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# DIN power male connector

RoHS compliant

## General information

| | | |
|---|---|---|
| Design | IEC 60603-2 | types: F male |
| No. of contacts | max. 48 | |
| Contact spacing | 5,08 mm | |
| Test voltage | 1550V contact/contact | 2500V contact/ground |
| Contact resistance | max. 15mOhm | |
| Insulation resistance | min. $10^{12}$Ohm | |
| Working current | max. 6A at 20°C (see derating diagram) | |
| Temperature range | -55°C ... +125°C | |
| Termination technology | solder pins | |
| Clearance | min. 1,6 mm | |
| Creepage | min. 3,0 mm | |
| Insertion and withdrawal force | 32-pole max. 50N<br>48-pole max. 75N | |
| Mating cycles | - PL1 acc. to IEC 60603-2 =><br>- PL2 acc. to IEC 60603-2 =><br>- PL3 acc. to IEC 60603-2 => | 500 mating cycles<br>400 mating cycles<br>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 |

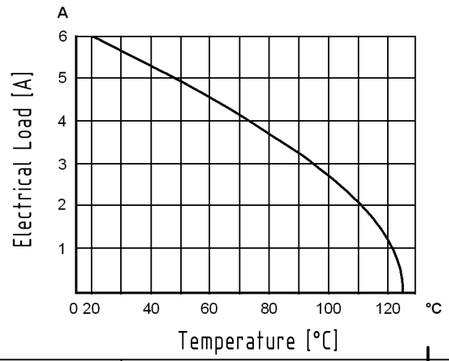
## Contact material

| | |
|---|---|
| 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



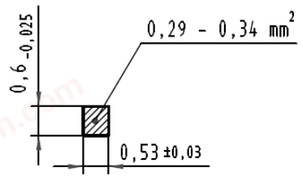

## Soldering instructions

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




All Dimensions in mm
Original Size DIN A3

Scale 1:1

Free size tol.

Ref.
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| Created by | Inspected by | Standardisation | Date | State |
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