



# DIN signal male connector with special contacts



## General information

Design	IEC 60603-2 types: M male	
No. of contacts	78+2, 60+4, 42+6, 24+8, 6+10	
Contact spacing	2,54 mm for signal contacts	7,62 mm for special contacts
Test voltage	1000V	
Contact resistance	max. 20mOhm	
Insulation resistance	min. 10 <sup>10</sup> Ohm	
Working current	2 A@20°C (see derating diagram) for signal contacts for special contacts refer to corresponding data sheet	
Temperature range	-55°C ... +125°C	
Termination technology	solder pins	
Clearance & creepage distance	min. 1,2 mm	
Insertion and withdrawal force	6pol. max. 6N	60pol. max. 57N
	24pol. max. 23N	78pol. max. 74N
	42pol. max. 40N	
Mating cycles	- PL1 acc. to IEC 60603-2 =>	500 mating cycles
	- PL2 acc. to IEC 60603-2 =>	400 mating cycles
	- PL3 acc. to IEC 60603-2 =>	50 mating cycles
UL file	E102079	
RoHS - compliant	Yes	
Leadfree	Yes	
Hot plugging	No	

## Insulator material

Material	PBT (thermoplastics, glass fiber reinforcement 30%)
Colour	RAL 7032 (grey)
UL classification	UL 94-V0
Material group acc. to IEC 60664-1	IIIa (175 ≤ CTI < 400)
NFF classification	I3, F4

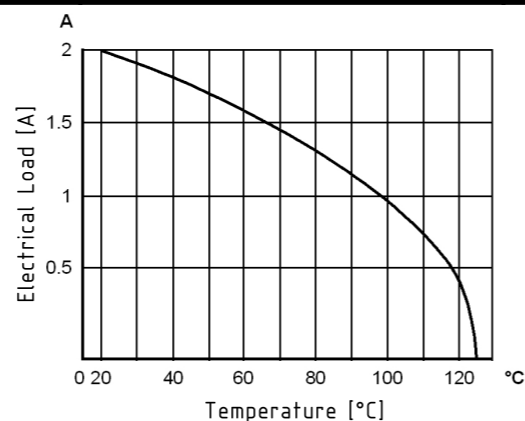
## Contact material

Contact material	Copper alloy
Plating termination zone	Sn over Ni
Plating contact zone	Au over PdNi over Ni

## Derating diagram acc. to IEC 60512-5 (Current carrying capacity)

The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals.  
The current capacity curve is valid for continuous, non interrupted current loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.

Control and test procedures according to DIN IEC 60512-5



## Soldering instructions

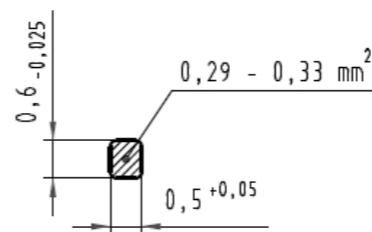
The connectors should be protected when being soldered in a dip, flow or film soldering bath. Otherwise, they might become contaminated as a result of soldering operations or deformed as a result of overheating.

(1) For prototypes and short runs protect the connectors with an industrial adhesive tape, e.g. Tesaband 4331 (www.tesa.de). Cover the underside of the connector moulding and the adjacent parts of the pcb as well as the open sides of the connector. This will prevent heat and gases of the soldering apparatus from damaging the connector. About 140 + 5 mm of the tape should suffice.

(2) For large series a jig is recommended. Its protective cover with a fast action mechanical locking device shields the connectors from gas and heat generated by the soldering apparatus. As an additional protection a foil can be used for covering the parts that should not be soldered.

(3) We recommend to align special contacts during soldering. A mated dummy connector of the counterpart can be used to align the contacts to avoid misalignment due to angular deviations.

## Cross section of solder pins



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