# Sealed SFP Assemblies Integrated Optical and Electrical Receptacles

## 106501

***The Molex Sealed SFP (Small Form-factor Pluggable) optical and electrical integrated-connection system is designed to maximize valuable real estate on the PCB while providing an environmentally rugged interface***

Molex's Sealed SFP system 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 optical, 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).

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




Left to right: A = Optical Industrial Ethernet Cable, B =Electrical 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 for Integrated Platforms C and D, K= Simplified SFP Receptacle

Molex also offers a Simplified SFP Receptacle, which allows end users to design their own board layout and transceiver options. The actual transceiver cage is positioned directly into the rear of the receptacle by the customer in accordance with the optical plane and front-end connectivity guidance provided by Molex.

This offers a low-cost alternative that offers complete accessibility of any SFP from the front of an optical node or outdoor enclosure. For more information on Sealed SFP Assemblies, visit: www.molex.com/product/fiber/sealedsfp.html.

### *Features and Benefits*

- For the integrated solution, an SFP transceiver can be installed and/or removed from the front or back side of the receptacle allowing for convenient factory installations and easy field upgrades
- Compatible with ODVA compliant optical and copper assemblies accommodating industry standard interface connectors and cable assemblies
- The integrated solution 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

## 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

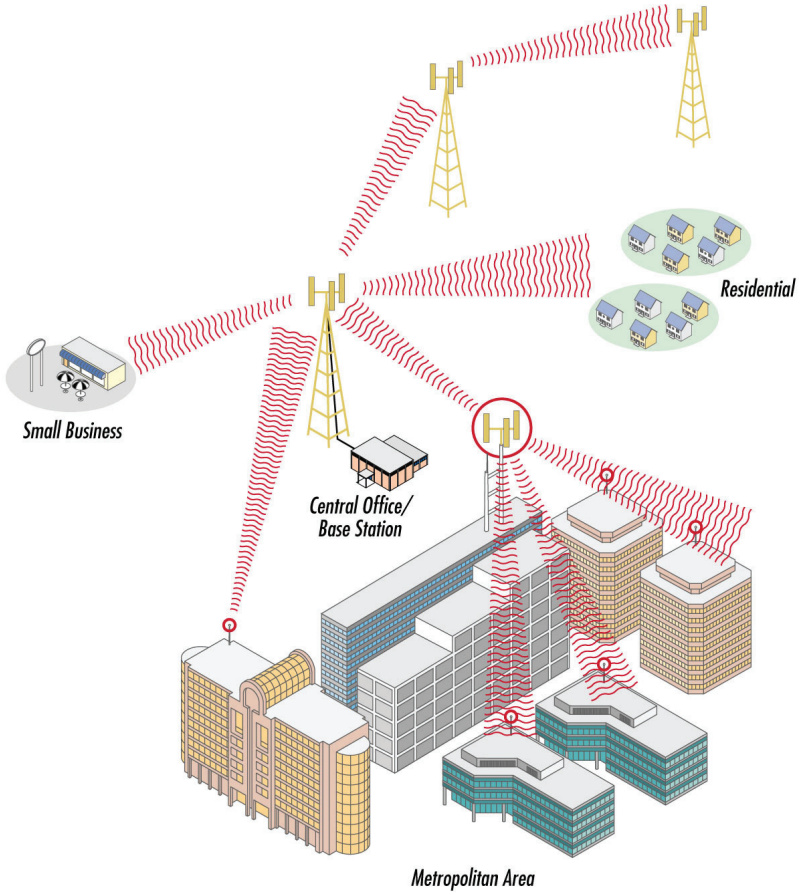
***Mechanical***
Durability: >50 mate and demate cycles

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

## APPLICATIONS

# 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
  - RRH - LTE (Remote Radio Heads - Long Term Evolution)
- Mobile communications equipment
  - Military
  - Broadcast
- Other Markets
  - BPL (Broadband over power lines)
  - Food Processing
  - Rugged Test Equipment




Industrial 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

### *Sealed SFP Module Assemblies*

| Order No. | Protocol | Components | Copper Flex Length |
|---|---|---|---|
| 106501-1000 | Optical | Receptacle, SFP cage, high-speed copper-flex assembly | 0.15m (6.000") |
| 106501-2000 | Electrical | | |

### *Sealed SFP Receptacles*

| Order No. | Protocol | Components |
|---|---|---|
| 106501-3000 | Optical or Electrical | Receptacle with panel nut for the integrated solution |
| 106501-0019 | Optical | Simplified SFP receptacle with plastic dust cap |
| 106501-0026 | Optical | Simplified SFP receptacle with metal dust cap |

### *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 |

Visit our website at www.molex.com/product/fiber/sealedsfp.html

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