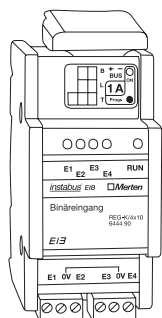


## Binary input REG-K/4x10



**Colour**  
light grey

**Article no.**  
644490

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## 1. Function

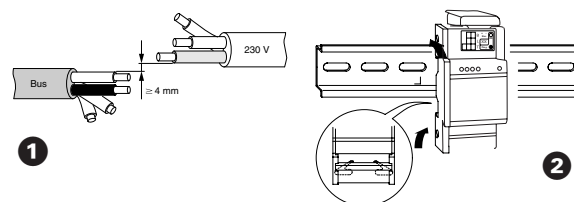
The binary input REG-K/4x10 has four inputs and is used for connecting four conventional push-buttons or floating contacts such as window or relay contacts. The device makes a contact supply voltage (SELV) available which is electrically isolated from the bus voltage. A separate power supply is not required. The function of the channels is determined by the loaded application software.

### Display and operating elements

- 1 green LED: Operating LED lights up if the application has been loaded correctly.
- 4 yellow LEDs: Status LEDs light up as soon as voltage is present at the associated input. Requirement: The application is loaded correctly (operating LED lights up).
- 1 red LED: Used for checking the programming
- 1 push-button: Used for programming

## 2. Installation

The binary input is mounted on a DIN rail EN 50022-35. A data rail is not required. The bus connection is carried out via the bus connecting terminal supplied with the device. The four inputs E1, E2, E3, E4 and 2 x 0 V (2 x  $U_k$ ) have two plug-in screw terminals, each with 3 terminals, available for the connection.



- Connect the device according to the connection example.
- Clip on the bus connecting terminal and cable cover. The safety clearance of 4 mm between the insulated individual cores of the bus line and other circuits is thereby guaranteed in accordance with DIN VDE 0110 Part 1 (Figure 1).



### Note

All devices that are mounted next to the binary input must at least be provided with basic insulation.

- Insert device into the DIN rail from underneath and slide upwards. Then press at the top and suspend in the rail (Figure 2).

The circuits of the binary input must meet the safety extra-low voltage conditions (SELV) in accordance with DIN VDE 0100T410. An installation with Y bell wire or J-FY flat webbed bell wire is permitted through electrical isolation.

### 3. Commissioning

After wiring the device, the assignment of the physical address and the parameterisation are carried out:

- Connect the serial interface to the bus
- Connect the bus voltage to the system
- Press the programming button in the device (red LED lights up)
- Load the physical address from the ETS via the serial interface (red LED is extinguished)
- Load the prepared application with the corresponding parameterisation into the device via the serial interface
- Check the required function when the device is ready for operation (also possible with ETS)



#### Note

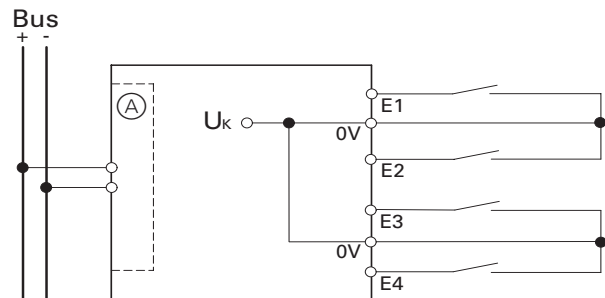
To guarantee the full functionality of the application under ETS2, it is necessary to use ETS2 from version 1.1 onwards with Service Release A or higher. If you have any queries, please contact the Merten infoline.

### 4. Technical Data

External auxiliary voltage:	none
Power supply from the bus:	DC 24 V, max. 10 mA
Bus coupling unit:	BCU system software 2.x
Inputs:	4 channels for the connection of floating contacts. Each pair of inputs (E1/E2 and E3/E4) have a common phase terminal ( $U_k$ ).
Contact voltage $U_k$ :	max. 10 V (SELV), clocked
Contact current:	max. 2 mA, pulsed
Cable length:	max. 50 m
Transfer resistance between contact and cable:	max. 500 W for closed contact min. 50 kW for open contact
Ambient temperature	
Operation:	-5 °C to +45 °C
Storage:	-25 °C to +55 °C
Transport:	-25 °C to +70 °C
Environment:	The device is designed for use at a height up to 2000 m above sea level

Humidity:	max. 93 %, no moisture condensation
Operating elements:	Programming button
Display elements:	
4 yellow LEDs:	Display of signal voltage at the inputs
1 red LED:	Checking the programming
1 green LED:	Readiness for operation
Connections	
Bus:	two 1 mm pins for bus connecting terminal
Inputs:	two plug-in screw terminals, each with 3 terminals for max. 2.5 mm
Mounting width:	2.5 modules = 45 mm
Dimensions:	90x45x65 mm (HxWxD)
EC guidelines:	EMC guideline 89/336/EEC

### Connection example



(A) Bus coupler

### 5. Settings in the EIB Tool Software (ETS)

#### Selection in the product database

Manufacturer:	Merten
Product family:	2.6 Binary input, 4-gang
Product type:	2.6.035 DIN rail mounted REG-K/10 V
Program name:	Universal 120D/2.1
Product name:	Binary input REG-K/4x10
Order number:	644490

## 6. Application overview

The following application is available:

Application	Vers.	Function
Universal 120D/2.1	2.1	Group addresses: Number = 34/Associations = 34, dynamic
		<b>Can be set for all channels:</b>
		Delay of the readiness for operation: From 17 to 30 seconds
		Debounce time from 10 to 120 milliseconds
		<b>Can be set per channel:</b>
		Contact type: Make/break contact
		Disable function
		TOGGLE: 2 objects, 1 bit or 1 byte
		Switch: 2 objects, 1 bit or 1 byte
		Cycl. monitoring: 2 objects, cycl. sending e.g. for wind alarm
		Dimming: single-surface or dual-surface
		Blind: single-surface or dual-surface
		Pulse edges: 2 objects, (1 bit, 2 bit, 1 byte), each obj. with independent pulse edge funct.
		Extended pulse edge function: 2 objects, (1 bit, 2 bit, 1 byte) with time function, cycl. sending, each obj. with independent pulse edge funct.
		Pulse edge with 2 bytes
		8 bit linear regulator