molex®

RJ-45 Industrial Ethernet Plugs and Jacks

Molex rugged Industrial Ethernet Plugs and Jacks designed specifically for robust, compact applications requiring high density and high protection levels in accordance with the Profinet specification.

85720 **IP20, IP67 Push-Pull, IP67 Hybrid Plugs**

85730 **IP67, IP67 Hybrid Panel Feed-Through Jacks**

Extended usage of Ethernet applications from office floors to the factory level requires RJ-45 connectors with enhanced protection level and category 5 performance. Molex's IP20 data plug is the smallest RJ-45 Ethernet plug on the market and the only version to which 22 AWG cables may be connected to support Insulation Connectivity (IDC) technology. The connector is designed with a standard grid of just 14.00mm (.551"), which guarantees maximum packing density in the application.

The IP67 data plug version in a push-pull housing has an innovative housing-locking technology. The connector can be locked and unlocked using one hand with minimal force. In spite of its high degree of protection, the housing is very compact and is ideally suited for compact industrial applications. The panel feed-through jack allows easy transition from harsh industrial environments to protected IP67/IP20 environments.

The RJ-45 Industrial IP67 Hybrid System was developed as an interface solution that integrates the data lines and the power supply into one connector for hybrid Ethernet networks. This brings significant reductions in installation costs. The IP67 hybrid plug also incorporates a lever lock for single-handed mating and un-mating.

FEATURES AND BENEFITS

- Field attachable
- Suitable for 22 AWG cable
- Suitable for solid and stranded wire
- Feed-through panel jack
- Compact design

- IP67 hybrid system integrates data lines and power supply into one connector
- Improved installation efficiency
- Suitable for industrial applications
- Accommodates various cable types

- Allows easy transition from dry to wet areas
- Significant cost reduction of installation and field devices
- Improved packing density

MARKETS AND APPLICATIONS

- Industrial
  - Networking
  - PROFINET driven devices
  - Traffic and transport information systems
  - Outdoor signage

- Marine
  - Data communication equipment
- Telecom
  - Base station data communication
  - WiFi and WiMax hot spots

Example:
Usage in robotic devices

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Physical
Housing:
Thermoplastic, Black UL94-V0

Plating
Contact Area:
1.27 µm Gold (Au) over Nickel (Ni)
Power Contacts:
5µm Gold (Au) over Nickel (Ni)

Wire Gauge:
22 to 24 AWG stranded
22 to 23 AWG solid

Operating temperature: 40 to 70°C

Mechanical
Durability:
IP20, IP67 Push-Pull Plugs: 750 cycles min.
IP67 Hybrid Jacks: 500 cycles min.

Specific to IP67 Hybrid System
Wire gauge power supply:
$1.50mm^2$
Working voltage power supply:
48V
Working current power supply:
See derating curve

Reference Information
Packaging: Tray

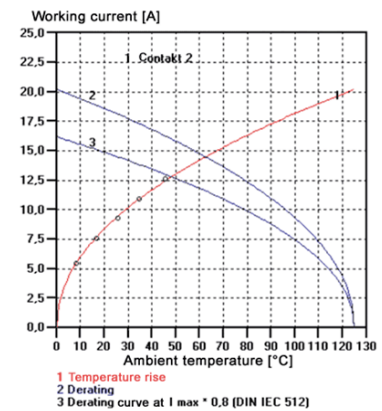Mates with: RJ-45 Plugs and jacks accessory to IEC60603-7

Designed-In: Millimeters

Working current [A]
1 Temperature rise
2 Derating
3 Derating curve at I max * 0,8 (DIN IEC 512)

ORDERING INFORMATION

Drawing	Order No.	Component	Protection Level	Comment
	85720-1050	Plug	IP20	
	85720-2050	Push-Pull Plug	IP67	Field Attachable
	85730-2050	Panel Feed-Through Jack		
	85720-5050	Hybrid Plug		
	85730-5050	Hybrid Panel Feed-Through Jack		

www.molex.com/product/io/rj45ethernet.html

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