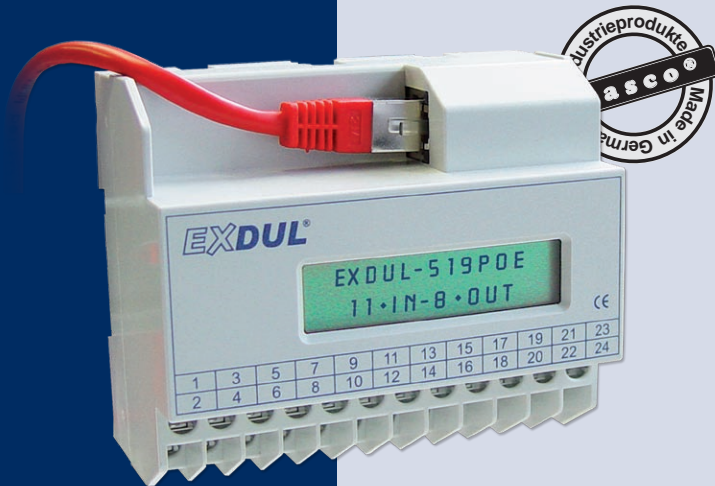


# EXDUL-519POE

**Ethernet Module with 11 Optocoupler Inputs, 8 Optocoupler Outputs, 6 Counters, LCD Display and Power Supply via Power over Ethernet**



**11 optocoupler inputs**

**8 optocoupler outputs**

with 1A FET power switches per channel

**6 counters 32 bit**

with power failure data back up

**programmable logic**

with module controlled signal to PC

**Watchdog**

**LCD display**

The EXDUL-519PoE with Ethernet interface has 11 digital inputs and eight digital outputs with galvanic isolation. The bidirectional inputs are protected by additional overvoltage protection diodes. The outputs, which are protected by reverse polarity protection diodes, can switch a maximum current of 1A per channel due to the downstream FET power switches. If required, six of the 11 optocoupler inputs can also be programmed to act as hardware-supported 32bit counter inputs. To prevent data loss in the event of a power failure, the counter readings are stored at 100µs intervals. They are automatically loaded into the counter registers when the module is restarted.

The integrated web page allows the module to be configured in a user-friendly manner. It is also possible to perform a simple functional test. Communication between the PC and the module is achieved by sending and receiving byte arrays via a stable TCP/IP connection. The connection is secured by a handshake protocol. The programmable logic of the module can be used both for autonomous actions at the outputs and for sending messages to the PC. This often eliminates the need to poll the inputs, and

## SPECIFICATIONS

### Optocoupler inputs

11 galvanic isolated bidirectional channels  
Over voltage protection diodes  
Input voltage range  
high = 10..30 Volt  
low = 0..3 Volt

### Digital Outputs via FET Power Switches

8 channels with opto-coupler galvanic isolation  
Contact B of the FET (source, + connection) with one connection terminal each, contact A (drain, - connection) with common connection terminal for all 8 channels  
Reverse polarity protection diodes  
Switchable recovery diodes  
Voltage CE: max. 30V  
Output current: max. 1A/channel  
Response time: typ. 60µs (24V, 100mA)  
Release time: typ. 250µs (24V, 100mA)

### Counters

6 hardware-supported programmable 32bit counters (occupying 6 optocoupler inputs)  
Counting frequency: max. 5kHz  
Automatic backup of counter readings at 10kHz intervals

### Web Server

Configuration  
Function test  
Firmware Update

### Watchdog

Adjustable timeout period 1 to 2<sup>32</sup>-1 ms

### Programmable Logic

Switch outputs with logic operations  
Send message to PC when input status changes

### LCD display

2-line, 16-column matrix display with 16 characters per line  
Programmable to display application specific data or as I/O status display

### Operating Voltage

external power supply  
+10V...+30V typ. 100mA at 24V  
or PoE  
IEEE802.3 at 48V typ.

### Ethernet Interface

10/100Base-T Ethernet Interface

### Connection Terminals

1 \* 24-pin screw terminal block  
Ethernet RJ-45 socket

### Ethernet connection cable

RJ-45 patch cable Cat5 or better

### Dimension

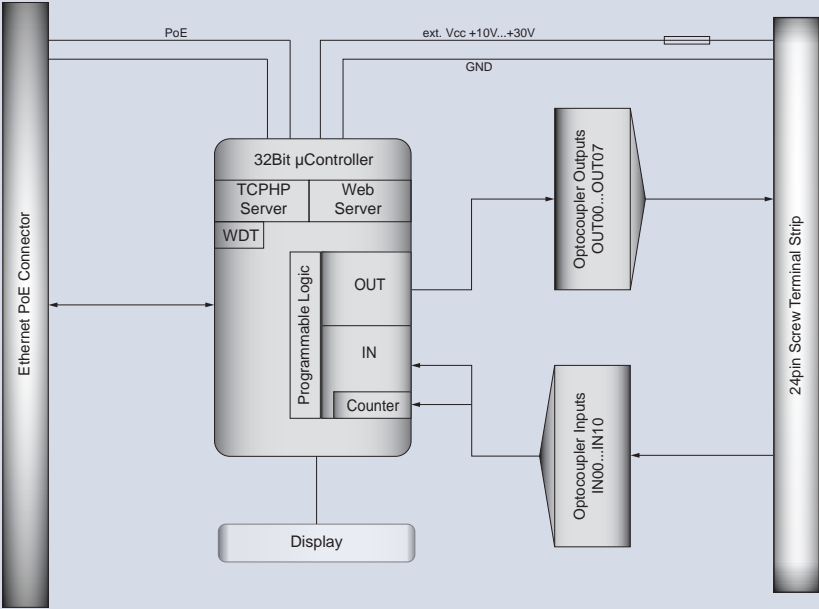
105mm x 89mm x 59mm (l x w x h)

### Housing

Insulated housing with integrated snap-on technology for DIN EN top-hat rail mounting.

Suitable for surface mounting, installation in switch and distribution cabinets or as a mobile desk unit.

# BLOCK DIAGRAM



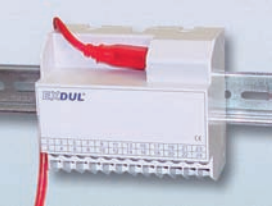
# PIN ASSIGNMENT

The terminals Vcc\_EXT und GND\_EXT are intended for the supply of an external supply voltage of 10 ... 30V.

## Screw terminal block CN1

DOUT01-	2	1	DOUT00-
DOUT03-	4	3	DOUT02-
DOUT05-	6	5	DOUT04-
DOUT07-	8	7	DOUT06-
DOUT_D	10	9	DOUT00 .. 07+
DIN01 / Counter1	12	11	DIN00 / Counter0
DIN03 / Counter3	14	13	DIN02 / Counter2
DIN05 / Counter5	16	15	DIN04 / Counter4
DIN07	18	17	DIN06
DIN09	20	19	DIN08
DIN_COM	22	21	DIN10
GND_EXT	24	23	Vcc_EXT

# ASSEMBLY AND APPLICATION OPTIONS



Top hat rail mounting



Wall mounting



Mobile use on a desk

can significantly reduce both data traffic and computer load.  
The module can be supplied with the necessary operation voltage by means of an external power supply unit. The EXDUL519PoE can also be powered via Power over Ethernet.  
Programmable display allows display of digital I/O status information or programmable user specific data.  
The power supply connections are made on a 24-pin screw terminal strip, as are the input and output optocoupler connections. The compact package allows use as a mobile module on a notebook computer. It can also be easily mounted on a wall or DIN rail for use in mechanical or control engineering applications.

# PROGRAMMING

**Windows®:**  
Driver and program examples for Java, VB.NET, C++.NET, C#.NET, Python, LabView Tutorial  
**Linux®:**  
Driver and program examples for C, C++ Python and Java (see manual)  
**Android**  
Driver and program examples for C#  
download at:  
[www.messcomp.com](http://www.messcomp.com), Section Support - Software

# SCOPE OF DELIVERY

Ethernet Module EXDUL-519E  
Cat.5 Ethernet cable 1 m lang  
German manual  
Installation and sample programs

# ORDER INFORMATION

EXDUL-519PoE EDP No A-374650  
Ethernet Optocoupler I/O Module

# SUITABLE ACCESSORIES

**DR-60-24**  
Switching power supply providing one output 24V / 2.5A, enclosed design, touch-proof screw terminals, overload protection by current limiter, power-on LED



For more detailed information about the here listed and other accessories we refer to the corresponding data sheets  
Product and company names mentioned may be trademarks of their respective owners