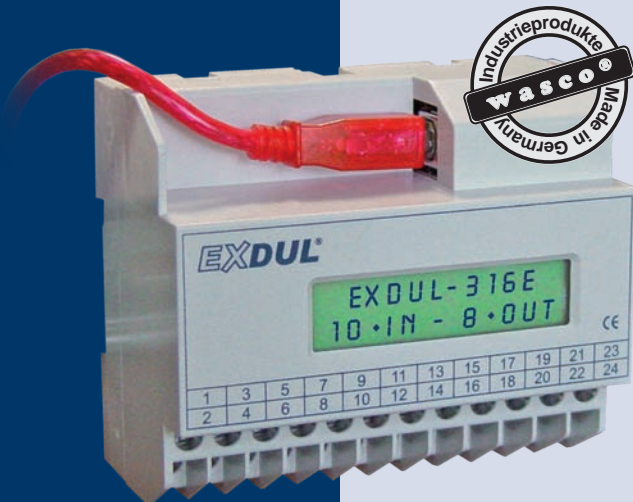


wasco[®]

EXDUL-316E

USB Module with 10 Optocoupler Inputs, 8 Optocoupler Outputs, Counter and LCD Display



10 optocoupler inputs

8 optocoupler outputs

2 16-bit counters

LCD display

USB 2.0 compatible

The module EXDUL-316E features ten digital inputs and eight digital outputs each of which are galvanically isolated by top-quality optocouplers and fitted with additional protection diodes. All input optocouplers have integrated Schmitt trigger function. Special high power output optocouplers have a maximum switching current of 150 mA. Two of the ten optocoupler inputs are programmable and usable as digital counters if required. A programmable LCD display presents I/O status information, communication data or user-specific data. Connecting to a computer is simple and uncomplicated Plug & Play via a USB interface. The required power supply can be provided via USB port or by an external voltage source. The module has a 24-pin screw terminal for the input/output connections and external power supply (if required). The compact chassis enables the module to be used as a portable device with a notebook. For mechanical engineering control applications it can also easily be attached to DIN mounting rail.

SPECIFICATIONS

Digital Optocoupler Inputs

10 channels galvanically isolated
common ground connection (cathodes shared)

2 of the channels programmable to be counting inputs

Optocouplers with integrated Schmitt-Trigger function

Overvoltage protection diodes

Input voltage ranges

high = 10 30 V

low = 0 3 V

Digital Optocoupler Outputs

8 output channels galvanically isolated

Common plus connection (emitters shared)

High-capacity optocouplers

Reverse polarity protection diodes

Output current: max. 150mA

Switching voltage: max. 50 V

Counter

2 programmable digital 16-bit counters (2 of the 10 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 as communication display,
I/O status display or user specific data display

Power Supply

+5V via USB Port or

+10 V...+24 V via external power supply

To power the device via USB port it may be necessary to configure your operating system software to obtain appropriate power requirements.

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

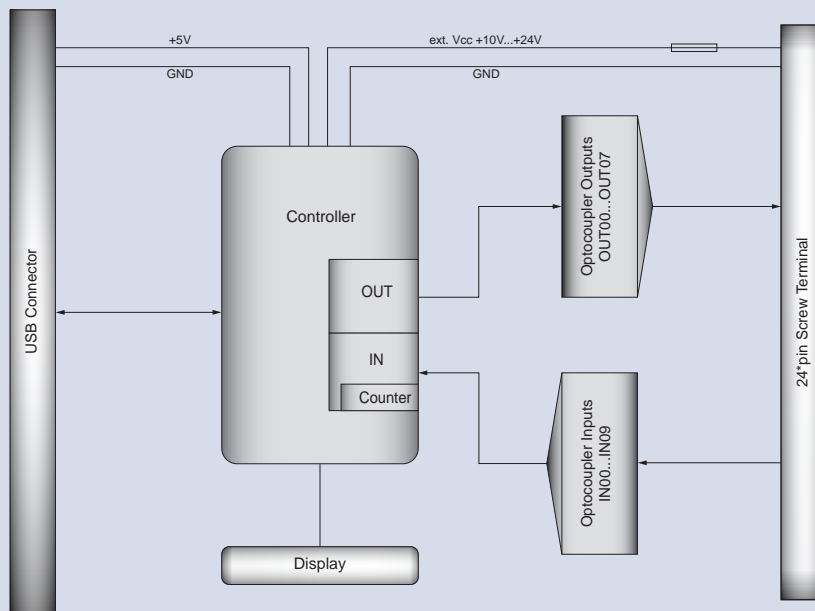
Product dimensions

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



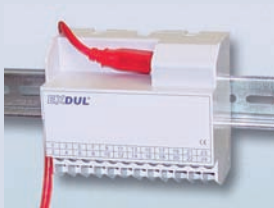
PIN ASSIGNMENT

Each single anode of the input optocouplers is individually led to the 24-pin screw terminal block CN1, the cathodes share one screw terminal. The emitter connections of the output optocouplers share one screw terminal, whereas each single collector connection is fed to individual screw terminals of CN1. Screw terminals Vcc_EXT and GND_EXT are provided for application of an external power supply of 10 ... 24 V.

Screw Terminal CN1

OUT01-	2	1	OUT00-
OUT03-	4	3	OUT02-
OUT05-	6	5	OUT04-
OUT07-	8	7	OUT06-
OUT00...07+	10	9	NC
IN01+	12	11	IN00+ / counter1
IN03+	14	13	IN02+
IN05+	16	15	IN04+ / counter2
IN07+	18	17	IN06+
IN09+	20	19	IN08+
NC	22	21	IN00...09-
GND_EXT	24	23	Vcc_EXT

ASSEMBLY AND APPLICATION OPTIONS



Top-hat Rail Mounting



Wall Mounting



Mobile Use on a Desk

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

USB Module EXDUL-316E
USB connection cable (Type A-B), 3 m
German Description (English on request)
Programs for installation and programming examples

ORDER INFORMATION

EXDUL-316E EDP-No. A-384340
USB Optocoupler I/O Module

SUITABLE ACCESSORIES

DR-60-24

EDP-No. A-3425

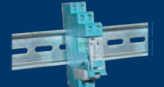
Power supply providing one output 24 V / 2,5 A, closed construction design, contact-protected screw terminals, overload protection by current limitation, Power-On-LED



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



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