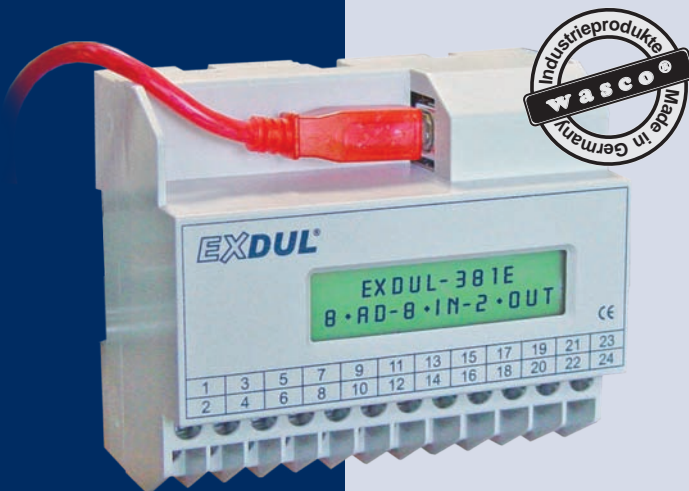


wasco[®]

EXDUL-381E

USB Module with 8 Analog Inputs, 8 Optocoupler Inputs,
2 Optocoupler Outputs



8 A/D inputs 16 bit

8 A/D inputs single-ended
or
4 A/D inputs differential

8 optocoupler inputs

2 optocoupler outputs

5 Counter 32 bit

LCD Display

The module EXDUL-381E provides either eight single ended or four differential 16-bit A/D input channels. Several bipolar input voltage ranges (+/-0.63 V, +/-1.27 V, +/-2.55 V, +/-5.1 V, +/-10.2 V) can be adjusted. The conversion process including the associated configuration of the A/D components (selection of range and channel) is triggered by software commands. Additionally the module provides eight digital inputs and two digital outputs which are opto-isolated galvanically by high-quality optocouplers and are equipped with additional protection diodes. Special high power output optocouplers cope with a switching current up to 150 mA. The USB Interface or an external power supply powers the module with the required operating voltage. The module provides a 24-pin screw terminal block for connecting the external power supply as well as the analog/digital inputs and outputs. The programmable LCD display presents either digital I/O status information or user-specific data. 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 rail.

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SPECIFICATIONS

A/D inputs

8 inputs single-ended (se)
or 4 inputs differential (diff)
or combined se/diff selectable via software
Resolution: 16 bit
Input voltage ranges bipolar:
+/-0.63 Volt, +/-1.27 Volt, +/-2.55 Volt,
+/-5.1 Volt, +/-10.2 Volt
FIFO: 10000 values
Input resistor: 500 MΩ
Over voltage protection: 50V
Measuring cycle: 100kHz

Optocoupler inputs

8 bipolar channels, galvanically isolated
Over voltage protection diodes
Input voltage range
high = 10..30 Volt
low = 0..3 Volt

Optocoupler outputs

2 channels, galvanically isolated
High capacity optocouplers
Reverse polarity protection
Output current: max. 150 mA
Switching voltage: max. 50 V

Counters

5 programmable counters 32 bit (occupying
5 optocoupler inputs)
Counting frequency: max. 5 kHz

LCD Display

Matrix display with 2 lines and 16 columns
presenting 16 characters each line
Programmable to display user specific data
or I/O status

Operation voltage

via USB
or via external power supply
+10 V...+30 V

USB Interface

Compatible with USB 2.0
USB Connection Plug and Play (hot-pluggable,
connectable at operating system)

Connection Terminals

1 * 24-pin screw terminal block
1 * USB socket Type B

USB connection lines

1 * USB plug Type A
1 * USB plug Type B

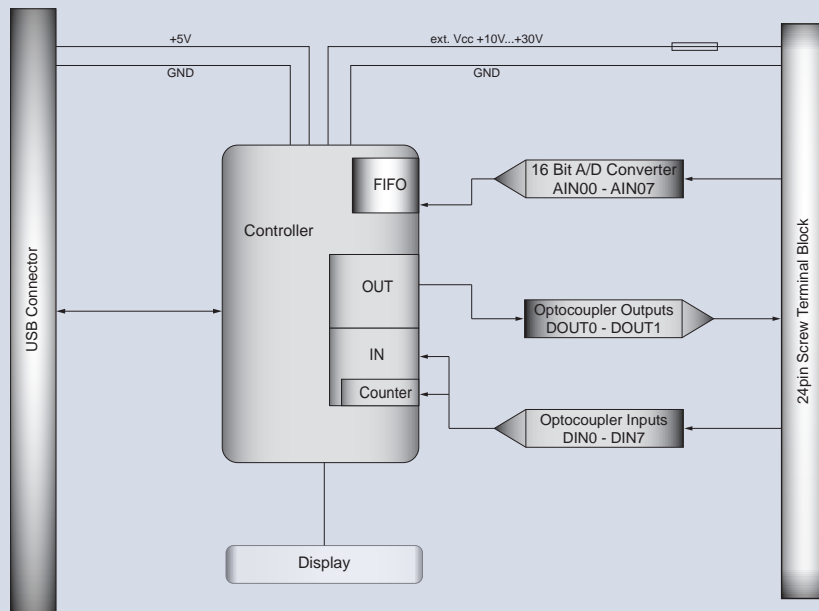
Dimensions

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

Casing

Insulating plastic casing with integrated snap-in 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



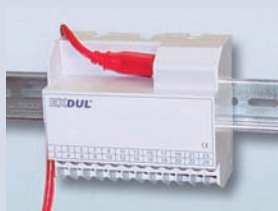
PIN ASSIGNMENT

Terminals Vcc_EXT und GND_EXT are provided for an application of 10 ... 30 V external voltage supply.

Screw-Terminal CN1

AIN01+	2	1	AIN00+
AIN03+	4	3	AIN02+
AIN05+	6	5	AIN04+
AIN07+	8	7	AIN06+
AGND	10	9	AGND
DIN1 / Counter1	12	11	DIN0 / Counter0
DIN3 / Counter3	14	13	DIN2 / Counter2
DIN5	16	15	DIN4 / Counter4
DIN7	18	17	DIN6
DOUT+	20	19	DIN_COM
DOUT1-	22	21	DOUT0-
GND_EXT	24	23	Vcc_EXT

ASSEMBLY AND APPLICATION OPTIONS



Top-hat Rail Mounting



Wall Mounting



Mobile Use on a Desk

PROGRAMMING

Windows®:

Driver and program examples for Java, VB.NET, C++.NET, C#.NET, LabView Tutorial

Linux®:

Driver and program examples for C, C++ and Java (see manual)

on enclosed CD or download at:
www.messcomp.com, Section Support - Software

SCOPE OF DELIVERY

USB Module EXDUL-381E

USB connection cable (Type A-B) 3m long

German Description (English on request)

Installation and sample programs

ORDER INFORMATION

EXDUL-381E

EDP-No. A-381772

USB Optocoupler I/O Module

SUITABLE ACCESSORIES

DR-60-24

EDP-No. A-3425

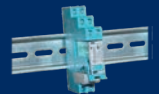
Switching power supply providing one output 24 V / 2,5A, closed design, contact-protected screw terminals, overload protection by current limitation, Power-On-LED



F4652-24-Set

EDP-No. A-351024

Industrial high-power relay combination with two change-over contacts 250 V / 8 A and free-wheeling diode, snap-in technology for DIN EN top-hat mounting



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

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