

# Interface converters, device servers, and gateways



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The aim of industrial communication is the reliable transmission of data from the field through to the control level. Interface converters and device servers enable the protocol-transparent conversion of serial interfaces, such as RS-232, RS-422, and RS-485, to other standards, e.g., Ethernet (RJ45). Gateways and protocol converters convert various fieldbus and Ethernet protocols (e.g., PROFIBUS to PROFINET), thus enabling the easy integration of legacy serial devices and fieldbuses into modern Ethernet networks.



# Serial device servers

Serial device servers enable the easy integration of legacy serial devices and buses into modern Ethernet networks.

Many applications involve multiple serial devices in close proximity, such as bar code scanners and printers. All the devices have to be connected to Ethernet. In this case, using a multi-port converter saves money and valuable space in the control cabinet.

Furthermore, the application can be customized to accommodate individual requirements, enabling various users to access various serial interfaces via a single converter.

# **PROFIBUS PA gateway**

There are five head stations to choose from for various applications. The devices are assigned a PROFIBUS PA address easily via DIP switch – no programming is necessary.

Analog and digital I/Os and a digital NAMUR input module are available as extensions. Thumbwheels are then used to easily assign the inputs and outputs of the extension modules.



# **Ethernet HART gateway**

Depending on the application, serial RS-485- or Ethernet-based access to all the digital data from HART devices is possible.

The Ethernet HART gateway provides PROFINET, Modbus TCP/IP, and HART-IP access to 40 devices. Each device connection has its own HART client that allows it to forward HART data as fast as possible via Ethernet.

When using a Modbus TCP/IP network, it is also possible to provide four digital inputs and four digital outputs.











GW EIP/MODBUS 2E/2DB9 - 1062380

The GW EIP/MODBUS... enables two-way communication between EtherNet/IP™ and Modbus protocols. Includes two RJ45 ports and two D-SUB 9 ports.



#### Interface converters

FL COMSERVER UNI 232/422/485 - 2313452

Second generation FL COMSERVER UNI..., serial device server for converting a serial 232/422/485 interface to Ethernet, supports TCP, UDP, Modbus gateway, and PPP applications, incl. COM port redirector software and user documentation



# Interface converters

GW MODBUS TCP/RTU 1E/1DB9 - 2702764

The GW MODBUS TCP/RTU... gateway converts serial based Modbus RTU (or ASCII) to Modbus TCP. Supports serial client or server devices. Includes one RJ45 port and one D-SUB 9 port.



#### Interface converters

GW DEVICE SERVER 1E/1DB9 - 2702758

Serial device server for converting serial data (RS-232/422/485) to Ethernet data (RJ45). Supports TCP and UDP protocols. COM port redirector software and Windows drivers are available for download. Includes one RJ45 port and one D-SUB 9 port.



# Interface converters

FL COMSERVER BASIC 232/422/485 - 2313478

Second generation FL COMSERVER BASIC..., serial device server for converting a serial RS-232/422/485 interface to Ethernet, only supports TCP and UDP applications, incl. Com Port Redirector software and user documentation (PDF)



#### Interface converters

GW DEVICE SERVER 1E/2DB9 - 2702760

Serial device server for converting serial data (RS-232/422/485) to Ethernet data (RJ45). Supports TCP and UDP protocols. COM port redirector software and Windows drivers are available for download. Includes one RJ45 port and two D-SUB 9 ports.



#### Interface converters

GW MODBUS TCP/ASCII 1E/1DB9 - 2702768

The GW MODBUS TCP/ASCII... converts RAW or ASCII serial strings into Modbus registers. Includes one RJ45 port and one D-SUB 9 port.



# Interface converters

GW EIP/ASCII 1E/1DB9 - 2702772

The GW EIP/ASCII... converts RAW or ASCII serial strings into EtherNet/IP™ protocol. Includes one RJ45 port and one D-SUB 9 port.



# Interface converters

GW MODBUS TCP/RTU 1E/2DB9 - 2702765

The GW MODBUS TCP/RTU... gateway converts serial based Modbus RTU (or ASCII) to Modbus TCP. Supports serial client or server devices. Includes one RJ45 port and two D-SUB 9 ports.



GW DEVICE SERVER 2E/4DB9 - 2702763

Serial device server for converting serial data (RS-232/422/485) to Ethernet data (RJ45). Supports TCP and UDP protocols. COM port redirector software and Windows drivers are available for download. Includes two RJ45 ports and four D-SUB 9 ports.



#### Interface converters

GW DEVICE SERVER 2E/2DB9 - 2702761

Serial device server for converting serial data (RS-232/422/485) to Ethernet data (RJ45). Supports TCP and UDP protocols. COM port redirector software and Windows drivers are available for download. Includes two RJ45 ports and two D-SUB 9 ports.



# Interface converters

GW PN/DP 1E/1DB9 - 1108712

PROFINET to PROFIBUS DP gateway. Functions as a PROFIBUS DP controller on the PROFIBUS network and a PROFINET IO device on the PROFINET network. Compatible with FDT/DTM container for simple configuration of PROFIBUS DP devices.



#### Interface converters

GW PN/MODBUS 1E/1DB9 - 1105707

The GW PN/MODBUS... enables two-way communication between PROFINET and Modbus protocols. Includes one RJ45 port and one D-SUB 9 port.



# Interface converters

GW PN/ASCII 2E/4DB9 - 1020882

 $The \ GW\ PN/ASCII...\ converts\ RAW\ or\ ASCII\ serial\ strings\ into\ PROFINET.\ Includes\ two\ RJ45\ ports\ and\ four\ D-SUB\ 9\ ports.$ 



#### Interface converters

GW MODBUS TCP/ASCII 2E/4DB9 - 2702771

The GW MODBUS TCP/ASCII... converts RAW or ASCII serial strings into Modbus registers. Includes two RJ45 ports and four D-SUB 9 ports.



#### Interface converters

GW MODBUS TCP/RTU 2E/4DB9 - 2702767

The GW MODBUS TCP/RTU... gateway converts serial based Modbus RTU (or ASCII) to Modbus TCP. Supports serial client or server devices. Includes two RJ45 ports and four D-SUB 9 ports.



# **Interface converters**

GW PN/MODBUS 2E/2DB9 - 1105709

The GW PN/MODBUS... enables two-way communication between PROFINET and Modbus protocols. Includes two RJ45 port and two D-SUB 9 ports.



# **Interface converters**

GW EIP/MODBUS 1E/1DB9 - 1062540

The GW EIP/MODBUS... enables two-way communication between EtherNet/IP $^{\text{TM}}$  and Modbus protocols. Includes one RJ45 port and one D-SUB 9 port.



GW EIP/ASCII 2E/4DB9 - 2702776

The GW EIP/ASCII... converts RAW or ASCII serial strings into EtherNet/IP. Includes two RJ45 ports and four D-SUB 9 ports.



# **Interface converters**

GW EIP/ASCII 1E/2DB9 - 2702773

 $The \ GW \ EIP/ASCII... \ converts \ RAW \ or \ ASCII \ serial \ strings \ into \ EtherNet/IP. \ Includes \ one \ RJ45 \ port \ and \ two \ D-SUB \ 9 \ ports.$ 



# **Interface converters**

GW EIP/ASCII 2E/2DB9 - 2702774

The GW EIP/ASCII... converts RAW or ASCII serial strings into EtherNet/IP. Includes two RJ45 ports and two D-SUB 9 ports.



# Interface converters

GW MODBUS TCP/ASCII 2E/2DB9 - 2702770

The GW MODBUS TCP/ASCII... converts RAW or ASCII serial strings into Modbus registers. Includes two RJ45 ports and two D-SUB 9 ports.



# **Interface converters**

GW MODBUS TCP/ASCII 1E/2DB9 - 2702769

The GW MODBUS TCP/ASCII... converts RAW or ASCII serial strings into Modbus registers. Includes one RJ45 port and two D-SUB 9 ports.



# Interface converters

GW MODBUS TCP/RTU 2E/2DB9 - 2702766

The GW MODBUS TCP/RTU... gateway converts serial based Modbus RTU (or ASCII) to Modbus TCP. Supports serial client or server devices. Includes two RJ45 ports and two D-SUB 9 ports.



# **Interface converters**

GW PN/MODBUS 2E/4DB9 - 1105710

The GW PN/MODBUS... enables two-way communication between PROFINET and Modbus protocols. Includes two RJ45 port and four D-SUB 9 ports.



#### Interface converters

GW PN/MODBUS 1E/2DB9 - 1105708

The GW PN/MODBUS... enables two-way communication between PROFINET and Modbus protocols. Includes one RJ45 port and two D-SUB 9 ports.



# **Interface converters**

GW EIP/MODBUS 1E/2DB9 - 1062423

The GW EIP/MODBUS... enables two-way communication between EtherNet/IP $^{\text{TM}}$  and Modbus protocols. Includes one RJ45 port and two D-SUB 9 ports.



GW EIP/MODBUS 2E/4DB9 - 1062388

The GW EIP/MODBUS... enables two-way communication between EtherNet/IP™ and Modbus protocols. Includes two RJ45 ports and four D-SUB 9 ports.



#### Interface converters

GW PN/ASCII 1E/1DB9 - 1021080

The GW PN/ASCII... converts RAW or ASCII serial strings into PROFINET. Includes one RJ45 port and one D-SUB 9 port.



# Interface converters

GW PN/ASCII 1E/2DB9 - 1021058

The GW PN/ASCII... converts RAW or ASCII serial strings into PROFINET. Includes one RJ45 port and two D-SUB 9 ports.



# **Interface converters**

GW PN/ASCII 2E/2DB9 - 1021056

The GW PN/ASCII... converts RAW or ASCII serial strings into PROFINET. Includes two RJ45 ports and two D-SUB 9 ports.



# **Data interface**

EM-PNET-GATEWAY-IFS - 2904472

Gateway for the connection of up to 32 INTERFACE system devices via PROFINET to a higher-level controller. The INTERFACE system devices are connected to the Gateway via DIN rail connectors, the DIN rail connectors are provided.



#### **Data interface**

EM-MODBUS-GATEWAY-IFS - 2901528

Gateway for the connection of up to 32 INTERFACE system devices via Modbus/TCP to a higher-level controller. The INTERFACE system devices are connected to the Gateway via DIN rail connectors, the DIN rail connectors are provided.



#### Data interface

EM-ETH-GATEWAY-IFS - 2901988

Gateway for the connection of up to 32 INTERFACE system devices to a higher-level controller via EtherNet/IP™. The INTERFACE system devices are connected to the Gateway via DIN rail connectors, the DIN rail connectors are provided.



#### **Data interface**

EM-CAN-GATEWAY-IFS - 2901504

Gateway for the connection of up to 32 INTERFACE system devices to a higher-level controller via CANopen®. The INTERFACE system devices are connected to the Gateway via DIN rail connectors, the DIN rail connectors are provided.



# **Data interface**

EM-PB-GATEWAY-IFS - 2297620

Gateway for the connection of up to 32 INTERFACE system devices to a higher-level controller via PROFIBUS DP. The INTERFACE system devices are connected to the Gateway via DIN rail connectors, the DIN rail connectors are provided.



# Protocol converter

GW PL HART8-BUS - 2702235

Eight-channel HART® expansion module, with screw connection



# **Protocol converter**

GW PL HART4-BUS - 2702234

Four-channel HART® expansion module, with screw connection



#### Protocol converter

GW PL HART8+AI-BUS - 2702236

Eight-channel HART® expansion module with analog loop supply and screw connection



# Protocol converter

GW PL DP/MODBUS - 2316365

Modbus/RTU to PROFIBUS DP protocol converter



# Protocol converter

GW PL HART8-R-BUS - 2702880

Eight-channel HART $^{\circ}$  expansion module, with screw connection, with 250  $\Omega$  internal input resistors



# Protocol converter

GW PL HART4-R-BUS - 2702879

Four-channel HART $^{\circ}$  expansion module, with screw connection, with 250  $\Omega$  internal input resistors



# **Protocol converter**

GW PL DIO4-BUS - 2702237

Four-channel digital input and four-channel digital output module with screw connection. For use with Modbus and OPC UA protocols.



# Protocol converter

GW PL PA/MODBUS - 2316364

Modbus/RTU to PROFIBUS PA protocol converter



# **Protocol converter**

GW PL FF/MODBUS - 2316363

Modbus/RTU to FOUNDATION Fieldbus protocol converter



# Protocol converter

GW PL DP/HART - 2316362

HART to PROFIBUS DP protocol converter



# **Protocol converter**

GW PL FF/HART - 2316360

HART to Foundation Fieldbus protocol converter



# **Protocol converter**

GW PL PA/HART - 2316361

HART to PROFIBUS PA protocol converter



# **Ethernet HART multiplexer**

GW PL ETH/BASIC-BUS - 2702321

 $Ethernet\ head\ station\ for\ modular\ HART\ gateway.\ Connect\ up\ to\ five\ GW\ PL\ HART...-BUS\ expansion\ modules\ to\ communicate\ with\ up\ to\ 40\ HART\ devices.\ Supports\ Modbus\ TCP,\ HART\ IP,\ FDT/DTM\ and\ Arcom.$ 



# **Ethernet HART multiplexer**

GW PL ETH/UNI-BUS - 2702233

Ethernet head station for modular HART gateway. Connect up to five GW PL HART...-BUS expansion modules to communicate with up to 40 HART devices. Supports Modbus TCP, OPC UA, PROFINET, HART IP, FDT/DTM and Arcom.



# Cable adapter

GW HART USB MODEM - 1003824

 ${\sf USB\; HART\; modem\; cable\; for\; communication\; between\; a\; PC\; and\; HART\; devices,\; cable\; length:\; 1m.}$ 



# **Proxy**

FL NP PND-4TX IB-LK - 2985929

Proxy for PROFINET-RT, G4 functionality, INTERBUS proxy for fiber optics with integrated 4-port switch and the proxy for the p



# **Proxy**

FL NP PND-4TX IB - 2985974

Proxy for PROFINET-RT-IRT, G4 functionality, INTERBUS proxy with integrated 4-port switch



# Wireless module

FL TIMESERVER NTP - 1107132

GNSS receiver and NTP (Network Time Protocol) for Ethernet networks, receives time, date, and location via GPS, GLONASS, or Galileo, web-based management, supply via PoE (af) or 24 V DC, integrated antenna, IP68 housing





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# FO converters

PSI-MOS-DNET CAN/FO 850/BM - 2708083

FO converter with integrated optical diagnostics, for DeviceNet™, CAN, CANopen® up to 800 kbps, basic module, interfaces: 1 x CAN, 1 x alarm, 1 x FO (BFOC), 850 nm, for PCF/fiberglass cable (multimode)



# **FO** converters

FL MC 1000 SC - 2891320

FO converter with SC duplex fiber optic connection (1300 nm), for converting 100Base-TX to multi-mode fiberglass. Auto MDI(X) function and comprehensive link diagnostics. DIN rail mountable.



#### FO converters

FL MC EF 1300 MM SC - 2902853

FO converter with SC duplex fiber optic connection (1300 nm), for converting 10/100Base-T(X) to multi-mode fiberglass (50/125  $\mu$ m). Auto negotiation and auto MDI(X) function. Comprehensive link diagnostics. DIN-rail mountable, 18...30 V DC supply.



# FO converters

FL MC 2000T SC - 2891315

FO converter with SC duplex fiber optic connection (1300 nm), for converting 100Base-TX to multi-mode fiberglass. Auto MDI(X) function and comprehensive link diagnostics. DIN rail mountable with wide operating temperature range.



# FO converters

FL MC EF 1300 MM ST - 2902854

FO converter with B-FOC (ST $^{\circ}$ ) fiber optic connection (1300 nm), for converting 10/100Base-T(X) to multi-mode fiberglass (50/125  $\mu$ m). Auto negotiation and auto MDI(X) function. Comprehensive link diagnostics. DIN-rail mountable, 18 ... 30 V DC supply.



#### **FO** converters

FL MC 2000E LC - 2891056

FO converter with LC duplex fiber optic connection (1300 nm), for converting 100Base-TX to multi-mode fiberglass. Auto MDI(X) function. Comprehensive link diagnostics. DIN rail mountable, 12 ... 57 V DC supply. Meets IEC 61850-3 and IEEE 1613 standards.



# FO converters

FL MC EF 1300 SM SC - 2902856

FO converter with SC duplex fiber optic connection (1300 nm), for converting 10/100Base-T(X) to single mode fiberglass (9/125  $\mu$ m). Auto negotiation and auto MDI(X) function. Comprehensive link diagnostics. DIN-rail mountable, 18 ... 30 V DC supply.



# **FO** converters

FL MC 2000T SM40 SC - 2891318

FO converter with SC duplex fiber optic connection (1300 nm) for converting 100Base-TX to single mode fiberglass with a maximum FO segment length of 40 km. Auto MDI(X) function and comprehensive link diagnostics. DIN rail mountable with wide operati...



FL MC 2000T SM20 SC - 2891317

FO converter with SC duplex fiber optic connection (1300 nm), for converting 100Base-TX to single mode fiberglass with a maximum FO segment length of 20 km. Auto MDI(X) function and comprehensive link diagnostics. DIN rail mountable with wide operati...



# FO converters

FL MC 2000E SM40 LC - 2891156

FO converter with LC duplex fiber optic connection (1300 nm), for converting 100Base-TX to single mode fiberglass. Auto MDI(X) function. Comprehensive link diagnostics. DIN rail mountable, 12 ... 57 V DC supply. Meets IEC 61850-3 and IEEE 1613 standards.



#### FO converters

FL MC EF WDM-SET SC - 2902660

FO converter set, consisting of type A devices and type B devices, for full duplex transmission from 10/100Base-T(X) to individual simplex fiberglass with WDM (wavelength division multiplex) technology. SC simplex fiber optic connection (1550/1310 nm).



# **FO** converters

PSI-MOS-RS485W2/FO 850 E - 2708339

FO converter with integrated optical diagnostics, alarm contact, for RS-485 2-wire bus systems (SUCONET K, Modbus ...) up to 500 kbps, NRZ coding, terminal device with one FO interface (BFOC), 850 nm, for PCF/fiberglass cable (multimode)



# **FO** converters

PSI-MOS-RS232/FO1300 E - 2708588

Fiber optic converter with integrated optical diagnostics, alarm contact, for RS-232 interfaces up to 115.2 kbps, termination device with one fiber optic interface (SC duplex), 1300 nm, for fiberglass cable



# FO converters

PSI-MOS-RS232/FO 850 E - 2708371

FO converter with integrated optical diagnostics, alarm contact, for RS-232 interfaces up to 115.2 kbps, terminal device with one FO interface (BFOC), 850 nm, for PCF/fiberglass cable (multimode)



# **FO** converters

PSI-MOS-DNET/FO 850 E - 2313999

Fiber optic converter with integrated optical diagnostics, for DeviceNet<sup>™</sup>, CAN, CANopen<sup>®</sup> up to 1000 kbps, termination device, interfaces: 1 x CAN, 1 x Alarm, 1 x FO (B-FOC), 850 nm, for PCF/fiberglass (multi-mode)



# **FO** converters

PSI-MOS-DNET/FO 850 T - 2313986

Fiber optic converter with integrated optical diagnostics, for DeviceNet<sup>™</sup>, CAN, CANopen<sup>®</sup> up to 1000 kbps, T-coupler, interfaces: 1 x CAN, 1 x Alarm, 2 x FO (B-FOC), 850 nm, for PCF/fiberglass (multi-mode)



# **FO** converters

FL MC 1000 ST - 2891321

FO converter with ST fiber optic connection (1300 nm), for converting 100Base-TX to multi-mode fiberglass. Auto MDI(X) function and comprehensive link diagnostics. DIN rail mountable.



FL MC 2000T ST - 2891316

FO converter with ST fiber optic connection (1300 nm), for converting 100Base-TX to multi-mode fiberglass. Auto MDI(X) function and comprehensive link diagnostics. DIN rail mountable with wide operating temperature range.



#### FO converters

PSI-MOS-PROFIB/FO1300 T - 2708892

Fiber optic converter with integrated optical diagnostics, alarm contact, for PROFIBUS up to 12 Mbps, T-coupler with two fiber optic interfaces (SC-Duplex), 1300 nm, for fiberglass cable



# **FO** converters

PSI-MOS-PROFIB/FO 850 T-SO - 2708614

FO converter with integrated optical diagnostics, coated PCB, alarm contact, for PROFIBUS up to 12 Mbps, T-coupler with two FO interfaces (BFOC), 850 nm, for PCF or fiberglass cable (multimode)



#### FO converters

PSI-MOS-RS485W2/FO1300 E - 2708562

FO converter with integrated optical diagnostics, alarm contact, for RS-485 2-wire bus systems (SUCONET K, MODBUS ...) up to 500 kbps, NRZ coding, termination device with an FO interface (SC-Duplex), 1300 nm, for fiberglass cable



# FO converters

PSI-MOS-PROFIB/FO 850 T - 2708261

FO converter with integrated optical diagnostics, alarm contact, for PROFIBUS up to 12 Mbps, T-coupler with two FO interfaces (BFOC), 850 nm, for PCF/fiberglass cable (multimode)



# FO converters

FL MC EF WDM-B SC - 2902659

FO converter (replacement device B), for full duplex transmission from 10/100Base-T(X) to individual simplex fiberglass with WDM (wavelength division multiplex) technology, SC simplex fiber optic connection (1550/1310 nm). Device set (type A and type...



# **FO** converters

FL MC EF WDM-A SC - 2902658

FO converter (replacement device A), for full duplex transmission from 10/100Base-T(X) to individual simplex fiberglass with WDM (wavelength division multiplex) technology, SC simplex fiber optic connection (1310/1550 nm). Device set (type A and type...



# Fiber optic adapter

IBS OPTOSUB-F/R-LK-OPC-2MBD - 2878010

INTERBUS fiber optic adapter, for converting the remote IN interface to fiber optics, FO output right, correction of the optical transmission power, 2 MBD



# Fiber optic adapter

IBS OPTOSUB-F/L-LK-OPC-2MBD - 2878023

INTERBUS fiber optic adapter, for converting the remote IN interface to fiber optics, FO output left, correction of the optical transmission power, 2 MBD

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PSI-MOS-PROFIB/FO 850 E-SO - 2708711

FO converter with integrated optical diagnostics, coated PCB, alarm contact, for PROFIBUS up to 12 Mbps, T-coupler with two FO interfaces (BFOC), 850 nm, for PCF or fiberglass cable (multimode)



#### FO converters

PSI-MOS-RS422/FO1300 E - 2708575

Fiber optic converter with integrated optical diagnostics, alarm contact, for RS-422/RS-485 4 wire/ INTERBUS up to 2 Mbps, termination device with one fiber optic interface (SC duplex), 1300 nm, for fiberglass cable



# FO converters

PSI-MOS-PROFIB/FO1300 E - 2708559

Fiber optic converter with integrated optical diagnostics, alarm contact, for PROFIBUS up to 12 Mbps, termination device with one fiber optic interface (SC-Duplex), 1300 nm, for fiberglass cable



#### FO converters

PSI-MOS-RS232/FO 850 T - 2708423

FO converter with integrated optical diagnostics, alarm contact, for RS-232 interfaces up to 115.2 kbps, T-coupler with two FO interfaces (BFOC), 850 nm, for PCF/fiberglass cable (multimode)



# FO converters

PSI-MOS-RS422/FO 850 T - 2708397

FO converter with integrated optical diagnostics, alarm contact, for RS-422/RS-485 4-wire/INTERBUS up to 2 Mbps, T-coupler with two FO interfaces (BFOC), 850 nm, for PCF/fiberglass cable (multimode)



#### FO converters

PSI-MOS-RS232/FO 660 T - 2708410

FO converter with integrated optical diagnostics, alarm contact, for RS-232 interfaces up to 115.2 kbps, T-coupler with two FO interfaces (FSMA), 660 nm, for polymer/PCF fiber cable



# **FO** converters

PSI-MOS-RS232/FO 660 E - 2708368

FO converter with integrated optical diagnostics, alarm contact, for RS-232 interfaces up to 115.2 kbps, terminal device with one FO interface (FSMA), 660 nm, for polymer/PCF fiber cable



# FO converters

PSI-MOS-RS485W2/FO 850 T - 2708326

FO converter with integrated optical diagnostics, alarm contact, for RS-485 2-wire bus systems (SUCONET K, Modbus ...) up to 500 kbps, NRZ coding, T-coupler with two FO interfaces (BFOC), 850 nm, for PCF/fiberglass cable (multimode)



# FO converters

PSI-MOS-RS485W2/FO 660 E - 2708313

FO converter with integrated optical diagnostics, alarm contact, for RS-485 2-wire bus systems (SUCONET K, Modbus ...) up to 500 kbps, NRZ coding, terminal device with one FO interface (FSMA), 660 nm, for polymer/PCF fiber cable



PSI-MOS-RS232/FO 660 E - 2708368

FO converter with integrated optical diagnostics, alarm contact, for RS-232 interfaces up to 115.2 kbps, terminal device with one FO interface (FSMA), 660 nm, for polymer/PCF fiber cable



#### FO converters

PSI-MOS-RS485W2/FO 850 T - 2708326

FO converter with integrated optical diagnostics, alarm contact, for RS-485 2-wire bus systems (SUCONET K, Modbus ...) up to 500 kbps, NRZ coding, T-coupler with two FO interfaces (BFOC), 850 nm, for PCF/fiberglass cable (multimode)



# FO converters

PSI-MOS-RS485W2/FO 660 E - 2708313

FO converter with integrated optical diagnostics, alarm contact, for RS-485 2-wire bus systems (SUCONET K, Modbus ...) up to 500 kbps, NRZ coding, terminal device with one FO interface (FSMA), 660 nm, for polymer/PCF fiber cable



#### FO converters

PSI-MOS-RS485W2/FO 660 T - 2708300

FO converter with integrated optical diagnostics, alarm contact, for RS-485 2-wire bus systems (SUCONET K, Modbus ...) up to 500 kbps, NRZ coding, T-coupler with two FO interfaces (FSMA), 660 nm, for polymer/PCF fiber cable



# FO converters

PSI-MOS-PROFIB/FO 660 E - 2708290

FO converter with integrated optical diagnostics, alarm contact, for PROFIBUS up to 12 Mbps, terminal device with one FO interface (FSMA), 660 nm, for polymer/PCF fiber cable



#### FO converters

PSI-MOS-PROFIB/FO 660 T - 2708287

FO converter with integrated optical diagnostics, alarm contact, for PROFIBUS up to 12 Mbps, T-coupler with two FO interfaces (FSMA), 660 nm, for polymer/PCF fiber cable



# **FO** converters

PSI-MOS-PROFIB/FO 850 E - 2708274

FO converter with integrated optical diagnostics, alarm contact, for PROFIBUS up to 12 Mbps, terminal device with one FO interface (BFOC), 850 nm, for PCF/fiberglass cable (multimode)



# FO converters

PSI-MOS-DNET CAN/FO 850/EM - 2708096

FO converter with integrated optical diagnostics, for DeviceNet™, CAN, CANopen® up to 800 kbps, extension/redundancy module, interfaces: 1 x FO (BFOC), 850 nm, for PCF/fiberglass cable (multimode)



# **FO** converters

FL MC EF 660 SCRJ - 2702944

FO converter, for converting 100Base-T to polymer and PCF fiber (660 nm), SC-RJ FO connection (PROFINET standard), can be mounted on a DIN rail, 24 V DC supply







Tel. 705 682 2828 sales@chesscontrols.com Fax. 705 682 0847

Gigabit Ethernet extenders, PROFIBUS extenders, and serial extenders - easy network connection





# **Ethernet extenders**

EXTENDER 2010 ETH TP-G - 1319322

Gigabit Ethernet extender, network extension via twisted pair cable up to 1 kilometer and bandwidth up to 1 Gbps, Power over Link (PoL) function for the power supply of additional devices via the twisted pair cable, Power over Ethernet (PoE) function

NEW



# **Ethernet extenders**

EXTENDER 1010 ETH TP-G - 1319321

Gigabit Ethernet extender, network extension via twisted pair cable up to 1 kilometer and bandwidth up to 1 Gbps, Power over Link (PoL) function for the power supply of additional devices via the twisted pair cable

NEW



#### Ethernet extenders

EXTENDER 2010 ETH COAX-G - 1319320

Gigabit Ethernet extender, network extension with coaxial cable up to 1 kilometer and bandwidth up to 1 Gbps, Power over Link function (PoL) for the power supply of additional devices via the coaxial cable, Power over Ethernet function (PoE)

NEW



#### Ethernet extenders

EXTENDER 1010 ETH COAX-G - 1319319

Gigabit Ethernet extender, network extension with coaxial cable up to 1 kilometer and bandwidth up to 1 Gbps, Power over Link function (PoL) for the power supply of additional devices via the coaxial cable



# **Ethernet extenders**

TC EXTENDER 2001 ETH-2S - 2702409

Second generation: Unmanaged Ethernet extender for point-to-point connections, line and ring structures, data rates up to 30 Mbps, distances of up to 20 km on in-house copper cables, diagnostics via USB and LEDs, 2 SHDSL ports, 1 LAN port



#### **Ethernet extenders**

TC EXTENDER 4001 ETH-1S - 2702253

Managed Ethernet extender, point-to-point connections, data rates up to 15.3 Mbps, distances of up to 20 km on in-house copper cables, replaceable surge protection, 1 SHDSL port, 1 LAN port, diagnostics via Ethernet



#### **Ethernet extenders**

TC EXTENDER 6004 ETH-2S - 2702255

Managed Ethernet extender, point-to-point, line and ring structures, data rates up to 30 Mbps, distances of up to 20 km on in-house copper cables, replaceable surge protection, 2 SHDSL ports, 4-port switch, diagnostics via display and Ethernet



# Modem

PSI-MODEM-SHDSL/SERIAL - 2313669

Industrial SHDSL extender for serial RS-232/422/485 interfaces, point-to-point and line structures, serial data transmission up to 2000 kbps on in-house cables, diagnostics via USB and LEDs, two configurable alarm outputs

# Industrial Wireless: From IWLAN, through Wireless IO, right through to LoRaWAN

Industrial Wireless enables secure and reliable wireless connections for industrial applications. Depending on requirements, use IWLAN or Bluetooth for real-time communication, NearFi for close-proximity applications, or LoRaWAN and Trusted Wireless for great distances. Our wireless solutions are comprised of access points and clients, as well as suitable antennas and cables.

# Industrial Ethernet switches – Industrial-strength Unmanaged and Managed Switches

Our Industrial Ethernet Switch portfolio comprises Managed and Unmanaged Switches with Gigabit, PoE, IEC 61850 certification, and for DIN rail mounting. This gives you the flexibility to build powerful and secure networks, even in harsh environments: copper and FO ports, as well as redundancy functions, enable the flexible networking of your systems and the easy segmentation of your industrial network.

# Fieldbus repeaters – For PROFIBUS and RS-485 bus systems

Using fieldbus repeaters for PROFIBUS and RS-485 bus systems, you can extend your network over a wide area regardless of the data rate. Even the number of devices can be extended by segmenting with repeaters. You can increase the range, transmit with reliable EMC, and extend and distribute channels as required. The modular concept supports any combination of copper and fiber optic channels.

# Network installation – From patch panels and network isolators to SPF modules

Install your entire network yourself – we will be happy to help you. Whether copper, fiber optics, or fast connectors – Phoenix Contact will provide you with all of the necessary components, such as patch panels, PoE injectors, insulators, and redundancy modules for flexible on-site installation.







