

MCS Series



S Series

100 Series

VP Series

MCS Series

MC Series

M Series

MOD 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

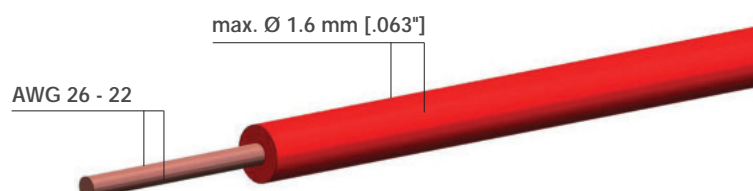
Housing	
Locking system	threaded coupling
Panel mount type	round flange
Housing material	brass (CuZn)
Surface plating	nickel (Ni)
Protection class acc. DIN EN 60529 (mated connector)	IP68
Operating temperature	-30°C to +80°C

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 mm ²)
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)



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

Characteristics	
Number of pins	2
Insulation material	PBT

Type / Version / Description	Picture / Drawing	
GB-MCS205 Receptacle, panel mount incl. female contacts 0.7 mm		
GS-MCS205 plug, panel mount incl. male contacts 0.7 mm		
KS-MCS205 plug, cable mount incl. male contacts 0.7 mm		
KB-MCS205 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
5001200	GB-MCS205		☑		☑	
5001205	GS-MCS205	☑			☑	
5001210	KS-MCS205 6.5 – 4.0	☑		☑		6.5 – 4.0 [.256" - .157"]
5001211	KS-MCS205 8.0 – 5.0	☑		☑		8.0 – 5.0 [.315" - .197"]
5001212	KS-MCS205 9.5 – 6.5	☑		☑		9.5 – 6.5 [.374" - .256"]
5001213	KS-MCS205 10.5 – 7.0	☑		☑		10.5 – 7.0 [.413" - .276"]
5001220	KB-MCS205 6.5 – 4.0		☑	☑		6.5 – 4.0 [.256" - .157"]
5001221	KB-MCS205 8.0 – 5.0		☑	☑		8.0 – 5.0 [.315" - .197"]
5001222	KB-MCS205 9.5 – 6.5		☑	☑		9.5 – 6.5 [.374" - .256"]
5001223	KB-MCS205 10.5 – 7.0		☑	☑		10.5 – 7.0 [.413" - .276"]

Accessories: page 76
2-core cable: page 80

Type MCS405 4-pole 5 kVDC

MCS Series

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

Characteristics	
Number of pins	4
Insulation material	PBT

Type / Version / Description	Picture / Drawing
GB-MCS405 Receptacle, panel mount incl. female contacts 0.7 mm	
GS-MCS405 plug, panel mount incl. male contacts 0.7 mm	
KS-MCS405 plug, cable mount incl. male contacts 0.7 mm	
KB-MCS405 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
5001400	GB-MCS405		☑		☑	
5001405	GS-MCS405	☑			☑	
5001410	KS-MCS405 6.5 – 4.0	☑		☑		6.5 – 4.0 [.256" - .157"]
5001411	KS-MCS405 8.0 – 5.0	☑		☑		8.0 – 5.0 [.315" - .197"]
5001412	KS-MCS405 9.5 – 6.5	☑		☑		9.5 – 6.5 [.374" - .256"]
5001413	KS-MCS405 10.5 – 7.0	☑		☑		10.5 – 7.0 [.413" - .276"]
5001420	KB-MCS405 6.5 – 4.0		☑	☑		6.5 – 4.0 [.256" - .157"]
5001421	KB-MCS405 8.0 – 5.0		☑	☑		8.0 – 5.0 [.315" - .197"]
5001422	KB-MCS405 9.5 – 6.5		☑	☑		9.5 – 6.5 [.374" - .256"]
5001423	KB-MCS405 10.5 – 7.0		☑	☑		10.5 – 7.0 [.413" - .276"]

Accessories: page 76
 4-core cable: page 80

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

Contacts

Part no.	Description	Cross section In mm ² (D)	AWG (D)	Mechanical drawing
6575150	Male contact 0.7 mm	0.15 – 0.38	26 - 22	<p>Technical drawing of a male contact. Dimensions: $\phi 0.60$ [0.024], 4.60 [0.181], 4.10 [0.161], 7.90 [0.311], $\phi 1.40$ [0.055], 16.60 [0.654], $\phi 0.70$ [0.028].</p>
6575160	Female contact 0.7 mm	0.15 – 0.38	26 - 22	<p>Technical drawing of a female contact. Dimensions: $\phi 0.60$ [0.024], 4.60 [0.181], 4.10 [0.161], 7.90 [0.311], $\phi 1.40$ [0.055], 16.60 [0.654], $\phi 1.10$ [0.043].</p>

drawing - dimensions in mm [inch]

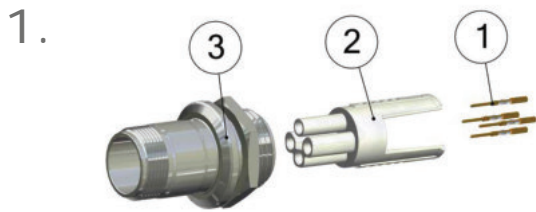
Coverings with thread

Part no.	Description	Mechanical drawing
1672118	Covering (inside thread) for types GS / GB 205 - 605	<p>Technical drawing of a covering with inside thread. Dimensions: 6.50 [0.256], 16 [0.630], $\phi 20$ [0.787], 1.40 [5.512], R3 [0.118].</p>
1672119	Covering (outside thread) for types KS / KB 205 - 605	<p>Technical drawing of a covering with outside thread. Dimensions: 3 [0.118], 20 [0.787], 6.50 [0.256], 22 [0.866], 1.40 [5.512], R3 [0.118].</p>

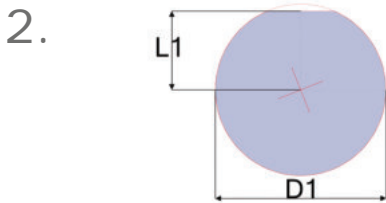
drawing - dimensions in mm [inch]

Ejector tool / Crimping tool

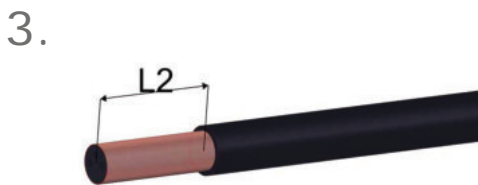
Part no.	Description
3000016	Extracting tool for 0.7 mm crimping contacts
3000024	Crimping tool fro 0.7 mm crimping contacts incl. pliers, contact holder and crimping cheeks



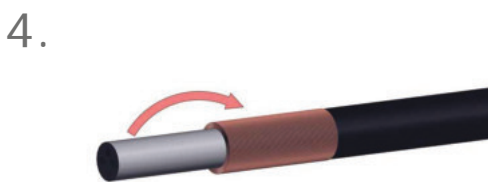
Part as delivered contacts (1), insulation part (2), housing (3)



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



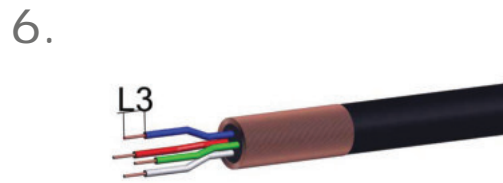
Carefully remove cable jacket (L2 = min. 30 mm [1.181"])
 ⚠ Do not damage metal shield.



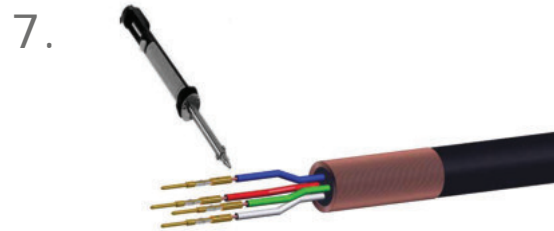
Fold back shield



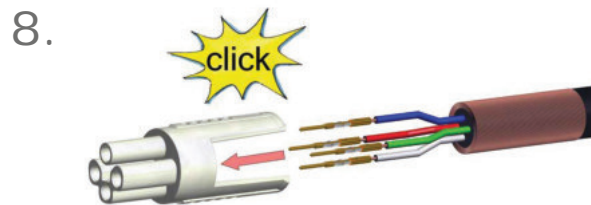
Remove any filling elements from cable



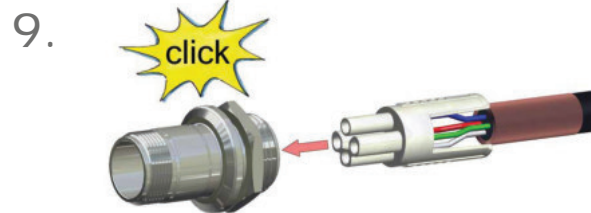
Remove dielectric insulation of single wires (L3 = 4 mm [.157"])
 ⚠ Do not damage conductor.



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



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



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



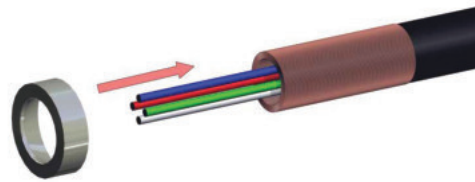
Assembly finished

1.



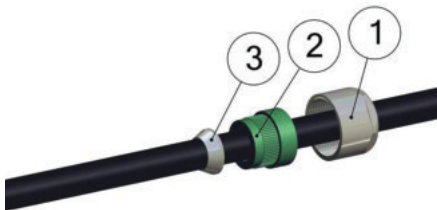
Part as delivered
cap (1), clamping rubber (2), outer cone (3), inner cone (4), contacts (5), insulation part (6), housing (7)

6.



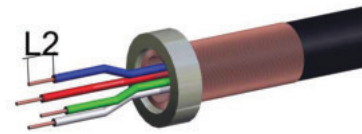
Place inner cone (4) on cable

2.



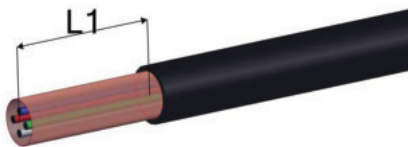
Place cap (1), clamping rubber (2) and outer cone (3) on cable
⚠ Respect correct order of parts (see picture).

7.



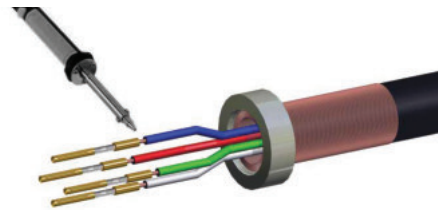
Remove dielectric insulation of single wires
(L2 = 4 mm [.157"])
⚠ Do not damage conductor.

3.



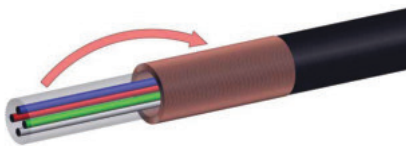
Carefully remove cable jacket
(L1 = 28 mm [1.102"])
⚠ Do not damage metal shield.
Do not damage dielectric insulation.

8.



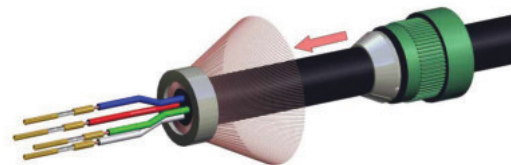
Crimp or solder one contact (5) each on every conductor
⚠ Tin-solder must not remain on contact surface!

4.



Fold back shield braid over jacket

9.



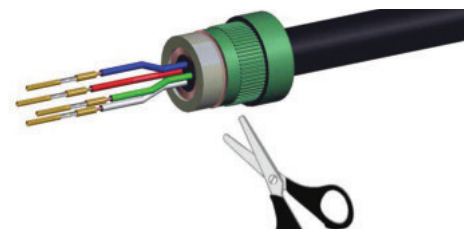
Completely widen shield braid. Push outer cone (3) and clamping rubber (2) under shield braid against inner cone (4) until shield braid clamps between outer cone (3) and inner cone (4)

5.



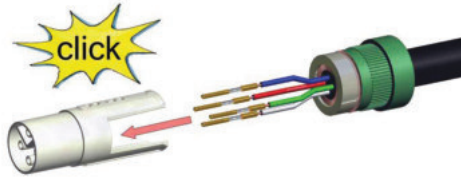
Remove any filling elements from cable

10.



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

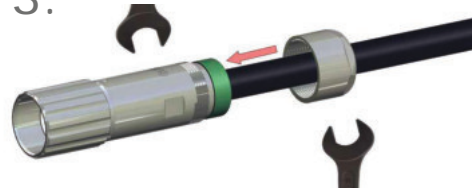
11.



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.

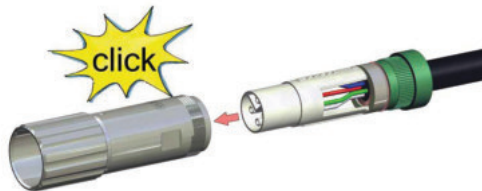
13.



Put on cap

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

12.



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

⚠️ Use notches for correct position of insulation part.

14.



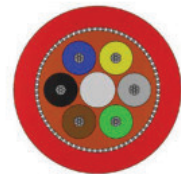
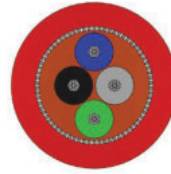
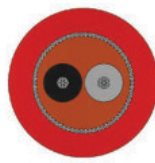
Assembly finished



Note – important!

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

	Part No. 3330082	Part No. 3330084	Part No. 3330086
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Operating voltage DC	5 kVDC		
Test voltage DC	7.5 kVDC		
Number of wires	2	4	6
Construction	2 wires stranded	4 wires stranded	6 wires stranded
Conductor			
AWG	AWG 26		
Strands	7 x 0.16 mm		
Cross section	0.14 mm ²		
Conductor diameter	0.42 mm		
Conductor material	tinned copper		
Dielectric			
Diameter	1.6 mm [.063"] (± 0.1 mm)		
Material	FEP		
Encoding	grey, black	grey, black, blue, green	grey, black, blue, green, yellow, brown
Screen (Shield)	YES		
Coverage	about 85 %		
Material	tinned copper		
Jacket			
Diameter	6.2 mm [.244"] (± 0.3 mm)	6.9 mm [.272"] (± 0.3 mm)	7.9 mm [.311"] (± 0.3 mm)
Material	Silicone		
Color	red		
Temperature range	-30°C to +180°C		
Fits connector types	MCS205	MCS405	MCS605