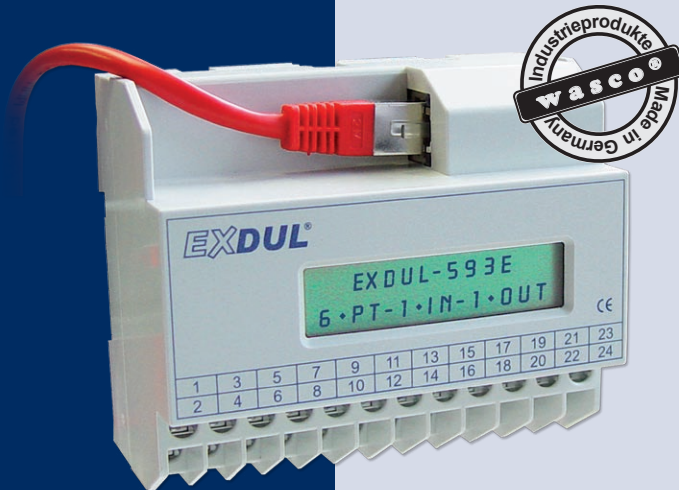


# EXDUL-593E

**Ethernet Module with 6 Temperature Measuring Units, 1 Optocoupler Input, 1 Optocoupler Output, LCD Display**



**6 temperature measuring units**  
PT100 3-wire sensing  
PT1000 3-wire sensing

**1 optocoupler input**

**1 optocoupler output**

**programmable logic**  
with module-controlled message to PC

**1 Counter 32 Bit**  
with data backup in case of blackout

**Watchdog**

**LCD display**

## SPECIFICATIONS

The module EXDUL-593E features 6 measuring units with PT100 and PT1000 sensors, each of which with its own current source and measuring inputs. The measuring of the individual sensors is made by software commands. Both the temperature and the sensor resistance can be measured.

In addition, the module provides one digital input and one digital output galvanically isolated via high-quality optocouplers and additional protection diodes. The special high power output optocoupler copes with a switching current up to 150 mA. An external voltage source is required to supply the necessary operating voltage to the module.

The module can be configured in a user-friendly way via the integrated webpage. In addition, a simple function test is possible.

Communication between PC and module is done by sending and receiving Bytearrays via a stable TCP/IP connection, which is secured by a handshake protocol.

The programmable logic of the module can be used both for autarkic actions at the output as well as for messages to the PC.

**6 Temperature measuring units**  
PT100 3 wire sensing  
PT1000 3 wire sensing  
sensor type per unit selectable via jumpers  
input protection: +/-45V

**Optocoupler input**  
1 bipolar channel  
Over voltage protection diodes  
Input voltage range  
high = 10..30 Volt  
low = 0..3 Volt

**Optocoupler output**  
1 channel  
High capacity optocouplers  
Reverse polarity protection  
Output current: max. 150 mA  
Switching voltage: max. 50 V

**Counter**  
1 hardware-supported programmable counter  
32 Bit (allocated to the optocoupler input)  
counting frequency: max. 5 kHz  
automatic backup of meter readings in case of blackout

**Webpage**  
Configuration  
Function test  
Firmware update

**Communication Watchdog**  
adjustable time slot od 1 bis 2<sup>32</sup>-1 ms

**Programmable Logic**  
Output switchable via links  
Message to PC in case of a change of state at the input

**LCD Display**  
Matrix display with 2 lines and 16 columns presenting 16 signs each line  
Programmable for presentation of customized data or I/O status display

**Operation voltage**  
external power supply required  
+10 V...+30 V

**Ethernet Interface**  
10/100Base-T Ethernet Interface

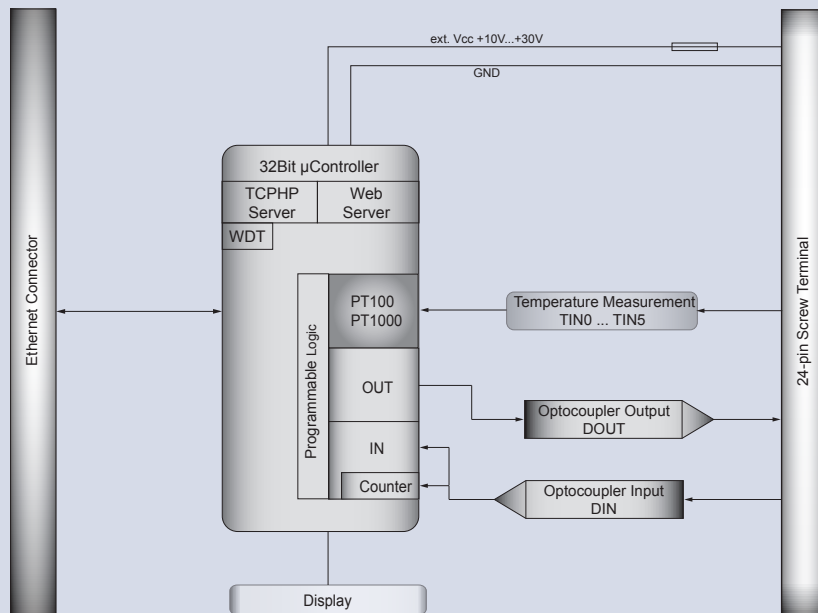
**Connection Terminals**  
1 \* 24-pin screw terminal block  
Ethernet RJ45 socket

**Ethernet connection lines**  
RJ45 network cable Cat5 or later

**Dimensions**  
105 mm x 89 mm x 59 mm (l x b x h)

**Casing**  
Insulating plastic casing with integrated snap-on technology for DIN EN rail mounting. Suitable for control and engineering technology mounted to control and distribution boxes, surface mounting or mobile use on a desk.

## BLOCK DIAGRAM



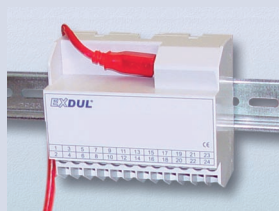
## PIN ASSIGNMENT

The Terminals Vcc\_EXT und GND\_EXT are designated for an application of an external supply voltage of 10 ... 30 V.

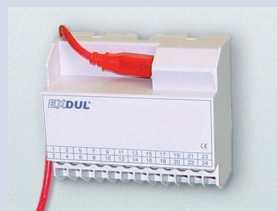
### Screw Terminal CN1

RTDIN0+	2	1	FORCE0+
FORCE1+	4	3	FORCE0-
FORCE1-	6	5	RTDIN1+
RTDIN2+	8	7	FORCE2+
FORCE3+	10	9	FORCE2-
FORCE3-	12	11	RTDIN3+
RTDIN4+	14	13	FORCE4+
FORCE5+	16	15	FORCE4-
FORCE5-	18	17	RTDIN5+
DOUT0-	20	19	DOUT0+
DIN0-	22	21	DIN0+
GND_EXT	24	23	Vcc_EXT

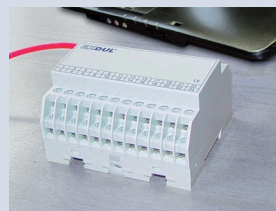
## ASSEMBLY AND APPLICATION OPTIONS



Top-hat Rail Mounting



Wall Mounting



Mobile Use on a Desk

This way the need of a polling at the inputs often is eliminated and both data traffic and computer load significantly can be reduced.

The programmable LCD display presents digital and analog I/O status information or programmable user-specific data.

The module provides a 24-pin screw terminal block for connecting the external power supply as well as the input and output optocoupler. The compact chassis enables the module to be used as a portable device with a notebook. For mechanical or control engineering it can also be easily wall mounted or attached to DIN mounting rails.

## 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#

on enclosed CD or download at:  
[www.messcomp.com](http://www.messcomp.com), Section Support - Software

## SCOPE OF DELIVERY

Ethernet Module EXDUL-593E

Cat.5 Ethernet cable 1 m

German Description (English on request)

Installation and sample programs

## ORDER INFORMATION

EXDUL-593E

EDP-No. A-372320

Ethernet Optocoupler I/O Module

## SUITABLE ACCESSORIES

### DR-60-24

Switching power supply providing one output 24 V / 2,5 A, closed construction design, touch-protected screw terminals, overload protection by current limitation, Power-On-LED

### EDP-No. A-3425



For more detailed information about the here listed and other accessories we refer to the corresponding data sheets

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