



Sealed SFP Assemblies Integrated Optical and Electrical Receptacles

106501

Gain valuable PCB real estate with Molex's Sealed SFP Assemblies

The Sealed SFP (Small Form-factor Pluggable) assembly is an optical and electrical-integrated connection system, designed to maximize valuable real estate on the PCB while providing an environmentally rugged interface. The Sealed SFP receptacle features a panel feed-through design incorporating an internally mounted SFP cage and related electrical circuitry.

This system was formerly named "Industrial SFP Assemblies", but was changed to better reflect the system's capabilities. The Sealed SFP Assemblies can be used in areas other than typical industrial applications, including outdoor and harsh environments.

This unique interconnect system combines multiple components. The panel feed-through receptacle incorporates conductive sealing gasketing, a panel nut and dust cap, which may be used with either an 'optical module' (see 'D' in photo) assembly or an 'electrical module' (see 'C' in photo) assembly. The removable 'module' assembly contains the SFP cage, power filtering, high-speed copper flex and PCB connector. When assembled to the receptacle, the module is contained within an environmentally durable, IP-67 grade (water and dust protection) industrial interface. The SFP receptacle, including the cage, is compatible with existing industrial cable assemblies, including ODVA (Open DeviceNet Vendors Association) compliant industrial ethernet (copper Cat 5 cabling) and industrial LC (optical duplex LC) assemblies. The SFP transceiver



Left to right: A = Industrial Ethernet Cable, B = RJ-45 to SFP Transceiver, C = Electrical Sealed SFP Module, D = Optical Sealed SFP Module, E = Optical SFP Transceiver, F = Industrial LC Cable Assembly with Cable Assembly Dust Cap, G = Industrial LC Adapter, H = In-Line Industrial LC Adapter Mated to an Industrial LC Cable Assembly, I = Duplex LC Cable Assembly, J = Sealed SFP Receptacle

may be installed from either side of the receptacle, allowing for easy maintenance and upgrade of the SFP after the system is installed.

The Sealed SFP assembly is connected to the customer's PCB using a high-speed, copper flex assembly from the internal SFP cage, to a board-to-board electrical connector. This extension allows the PCB engineer design flexibility in regards to deciding where the PCB

connection is located on the board and reduces the footprint space required on the PCB. The spring-loaded Electro Magnetic Interference (EMI) shielded cage is designed to accept most industry standard LC based optical SFP transceiver modules. The electrical version accepts the Molex 1000 Base-T SFP adapter (Series 74741).

Features and Benefits

- Compatible with ODVA compliant optical and copper assemblies accommodating industry standard interface connectors and cable assemblies
- Accommodates copper or optical SFP devices allowing for future upgrades or backwards compatibility
- IP-67 rated hardened user interface for providing dust and water protection
- Durable diecast receptacle housing with electrically conductive gasket provides EMI suppression
- Allows SFP device to be installed and/or removed from the front or back side of the receptacle allowing for convenient factory installations and easy field upgrades

SPECIFICATIONS

Reference Information

Packaging: Individual Bag
 Mates With: Optical: Industrial LC Cable Assemblies (Series 106059) or Electrical: Industrial Ethernet connectors/cable assemblies (84700 Series)
 Designed In: Millimeters

Mechanical

Durability: >50 mate and demate cycles

Physical

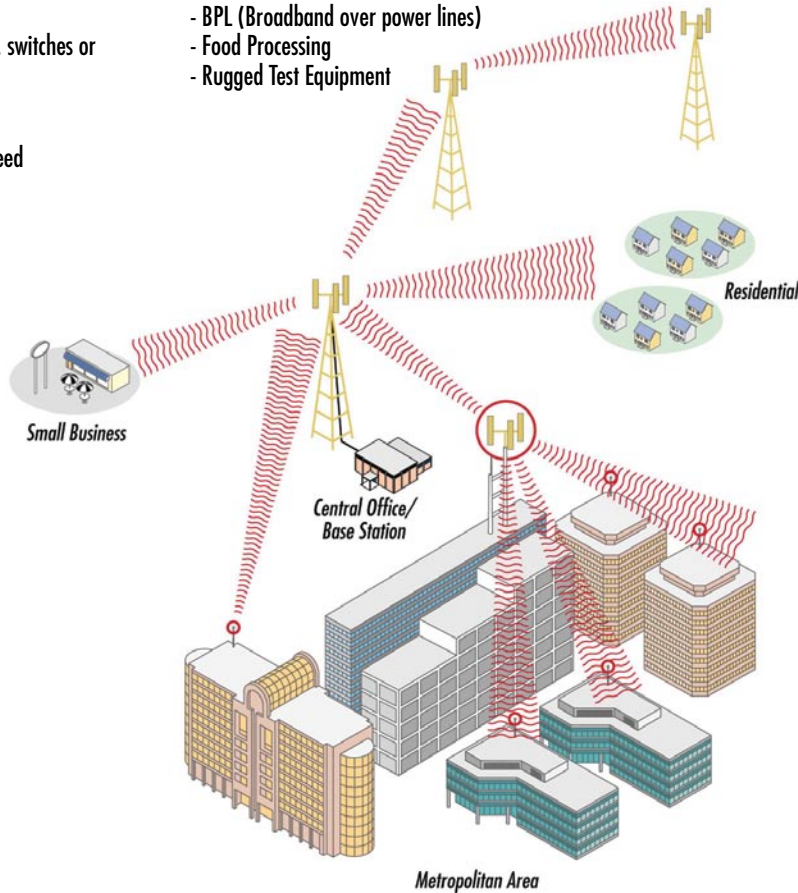
Housing: Nickel (Ni) plated Zinc die-cast
 Operating Temperature: -40 to +85°C



Sealed SFP Assemblies Integrated Optical and Electrical Receptacles

- Industrial
 - System controls
 - Monitoring
 - Data routers
- Telecommunication
 - Outdoor environment data routers, switches or networking equipment
 - FTTX connections
- Wireless base station and antenna feed
 - WiFi
 - WiMax

- Mobile communications equipment
 - Military
 - Broadcast
- Other Markets
 - BPL (Broadband over power lines)
 - Food Processing
 - Rugged Test Equipment



Sealed SFP assemblies used with WiFi and/or WiMax transmission antennas that can be mounted atop broadcast antennas, large office buildings, and small businesses as well as residential apartments and homes.

ORDERING INFORMATION

SFP Assemblies

Order No.	Protocol	Components	Copper Flex Length
106501-1000	Optical	Module, SFP cage, high-speed copper-flex assembly	0.15m (6.000")
106501-2000	Electrical	Module, SFP cage, high-speed copper-flex assembly	0.15m (6.000")
106501-3000	Optical or Electrical	Receptacle with panel nut	N/A

1000Base -T Electrical Transceivers

Order No.	Components	Comment
74741-0001	Transceiver, RJ-45 to SFP	LOS GND
74741-0002	Transceiver, RJ-45 to SFP	LOS Toggle

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