



Ethernet Media Converters with single-fiber technology

One fiber – many advantages

The FL MC EF WDM... media converters enable full duplex communication with a single glass fiber via WDM technology (Wavelength Division Multiplex). WDM FO converters convert a 10/100Base-T(X) Ethernet interface into a single optical fiber. It provides many advantages. WDM media converters are particularly suitable for rotating applications with optical rotary transformers, such as wind power plants and revolving tables.

The advantages of the WDM media converter

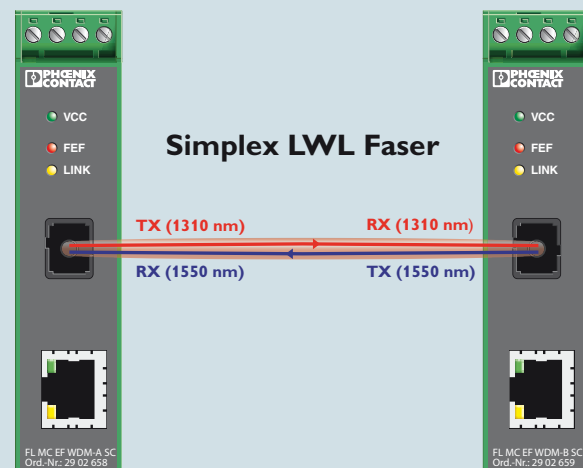
- Double the bandwidth or creation of separate networks in existing cabling
- Easy startup via autonegotiation and auto-MDI-MDI(X) switching
- Comprehensive diagnostics via LFP functions (Link-Fault-Pass-through) and FEF (Far-End-Fault)
- Extended temperature range from -40 °C to +65 °C for use in industrial environments with high requirements

Description	Type	Order No.
WDM media converter set	FL MC EF WDM-SET	2902660
WDM media converter – A	FL MC EF WDM-A SC	2902658
WDM media converter – B	FL MC EF WDM-B SC	2902659
SHDSL Ethernet modem	PSI-MODEM-SHDSL/ETH	2313643

Functional principle

Multiplexing of various wavelengths (1310 nm and 1550 nm) makes it possible to simultaneously transmit and receive via a single optical fiber. Two media converters always work together for this purpose. When a converter is transmitting the signals on a wavelength of 1310 nm, the other must be able to receive them on same wavelength.

Thanks to this principle, a bidirectional connection is created via one single-mode or multi-mode fiber without restricting the data rate or transmission quality.



Full duplex communication on one single fiber via multiplexing of various different light wavelengths

FIBER OPTICS



Redundancy via light and copper

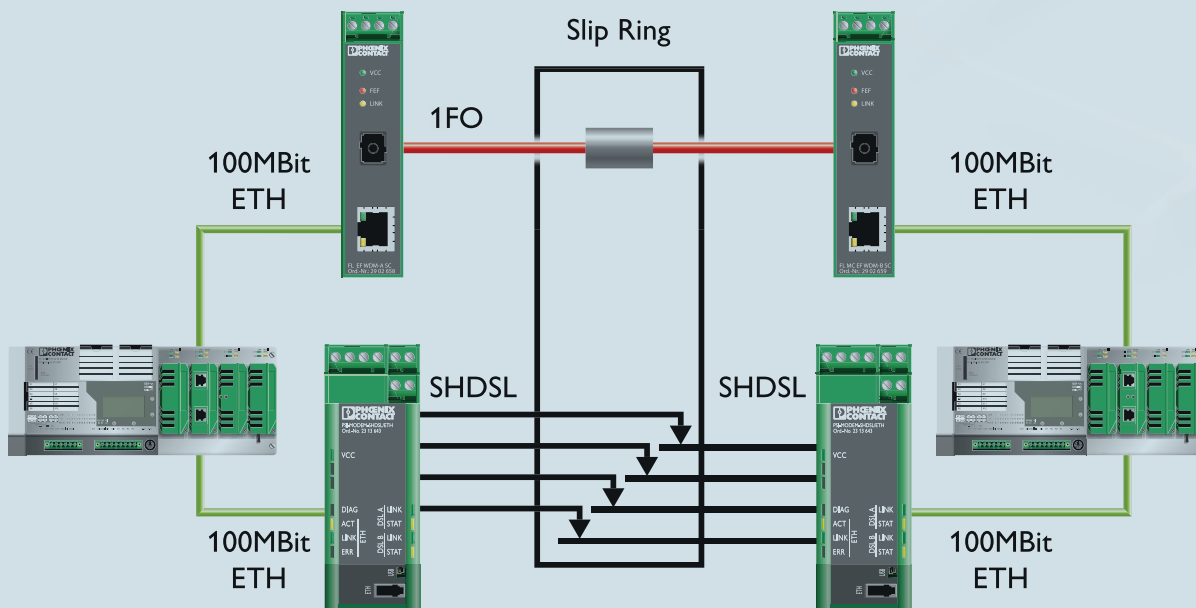
It is particularly important for wind power systems that high-performance data communication between hub and gondola is guaranteed. This is where a redundant network offers advantages. Independent transmission paths are used for data communication. Since optical systems were too expensive in the past, wireless systems with copper slip rings were often used instead.

Our WDM media converters can be used with optical rotary transformers with just one fiber, which are considerably less expensive than rotary transformers with several fibers. This makes it possible to replace the previously used wireless

systems with optical systems. Data communication via fiber optic rotary transformers is also immune to electromagnetic interference, is electrically isolated and maintenance free.

The new WDM media converters make it possible to ensure cost-effective, high-performance and reliable data communication.

In conjunction with the SHDSL modems from Phoenix Contact that communicate via the conventional copper connection of the slip ring, it is now possible to create a future-oriented redundant network solution.



Redundant data communication via fiberglass and copper slip ring

Additional information on the products presented here and the world of solutions from Phoenix Contact can be found at www.phoenixcontact.com/catalog



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