MCS Series

- Operating voltage up to 5 kVDC
- Operating current up to 4,5 A
- 2 - 6 high voltage contacts
- Quick and easy assembling
- Protection class IP68 acc. DIN EN 60529

General characteristics and technical data Series MCS

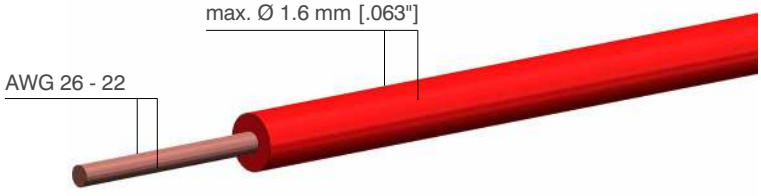
Housing	
Locking system	threaded coupling
Panel mount type	round flange
Housing material	brass (CuZn)
Surface plating	nickel (Ni)
Protection class acc. DIN EN 60529 (mated connector)	IP68
Operating temperature	-30°C to +80°C

Contacts 0.7 mm	
Termination method	solder / crimp
Rated current	4.5 A
Contact resistance	< 0,7 mΩ
Contact diameter	0.7 mm [.028"]
Wire size	AWG 26 - 22 (0.15-0.38 mm²)
Contact material	brass (CuZn)
Contact plating	gold (Au)
Mating cycles	≥ 5000

Insulation inserts	
Number of contacts	2, 4, 6
Insulation material	PBT
Flammability class	UL94 V-0
Operating temperature	-40°C to +150°C
CTI value	600
Insulation material group	I (DIN IEC 60664)
Max. diameter of dielectric cable insulation	1.6 mm

Configurations			
Type	205	405	605
Receptacle			
Plug			

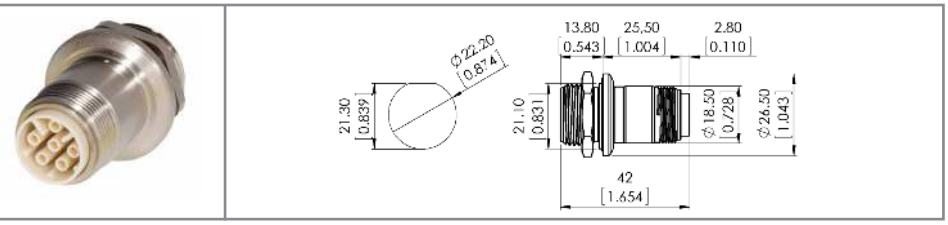
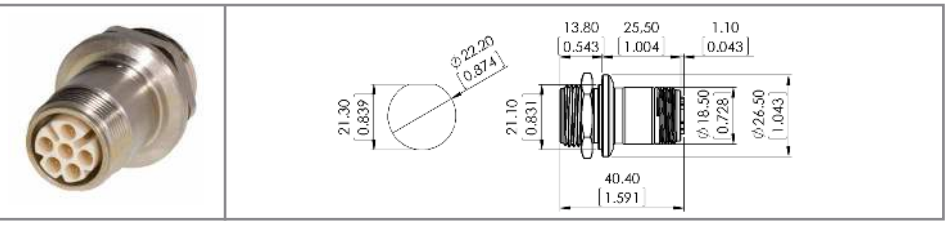
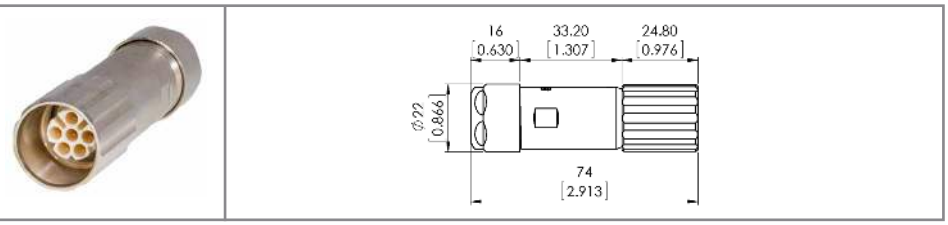
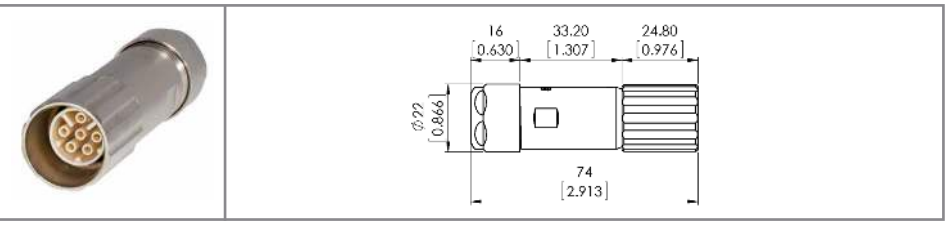
Suitable cable dimensions (single wire)



Type MCS605 6-pole 5 kVDC

Electrical Values	
Operating Voltage (DC)	5 kV
Test Voltage (DC)	8 kV
Rated Current	4.5 A

Characteristics	
Number of pins	6
Insulation material	PBT

Type / Version / Description	Picture / Drawing
GB-MCS605 **Receptacle, panel mount incl. female contacts 0.7 mm**	
GS-MCS605 **plug, panel mount incl. male contacts 0.7 mm**	
KS-MCS605 **plug, cable mount incl. male contacts 0.7 mm**	
KB-MCS605 **Receptacle, cable mount incl. female contacts 0.7 mm**	

drawing - dimensions in mm [inch]

Part no.	Description	Plug	Receptacle	Cable mount	Panel mount	Clamping range (in mm [inch]) Screwed cable gland
5001600	GB-MCS605		•		•	
5001605	GS-MCS605	•			•	
5001610	KS-MCS605 6.5 – 4.0	•		•		6.5 – 4.0 [.256" - .157"]
5001611	KS-MCS605 8.0 – 5.0	•		•		8.0 – 5.0 [.315" - .197"]
5001612	KS-MCS605 9.5 – 6.5	•		•		9.5 – 6.5 [.374" - .256"]
5001613	KS-MCS605 10.5 – 7.0	•		•		10.5 – 7.0 [.413" - .276"]
5001620	KB-MCS605 6.5 – 4.0		•	•		6.5 – 4.0 [.256" - .157"]
5001621	KB-MCS605 8.0 – 5.0		•	•		8.0 – 5.0 [.315" - .197"]
5001622	KB-MCS605 9.5 – 6.5		•	•		9.5 – 6.5 [.374" - .256"]
5001623	KB-MCS605 10.5 – 7.0		•	•		10.5 – 7.0 [.413" - .276"]

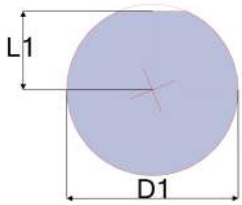
Accessories - page 76
6-core cable - page 80

Assembly instructions (GB/GS)

1.

Part as delivered
contacts (1), insulation part (2), housing (3)

2.



Panel cut out	
D1 mm [inch]	L1 mm [inch]
22.20 [.874"]	10.10 [.398"]

3.

Carefully remove cable jacket
(L2 = min. 30 mm [1.181"])
⚠ Do not damage metal shield.

4.

Fold back shield

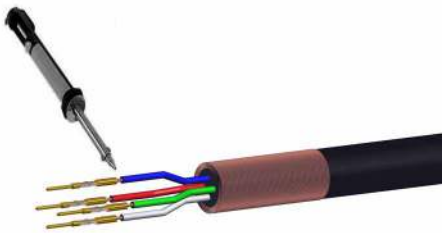
5.

Remove any filling elements from cable

6.

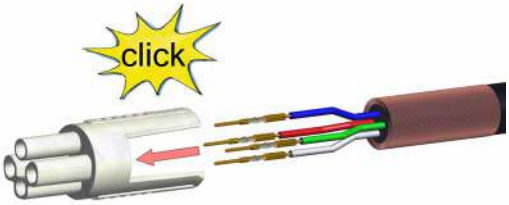
Remove dielectric insulation of single wires
(L3 = 4 mm [.157"])
⚠ Do not damage conductor.

7.



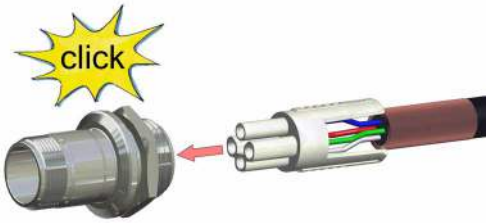
Crimp or solder one contact (1) each on every conductor
⚠ Tin-solder must not remain on contact surface!

8.



Slide contacts (1) completely into insulation part (2) until contacts snap
💬 Put in all contacts at the same time

9.



Put insulation part (2) into housing (3)
💬 Pay attention to notches.

10.

Assembly finished

Assembly instructions (KB/KS)

1.

Part as delivered
cap (1), clamping rubber (2), outer cone (3), inner cone (4), contacts (5), insulation part (6), housing (7)

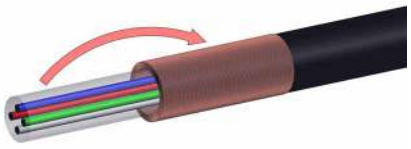
2.

Place cap (1), clamping rubber (2) and outer cone (3) on cable
⚠ Respect correct order of parts (see picture).

3.

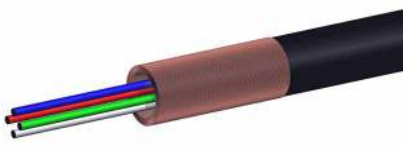
Carefully remove cable jacket (L1 = 28 mm [1.102"])
⚠ Do not damage metal shield.
Do not damage dielectric insulation.

4.



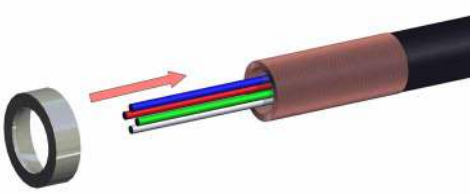
Fold back shield braid over jacket

5.



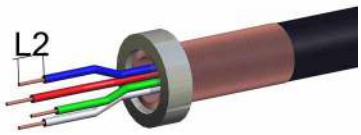
Remove any filling elements from cable

6.



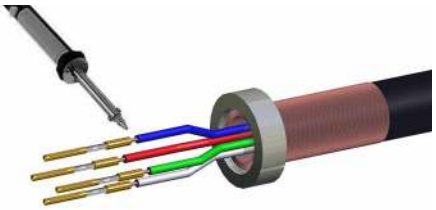
Place inner cone (4) on cable

7.



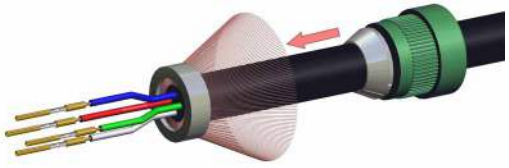
Remove dielectric insulation of single wires (L2 = 4 mm [.157"])
⚠ Do not damage conductor.

8.



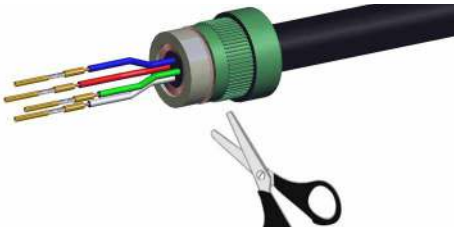
Crimp or solder one contact (5) each on every conductor
⚠ Tin-solder must not remain on contact surface!

9.



Completely widen shield braid. Push outer cone (3) and clamping rubber (2) under shield braid against inner cone (4) until shield braid clamps between outer cone (3) and inner cone (4)

10.



Cut overlapping shield braid
⚠ Carefully remove loose shield parts. Loose shield parts can cause electrical break down.

Assembly instructions (KB/KS)

11.

Slide contacts (5) completely into insulation part (6) until contacts snap

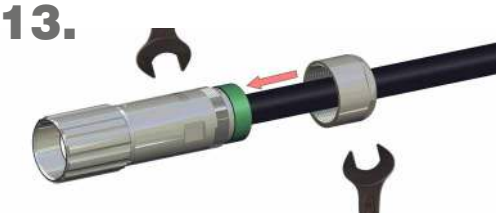
Insert all contacts at the same time. Pull gently to check that contacts are correctly located and remain in position.

12.

Slide insulation part (6) into housing (7) until insulation part snap in

Use notches for correct position of insulation part.

13.



Put on cap

Wrench size cap	Wrench size housing	Tightening torque [Nm]
20	19	5

14.

Assembly finished

Note – important!

1. **Please carefully read assembly instructions before cable assembly.**
2. **Cable assembly must only be done by trained and qualified personnel.**