wasco®
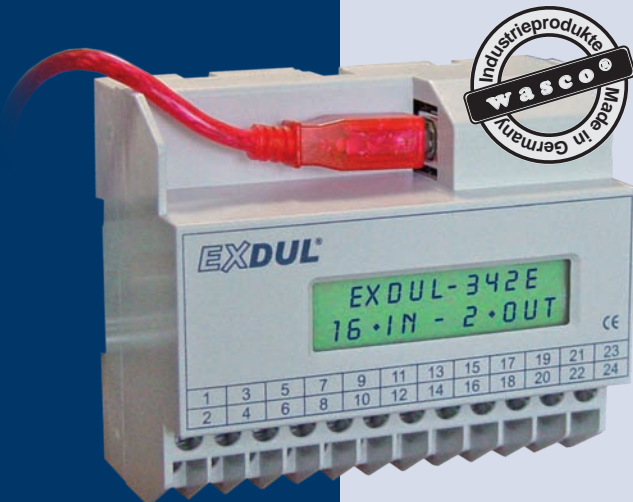
EXDUL-342E

USB Module with 16 Optocoupler Inputs, 2 Relay Outputs, Counter and LCD Display

16 optocoupler inputs

2 relay outputs

2 16-bit counters

LCD display

USB 2.0 compatible

SPECIFICATIONS

EXDUL-342E provides 16 digital inputs and two digital outputs galvanically isolated by high-quality optocouplers and additional protection diodes. All input optocouplers have integrated schmitt trigger function. Special high power output relays manage a maximum switching current of up to 2 A. Two of the 16 optocoupler inputs are programmable and usable as counter inputs if required. An LCD display presents user-specific data, I/O status information or communication data. Connecting to a computer is simple and uncomplicated Plug- and-Play via a USB interface. The required power supply can be provided via the USB port or via an external voltage source The connections for the external power supply as well as the connections for the input optocouplers and output relays are led to a 24-pin screw terminal block. The compact chassis enables the module to be used as a portable device with a notebook. For mechanical engineering control applications it also allows easy wall mounting or uncomplicated clipping to DIN-EN mounting rails.

Digital optocoupler inputs
16 input channels with galvanic isolation, common ground connection (cathodes shared)
2 of the channels programmable as counter inputs
Optocoupler with integrated Schmitt-Trigger function
Overvoltage protection diodes
Input voltage range
  high = 10 .... 30 V
  low = 0 .... 3 V
Input frequency max. 10 kHz

Digital relay outputs
2 channels galvanically isolated
Relay contact A with one terminal connection each, relay contact B with shared termination
Contact: 1 NO contact
Switching current: max. 2 A
Switching voltage: max. 30 V AC / 30 V DC
Contact power rating: max. 60 VA / 60 W
Mechanical lifetime: max. $20 * 10^6$ switching cycles without load
Contact lifetime: 2 A, 30 VAC at switch, max. 10^5 switching cycles
Switching frequency under load:
  max. 10/min
Switching frequency without load:
  max. 1200/min
Switching time: typ. 5 ms
Release time: typ. 2 ms
Fall time NO contact:< 1 ms

Counters
2 programmable digital 16-bit counters (2 of the 16 input optocouplers are assigned)
Counting frequency: max. 5 kHz

LCD Display
Matrix display with 2 lines and 16 columns presenting 16 signs each line
Programmable to display communication data, I/O status or user specific data

Power Supply
+5V via the PC's USB Port. It may be necessary to configure your operating system software to obtain appropriate power requirements.
+10 V...+24 V via external power supply

USB interface
USB 2.0 compatible
USB connection Plug-and-Play (hot swappable

Module connections
1 * 24pin screw terminal
1 * USB port type B

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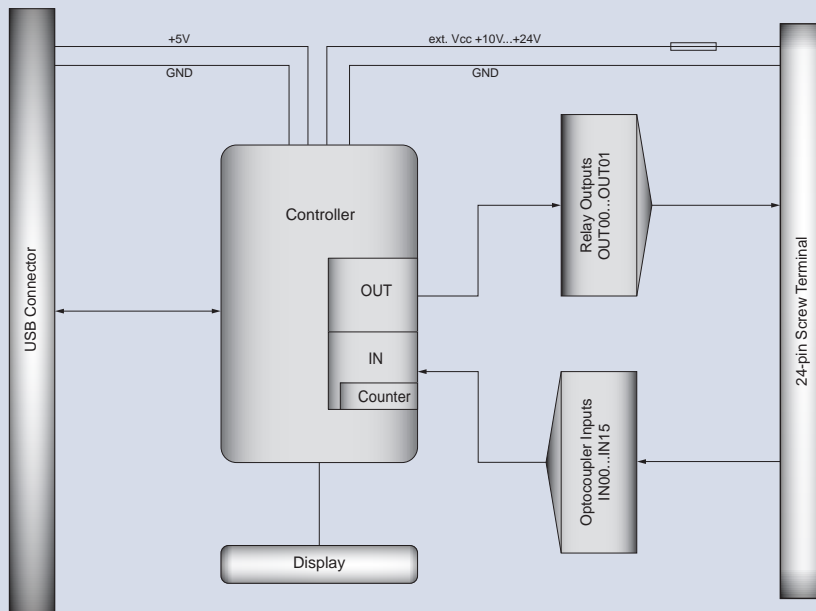1 * USB plug type A
1 * USB plug type B

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

PROGRAMMING

Driver installation from enclosed CD.
The accompanying CD provides sample programs for Microsoft Visual C++, Microsoft Visual Basic 2005 and Microsoft Visual C# 2005

SCOPE OF DELIVERY

USBModule EXDUL-342E
USB connection cable (Typ A-B) 3m long
German Description (English on request)
Programs for installation and programming examples

ORDER INFORMATION

EXDUL-342E   EDP-No. A-385640
USB Optocoupler/Relay I/O Module

SUITABLE ACCESSORIES

DR-60-24   EDP-No. A-3425
Power supply providing one output 24 V / 2,5 A, closed construction 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 of two change-over contacts 250 V / 8 A and free-wheeling diode, snap-on technology for DIN EN top-hat mounting

PIN ASSIGNMENT

Each single anode of the input optocouplers is individually led to the 24-pin screw terminal block CN1, the cathodes share one screw terminal. Contact B of the output relais share one screw terminal, whereas each single contact A is fed to individual screw terminals of CN1. Screw terminals Vcc_EXT and GND_EXT are allocated for application of an external power supply of 10 ... 24 V.

Screw teminal CN1

IN01+ / Counter2	2	1	IN00+ / Counter1
IN03+	4	3	IN02+
IN05+	6	5	IN04+
IN07+	8	7	IN06+
IN09+	10	9	IN08+
IN11+	12	11	IN10+
IN13+	14	13	IN12+
IN15+	16	15	IN14+
NC	18	17	IN00...15-
OUT01A	20	19	OUT00A
NC	22	21	OUT00...01B
GND_EXT	24	23	Vcc_EXT

ASSEMBLY AND APPLICATION OPTIONS

Top-hat Rail Mounting

Wall Mounting

Mobile Use on a Desk

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