

M23 / Bayonet Signal Connectors • RC / UC / TU Series

Technical Data

Mechanical data:

Housing material:	<ul style="list-style-type: none"> • Metal parts are either CuZn (copper-zinc alloy) or GD-Zn (die cast), nickel plated or yellow passivated • Receptacles allowing overpainting carry a thick film passivation • Plastic caps or plastic coatings of metal parts: sPS (syndiotactic polystyrene)
Insulating body:	Thermoplastic polyester (PBT), polyamide (PA 66); storage at 15-35 °C, 40-70 % rel. humidity
Contact material:	Copper-zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold layer (Au)
Contact connection type:	Solder cup, crimp and screw versions, dip solder pin
Gasket and O-ring:	Fluorine rubber (FPM); types with plastic cap: perbunane (NBR) gasket
Flat gasket:	Perbunane (NBR); fluorine rubber (FPM)
Ambient temperature:	-20°C up to +125°C
Conductor entry:	EMC design for external cable diameters 2 - 10.5 mm; without EMC protection for cable diameters 4 - 14 mm, EMC design with extended cable entry range (UC/TU series) for external cable diameters 2 - 14.5 mm
Locking method:	M23 screw locking; TU series: bayonet locking, bayonet ring dia. 29.3 mm
Mechanical insertion/ withdrawal cycles:	Standard: 50, more upon request
Degree of protection:	EMC version: IP67; without EMC protection: IP65 - IP68 (depending on the cable gland); in the locked state
Approvals:	An overview of the listed connectors for UL, cUL and VDE is available upon request.

Electrical data:

Number of positions	6, 7	9 (8+1)	9 (6+3)	12	16	17	19 (6+3)
Contacts	6, 7	8 + 1	6 + 3	12	16	17	16 + 3
Contact Ø [mm]	2	1 2	1 2	1	1	1	1 1.5
Conductor cross sections							
Solder connection: contacts x [mm ²] max.	6 (7) x 2.5	8 x 1.0 + 1 x 2.5	6 x 1.0 + 3 x 2.5	12 x 1.0	16 x 1.0	17 x 1.0	16x1.0 + 3x1.0
Crimp connection: contacts x [mm ²] max.	6 (7) x 2.5	8 x 0.56 + 1 x 2.5		12 x 0.56	16 x 0.56	17 x 0.56	16x1.0 + 3x1.0
Screw connection: contacts x [mm ²] max.	6 (7) x 1.0	8 x 0.75 + 1 x 1.0					
Nominal current per contact at 25 °C ¹⁾ [A]	20	8 20	8 20	8	8	8	8 10

Data according to DIN EN 61984:2001

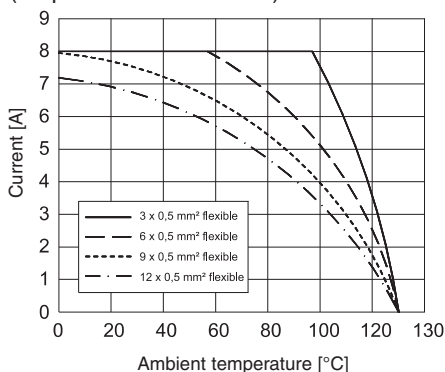
Nominal/operating voltage [V AC / DC]	300 (150) ²⁾	300	150	150	150	150	150
Test/surge voltage [kV AC]	2.5 (1.5) ²⁾	2.5	1.5	1.5	1.5	1.5	1.5
Surge voltage category	II	II	II	II	II	II	II
Contamination class ³⁾	3	3	3	3	3	3	3
Installation altitude [m]	up to 2000	up to 2000	up to 2000	up to 2000	up to 2000	up to 2000	up to 2000

1) The effective current carrying capacity is to be determined via a derating curve depending on the application, if necessary.


2) 150 V / 1.5 kV for 6- and 7-pos. screw connection

3) The specified values assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions and if there is a danger of contamination, the connector must be sealed using a protective cap ≥ IP54.

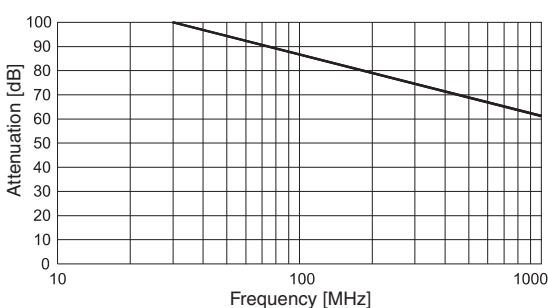
Derating curve based on DIN EN 60512-5-2 (12-pos. cable connector)



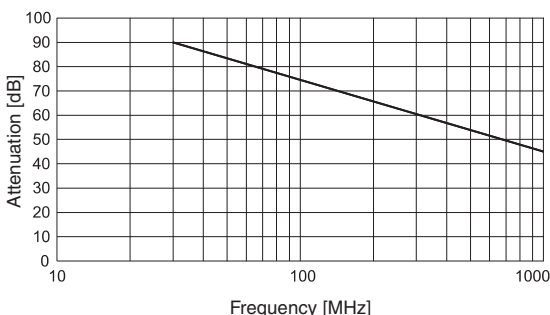
The modular M23 connectors of the RC and UC series are fully compatible. After technical clarification, these can also be combined with the M23 complete connectors of the RF series.

 Unlike plugs, connectors must not be plugged in or unplugged under load.

Shield attenuation curve for RC series based on DIN EN 50289-1-6



Shield attenuation curve for UC/TU series based on DIN EN 50289-1-6



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Pin Assignments and Coding

Other coding versions can be configured manually or mechanically on request.

Contact chamber numbering

(view of plug-in side)

Number of positions	Clockwise (standard)		Counter-clockwise (opposite direction)	
	Male	Female	Male	Female
6-pos. Solder/Crimp/Screw				
7-pos. Solder/Crimp/Screw				
9-pos. (6+3) Solder				
9-pos. (8+1) Solder/Crimp/Screw				
12-pos. Solder/Crimp				
16-pos. Solder				
16-pos. Crimp				
17-pos. Solder				
17-pos. Crimp				
19-pos. (16+3) Solder/Crimp				
Direction of contact chamber numbering (view of plug-in side)				
	Male, clockwise (standard)	Female, counter-clockwise (standard)	Male, counter-clockwise (opposite direction)	Female, clockwise (opposite direction)

The RC/UC/TU connectors have a modular design and can be provided for assembly with male or female contacts depending on the application. **For safety reasons, only female contacts may be used in the live part of the connector.**