



# Optical Industrial Cable Assemblies and Adapters

**106059 LC Duplex**

**106059 SC Simplex**

**106059 MPO Multi-fiber**

*Easy optical connections are now possible in harsh industrial environments with Molex's optical industrial cable assemblies*

Designed with rugged and compact housings, Molex's optical industrial assemblies incorporate the high-performance of a fiber optic connection with the versatility of a rugged industrial connector. The assemblies guarantee an environmentally sealed optical connection in one step, with the combined push-pull insertion and bayonet-style mechanical latch. The bulkhead adapter mounts directly in a panel cut-out, serving as a sealed feed-through. The removable connector provides sealing between both the adapter mating-surface, as well as the cable exiting the connector.

Molex's optical industrial assemblies are compatible with many fiber types and cable constructions and are ideal for both indoor and outdoor applications. This assembly is particularly well-suited for long distances or remote connections using either single mode or multimode fiber.

Available in a simplex SC, Duplex LC, and multi-fiber MPO version, these assemblies offer a sealed fiber optic connection to fit many applications from bi-directional single fiber up to 12 fiber ribbon connections. Assemblies are available in pigtailed (single-ended), jumpers (dual-ended) and breakout assemblies, to any Molex standard fiber optic connector. The assemblies can be manufactured in lengths from 1.0 meter to well over 1.0 kilometer.

The industrial duplex LC assembly has been ratified as a 'Standard Interface' in the ODVA (Open DeviceNet Vendors Association) as a next generation industrial interconnect.



(Left to right) Industrial MPO, Industrial SC, Industrial LC Cable Assemblies

## Features and Benefits

- Provides moisture and dust protection for use in harsh industrial environments
- Sealed panel feed-through design for easy installation into enclosures
- 100% optically tested to ensure quality performance assemblies
- Available in single mode and multimode styles to work with any common fiber type
- Housing is NEMA 6P and IP67 rated which ensures dust and moisture protection
- Push-pull insertion with bayonet-style mechanical latch provides easy installation and removal
- Broad temperature range (-40 to +85°C) is ideal for indoor or outdoor applications

## APPLICATIONS

### Markets and Applications

- Industrial
  - System controls
  - Monitoring
  - High Electro Magnetic Interference (EMI) and Radio Frequency Interference (RFI) areas
- Medical equipment
- Telecommunication/CATV
  - FTTx
  - Outdoor system connections
- Other markets
  - Rugged test equipment
  - Mobile broadcasting or audio visual equipment
  - Food processing



Ball Park – outdoor system connections

## SPECIFICATIONS



## Optical Industrial Cable Assemblies and Adapters

**106059 LC Duplex**  
**106059 SC Simplex**  
**106059 MPO Multi-fiber**

### Reference Information

Packaging: Cable Assemblies: Individual bag or spool  
 Adapters: Individual bag  
 Mates With: Standard LC, SC, or MPO assemblies (respectively)  
 Designed In: Inches

### Physical

Housing: Polymer  
 Ferrule: Zirconia Ceramic  
 Operating Temperature: -40 to +85° C  
 Cable Type: Indoor or outdoor  
 Fiber Type: Single mode or multimode

### Optical

Insertion Loss:  
 Single mode <0.35dB max. (0.13dB typical)  
 Multimode <0.50dB max. (0.10dB typical)  
 Return Loss:  
 Single mode 45 to 55dB  
 Wavelength:  
 Single mode 1310 or 1550nm  
 Multimode 850 or 1300nm



Indoor and Outdoor Industrial LC Assemblies with Industrial LC Adapters

## ORDERING INFORMATION

### Cable Assemblies

| Order No.   | Connector Type | Cable   | Fiber Count | Fiber Type  |
|-------------|----------------|---------|-------------|-------------|
| 106059-0100 | Industrial LC  | Indoor  | 2           | Multimode   |
| 106059-0110 |                |         |             | Single mode |
| 106059-1100 |                |         |             | Multimode   |
| 106059-1110 |                |         |             | Single mode |
| 106059-2020 | Industrial SC  |         | 1           | Multimode   |
| 106059-2025 |                |         |             | Single mode |
| 106059-6100 | Industrial MPO | Outdoor | 4           | Multimode   |
| 106059-6105 |                |         | 8           |             |
| 106059-6110 |                |         | 12          |             |
| 106059-6115 |                |         | 4           | Single Mode |
| 106059-6120 |                |         | 8           |             |
| 106059-6125 |                |         | 12          |             |

Note: 1. Optical industrial assemblies are supplied in a cable assembly form only  
 2. Above part numbers are for reference drawings only, all assemblies will be assigned custom part numbers

### Cable Assembly Accessory

| Order Number | Description          |
|--------------|----------------------|
| 106059-0020  | Dust Cap/Pulling cap |

### Adapters

| Order No.   | Alignment Sleeve | Type                                     | Mode                  |
|-------------|------------------|--|-----------------------|
| 106059-0200 | Phosphor Bronze  | Industrial LC to Duplex LC               | Multimode             |
| 106059-0210 | Zirconia         |  | Single mode           |
| 106059-3110 | Phosphor Bronze  | Industrial LC to Industrial LC (in-line) | Multimode             |
| 106059-3100 | Zirconia         |  | Single mode           |
| 106059-2030 | Phosphor Bronze  | Industrial SC to Simplex SC              | Multimode             |
| 106059-2031 | Zirconia         |  | Single mode           |
| 106059-4100 | Phosphor Bronze  | Industrial SC to Industrial SC (in-line) | Multimode             |
| 106059-4110 | Zirconia         |  | Single mode           |
| 106059-6200 | None             | Industrial MPO to MPO/MTP                | Single mode/Multimode |



Indoor industrial LC Assemblies with In-line Industrial LC Adapter



Outdoor Industrial SC Assembly with Industrial SC Adapter and SC Cable Assembly



Outdoor Industrial MPO Assembly with Industrial MPO Adapter and MPO Cable Assembly



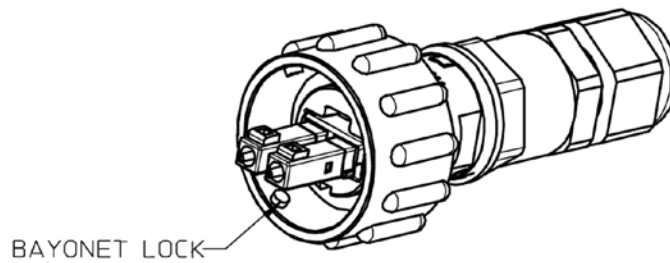
# Optical Industrial Cable Assemblies and Adapters

**106059 LC Duplex**

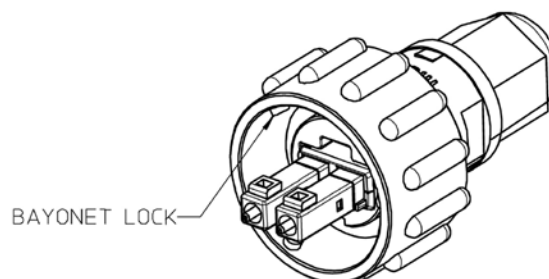
**106059 SC Simplex**

**106059 MPO Multi-fiber**

## Industrial LC with Outside Plant Cable



## Industrial LC with Indoor Cable



All dimensions are in INCHES  
(MILLIMETERS)



**Optical Industrial  
Cable Assemblies  
and Adapters**

**106059 LC Duplex**

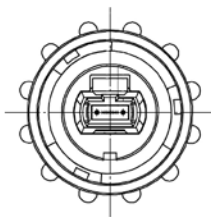
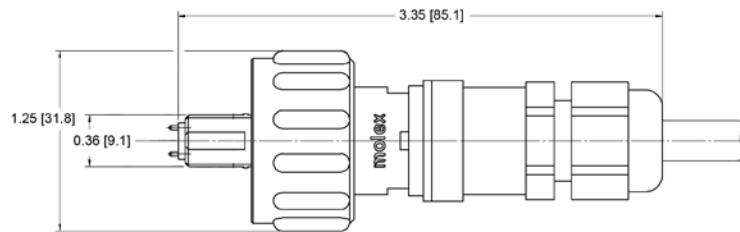
**106059 SC Simplex**

**106059 MPO Multi-fiber**

**Industrial SC  
with Outdoor Plant Cable**



**Industrial MPO  
with Outdoor Cable**



All dimensions are in INCHES (MILLIMETERS)

**ORDERING INFORMATION**



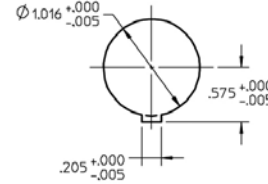
**Optical Industrial  
Cable Assemblies  
and Adapters**

**106059 LC Duplex**

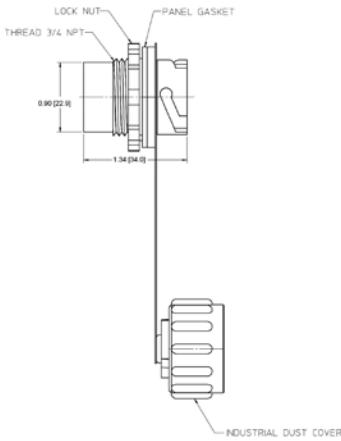
**106059 SC Simplex**

**106059 MPO Multi-fiber**

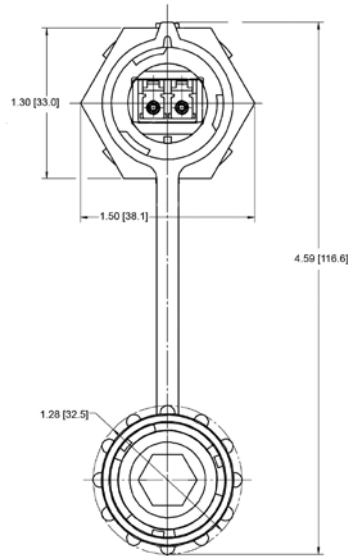
**Industrial Adapter  
with Dust Cap**



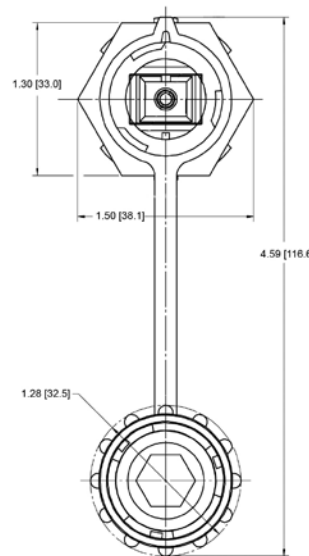
RECOMMENDED MOUNTING CUTOUT



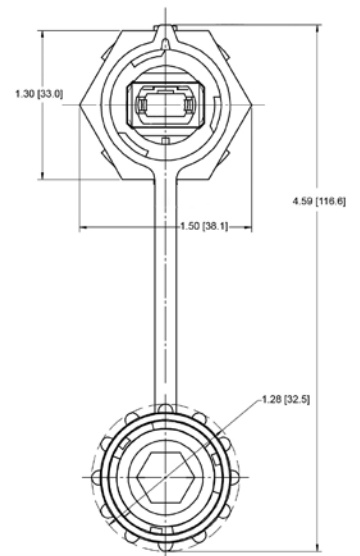
All Styles



LC  
(Duplex)



SC  
(Simplex)



MPO  
(8 or 12 fiber)

All dimensions are in **INCHES**  
(MILLIMETERS)

**ORDERING INFORMATION**



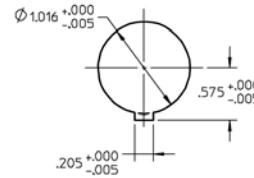
**Optical Industrial  
Cable Assemblies  
and Adapters**

**106059 LC Duplex**

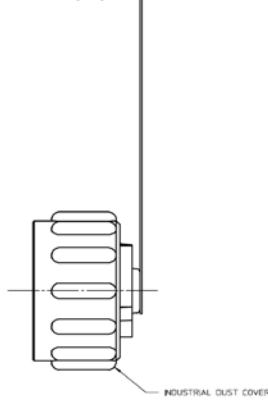
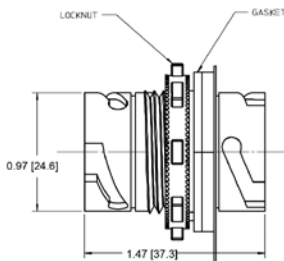
**106059 SC Simplex**

**106059 MPO Multi-fiber**

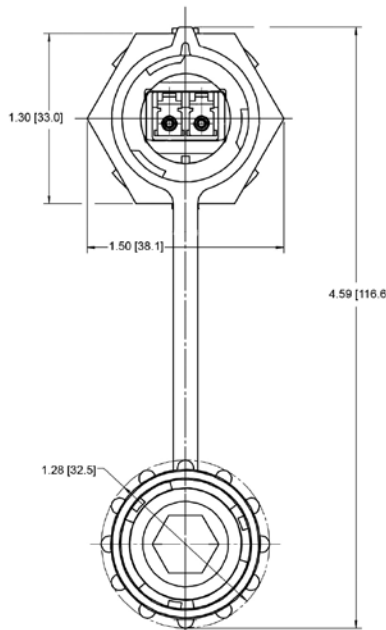
**Industrial In-Line  
Adapter  
with Dust Cap**



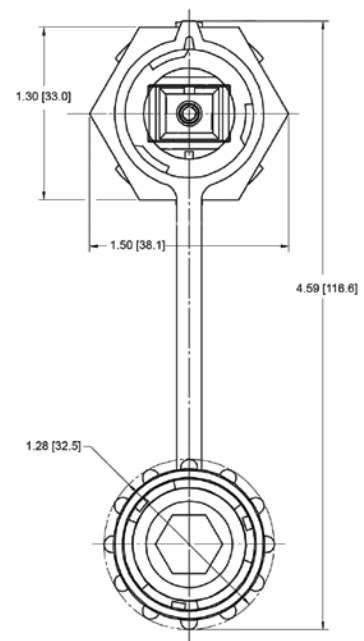
RECOMMENDED MOUNTING CUTOUT



All Styles



LC  
(Duplex)



SC  
(Simplex)

All dimensions are in INCHES (MILLIMETERS)

**Americas Headquarters**  
Lisle, Illinois 60532 U.S.A.  
1-800-78MOLEX  
amerinfo@molex.com

**Asia Pacific North Headquarters**  
Yamato, Kanagawa, Japan  
81-462-65-2324  
feninfo@molex.com

**Asia Pacific South Headquarters**  
Jurong, Singapore  
65-6-268-6868  
fesinfo@molex.com

**European Headquarters**  
Munich, Germany  
49-89-413092-0  
eurinfo@molex.com

**Corporate Headquarters**  
2222 Wellington Ct.  
Lisle, IL 60532 U.S.A.  
630-969-4550  
Fax: 630-969-1352

Visit our website at [www.molex.com/product/fiber/industrialcables.html](http://www.molex.com/product/fiber/industrialcables.html)





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.