

Performance level 3 as per IEC 60 603-2

500 mating cycles then visual inspection.
No gas test.
No functional impairment.

Part No. explanation **09** **7**

Performance level 2 as per IEC 60 603-2

400 mating cycles.
200 mating cycles then 4 days gas test using 10 ppm SO₂.
Measurement of contact resistance.
200 mating cycles then visual inspection. No abrasion of the contact finish through to the base material.
No functional impairment.

Part No. explanation **09** **6**

Performance level 1 as per IEC 60 603-2

500 mating cycles.
250 mating cycles then 10 days gas test using 10 ppm SO₂.
Measurement of contact resistance.
250 mating cycles then visual inspection. No abrasion of the contact finish through to the base material.
No functional impairment.

Part No. explanation **09** **2**

Performance level 2 as per IEC 61 076-4-113

250 mating cycles.
125 mating cycles then 4 days gas test using 10 ppm SO₂.
Measurement of contact resistance.
125 mating cycles then visual inspection. No abrasion of the contact finish through to the base material.
No functional impairment.

Part No. explanation **02** **2**

Performance level 1 as per IEC 61 076-4-113

500 mating cycles.
250 mating cycles then 10 days gas test using 10 ppm SO₂.
Measurement of contact resistance.
250 mating cycles then visual inspection. No abrasion of the contact finish through to the base material.
No functional impairment.

Part No. explanation **02** **1**

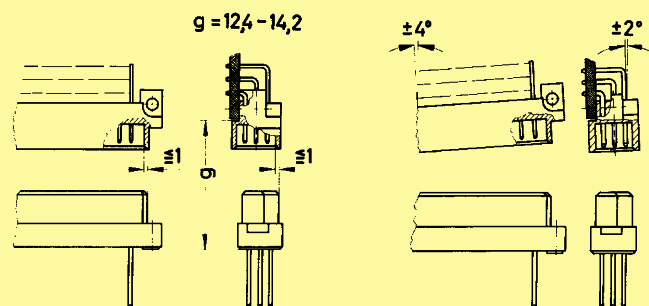
Other plating finishes available on request.

Mating conditions

To ensure reliable connections and prevent unnecessary damage, please refer to the application data diagrams.

These recommendations are set out in IEC 60 603-2.

The connectors should not be coupled and decoupled under electrical load.



Soldering the male connectors into pcb's

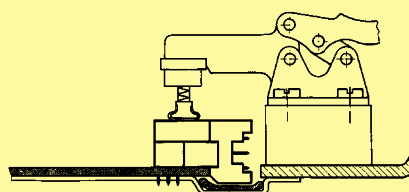
Male connectors should be protected when being soldered in a dip, flow or film soldering baths. Otherwise, they might become contaminated as a result of soldering operations or deformed as a result of overheating.

- 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.
- ③ For prototypes and short runs the protection described under point ① can be replaced by a solder protection cap. This cap can be ordered under the part no. 09 02 000 9935.

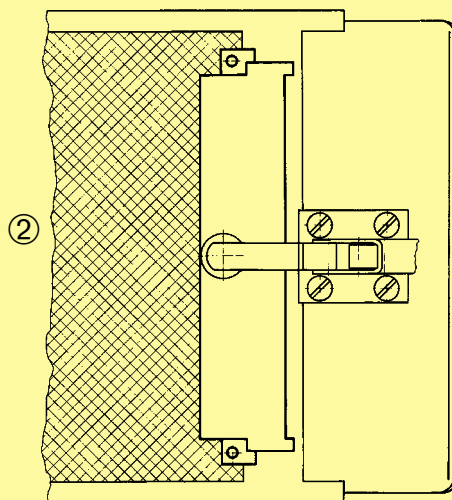


Adhesive tape or protection cap

① + ③



Intermediate foil



②

Design of connectors

- Standard fixing arrangement
- Standard positions for pcb's and connectors provide a modular system in the card frame and a standard front panel system.
- Standard wiring matrix on the connection side for female connectors built up on a 2.54 mm (0.1" centres) grid. (This facilitates automatic wiring).
- Printed circuit boards with standard dimensions 100 x 160 resp. 233.4 x 160 mm as set out in DIN EN 60 297-3 standard sizes 3 U and 6 U.

Building up card frame systems

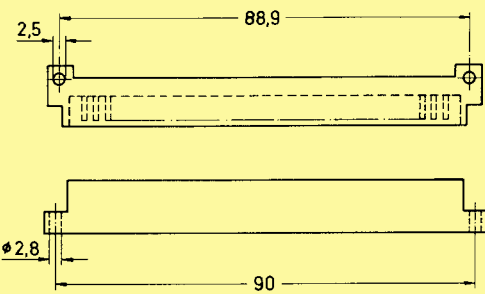
In the basic frame unit according to DIN EN 60297-3 pcb's are inserted from the front and make contact with the connectors fitted to the back. This basic arrangement gives the following advantages:

- When using conventional connectors on the back of the card frames, space is left above, below and in the middle along the horizontal line of the frame which can be used to fit extra connectors for cross connection or making plug connections by means of flying lead connectors.
- Using the HARTING system one can also connect flying lead connectors onto the front of the frame or even onto the inside of the back of the frame. This means that external equipment can easily be monitored, controlled or tested from the card frame itself.

Complementary components

All connectors can be supplied with a complete range of accessories. These can be fitted above or below the wiring plane on the back of the card frame or on the front of the card frame. These connectors and accessories provide a complete connector system suitable for commonly used wiring techniques.

- The flying lead connector consists of a connector with crimp or solder contacts and a shell housing. The flying lead connector is latched or retained in position using screw fixings and is compatible with a corresponding male connector and interface connectors I and U.
- Fixing brackets prohibit the withdrawal of the pcb when a flying lead connector is used on the front side of the card frame.
- The interface connector I has blade contacts on the plug side and solder pins, wrap posts or crimp terminals on the termination side. It replaces the female connector type F fitted into the frame and allows interfacing to the internal wiring with the help of the flying lead connector on the back of the card frame unit.
- On the one plane the interface connector U has male contacts that are compatible with the flying lead connector. On the other plane it has wrap posts for interfacing to the internal wiring of the card frame. It can be mounted on the back of the card frame above or below other connectors arranged upright. Its wrap posts follow the same pitch as other connectors therefore allowing automated wiring. By using the U connector with the flying lead connector plug-in connections between the card frame and the peripheral equipment/ outlying stations are made easy.



Contact spacing

