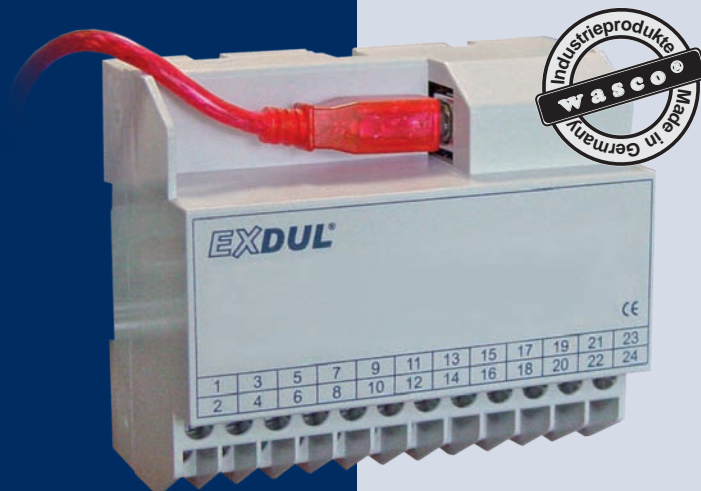# wasco®

EXDUL-337S

USB Module with 12 Optocoupler Inputs, 8 Relay Outputs and 6 Counters

12 optocoupler inputs

8 relay outputs

6 counters 32 Bit

The EXDUL-337S provides 12 digital inputs and eight digital outputs galvanically opto-isolated. The inputs are isolated via high-quality optocouplers protected with additional overvoltage protection diodes. Powerful relays, which can handle a switching current of 2A, ensure the isolation at the outputs.

Six of the 12 optocoupler inputs can also be programmed as hardware-supported 32-bit counter inputs if required.

The necessary operating voltage to the module is provided by either the USB port of the computer or via an external voltage source.

The module provides a 24-pin screw terminal block for connecting the external power supply as well as the input and output optocouplers.

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.

SPECIFICATIONS

Digital Optocoupler Inputs
12 bipolar channels galvanically isolated
Optocoupler contact A with one terminal connection each, Optocoupler contact B sharing one terminal
Overvoltage protection diodes
Input voltage ranges
  high = 10 .... 30 V
  low = 0 .... 3 V

Digital Relay Outputs
8 output channels galvanically isolated
Relay contact A with one terminal connection each, relay contact B sharing one terminal
Contact: 1 NO contact
Contact current rating: max. 2 A per channel
Contact voltage rating: max. 30 V AC / 30 V DC
Contact power rating: max. 60 VA / 60 W
Mechanical lifetime: min. $10*10^6$ switching cycles without load
Contact lifetime: 2 A, 30 VAC at NO contact, ca $2*10^5$ switching cycles
Switching frequency under load: typ. 10/min
Switching frequency without load: typ. 300/min

Counters
6 hardware supported programmable digital 32-bit counters (6 of the input optocouplers are assigned)
Counting frequency: max. 5 kHz

Operation voltage
  +5 V (via USB port of the PC)
  +10 V...+30 V (via external power supply)

USB interface
USB 2.0 compatible
USB connection Plug-and-Play (hot pluggable)

Connection Terminals
1 * 24-pin screw terminal block
1 * USB port type B

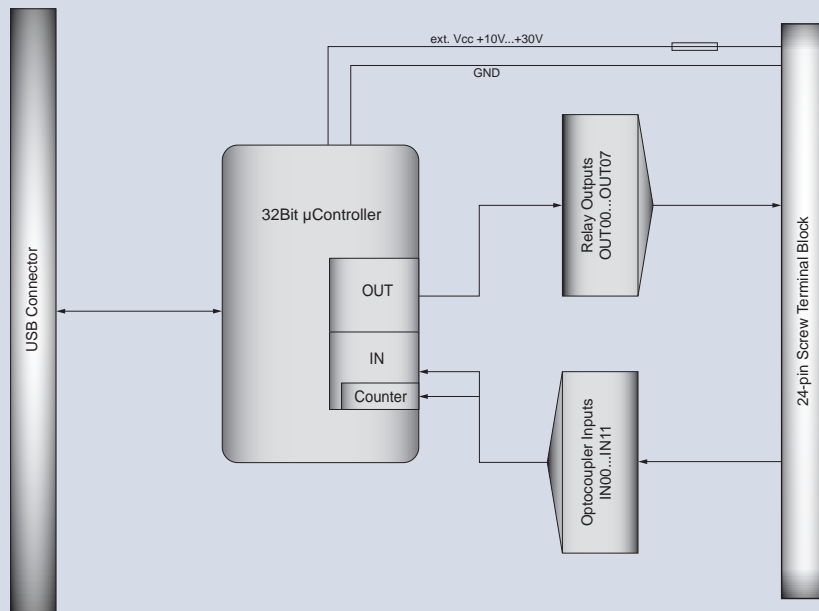**USB connecting cable**
1 * USB plug type A
1 * USB plug type B

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

Casing
Plastic casing with integrated snap-on technology for top-hat rail mounting to DIN EN. Suitable for control and engineering technology mounted to control and distribution boxes, surface mounting or mobile use on a desk.
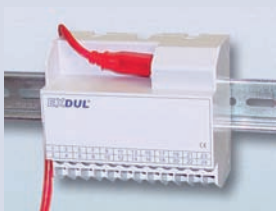
BLOCK DIAGRAM

ext. Vcc +10V...+30V

GND

USB Connector

32Bit µController

OUT

IN

Counter

Relay Outputs OUT00...OUT07

Optocoupler Inputs IN00...IN11

24-pin Screw Terminal Block

PIN ASSIGNMENT

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

Screw Terminal CN1

DOUT01A	2	1	DOUT00A
DOUT03A	4	3	DOUT02A
DOUT05A	6	5	DOUT04A
DOUT07A	8	7	DOUT06A
DIN00 / Counter0	10	9	DOUT00 .. 07B
DIN02 / Counter2	12	11	DIN01 / Counter1
DIN04 / Counter4	14	13	DIN03 / Counter3
DIN06	16	15	DIN05 / Counter5
DIN08	18	17	DIN07
DIN10	20	19	DIN09
DIN_COM	22	21	DIN11
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-337S
USB connection cable (Typ A-B) 3m long
German Description (English on request)
Programs for installation and programming examples

ORDER INFORMATION

EXDUL-337S   EDP-No. A-385420
USB Optocoupler/Relay I/O Module

SUITABLE ACCESSORIES

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

F4652-24-Set   EDP-No. A-351024
Industrial power relay combination with two changeover contacts 250 V / 8 A and free-wheeling diode, snap-on technology for DIN EN top-hat rails

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