wasco®

EXDUL-519S

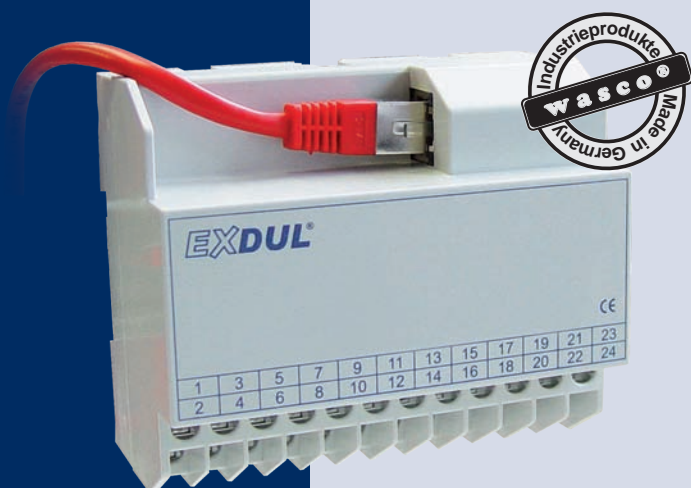**Ethernet Module with 11 Optocoupler Inputs, 8 Optocoupler Outputs and 6 Counters**

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

The EXDUL-519S 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 dowstream 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.

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 programmable 32-bit 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 $2^{32}-1$ ms

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

Operating Voltage
external power supply required
  +10V...+30V typ. 100mA at 24V

Ethernet Interface
10/100Base-T Ethernet Interface

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

Ethernet connection cable
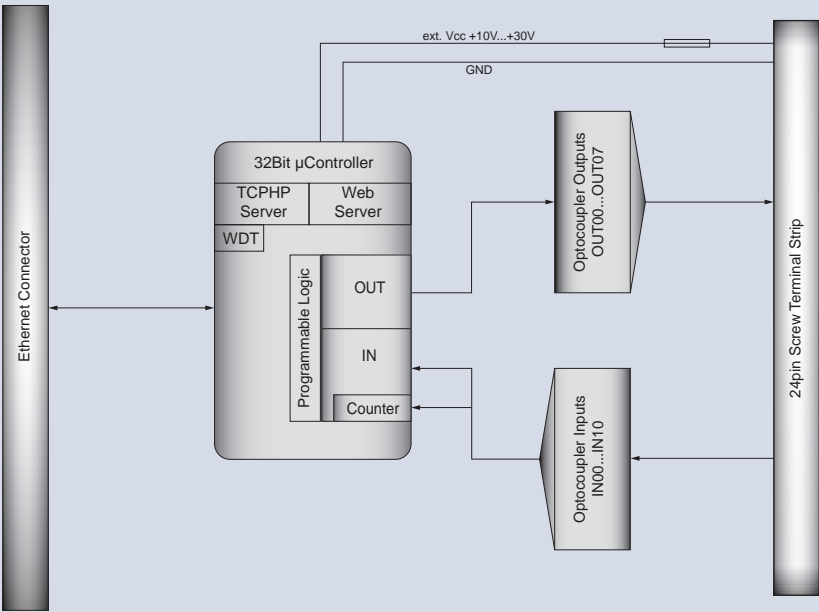RJ-45 patch cable Cat5 or better

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.
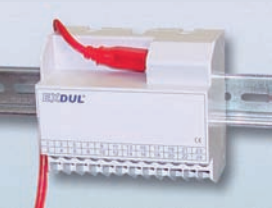
BLOCK DIAGRAM

PIN ASSIGNMENT

The terminals Vcc_EXT und GND_EXT are intended for the supply of an external supply voltage of 10 ... 30V.

Screw terminal strip
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

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 can significantly reduce both data traffic and computer load. The module is supplied with the necessary operation voltage by means of an external power supply unit. 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, Section Support - Software

SCOPE OF DELIVERY

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

ORDER INFORMATION

EXDUL-519S   EDP No A-374620
Ethernet Optocoupler I/O Module

SUITABLE ACCESSORIES

DR-60-24   EDP-No. A-3425
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

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