LIGHTNING SPEED
ON THE DATA HIGHWAY

OPTICAL DATA COUPLERS FOR
100 MBIT/S TRANSFER

PEPPERL+FUCHS

SENSING YOUR NEEDS

Optical transfer of a wide variety of Ethernet protocols, including Industrial Ethernet at 100 Mbit/s

- Fast Ethernet optical data coupler

- Consistently high data rate of 100 Mbit/s, regardless of transfer distance

- Protocol-free data transmission

- Full duplex transfer

Opens doors to new applications

- Fast enough to transfer live video for remote maintenance and diagnosis

- Transfers Ethernet for plant communications

- Alternative to Wi-Fi, which has signal attenuation around metal and inconsistent transfer rates

User-friendly features

- Minimal infrastructure costs

- Operating range from 0 m to 150+ m

- Quick disconnect for fast set up

- Plug and play: no configuration or operating controls

- LED bar graph displays signal strength

- Integral alignment aid visible at long distances

- Large operating angle for easy alignment

WE BRING 100 MBIT/S FAST ETHERNET TO STORAGE AND RETRIEVAL SYSTEMS

Optical data couplers provide wireless data transfer via a modulated light beam. They are used in pairs with one aimed at the other along an axis. Unlike Wi-Fi or RF-based communications, they are immune to noise interference and have a consistent data transfer rate over all distances. They can be used in automated storage and retrieval systems, overhead monorail systems, mobile transport units, automated guided vehicles, material transfer systems, and other areas.

LS680 is an optical data coupler that connects Ethernet modules to remote modules. It is ideal for high bays in warehouses, as it is easy to connect the vehicle controls of the automatic storage and retrieval vehicles to the stationary control system without reducing the transfer speed. Data transmission occurs protocol-free. Packets are not saved, but immediately transmitted, resulting in a rapid full duplex rate of 100 Mbit/s regardless of transmission distance. LS680 transmits Industrial Ethernet topologies such as PROFINET, Ethernet/IP, and TCP/IP.

PROFI NET®

EtherNet/IP™

Operating range	0 m to 150 m
Range limit	180 m
Light source	Laser diode, laser class 1M
Interface	100 Base-TX
Data rate	100 Mbit/s
Data flow display	Green LED: OPTO link, Yellow LED: LAN-link
Function display	Bar graph for signal strength (8 LEDs: red, yellow, green)
Supply voltage	18 V DC to 30 V DC
Operating temperature	-10 °C to 50 °C (14 °F to 122 °F)
Electrical connection	Power supply: M12 plug, 4-pin Service: M12 plug, 8-pin LAN: M12 plug, 4-pin, D-coded
Material	Enclosure: ABS / PC, Optical cover: plastic
Weight	700 g

MODELS

Model Number	Description
LS680-DA-EN/F1	Infrared light emitter, visible red light receiver
LS680-DA-EN/F2	Visible red light emitter, infrared light receiver

To enable data transfer, an F1 unit must be used with an F2 unit.

Operating indicator

OPTO link

Laser error

Fault

LAN link

Signal quality

MOUNTING ACCESSORIES

OMH-LS610-01

- Heavy-duty bracket with an innovative quick clamp for mounting and alignment
- Precise alignment in two axes via horizontal and vertical adjustment screws

OMH-LS610-02

- Direct mounting set (4 threaded M4 inserts)

Protective cap LS610

- Convenient connector dust cover for transport and storage

CORDSETS FOR POWER

Model Number	Description
V1-G-2M-PVC	Female cordset, straight, M12, 4-pin, PVC cable, length: 2 m
V1-G-2M-PUR	Female cordset, straight, M12, 4-pin, PUR cable, length: 2 m
V1-W-2M-PVC	Female cordset, angled, M12, 4-pin, PVC cable, length: 2 m
V1-W-2M-PUR	Female cordset, angled, M12, 4-pin, PUR cable, length: 2 m
V1-W-5M-PVC	Female cordset, angled, M12, 4-pin, PVC cable, length: 5 m
V1-W-5M-PUR	Female cordset, angled, M12, 4-pin, PUR cable, length: 5 m

NETWORK CABLES

The sensor is connected to the network by an M12 connector.

Model Number	Description
V1SD-G-2M-PUR-ABG-V45-G	Patch cable M12 to RJ45, length: 2 m
V1SD-G-5M-PUR-ABG-V45-G	Patch cable M12 to RJ45, length: 5 m
V1SD-G-ABG-PG9	Male cordset M12 D-coded, 4-pin for bus cable, self-assembly

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