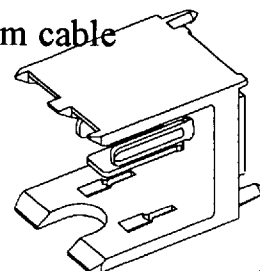


SOFIX Connector System

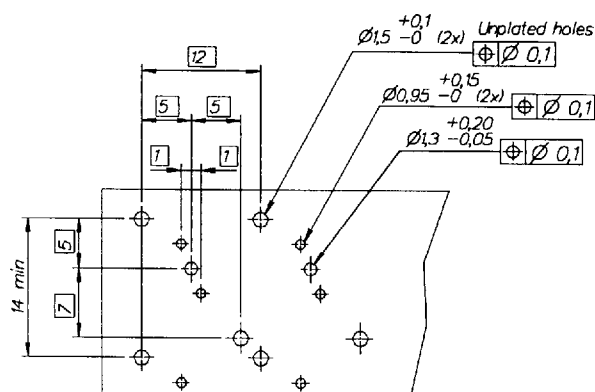
Male Straight Solder-to-Board Power 2-ways Connector

- For powering daughtercard from backplane and backplane from cable
- Can be mounted together with all the other modules in the SOFIX Connector System
- For filtered power distribution (EMI)
- Performance class Telecom



Ordering Information

| Part numbers | Note |
|--------------|--|
| RPT 636 1111 | Narrow body |
| RPT 639 1121 | Wide body |
| RPT 639 1122 | Wide body with extended center contact |



Technical data

| | |
|----------------------------|----------------------------------|
| Current rating/contact | 10 A |
| Voltage proof | ~1000 V r.m.s |
| Insulation resistance | min. 5000 MΩ |
| Plating on contact surface | Ni + Au |
| Plating on solder post | Ni + SnPb |
| Housing material | Natural coloured LCP (UL 94 V-0) |
| Contact material | Phosphor bronze |
| Temperature range | -55°C - +125°C |

Technical description

General

SOFIX Connector system is developed to give an optimized price/performance function for most electrical signal connection needs in telecom, data and control systems. Through the modular philosophy in SOFIX Connector system, the user will find solutions for most interconnection needs. As a hard metric connector, conforming with IEC 917, the "Metric Order", it is designed to meet future requirements in modern system packaging. The basic grid is 0,5 mm, with contacts placed on a 2 mm-grid. This philosophy gives more than double the number of contacts in the same space as a connector according to IEC-603-2 (DIN-41612). For power and coax types the grid is different, but always compatible with the 0,5 mm grid. There are three performance classes, one for telecom Central Office use (extremely hard requirements on long term reliability), PL1 for telecom (normal requirements) and similar use (250+250 mating cycles) and PL2 for common use (100+100 mating cycles).

Modularity

Modularity was a fundamental request in the development of the SOFIX Connector System. Another requirement was that it should be end-to-end stackable, without loss of functions in the module ends. It is easy from a design, logistical and production point of view to mix the individual functions of signal, power, coax, optical etc. interface at the same card edge/back plane. The basic module is 12 mm in connector length, but many types are available in multimodule housings in length of 24, 48 and 96 mm. The modularity in height is in steps of 2 mm. Signal connectors with 4 and 5 rows are available.

Choice of material

Contacts are made from phosphor bronze. They are gold plated with nickel underlayer on contact surface, tin plated on solder tails/compliant pin section. The housings are made from liquid crystal polymer, LCP, natural colour (beige), UL94 V-0. Covers for cable connectors are manufactured in thermoplastic polyester.

SOFIX Connector System

Description of contacts

The signal contact pins are 0,5 mm thick, with a soft rounded lead-in part, 5 different available lengths for sequential mating gives both electrical and mechanical advantages.

The signal contact springs are preopened, centered and preloaded on guides in the housing to prevent damage during mating. The springs are designed with long beams to give a good spring characteristic, which improves the contact reliability. All contact springs have equal length. Sequencing at mating is fully controlled by the pin lengths of the male connector. A high Hertz-stress in the contact point enables electrical contact even when the contacts are contaminated. This is achieved by the contact pin/spring design which is shaped as "crossed rods".

Testing and verification of performance

The SOFIX Connector System has gone through several testing sequences. These have all been comparable with Ericsson Telecom's internal requirements. Generally they are comparable to IEC-603-2, but with harder requirements in industrial atmosphere. SOFIX Connector System is in compliance with IEC and CECC draft specifications, but with harder requirements on the numbers of mating cycles.

Application

Plug-in unit connectors are mounted with hot riveting, using a simple tool. The hot riveting process is developed to ensure a reliable mounting during the connectors lifetime. The connector can then be wave soldered without distorting the rivet, but the housing must be protected to prevent the springs or pins from contamination from flux or solder bath. Back plane connectors can either be soldered or mounted with press-fit technology. The connectors for soldering are positioned by 1,5 mm holes in the back plane. Press-fit connectors do not need any separate locating holes. Mounting of the press-fit connectors must be done with a special tool. A range of application equipment is available, which gives the user an optimized solution in assembling all the different modules in SOFIX Connector System.

Packing

The SOFIX Connector System is delivered in antistatic packing tubes. This prevents the connectors from damage during handling, as well as an easy way to handle the connectors in different production systems.