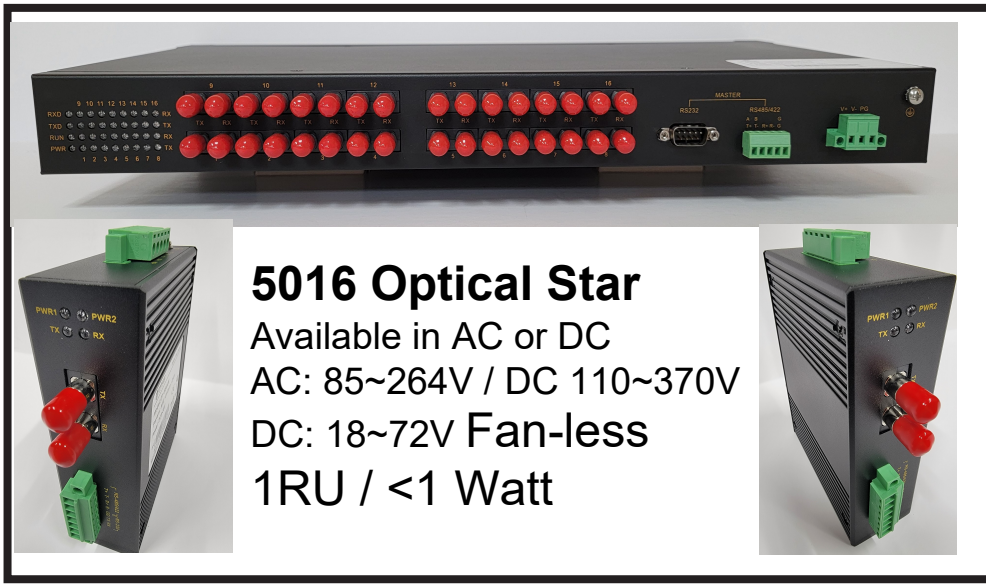
DYMEC Serial Link's & FIBER OPTICAL STAR Series

Product Bulletin -DY-5016 Optical Star

DYMEC Ethernet and Serial Link Fiber Optical Stars for the networking of multiple serial devices are Certified to IEEE1613 and Class 1 Div2 for use in hazardous locations.
Sub-station and Utility tested. Temperature Hardened. 1 RU.



5016 Optical Star
Available in AC or DC
AC: 85~264V / DC 110~370V
DC: 18~72V Fan-less
1RU / <1 Watt

Dymec Models operate as Links and Repeaters, optically connecting different formats and eliminating the need for converters. Optical Stars operate with multi-mode and/or single-mode optics, providing a full optical budget for each port.



DY-3457-2F-2TX

Features

- Operates efficiently & reliably at temperatures of –40°C to 85°C Fan-less
- Packaged in rugged, industrial quality, light weight Aluminum and powder coated shells
- Powered from Station Battery Bus
- Multiple Mounting choices with built-in and optional mounting brackets
- Extended distances of 2km over Multi-mode fiber and 120Km over Single-mode fiber.
- Diagnostic LED's for ease of installation
- Certified to IEEE 1613 and Class 1 Div2
- Low Power Consumption
- 5 YEAR Warranty

- **IEEE 802.3 / UL6095-1 Certified**
- **2 RJ45 & 2 Fiber Connections**
- **Automatic Polarity detection**
- **Auto adapts to Half or Full Duplex mode**
- **Low Power Consumption**
- **Temperature Hardened**

DYMEC's Ethernet Link DY-3457-2F-2TX

DYMEC model: DY-3457-2F-2TX is a hardened fiber optic link that convert 10 / 100 Mbps Ethernet from twisted pair copper to 10Base-FL or Single-mode fiber optics.

DYMEC model: DY-3457-2F is a temperature hardened fiber optic link that converts 10/100Base-T Ethernet from twisted pair copper to 100Base-FX, 100Base-SX or Single-mode fiber optics.

These links are stand-alone mounted and require no programming or set up. Simply mount the Link in an appropriate location and connect the power.

DYMEC Links are powered from various sources. The standard models accept 85 to 264 Volts AC or 110 ~ 370 volts DC. Optionally, these Links can also be ordered for 12 or 24 to 48 Volts DC. The power supplies are surge protected. Certified to both IEC 63000 and IEEE C37.90 standards. Sub-station Rated

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DYMEC 5877M and 5878M

Multi-mode 850 nm
OPTO-ISOLATION
Copper Wire 7 Pin Terminal Block
No DIP Switches

DYMEC models 5877M and 5878M are hardened fiber optic Link/Repeaters that convert RS232, RS422, RS485 or TTL level copper to amplitude based fiber output. Supports data rates from 300 to 115.2Kbps, auto-rate adaptive signal / with DCE or DTE port configurations.

The DYMEC 5877M and DY-5878M Link/ Repeaters can be configured for point-to-point, star, optical bus, or loop networks, and permit quick, easy connection of devices. For example, an extensive multi-drop network—where two or more intelligent electrical devices are connected and communicating can be constructed simply by connecting the devices through Link/ Repeaters.

DYMEC DY-5877M - Multi mode 850nm AC-85 ~ 264 Volts / DC-110 ~ 370 Volts

DYMEC DY-5878M - Multi mode 850nm DC-9 ~ 60 Volts / Can be used on 12VDC / 24 VDC or 48 VDC Systems

DYMEC 5844MA-ST

Multi-mode 850nm / OPTO-ISOLATION
DB-9 Terminal Block - RS-232
Copper Wire 5 Pin Terminal Block / RS-422 / RS-485

The DYMEC model 5844MA-ST Serial Fiber Link is a link/repeaters for EIA RS232, RS422 and RS485 data connections. The 5844MA-ST Link provides reliable serial data connectivity over fiber optic facilities in harsh environments where immunity and signal isolation are critical. Optical connectivity provides flexibility, extended distance, operational safety, reduced equipment outages due to electrical surges, with improved signal quality and network performance.
The 5844MA-ST also inter-operates with the DYMEC Optical Star product (DY-5016M) to cost effectively create highly scalable data networks with minimum electrical signal exposure.

All DYMEC Links are substation-hardened to IEEE 1613 specifications. They operate in an extended temperature range and optionally take DC power directly from station battery. Flexible mounting options, diagnostic LEDs and integrated optical and electrical signal test features make turning up Link networks simple.

DYMEC Link DY-5977 Series

The DYMEC DY-5977M and DY-5977S Data Links are designed as full duplex four channel devices. Four channels have bandwidth of 300 ~ 115.2Kbps.

Used in point-to-point RS2-32 / RS-422 / RS-485 applications. The DY-5977 Series Data Links are designed to pass handshaking or flow control signals along with data. The links do not utilize the flow signals for their operation.

Like all Dymec digital-to-fiber optic products, they are passive to all software protocols, and simply send the communications signals from one node to the other.

DYMEC DY-5977M
Multi-mode 1310nm
DC-5 ~ 12 Volts

DYMEC DY-5977s
Single-mode 1310nm
DC-5 ~ 12 Volts

- Sends four RS232 / 422 /485 non-handshaking signals together on a single pair of fibers.
- Interfacing RTUs to radios that require push-to talk control
- Passing up four contacts bi-directionally or KYZ meter contacts.
- Transmitting data and IRIG-B timing signals with a single Link
- Opto-isolation
- Temperature Hardened

Optical FiberStar

The DYMEC DY-5016 Series Optical Stars provide network designers with a convenient “hub and spoke” topology capability. The redesigned DYMEC Optical Stars are now available with sixteen optical ports, with multi-mode and/or single-mode optics providing a full optical budget on each port. To further provide flexibility the Master port (port one) can be configured with an RS232 copper interface. The 5016 Optical Star can also support Master/Slave or Peer-to-Peer mode and be cascaded by simply connecting a port from one Optical Star to a port of the next

DYMEC DY-5016 Optical Stars are ideal for Master/Slave polling applications such as multiple meters, relays and other statistical devices as well as broadcasting IRIG-B to multiple devices where fiber offers extended range and isolation from interference. Optical Stars also allow you to take one or more devices out of service while all others continue to operate. This is invaluable in most applications.

Optical Stars are passive to all software protocols, and ports cannot be addressed by software. Data rates from 300 ~ 115.2Kbps are supported. Optical Stars are optically compatible with DYMEC models 5877M, 5877S, 5878 and 58464-MA-ST. Optical Stars are also compatible with most IEDs with embedded optical ports using amplitude modulation. These units are available in 19-inch rack mount and can be configured for panel mounting. Available in the following configurations:



DYMEC 5016 Series Optical Star & Serial Link Ordering Information

Part Number: **DY-5016M-850-AC**	**Multi-mode Fiber, 1 x RS-232 / RS-485 / RS-422 DB-9 to 16-channel fiber hub, multi-mode optical ports, 19" rack mount, with built-in power supply:** **AC 85~265 Volts or DC 110~380 Volts / Uses <5 Watts** **850nm Multi- mode, <2KM,ST connectors.**
Part Number: **DY-5016M-850-48**	**Multi-mode Fiber, 1 x RS-232 / RS-485 / RS-422 DB-9 to 16-channel fiber hub, multi-mode optical ports, 19" rack mount, with built-in power supply:** **DC 9~60 Volts (For Use in 12, 24, or 48 Volts DC Plant) / Uses <5 Watts** **850nm Multi- mode, <2KM,ST connectors.**
Part Number: **DY-5016S-1310-AC**	**Single-mode Fiber, 1 x RS-232 / RS-485 / RS-422 DB-9 to 16-channel fiber hub, single-mode optical ports, 19" rack mount, with built-in power supply:** **AC 85~265 Volts or DC 110~380 Volts / Uses <5 Watts** **1310nm Multi- mode, <20KM,ST connectors.**
Part Number: **DY-5016S-1310-48**	**Single-mode Fiber, 1 x RS-232 / RS-485 / RS-422 DB-9 to 16-channel fiber hub, single-mode optical ports, 19" rack mount, with built-in power supply:** **DC 9~60 Volts (For Use in 12, 24, or 48 Volts DC Plant) / Uses <5 Watts** **850nm Multi- mode, <20KM,ST connectors.**
Part Number: **DY-5016S-1550-AC**	**Single-mode Fiber, 1 x RS-232 / RS-485 / RS-422 DB-9 to 16-channel fiber hub, multi-mode optical ports, 19" rack mount, with built-in power supply:** **AC 85~265 Volts or DC 110~380 Volts / Uses <5 Watts** **850nm Multi- mode, 60 / 80 KM,ST connectors.**
Part Number: **DY-5016S-1550-48**	**Single-mode Fiber, 1 x RS-232 / RS-485 / RS-422 DB-9 to 16-channel fiber hub, multi-mode optical ports, 19" rack mount, with built-in power supply:** **DC 9~60 Volts (For Use in 12, 24, or 48 Volts DC Plant) / Uses <5 Watts** **850nm Multi- mode, 60 / 80 KM,ST connectors.**

SERIAL LINKS

Part Number: **DY-5877M**	**Multi-mode Serial Link / Supports 1 x RS-232 / RS-485 / RS-422 three-in-one terminal block interface fiber converter:** **1) 1 x FIBER:Multi-mode: 850nm, ST Connector / <2 Km.** **2) Supports built-in AC 85 ~ 264 Volts / DC 110 ~370 Volts isolated power supply, aluminum alloy case with Din-Rail installation**
Part Number: **DY-5877S**	**Single-mode Serial Link / Supports 1 x RS-232 / RS-485 / RS-422 three-in-one terminal block interface fiber converter:** **1) 1 x FIBER:Multi-mode: 131nm, ST Connector / <20 Km.** **2) Supports built-in AC 85 ~ 264 Volts / DC 110 ~370 Volts isolated power supply, aluminum alloy case with Din-Rail installation**
Part Number: **DY-5878M**	**Multi-mode Serial Link / Supports 1 x RS-232 / RS-485 / RS-422 three-in-one terminal block interface fiber converter:** **1) 1 x FIBER:Multi-mode: 850nm, ST Connector / <2 Km.** **2) Supports built-in DC 9 ~60 Volts isolated power supply, aluminum alloy case with Din-Rail installation. Use with 12 volt / 24 volt / 48 volt installations**

DYMEC
AMERICAN INDUSTRIAL



DYMEC AI Consulting Center

As the complexity of communication and connectivity solutions has increased, so have the requirements for design, implementation and maintenance of these solutions. For users, acquiring and verifying the latest expert AI knowledge plays a decisive role.
As a reliable partner for AI Traffic & Communication solutions, DYMEC offers expert consulting, design, technical support. Up-to-date manufacturer's expertise, an superb service network and access to external specialists guarantee you the best possible support for products. Whatever the technology you use, you can rely on our full support – from implementation to optimization of every aspect of daily operations.

About DYMEC

DYMEC Inc., a global leader in high quality, end-to-end signal transmission solutions. We delivers a comprehensive product portfolio designed to meet the mission-critical network infrastructure needs of industrial, enterprise and broadcast markets. DYMEC delivers innovative solutions targeted at reliable and secure transmission of rapidly growing amounts of data, audio and video. DYMEC is at the center of the global transformation to a connected world. Founded in 1957 by Hewlett-Packard, the company is now privately owned and headquartered in Kansas City, MO USA. DYMEC is a Veteran Owned Small Business

For more information, visit us at www.DYMEC.com and follow us on LinkedIn.

Got questions? Need to talk to an expert? Send us an email: Sales@DYMEC.com

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