

DIN-Signal 2C048FP-4,5C1-1

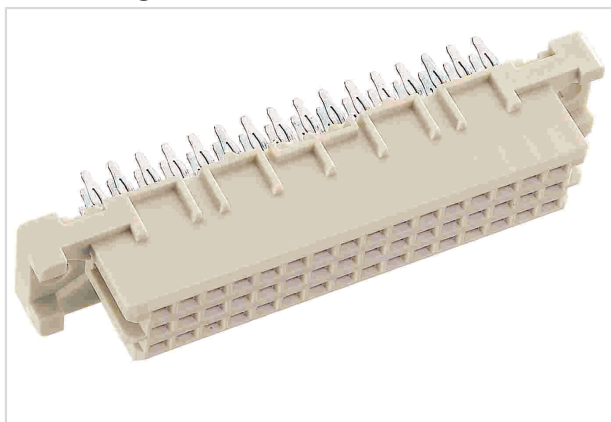


Image is for illustration purposes only. Please refer to product description.

| | |
|--------------------|---|
| Part number | 09 23 248 2850 |
| Specification | DIN-Signal 2C048FP-4,5C1-1 |
| HARTING eCatalogue | https://b2b.harting.com/09232482850 |

Identification

| | |
|----------------------------|------------------|
| Category | Connectors |
| Series | DIN 41612 |
| Identification | Type 2C |
| Element | Female connector |
| Description of the contact | Straight |
| Features | lead-free |

Version

| | |
|-----------------------|---|
| Termination method | Press-in termination |
| Connection type | Motherboard to daughtercard Mezzanine |
| Number of contacts | 48 |
| Contact configuration | Rows a, b and c, positions 1, 2, ... , 15, 16 |
| Termination length | 4.5 mm |
| Coding | Coding with loss of contacts |
| PCB fixing | With fixing flange |

Technical characteristics

| | |
|------------------------------------|---|
| Contact rows | 3 |
| Contact spacing (termination side) | 2.54 mm |
| Contact spacing (mating side) | 2.54 mm |
| Rated current | 2 A |
| Rated current | Rated current measured at 20 °C, see derating curve for details |



Pushing Performance

Technical characteristics

| | |
|----------------------------------|---|
| Clearance distance | ≥1.2 mm |
| Creepage distance | ≥1.2 mm |
| Insulation resistance | >10 ¹² Ω |
| Contact resistance | ≤20 mΩ |
| Limiting temperature | -40 ... +105 °C upper limiting temperature limited by the pcb |
| Insertion and withdrawal force | ≤45 N |
| Performance level | 1 acc. to IEC 60603-2 |
| Mating cycles | ≥500 |
| Test voltage U _{r.m.s.} | 1 kV |
| Isolation group | IIIa (175 ≤ CTI < 400) |
| PCB thickness | ≥1.6 mm |
| Hot plugging | No |

Material properties

| | |
|---|--|
| Material (insert) | Thermoplastic resin, glass-fibre filled |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Surface (contacts) | Noble metal over Ni Mating side Ni Termination side |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |
| ELV status | compliant |
| China RoHS | e |
| REACH Annex XVII substances | No |
| REACH ANNEX XIV substances | No |
| REACH SVHC substances | No |
| California Proposition 65 substances | Yes |
| California Proposition 65 substances | Nickel Antimony trioxide |

Specifications and approvals

| | |
|----------------|--|
| Specifications | IEC 60603-2 (complementary) |
| UL / CSA | UL 1977 ECBT2.E102079 CSA-C22.2 No. 182.3 ECBT8.E102079 |



Pushing Performance

Specifications and approvals

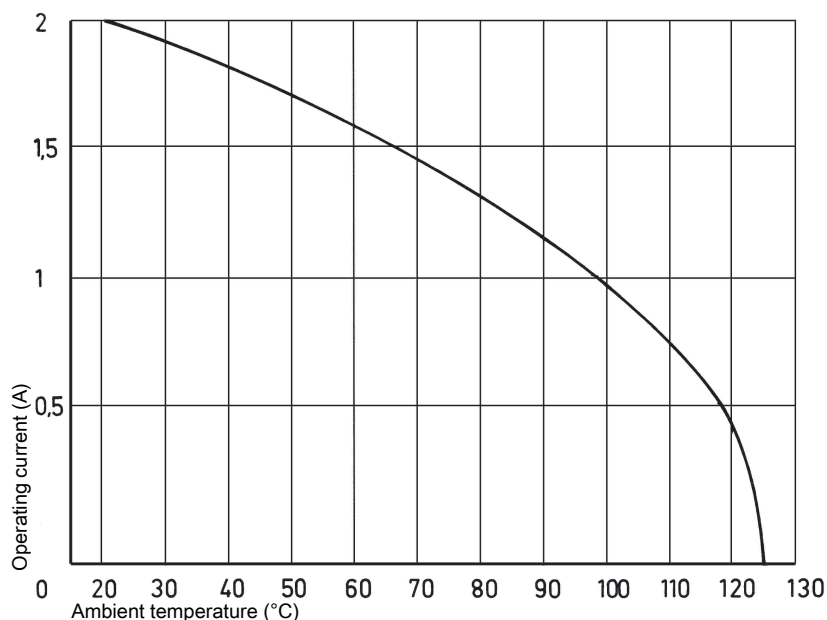
| | |
|------------------------|------------------------------|
| Railway classification | F4/I3 acc. to NFF 16-101/102 |
|------------------------|------------------------------|

Commercial data

| | |
|--------------------------------|--|
| Packaging size | 100 |
| Net weight | 8 g |
| Country of origin | Germany |
| European customs tariff number | 85366990 |
| eCl@ss | 27460201 PCB connector (board connector) |

Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature. Measuring and testing techniques acc. to IEC 60512-5-2



Recommended configuration of plated through holes



| | | |
|--|----------------------------|-----------------------------|
| Tin plated PCB (HAL) acc. to EN 60352-5 | Drilled hole \varnothing | $1,15 \pm 0,025 \text{ mm}$ |
| | Sn | max. $15 \mu\text{m}$ |
| | plated hole \varnothing | $0,94 - 1,09 \text{ mm}$ |
| Chemical tin plated PCB | Drilled hole \varnothing | $1,15 \pm 0,025 \text{ mm}$ |
| | Sn | min. $0,8 \mu\text{m}$ |
| Gold /Nickel plated PCB | Drilled hole \varnothing | $1,15 \pm 0,025 \text{ mm}$ |
| | Ni | $3 - 7 \mu\text{m}$ |
| | Au | $0,05 - 0,12 \mu\text{m}$ |
| Silver plated PCB | Drilled hole \varnothing | $1,15 \pm 0,025 \text{ mm}$ |
| | Ag | $0,1 - 0,3 \mu\text{m}$ |
| Copper plated PCB (OSP) | Drilled hole \varnothing | $1,15 \pm 0,025 \text{ mm}$ |
| | plated hole \varnothing | $1,00 - 1,10 \text{ mm}$ |

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 above mentioned configuration of pcb through holes.

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 for the press-in process.

Mating conditions



To ensure reliable connections and prevent unnecessary damage, please refer to the application data diagrams. These recommendations are set out in IEC 60603-2. The connectors should not be coupled and decoupled under electrical load.