DIN Signal female connector

RoHS compliant

General information

Design	IEC 60603-2	types: E female
No. of contacts	max. 48	
Contact spacing	5,08 mm	
Test voltage	1550V	
Contact resistance	max. 15mOhm	
Insulation resistance	min. 10^{12}Ohm	
Working current	6A at 20°C (see derating diagram)	
Temperature range	-40°C ... +105°C	due to limitations of PCB-material
Termination technology	press-in	
Clearance	min. 3,0 mm	
Creepage	min. 3,0 mm	
Insertion and withdrawal force	32pole max. 50N 48pole max. 75N	
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%)
Color	RAL 7032 (grey)
UL classification	UL 94-V0
Material group acc. IEC 60664-1	IIIa (175 ≤ CTI < 400)
NFF classification	I3, F4

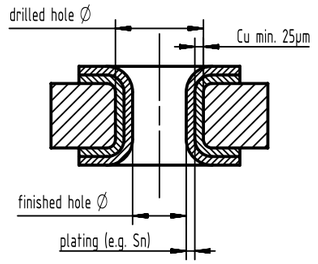
Contact material

Contact material	Copper alloy
Plating termination zone	Ni
Plating contact zone I	acc. to performance level, see table below
Plating contact zone II (termination side)	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	plating contact zone I	plating contact zone II (termination side)
1	500		Au over Ni	
2	400		Au over Ni	
Au30		500	min. 0,76µm (30µinch) Au over Ni	

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

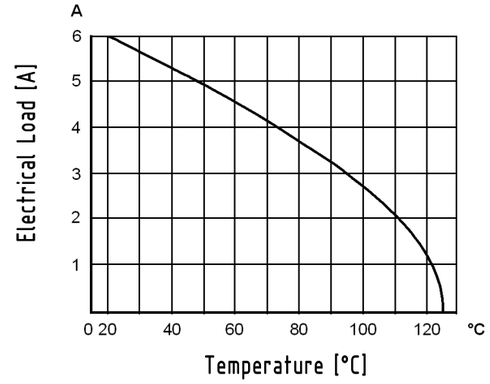
It is highly recommended to use HARTING press-in tools to ensure a reliable press-in process. Please refer to the catalogue for tools, machines and further information about the press-in process.

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.

Sub.

Department EL PD

HARTING Electronics GmbH

D-32339 Espelkamp

Created by	Inspected by	Standardisation	Date	State
LEHNERT	TADJE	HOFFMANN	2019-06-13	Final Release

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