DIN Signal female connector

RoHS compliant

General information

Design	IEC 60603-2	types: B, 2B, 3B, C, 2C, 3C, M female		
No. of contacts	max. 96			
Contact spacing	2,54 mm			
Test voltage	1000V			
Contact resistance	max. 20mOhm			
Insulation resistance	min. 10^{12}Ohm			
Working current	2A at 20°C (see derating diagram)	40 A for type M		
Temperature range	-55°C ... +125°C			
	-40°C ... +105°C	(for press-in connectors)		
Termination technology	press-in, solder pins			
Clearance & creepage distance	min. 1,2 mm each			
Insertion and withdrawal force	16-pole max. 15N	20-pole max. 20N	30-pole max. 30N	32-pole max. 30N
	48-pole max. 45N	64-pole max. 60N	96-pole max. 90N	
Mating cycles	PL 1 acc. to IEC 60603-2		500 mating cycles	
	PL 2 acc. to IEC 60603-2		400 mating cycles	
	PL 3 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%)
Color	RAL 7032 (grey)
UL classification	UL 94-V0
Material group acc. IEC 60664-1	IIIa (175 < CTI < 400)
NFF classification	I3, F4

Contact material

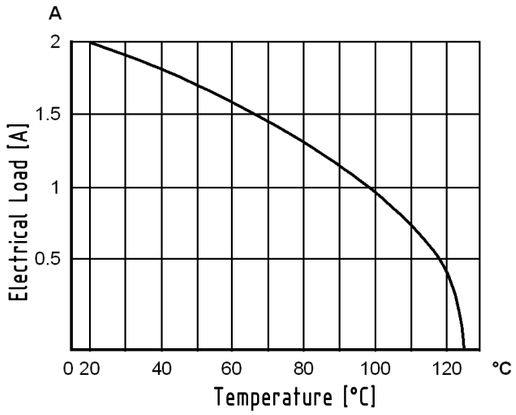
Contact material	Copper alloy	
Plating termination zone	Sn over Ni for solder, Ni for press-in	
Plating contact zone I	Au over PdNi over Ni	(Au over Ni for PL3)
Plating contact zone II (termination side)	Au over PdNi over Ni	(Au over Ni for PL3)

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.

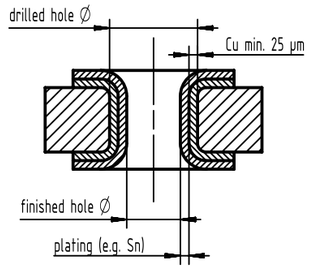
The current capacity curve is valid for continuous, non interrupted current loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.

Control and test procedures according to DIN IEC 60512-5



Recommended configuration of plated through holes for press-in termination

In addition to the hot-air-level (HAL), other PCB surfaces are getting more important. Due to their different properties - such as mechanical strength and coefficient of friction - we recommend the following configuration of PCB through holes.



Tin plated PCB (HAL) acc. to EN 60352-5	Drilled hole Ø	1,15±0,025 mm
	Sn	max. 15 µm
	plated hole Ø	0,94 - 1,09 mm
Chemical tin plated PCB	Drilled hole Ø	1,15±0,025 mm
	Sn	min. 0,8µm
	plated hole Ø	1,00 - 1,10 mm
Gold /Nickel plated PCB	Drilled hole Ø	1,15±0,025 mm
	Ni	3 - 7 µm
	Au	0,05 - 0,12 µm
	plated hole Ø	1,00 - 1,10 mm
Silver plated PCB	Drilled hole Ø	1,15±0,025 mm
	Ag	0,1 - 0,3 µm
	plated hole Ø	1,00 - 1,10 mm
Copper plated PCB (OSP)	Drilled hole Ø	1,15±0,025 mm
	plated hole Ø	1,00 - 1,10 mm

Assembly instructions

It is highly recommended to use HARTING press-in tools to ensure a reliable press-in process. Please refer to the catalogue for tools, machines and further information about the press-in process.

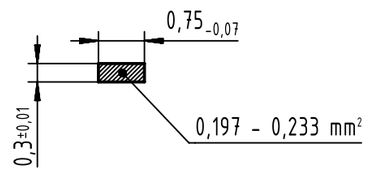
Soldering instructions

The connectors should be protected when being soldered in a dip, flow or film soldering baths. 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.

Cross section of solder terminations



All Dimensions in mm Original Size DIN A3	Scale 1:1	Free size tol.		Ref. Sub.	
All rights reserved	Created by LEHNERT	Inspected by ZWAHR	Standardisation HOFFMANN	Date 2016-11-03	State Final Release
Department EC PD - DE	Title DIN Signale female connector				Doc-Key / ECM-Nr. 100572187/UGD/001/B 500000111021
HARTING Electronics GmbH D-32339 Espelkamp	Type DS	Number 09032100001		Rev. B	Page 1/1

A3

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09022642825 09027646825 09032426830 09032426864 09032426865 09032786830 09032786864 09032786865 09032966421 09037966421 09222326421 09232482825 09232486421 09233482921 09252306824 09252306850 09022642824 09022642850 09027646824 09032246850 09032246864 09032246865 09032322824 09032322825 09032322845 09032326824 09032326825 09032326835 09032326845 09032327824 09032327834 09032327845 09032606804 09032606850 09032606865 09032642825 09032646861 09032647825 09032647850 09032647855 09032786805 09032962824 09032962825 09032962845 09032962850 09032962855 09032967825 09032967845 09032967850 09032967855 09034322824 09034326825 09034642825 09034646824 09034646825 09034962824 09034962825 09034966824 09037646825 09037962825 09037966825 09037966850 09222326824 09222326850 09224326825 09232326824 09232326825 09232326850 09232327825 09232482824 09232482850 09232486824 09234326824 09234486824 09022646421 09022646824 09022646825 09032246805 09032426805 09032606805 09032646824 09032646825 09032646850 09032647824 09032966825 09032966850 09032966861 09032966862 09222326825 09232486825 09252306825 09034326824 09034647824 09242206824 09242206825 09232486850 09032966852 09032246830 09032646855 09032966845

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