



# DIN Signal male connector



## General information

Design	IEC 60603-2	types: B, 2B, 3B, C, 2C, 3C male
No. of contacts	max. 96	
Contact spacing	2,54mm	
Test voltage	1000V	
Contact resistance	max. 20mOhm	
Insulation resistance	min. 10 <sup>10</sup> Ohm	
Working current	max. 2 A at 20°C (see derating diagram)	
Temperature range	-55°C ... +125°C	
Termination technology	solder pins	
Clearance & creepage distance	min. 1,2 mm	
Insertion and withdrawal force	16pol. max. 15N	20pol. max. 20N
	30pol. max. 30N	32pol. max. 30N
	48pol. max. 45N	64pol. max. 60N
Mating cycles	acc. to performance level, see table below	
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	acc. to performance level, see table below

performance level	mating cycles		plating contact zone
	acc. to IEC 60603-2	complementary acc. to IEC 60603-2	
1	500		<i>Au over PdNi over Ni</i>
2	400		<i>Au over PdNi over Ni</i>
3	50		<i>Au over PdNi over Ni</i>
NM30 (S4)		500	min. 0,76µm (30pinch) noble metal (alloy) over Ni
Au1	500		Au over Ni
Au2	400		Au over Ni
Au30		500	min. 0,76µm (30pinch) Au over Ni
Au50		500	min. 1,27µm (50pinch) Au over Ni
Au70		500	min. 1,60µm (70pinch) Au over Ni
Au90		500	min. 2,00µm (90pinch) Au over Ni

Standard plating options highlighted in *italic*, other plating options are available on request.

## 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.

## Cross section of solder pins



## 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

	All Dimensions in mm Original Size DIN A3	Scale 1:1	Free size tol.	Ref.
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HARTING Electronics GmbH D-32339 Espelkamp		Title DIN Signal male connector		Date 2018-05-18
		Type DS	Number 09031200201	State Final Release
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				Rev. <b>B</b> Page 1/1

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