



DIN Signal male connector straight



General information

Design	IEC 60603-2, types: Q, 2Q, 3Q, R, 2R, 3R, R(HE11), RM male			
No. of contacts	max. 96			
Contact spacing	2,54mm			
Test voltage	1000V			
Contact resistance	max. 15mOhm			
Insulation resistance	min. 10 ⁹ Ohm			
Working current	2A at 20°C (see derating diagram)			
Temperature range	-55°C ... +125°C -40°C ... +105°C for press-in connectors (due to limitations of PCB material)			
Termination technology	press-in, solder pins, wirewrap			
Clearance & creepage distance	min. 1,2mm 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 PL 2 acc. to IEC 60603-2 PL 3 acc. to IEC 60603-2			
	500 mating cycles 400 mating cycles 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

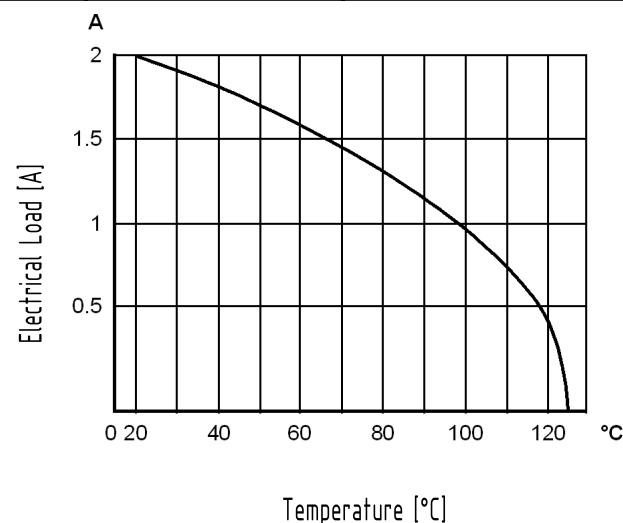
Contact material	Copper alloy		
Plating termination zone	Sn over Ni for solder, Ni for press-in & wirewrap		
Plating contact zone I	Au over PdNi over Ni	S4: 0,06µm Au over 0,7µm PdNi over Ni	
Plating contact zone II (termination side)	Au over Ni	S4: 0,76µm Au over Ni	

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.

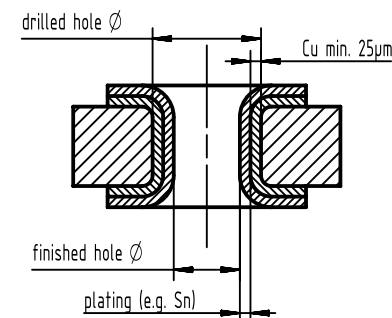
The current capacity curve is valid for continuous, non interrupted current loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.

Control and test procedures according to DIN IEC 60512-5



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

Assembly instructions

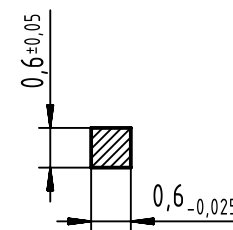
It is highly recommended to use HARTING press-in tools to ensure a reliable press-in process. Please refer to the catalogue for tools, machines and further information about the press-in process.

Soldering instructions



The connectors should be protected when being soldered in a dip, flow or film soldering bath. Otherwise, they might become contaminated as a result of soldering operations or deformed as a result of overheating. In most cases this is covered by the PCB the connector is going to be soldered to.

Cross section of solder terminations

A= 0,35mm² - 0,39mm²



SEMIC TRADE, s.r.o.
Volutová 2521/18
158 00 Praha 5
Czech Republic
www.semic.cz
semic@semic.cz
tel.: +420 251 625 331, 332, 377
fax: +420 251 626 252, 393

		All Dimensions in mm		Scale		Free size tol.		Ref.					
		Original Size DIN A3		1:1				Sub. DS 09 73 110 00 01 / EC04453 / 21.02.2012					
		All rights reserved		Created by		Inspected by		Standardisation		Date		State	
		Department EC PD - DE		TADJE		ELLERMANN		HOFFMANN		2013-12-16		Final Release	
HARTING Electronics GmbH D-32339 Espelkamp				Title								Doc-Key / ECM-Nr.	
				DIN Signal male connector straight								100560208/UGD/001/C 500000069481	
				Type		Number				Rev.		Pag.	
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