

**Designed with rugged and compact housings, Molex's optical industrial cable assemblies incorporate the high-performance of a fiber optic connection with the versatility of a rugged industrial connector and are ideal for harsh industrial environments**

Molex industrial cable assemblies provide an environmentally sealed optical connection for harsh environments. Plus, the assemblies guarantee an easy, one-step connection system with the combined push-pull insertion and bayonet-style mechanical latch.

The industrial panel-mount, plastic adapters serve as a sealed feed-through for the fiber connection. The industrial metal body adapters offer a more robust means of interconnection on outdoor nodes and enclosures over their plastic counterparts. The new industrial integrated flange-mount adapters are designed for tight, side-by-side applications. A single shutter, available in plastic or metal, is secured inside the adapter to cover both LC duplex ports and provide dust and laser protection for the internal fiber connection.

Molex's optical metal- and plastic-body industrial assemblies are compatible with many fiber types and cable constructions; assemblies are ideal for both indoor and outdoor applications. These assemblies are particularly well-suited for long distances or remote connections using either single mode or multimode fiber. The optical industrial assemblies are available in simplex SC, duplex LC (metal-body is currently only available in LC duplex) and multi-fiber MPO versions. Each assembly offers 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 optical industrial assemblies can be manufactured in lengths from 1.0 meter to well over 1.0 kilometers.

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.

For more information on Molex Optical Industrial Cable Assemblies and Adapters, visit: <http://www.molex.com/product/fiber/industrialcables.html>

## FEATURES AND BENEFITS

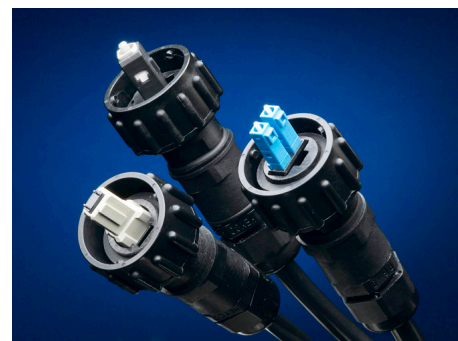
- Provides moisture and dust protection for use in harsh industrial environments; housing is NEMA 6P and IP67 rated
- Sealed panel feed-through design for easy installation into enclosures
- 100% optically tested to ensure quality performance assemblies
- Available in single mode and multimode styles to work with any common fiber type
- Metal body LC connectors have been tested to GR-486, salt and fog exposure for extreme environments
- 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

## Optical Industrial Cable Assemblies and Adapters: LC Duplex, SC, MPO

**106059 Industrial Connectors: LC Duplex, SC Simplex, MPO Multi-Fiber**

**106059 Industrial Adapters Panel Mount: LC Duplex, SC Simplex, MPO Multi-Fiber**

**106501 Integrated Industrial Adapters Flange Mount: LC Duplex**



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



*Metal Body LC Industrial connector and adapter (shown with plastic Industrial LC version)*



*Integrated Industrial LC Duplex Adapter*

\*DeviceNet is a trademark of Open DeviceNet Vendor Association (ODVA)

## SPECIFICATIONS

### Reference Information

Packaging:  
 Cable Assemblies: Individual bag or spool  
 Adapters: Individual bag

Mates With:  
 Standard LC, SC, or MPO assemblies  
 (respectively)

Designed In: Inches

### 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

### Physical

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

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**106059 Industrial Adapters Panel Mount:** LC Duplex, SC Simplex, MPO Multi-Fiber

**106501 Integrated Industrial Adapters Flange Mount:** LC Duplex

## 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



Indoor and Outdoor Industrial LC Assemblies with Industrial LC Adapters



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



Indoor Industrial LC Assemblies with In-line Industrial LC Adapter

## ORDERING INFORMATION

### Connectors

Order No.	Connector Material	Connector Type	Cable	Fiber Count Fiber	Type		
106059-7100	Metal	Industrial LC	Indoor/Outdoor	2	Multimode		
106059-7300		Industrial LC –no logo	Indoor/Outdoor	2			
106059-7500		Industrial LC	Indoor/Outdoor	2	Single mode		
106059-7700		Industrial LC- no logo	Indoor/Outdoor	2			
106059-7900		Industrial LC	Indoor/Outdoor	2	Single mode - APC		
106059-2500		Industrial LC	Indoor/Outdoor	1	Single mode		
106059-2100		Industrial LC	Indoor/Outdoor	1	Multimode		
106059-0100	Plastic	Industrial LC	Indoor	2	Single mode		
106059-0110						Multimode	
106059-1100					Single mode		
106059-1110							Multimode
106059-2020					Single mode		
106059-2025		Single mode					
106059-6100			Industrial SC	Outdoor	1	Multimode	
106059-6105		Single mode					
106059-6110						Multimode	
106059-6115							Single mode
106059-6120							
106059-6125						Single mode	
106059-6110		Industrial MPO					Outdoor
106059-6105			8				
106059-6110				12			
106059-6115	4						
106059-6120			8				
106059-6125	12						
106059-6120		8	Single Mode				
106059-6125	12						

\* Connector part numbers are supplied in a cable assembly form only

\* All above part numbers are for reference drawings only; all assemblies will be assigned custom part numbers depending on cable length

### Cable Assembly Accessory

Order Number	Description
106059-0020	Dust Cap/Pulling cap

### Adapters

Order No.	Alignment Sleeve	Mounting Style	Dust Cover	Type	Mode
106059-0200	Phosphor Bronze	Panel Nut	Yes - plastic	Industrial LC to Duplex LC	Multimode
106059-0210	Zirconia			Single mode	
106501-0024	Ceramic	Flange (Screw)		Integrated Industrial LC Duplex	Single mode
106059-3110	Phosphor Bronze	Panel Nut		Industrial LC to Industrial LC (in-line)	Multimode
106059-3100	Zirconia			Single mode	
106059-2031	Phosphor Bronze			Industrial SC to Simplex SC	Multimode
106059-2030	Zirconia			Single mode	
106059-4110	Phosphor Bronze			Industrial SC to Industrial SC (in-line)	Multimode
106059-4100	Zirconia			Single mode	
106059-6200	None			Flange (Screw)	Industrial MPO to MPO/MTP
106059-6210			Industrial MPO to Industrial MPO (in-line)		
106059-7200	Phosphor Bronze	Panel Nut	Yes - Metal	Industrial LC Metal body to Duplex LC	Multimode
106059-7400				Industrial LC Metal Body to Duplex LC (no logo)	
106059-7600	Zirconia			Industrial LC Metal body to Duplex LC	Single mode
106059-7800				Industrial LC Metal Body to Duplex LC (no logo)	
106059-7250	Phosphor Bronze		Yes - plastic	Industrial LC Metal body to Duplex LC	Multimode
106059-7450				Industrial LC Metal Body to Duplex LC (no logo)	
106059-7650	Zirconia			Industrial LC Metal body to Duplex LC	Single mode
106059-7850				Industrial LC Metal Body to Duplex LC (no logo)	

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Outdoor Industrial MPO Assembly with Industrial MPO adapter and MPO Cable Assembly