

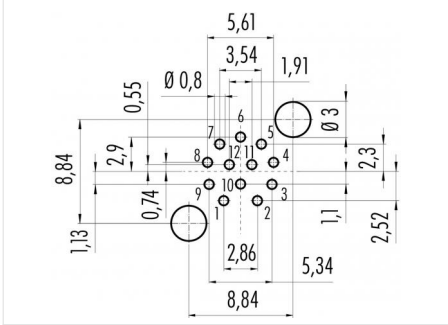
Product description **M12-A male panel mount connector, Contacts: 12, not shielded, dip-solder, IP68, UL, M16x1.5**

Area **M12-A series 713**  
 Order number **86 0231 0100 00012**

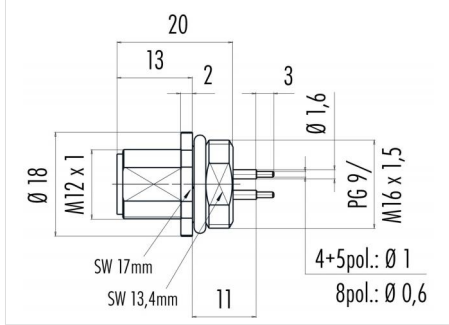
**Illustration**



**Conductor layout**



**Scale drawing**



**Contact arrangement (Plug-in side)**

	X	Y	
1	2,80	0,78	1 brown
2	0,78	2,80	2 blue
3	-1,09	2,69	3 white
4	-2,51	1,46	4 green
5	-2,88	-0,37	5 pink
6	-2,05	-2,05	6 yellow
7	-0,37	-2,88	7 black
8	1,46	-2,51	8 grey
9	2,69	-1,09	9 red
10	0,78	0,78	10 purple
11	-1,06	0,29	11 grey/pink
12	0,29	-1,06	12 red/blue

Shielded versions: shield on housing

You can find the assembly instructions on the next page.

**Technical data**

**General values**

Notice Please note that, due to the change from the old to the new order number, there may be deviations in the technical specifications. For questions about product details, please use the 'Contact Customer Service' form on the right.

Connector design male panel mount connector  
 Connector locking system screw  
 Termination dip-solder  
 Upper limit temperature 85 °C  
 Lower limit temperature -40 °C  
 Customs tariff number 85369010

**Electrical values**

Rated current (40 °C) 1.5 A (2 A UL)  
 Rated voltage 30 V  
 Rated impulse voltage 500 V  
 Pollution degree 3  
 Overvoltage category II  
 Insulating material group III  
 Insulation resistance > 10<sup>8</sup> Ω  
 EMC compliance not shielded  
 Degree of protection IP68  
 Mechanical operation > 100 Mating cycles

**Cable data**

Approval 1 UL

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## Technical data

### Material

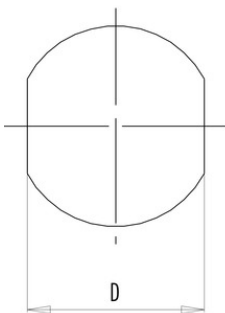
Contact material	CuZn (brass)
Contact plating	Au (gold)
Contact body material	PA
Housing material	Zinc die-cast nickel-plated
REACH SVHC	CAS 80-05-7 (4,4'-isopropylidendiphenol) CAS 7439-92-1 (Lead) CAS 61788-32-7 (Terphenyl, hydrogenated)

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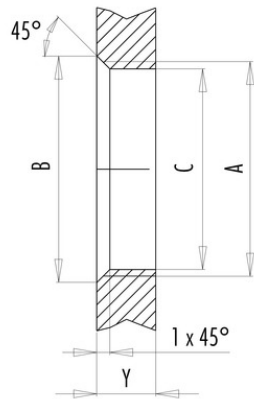
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Assembly instructions / Panel cut-out

With flats as anti-rotation device



With bore hole



Installation direction:  
o-ring sits on chamfer.

Thread	Measures			Tightening torque	
	B (mm)	C (mm)	D (mm)	Metal housing/ Positioning sleeve	Plastic housing/ Positioning sleeve
PG 9	16,2	15,3	13,5	1,25 Nm	1,25 Nm
PG 11	20,2	18,7	17,0	2 Nm	–
PG 13,5	21,5	20,5	–	2 Nm	–
M12 x 0,5	–	12,1	–	–	0,4 Nm
M12 x 1	–	12,2	–	1 Nm	–
M14 x 1	15,2	14,2	–	1,25 Nm	–
M16 x 1,5	17,0	16,1	13,5	1,25 Nm	1,25 Nm
M20 x 1,5	21,0	20,1	–	2 Nm	1,25 Nm

Version	Thickness of wall Y (mm)	
	min (mm)	max (mm)
Fastened from back side	2	3,5
Front fastened	2	4,5
Positioning possible <sup>1)</sup>	2	3,5
Screw clamp	2	3,5
Thread M12 x 1	2	3,0
Thread M14 x 1 <sup>2)</sup>	<sup>3)</sup> 1,5/ <sup>4)</sup> 2	6,5

Notes

- <sup>1)</sup> Do not attach a chamfer
- <sup>2)</sup> Wall thickness:  
use locknut 01-5385  
up to 1,5 mm,  
>1,5 mm cut thread
- <sup>3)</sup> Nut
- <sup>4)</sup> Thread in wall of housing

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## Security notices

The connectors are designed for use in plant, control system and electrical equipment. The end user is responsible for checking whether the connectors are suitable for use in other applications. Connectors with degree of protection IP 67 and IP 68 are not suitable for use under water. When used outdoors, the connectors must be separately protected against corrosion. For further information about IP degrees of protection refer to 'Technical support' in the Download Centre.