.
- **AEROSPACE :** In Flight Entertainment*, Avionics*, Communication Systems.

**µCom approved by GORE*

# TRANSMISSION DATA

Exceeds 10Gb/s Ethernet requirement

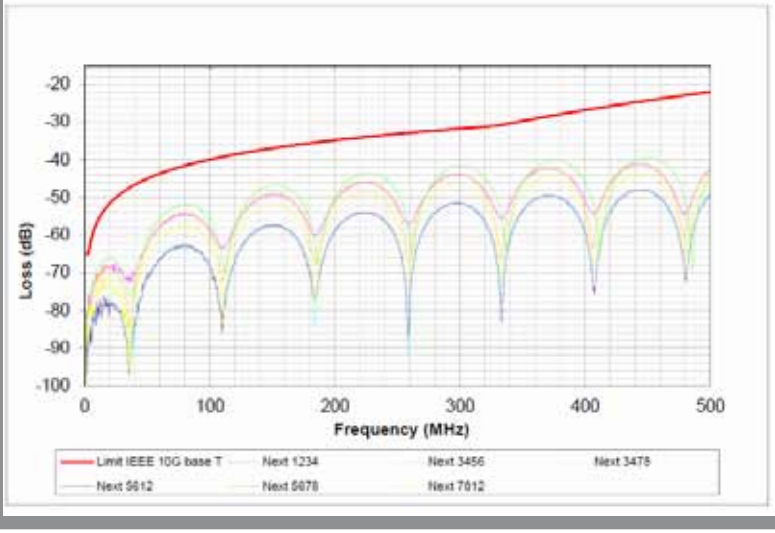
Insertion Loss (IL) :




← Amphenol performance

← IEEE 802.3an Standard requirement

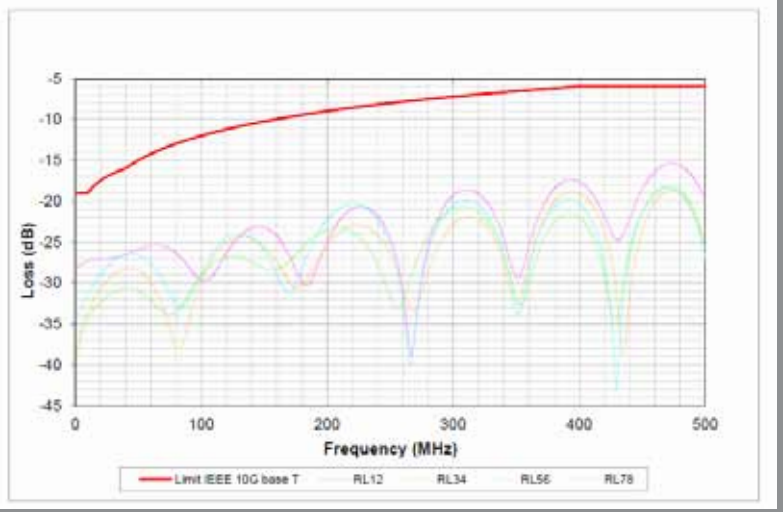
Near End crosstalk (NEXT) :




← IEEE 802.3an Standard requirement

← Amphenol performance

Return Loss (RL) :




← IEEE 802.3an Standard requirement

← Amphenol performance

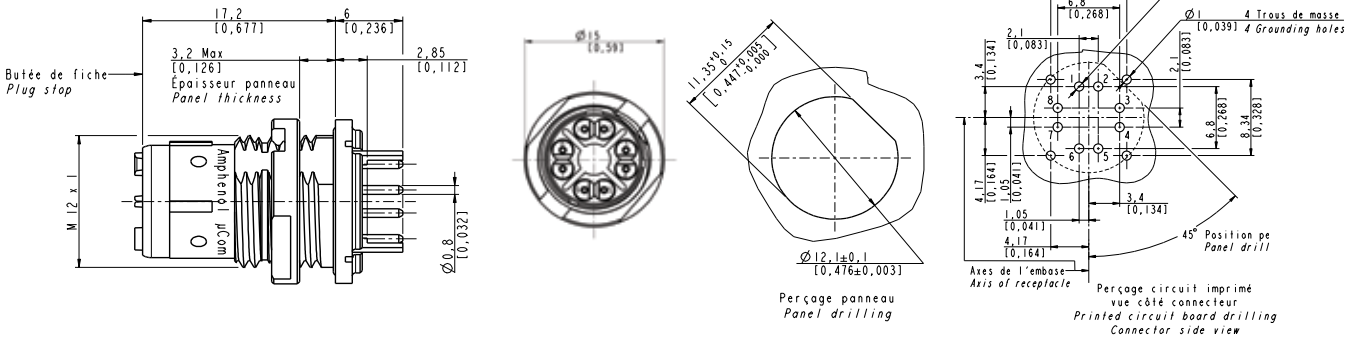
# FEMALE RECEPTACLES

## 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*

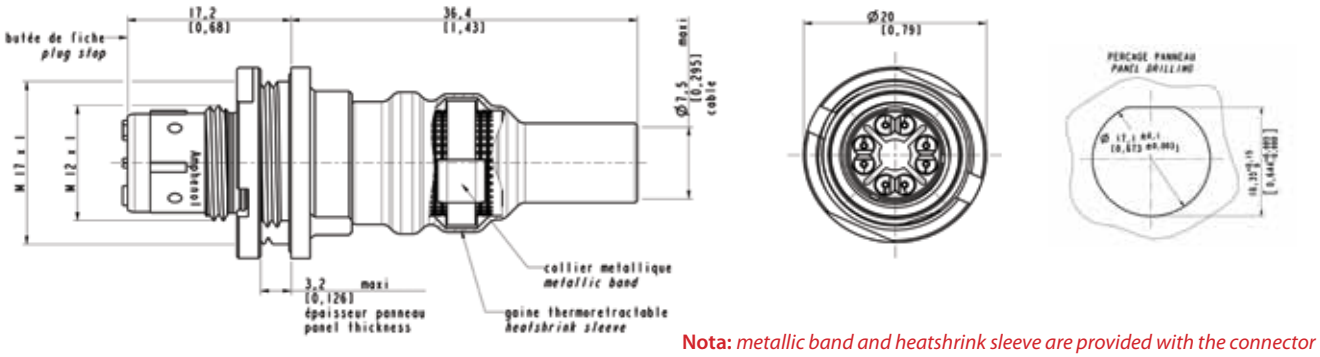


## Panel mount female receptacle with metallic band backshell

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

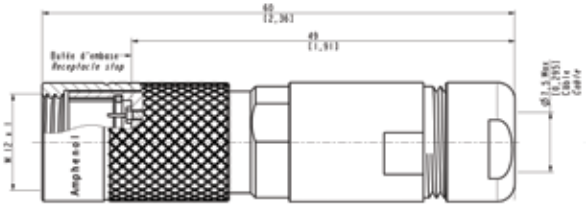
**Shell plating**
**B:** black nickel
**G:** olive drab cadmium
**U:** unplated brass

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

# MALE PLUGS

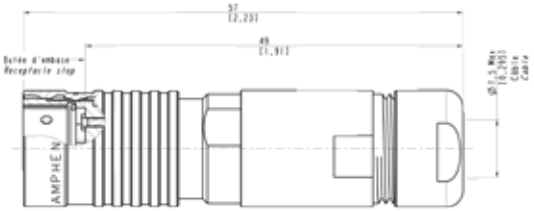
## Plug with cable gland backshell

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



Thread version

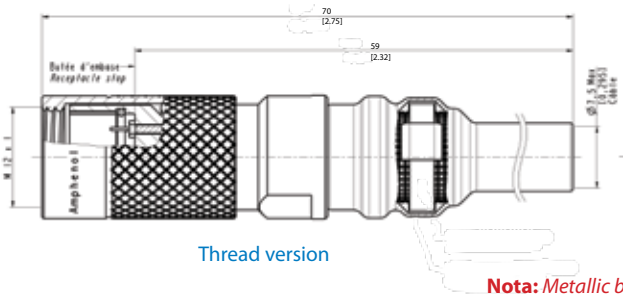
Part number: UCOM-10G+ P P x x **G** x
*x: see the 'How to order' below to complete your part number*



Push Pull version

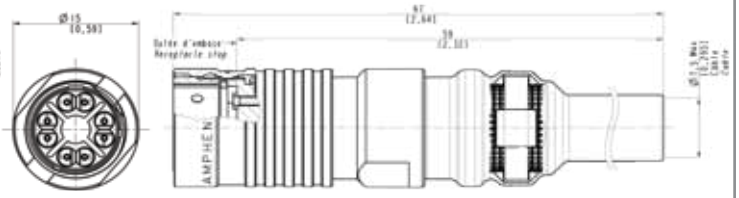
## Plug with metallic band backshell

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

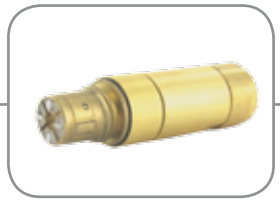
**Backshell type**
**G:** gland
**B:** band

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

*For other cable diameter, please consult us*

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

# FEMALE IN-LINE RECEPTACLES

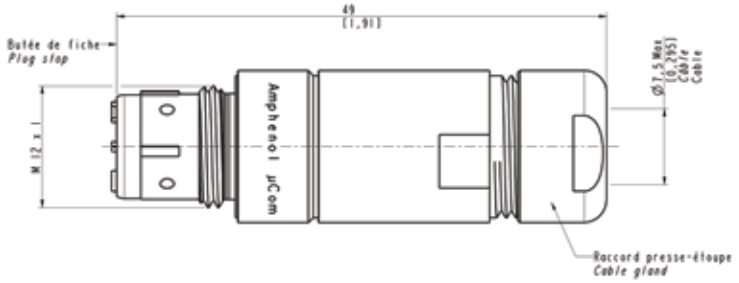


## Female in-line receptacle with cable gland backshell

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*

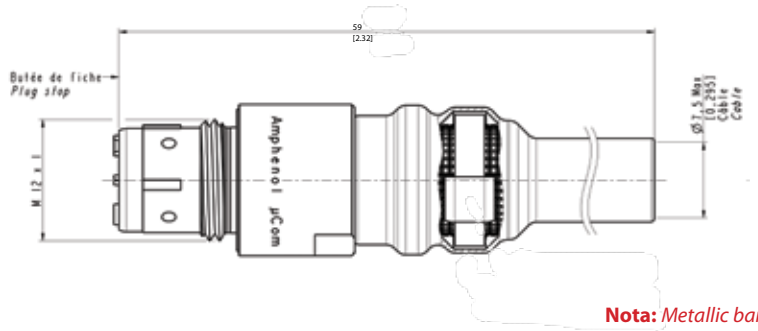


## Female in-line receptacle with metallic band backshell

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

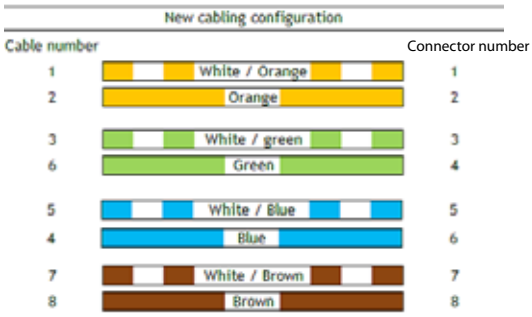
| UCOM - 10G+ | L | S | B | G | A |
|---|---|---|---|---|---|
| **Shell**<br>**L:** in line receptacle (push pull or thread) | | | | | |
| **Contacts termination**<br>**C:** crimp<br>**S:** solder | | | | | |
| **Shell plating**<br>**B:** black nickel<br>**G:** olive drab cadmium<br>**U:** unplated brass | | | | | |
| **Backshell type**<br>**G:** gland<br>**B:** band | | | | | |
| **Cable diameter** ***(for gland backshell only)***<br>**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*

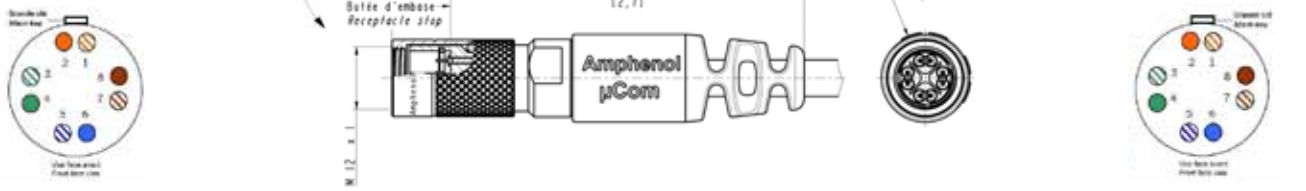
# CORDSETS




## µCom plug - µCom plug cordset

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

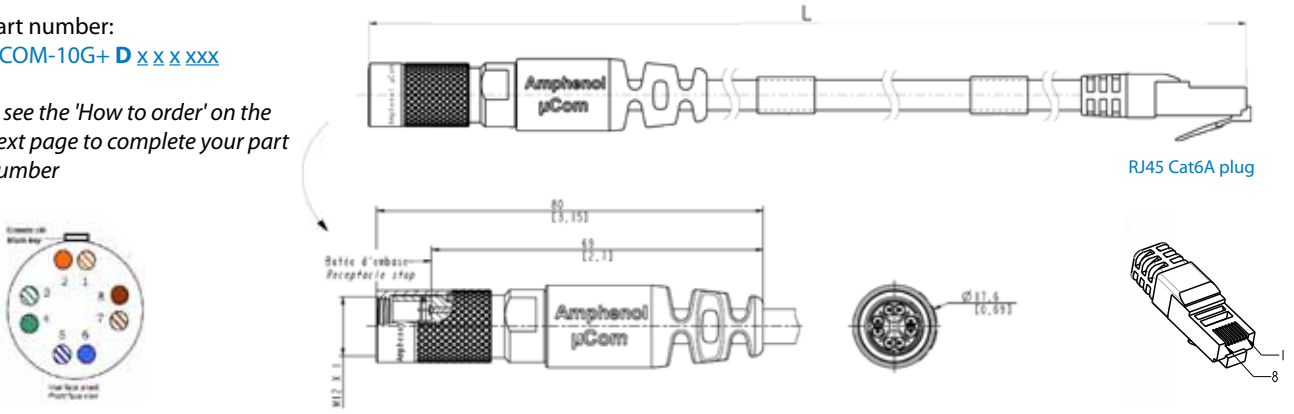
*x: see the 'How to order' on the next page to complete your part number*




## µCom plug - RJ45 Cat6A plug cordset

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

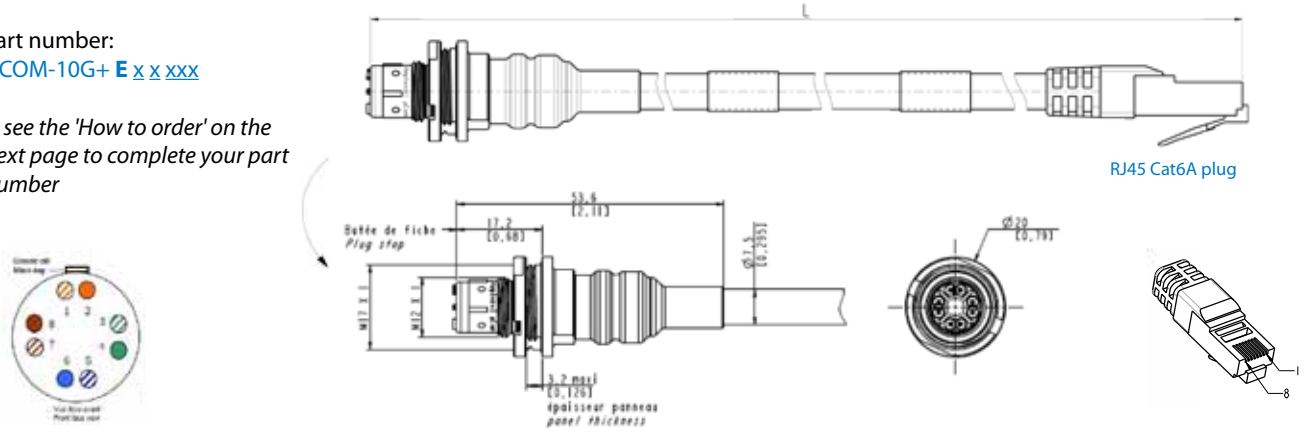
*x: see the 'How to order' on the next page to complete your part number*




## µCom panel mount receptacle - RJ45 Cat6A plug

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

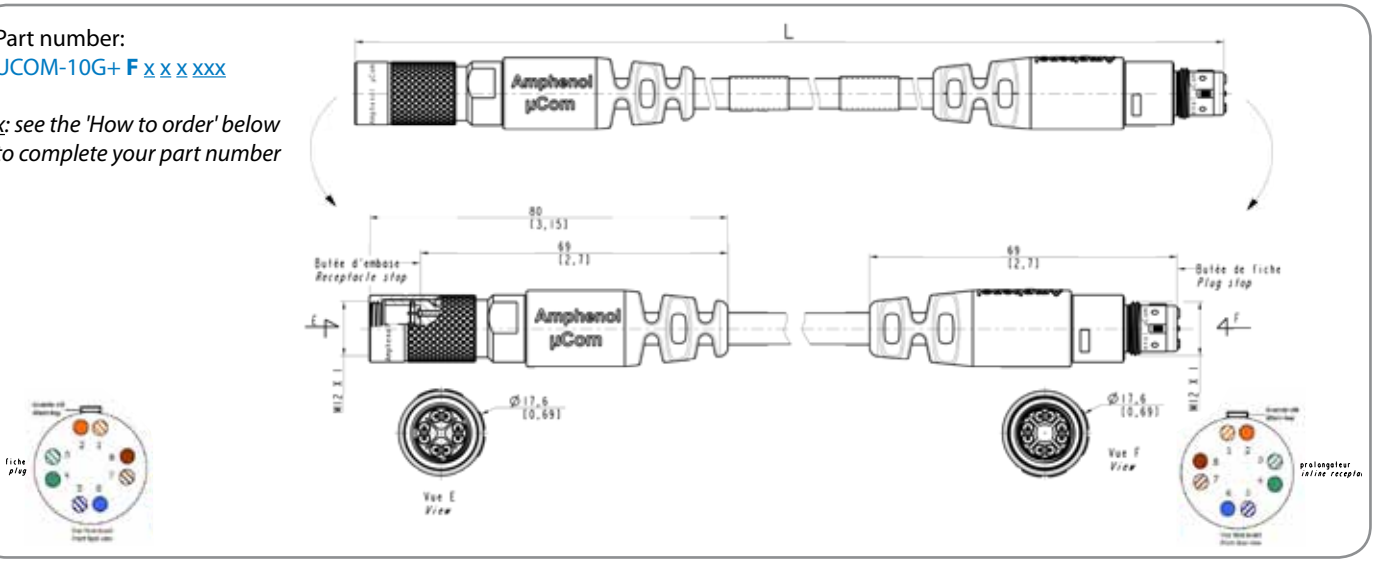
*x: see the 'How to order' on the next page to complete your part number*



## µCom 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]

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

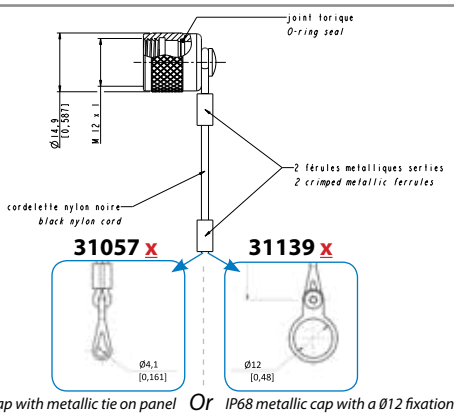
# ACCESSORIES

## 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*
*Nota: plan a hole on the panel*

*Or*

*IP68 metallic cap with a Ø12 fixation ring*

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

## CAPS for plugs

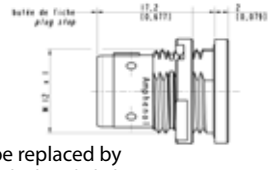
Cap in neoprene
Part number: **31092**

## 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).*

The information contained in this document should be used **as a guideline only**.
We reserve the right to **modify our products** in any way we deem necessary.
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Edited by **AMPHENOL SOCAPEX** - November 2016



For more information, you can contact us on our website www.amphenol-socapex.com or by calling on **+33 (0)4 50 89 28 00.**

LifeElectronics
Живое партнерство

**ООО «ЛайфЭлектроникс»** **“LifeElectronics” LLC**

*ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703*

*Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.*

*С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров*

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- *Специальные условия для постоянных клиентов.*
- *Подбор аналогов.*
- *Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.*

- *Приемлемые сроки поставки, возможна ускоренная поставка.*
- *Доставку товара в любую точку России и стран СНГ.*
- *Комплексную поставку.*
- *Работу по проектам и поставку образцов.*
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- *Сертификаты соответствия на поставляемую продукцию (по желанию клиента).*
- *Тестирование поставляемой продукции.*
- *Поставку компонентов, требующих военную и космическую приемку.*
- *Входной контроль качества.*
- *Наличие сертификата ISO.*

*В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.*

*Конструкторский отдел помогает осуществить:*

- *Регистрацию проекта у производителя компонентов.*
- *Техническую поддержку проекта.*
- *Защиту от снятия компонента с производства.*
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***www.lifeelectronics.ru***