

# M17 Power and Signal Connectors

## P20 • Series ST

### Technical Data

#### Mechanical data:

Housing material:	Machined component: copper-zinc alloy (CuZn), die-cast part: zinc (GD-Zn)
Housing surface:	Nickel-plated; panel mounting connectors / receptacles: nickel-plated/thick-film passivated (can be overpainted)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper-zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold layer (Au)
Contact connection type:	Crimp version
Gasket and O-ring:	Fluorine rubber (FPM)
Ambient temperature:	-20°C up to +125°C
Cable entry:	Cable connectors and cable connecting receptacles for ext. cable diam. of 3.5 -10 mm, shielded (3.5 -11.5 mm on request)
Locking method:	Quick locking M17 SPEEDCON, cable connector optional with M17 x 1 standard thread
Mechanical insertion/ withdrawal cycles:	Standard: 50, stamped-rolled C-HC crimp contacts: up to 10,000
Degree of protection:	IP 67 in locked state

#### Electrical data:

Number of positions	4 (3+PE)	6 (5+PE)	7 (6+PE)	8 (7+PE)	9 (5+3+PE)	17
Contacts	3 + PE	5 + PE	6 + PE	7 + PE	5 + 3 + PE	17
Contact Ø [mm]	2	1	1	1	0.6 1 1	0.6
Conductor cross section, machined crimp contacts [mm <sup>2</sup> ]	0.25-2.5	0.08-1.0	0.08-1.0	0.08-1.0	0.08-0.5 / 0.08-1.0	0.08-0.5
Conductor cross section, C-HC crimp contacts stamped-rolled and taped [mm <sup>2</sup> ]	—	0.08-0.56	0.08-0.56	0.08-0.56	—	—
Cable clamping range max Ø [mm]	10	10	10	10	10	10
Nominal current per contact at 25 °C <sup>1)</sup> [A]	20 (25 <sup>2)</sup> )	14	14	14	3.6 14	3.6

#### Data according to DIN EN 61984:2001

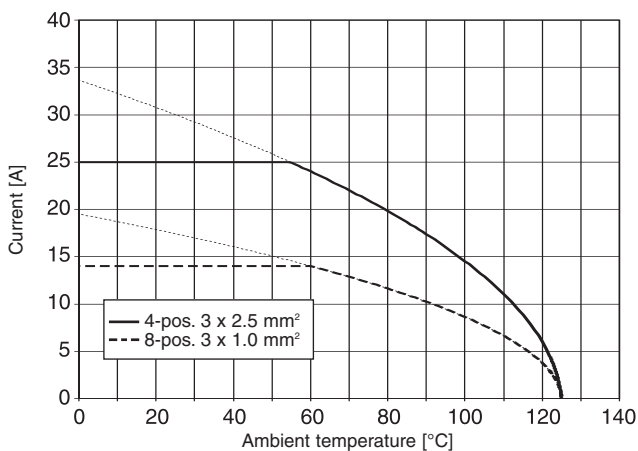
Nominal/rated voltage [V AC / DC]	630	630	630	630	60 630	60
Test/surge voltage [kV]	4	6	6	6	1.5 6	1.5
Surge voltage category	III	III	III	III	III	III
Contamination class <sup>3)</sup>	3	3	3	3	3	3
Installation altitude [m]	up to 3000	up to 3000	up to 3000	up to 3000	up to 3000	up to 3000

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

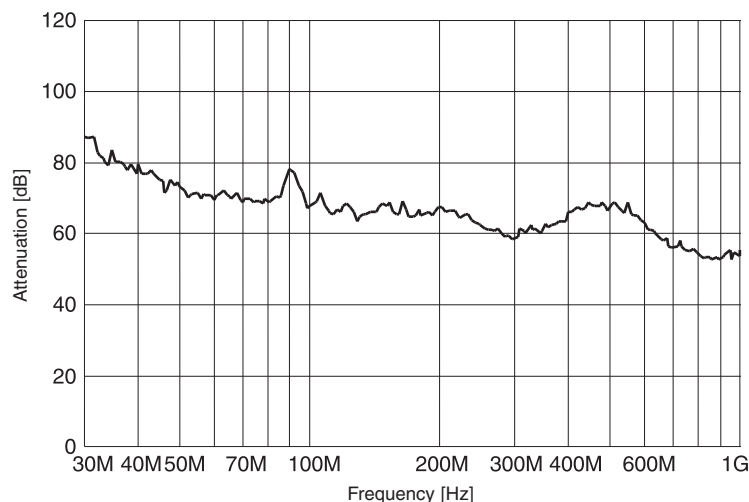
2) 25A when assembled with 3 x 2.5 mm<sup>2</sup>


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** (for 3 x 2.5 mm<sup>2</sup> / 3 x 1.0 mm<sup>2</sup>)  
based on DIN EN 60512-5-2  
(Cable connector mounted)



**Shield attenuation curve** based on DIN EN 50289-1-6  
(SPEEDCON cable connector and panel mounting connector angled on base plate)

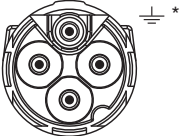
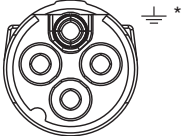
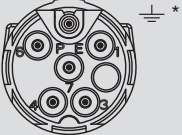
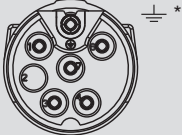
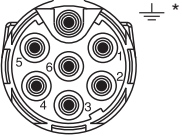
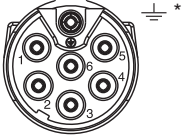
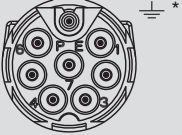
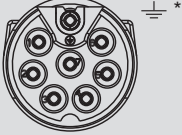
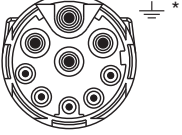
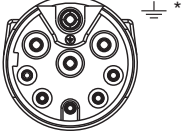
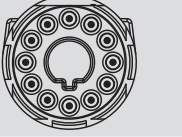
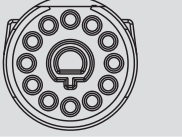
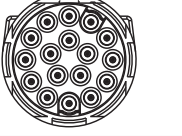
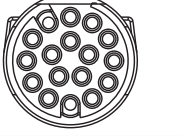


 Unlike plugs, connectors must not be plugged in or unplugged under load.

# M17 Power and Signal Connectors

## P20 • Series ST

### Pin Assignments

Number of positions	Contact chamber numbering (view of plug-in side)			
	Clockwise (standard)	Counter-clockwise (standard)		
	Male	Female		
4-position (3+PE) Crimp			* with grounding contact PE leading	
6-position (5+PE) Crimp <small>(contact chambers 2 and 5 closed)</small>			* with grounding contact PE leading	
7-position (6+PE) Crimp			* with grounding contact PE leading	
8-position (7+PE) Crimp			* with grounding contact PE leading	
9-position (5+3+PE) Crimp			* with grounding contact PE leading	
12-position Crimp			In preparation	
17-position Crimp				

The M17 connectors of the ST series 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.**