

# 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**.

**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

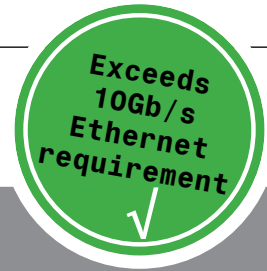
- 4 pairs totally insulated throughout the connector
  - ➔ minimum cross-talk between the four pairs
- Patent pending special interfacial shapes
  - ➔ minimum perturbation at the interface of each pair
- Thread coupling mechanism
  - ➔ 2000 mating cycles & high vibration resistance
- Machined Brass shells 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



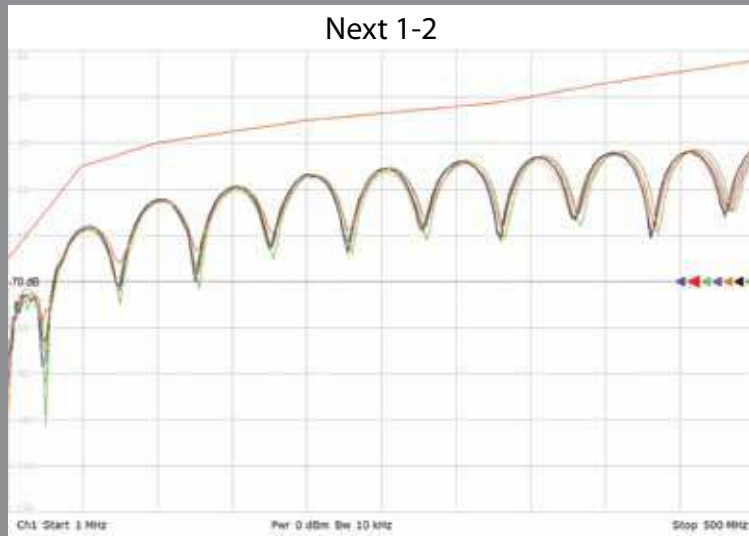
Insertion loss



← Amphenol performance

← IEEE 802.3an Standard requirement

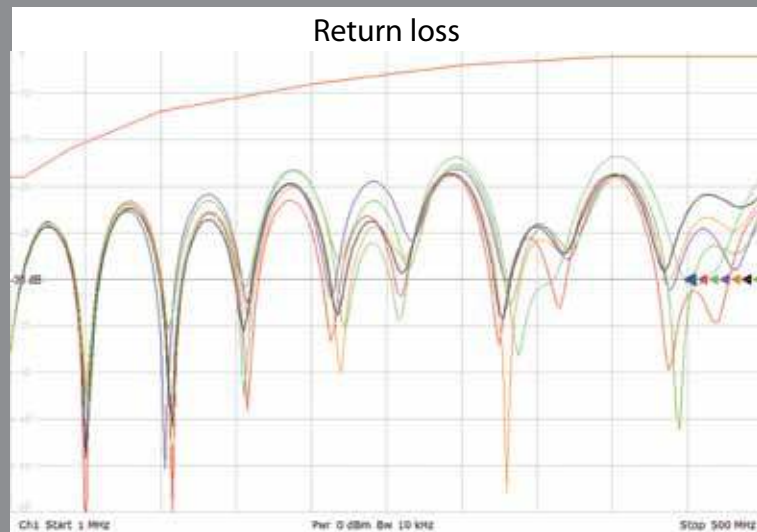
Next 1-2



← IEEE 802.3an Standard requirement

← Amphenol performance

Return loss



← IEEE 802.3an Standard requirement

← Amphenol performance

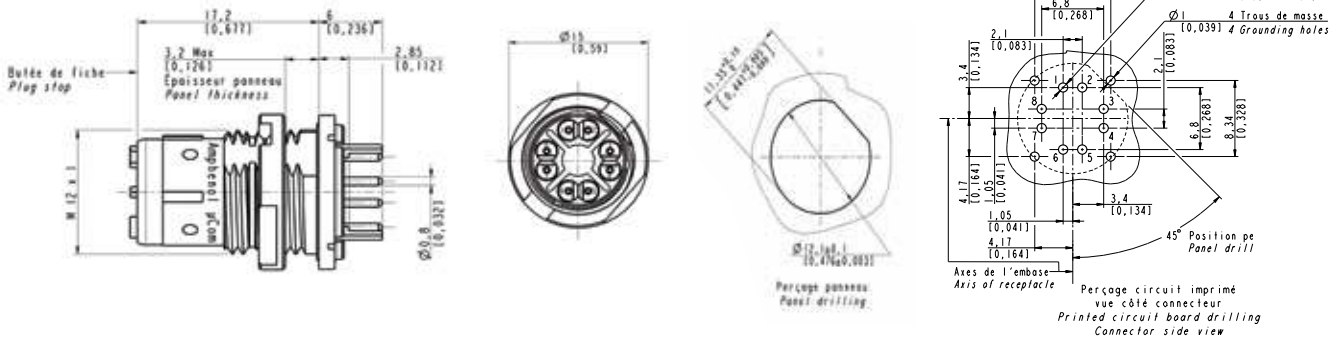
## FEMALE RECEPTACLES



### Female receptacle for printed circuit board

Part number: UCOM-10G+ R P X

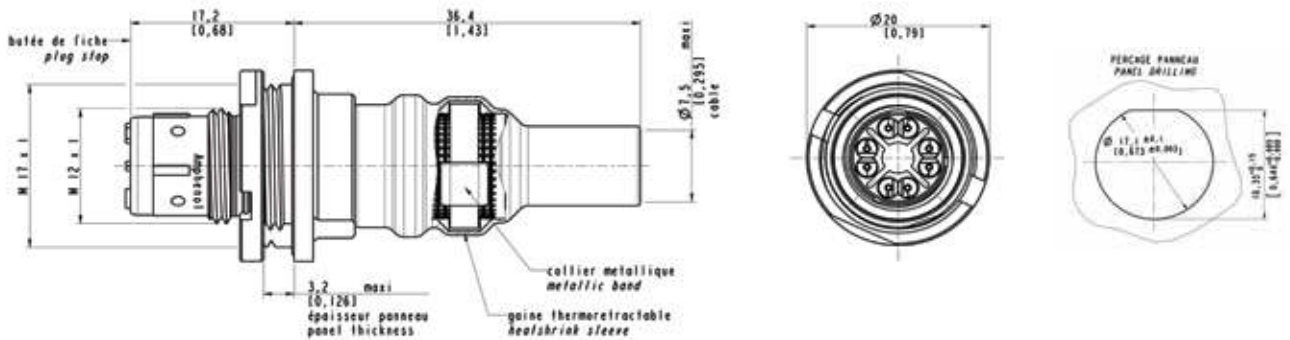
X: see the 'How to order' below to complete your part number



### 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:

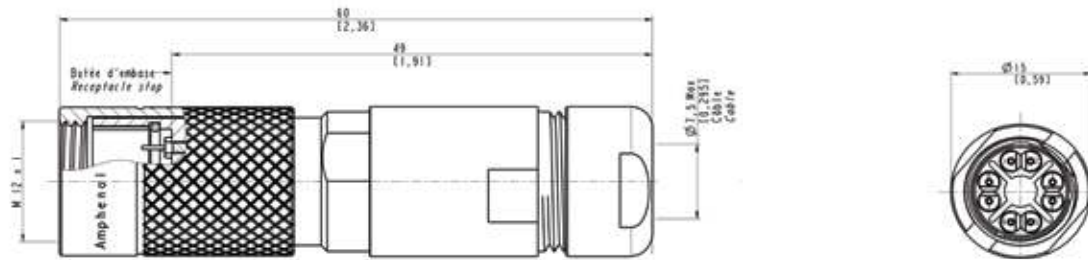
- UCOM for order designation
- μCom for marking on connectors

MALE PLUGS



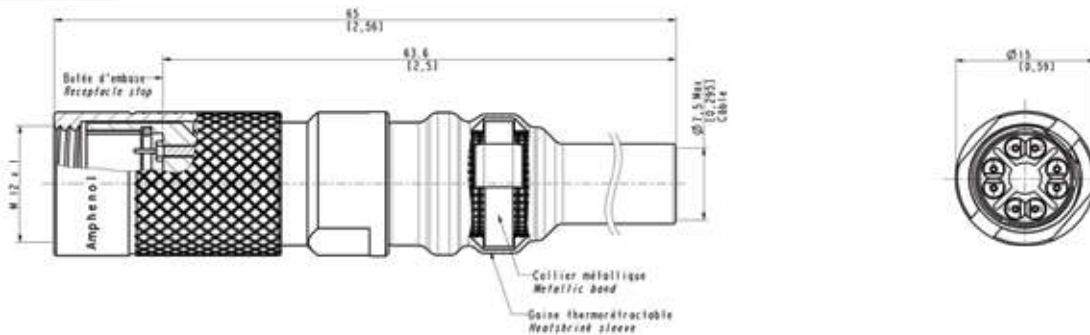
Plug with cable gland backshell

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

NOTA:

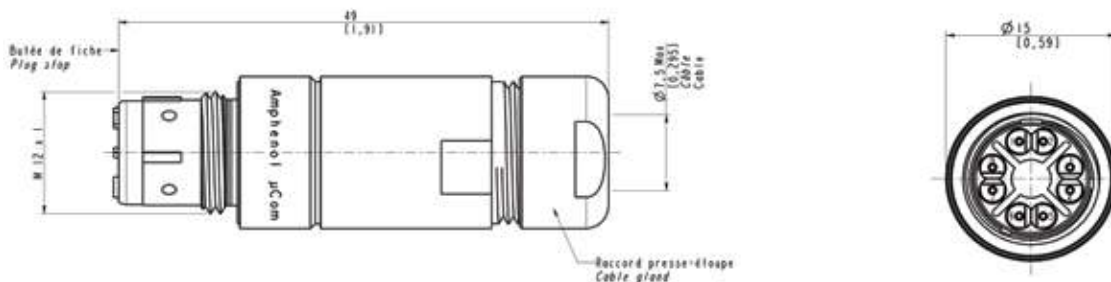
- UCOM for order designation
- μCom for marking on connectors

## FEMALE IN-LINE RECEPTACLES



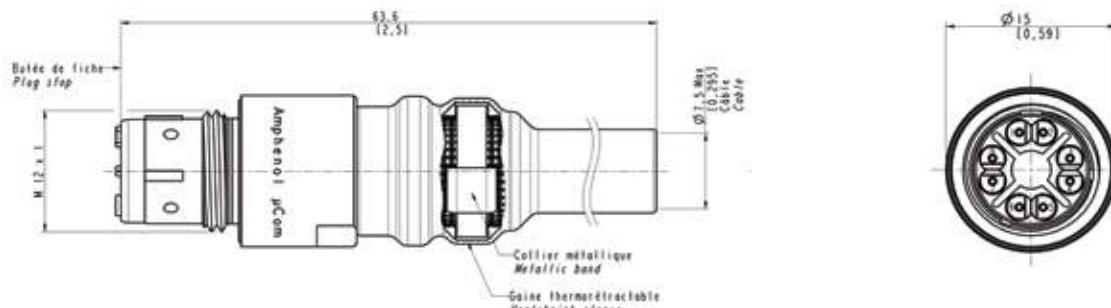
### Female in-line receptacle with cable gland backshell

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
<b>Shell</b>					
L: in line receptacle					
<b>Contacts termination</b>					
C: crimp					
S: solder					
<b>Shell plating</b>					
B: black nickel					
G: olive drab cadmium					
U: unplated brass					
<b>Backshell type</b>					
G: gland					
B: band					
<b>Cable diameter (for gland backshell only)</b>					
A: for cable diam 7.5mm					
B: to be defined					

**NOTA:**

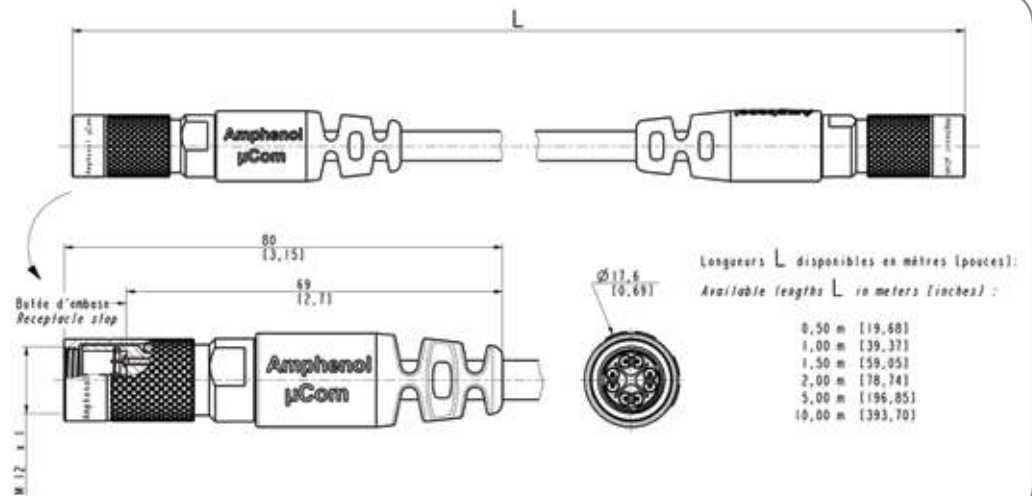
- UCOM for order designation
- μCom for marking on connectors

CORDSETS

μCom plug - μCom plug cordset

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

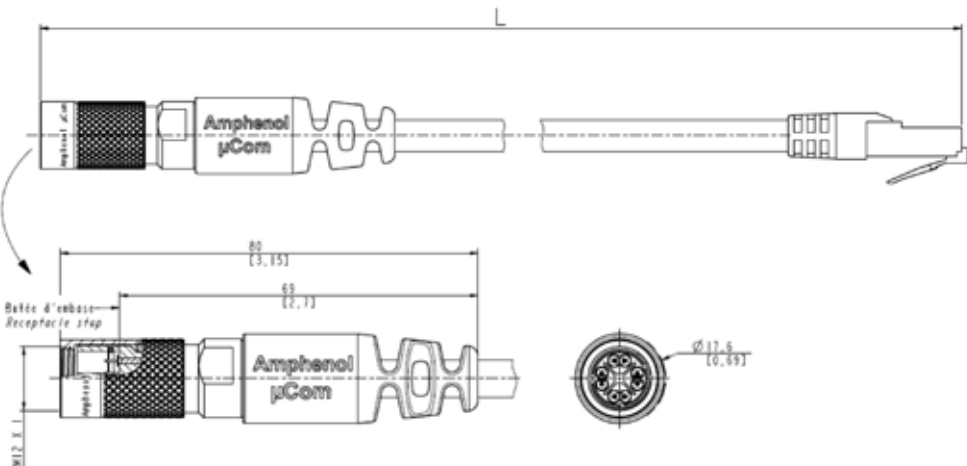
x: see the 'How to order' on the next page to complete your part number



μCom plug - RJ45 plug cordset

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

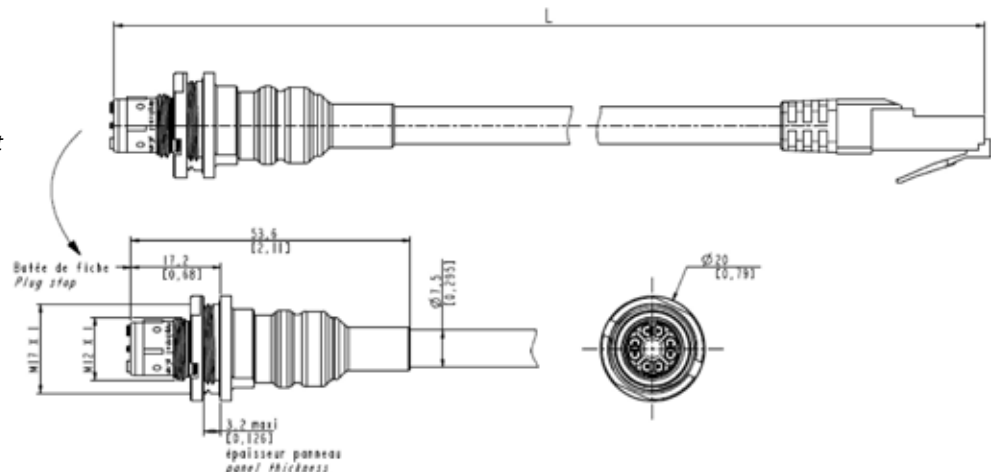
x: see the 'How to order' on the next page to complete your part number



μCom panel mount receptacle - RJ45 plug

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

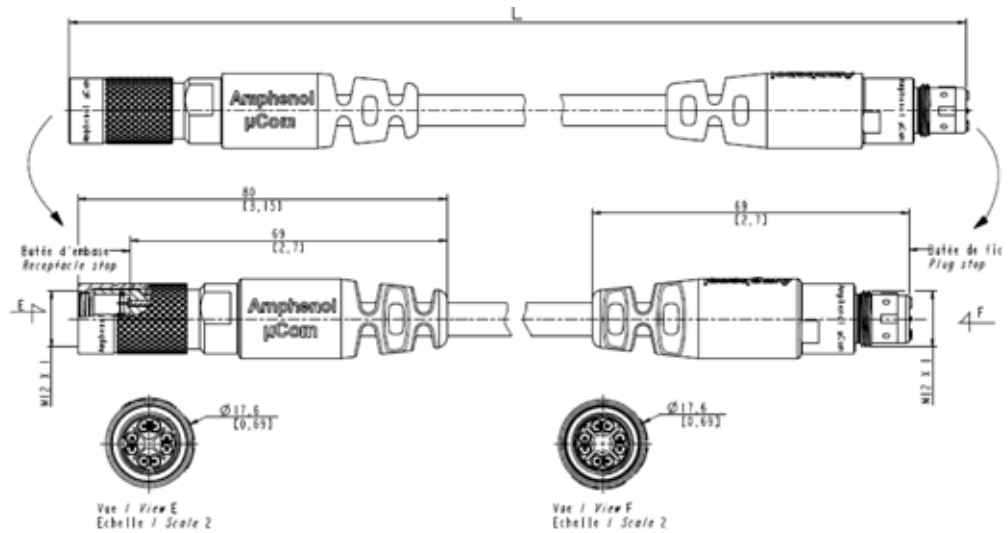
x: see the 'How to order' on the next page to complete your part number



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, Aluminated 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
<b>Shell</b>						
<b>C:</b>	μCom plug - μCom plug cordset					
<b>D:</b>	μCom plug - RJ45 plug cordset					
<b>E:</b>	μCom panel mount receptacle - RJ45 plug cordset					
<b>F:</b>	μCom plug - μCom inline receptacle cordset					
Open versions:						
<b>G:</b>	μCom plug - no connector at the end					
<b>H:</b>	μCom panel mount receptacle - no connector at the end					
<b>J:</b>	μCom inline receptacle - no connector at the end					
<b>Mating (for plugs only)</b>						
<b>T:</b>	thread					
<b>Contacts termination</b>						
<b>C:</b>	crimp					
<b>S:</b>	solder					
<b>Shell plating</b>						
<b>B:</b>	black nickel					
<b>G:</b>	olive drab cadmium					
<b>U:</b>	unplated brass					
<b>Total length - For other lengths, please consult us</b>						
<b>005:</b>	50 cm [19.68]					
<b>010:</b>	1.0 m [39.37]					
<b>015:</b>	1.5 m [59.05]					
<b>020:</b>	2.0 m [78.74]					
<b>050:</b>	5.0 m [196.85]					
<b>100:</b>	10.0 m [393.70]					

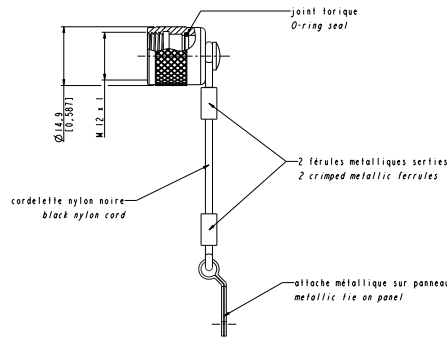
**NOTA:**

- 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**



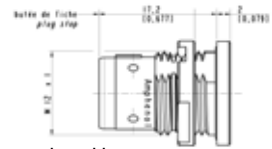
CAPS for in line receptacles

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**