

Binary input device N 262E01
8x potential-free contacts

5WG1 262-1EB01

Product and function description



The N 262E01 binary input device is a 6 module units wide DIN rail mounted device in N-System dimensions with 8 inputs for potential-free contacts. It enables both statuses (contact is open or closed) and changes in status (contact became opened or closed) to be recorded by means of voltage impulses generated inside of the device. It can therefore be used, for example, to monitor the switching or operating states (whether a device or a plant is switched on or off, whether a limit violation or a malfunction or an alarm is being signalled), to record the change of status when switching on or switching off (whether a switch or a pushbutton was activated, whether it was activated for a shorter or longer period) and to record and count changes of the switching status (i.e. pulses) with a minimum on-time of the contact of 70 ms and a max. pulse succession of up to 5 pulses per second, without or with monitoring of the number of pulses counted until a predetermined threshold has been reached or exceeded.

At each input a red LED shows whether the connected contact is open (LED is off) or closed (LED is illuminated). The N 262E01 has an integrated 230 V power supply in order to supply the electronics. This power supply enables the generation of the voltage pulses for checking the switching statuses and for displaying them via the LEDs even when there is no bus voltage present.

Note: The device is without function after the application program has been "unloaded" with the ETS. The status of the inputs is also no longer displayed in this case.

Application program

The "2558 Binary Input Device 980901" application program, which can be downloaded up from the ETS2 V1.3,

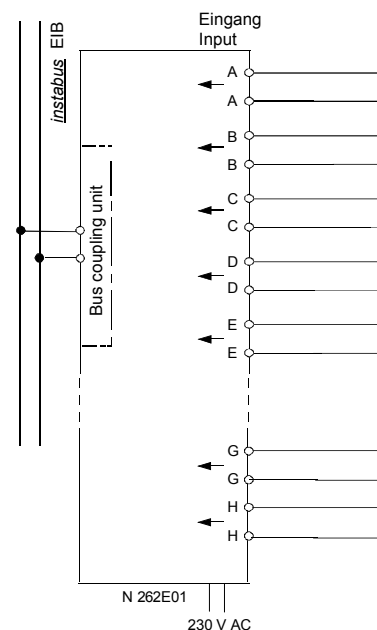
supports a multitude of applications and enables one of the following functions to be assigned to every input:

- Switching status / binary value transmission
- Switching, edge-triggered
- Switching, short / long operation
- 1-button dimming
- 1-button solar protection control
- 1-button group control (sequence control)
- 1-bit Scene control
- 8-bit Scene control
- 8-bit value, edge-triggered
- 8-bit value, short / long operation
- 16-bit floating point value, edge-triggered
- 16-bit floating point value, short / long operation
- 8-bit pulse counting without threshold check
- 8-bit pulse counting with threshold check
- 16-bit pulse counting without threshold check
- 16-bit pulse counting with threshold check
- 32-bit pulse counting without threshold check
- 32-bit pulse counting with threshold check.

Using the ETS, one of the following functions can be allocated to one input pair, i.e. to two neighbouring inputs:

- 2-button dimming with stop telegram
- 2-button solar protection control.

Connection example



Installation notes

- The device can be used for permanent installation in dry interior rooms and for insertion in control cabinets or small distribution boards.



DANGER

- Never connect an AC or DC voltage to an input for a potential-free contact (this will damage / destroy the input / device and impress this voltage on the bus).
- Basic insulation for 250 V has to be kept when connecting the potential-free contacts to the terminals.
- The device must only be installed and commissioned by an authorized professional electrician.
- Unoccupied sections of DIN rail with data rail inserted must be protected with the cover 5WG1 192-8AA01.
- When connecting the device, care should be taken that the device can be isolated from the mains.
- The device must not be opened.
- When planning and installing electrical equipment the relevant guidelines, regulations and specifications of the respective country must be considered.

Technical data

Power supply

- Bus voltage: carried out via the bus line (DC 21...30 V, SELV)
- Bus current: 5 mA (only half a standard bus load !)
- Electronics:
 - integrated power supply for AC 230 V, + 10 % /- 15 %, 50/60 Hz
 - Mains connection: 2-pole (N, L)
 - power consumption: max. 1.6 W

Operating elements:

- 1 learning pushbutton:
 - for toggling between normal mode / addressing mode

Display elements

- 1 red LED:
 - for checking the bus voltage and displaying normal mode / addressing mode
- 1 green LED:
 - for displaying the 230 V operating voltage
- 1 red LED per binary input for status display;
 - LED = ON: contact is closed.

Inputs

- 8 inputs, potential-free (with basic insulation 250 V against each other and against the EIB)
- Detection of the switching status of a floating contact connected to an input by means of voltage pulses generated by the device:
 - pulse voltage when the contact is open: typ. 15 V_{ss}
 - pulse current when the contact is closed: typ. 0.45 A_{ss}
- Input signal delay until transmission of first bus telegram:
 - after closing the contact: 100 ms
 - after opening the contact: 100 ms
- Contact closed time: min. 100 ms
- Contact open time: min. 100 ms
- max. detectable switching frequency: 5 Hz
- Input function: to be set in the parameter list
- Max. length of connecting cable with wires twisted in pairs: 100 m

Connections

- Mains connection and inputs:
 - Plug-in terminals, insulation strip length 9...10 mm
- Note:** Cables with wires twisted in pairs should be used when connecting potential-free contacts to the inputs of the actuator.
- The following conductor cross-sections are permitted:
 - 0,5 ... 2.5 mm² single-core
 - 0,5... 2.5 mm² finely stranded with plug connector, sealed crimp connection
 - 0,5 ... 1.5 mm³ finely stranded, with connector sleeve
 - 1.0 and 1.5 mm² finely stranded, untreated
- KNX bus line:
 - Pressure contacts on data rail,
 - Screw-less bus terminal, 0.6 ... 0.8 mm Ø single-core, insulation strip length 5 mm

Mechanical data

- Housing: plastic
- Dimensions: DIN rail mounted device in N-system dimensions, width 6 Module Units (1 MU = 18 mm)
- Weight: approx. 280 g
- Fire load: approx. 5315 kJ
- Mounting: Snap-on mounting on DIN rail
 - EN 60715-TH35-7.5

Electrical safety

- Degree of pollution (according to IEC 60664-1): 2
- Type of protection (according to EN 60529): IP 20
- Overvoltage category (according to IEC 60664-1): III
- Bus: Safety extra-low voltage SELV DC 24 V
- Device complies with EN 50090-2-2

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EMC requirements

- Complies with EN 50090-2-2 and EN 61000-6-2

Environmental conditions

- Climatic withstand capability: EN 50090-2-2
- Ambient operating temperature: - 5 ... + 45 °C
- Storage temperature: - 25 ... + 70 °C
- Rel. humidity (not condensing): 5 % to 93 %

Markings:

KNX EIB

CE mark

In accordance with the EMC guideline (residential and functional buildings), low voltage guideline

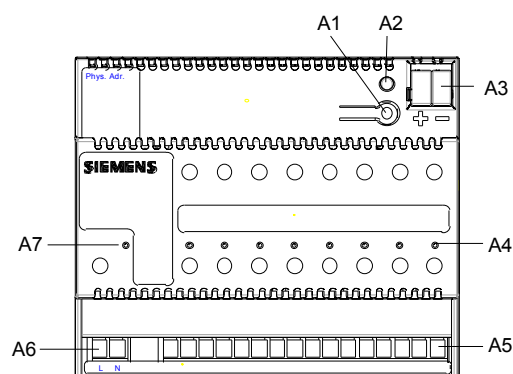
Position and function of the display and operating elements


Figure 1: Position of the display and operating elements

- A1 Button for toggling between normal mode / addressing mode for transferring the physical address
- A2 LED for displaying normal mode (LED Off) or addressing mode (LED On); it is automatically extinguished once the physical address has been transferred
- A3 Plug for bus connecting terminal
- A4 LEDs for status display of inputs A to H
- A5 Terminals for inputs A to H
- A6 Terminals for L-conductor and neutral conductor (N) for power supply of the electronics
- A7 LED for displaying the operating voltage

Installation and wiringGeneral description

The DIN rail mounted device in N-system dimensions (width 6 module units) can be inserted in N-system distribution boards, surface- or flush-mounted and wherever DIN rails according to EN 60715-TH35-7.5 are present.

Installing the DIN rail mounted device (Figure 2)

- Suspend the DIN rail mounted device (B 1) on the DIN rail (B2) and
- Rotate the DIN rail mounted device (B1) backwards until the slide switch audibly clicks into position.

Dismantling the DIN rail mounted device (Figure 2)

- Press the slide switch (C3) downwards with a screwdriver and
- Remove the DIN rail mounted device (C1) from the DIN rail (C2) with a swivel action.

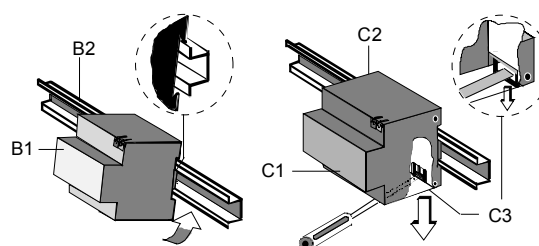


Figure 2: Installing / dismantling the device

Removing the bus terminal (Figure 3)

- The bus terminal (D2) is located on the upper side of the binary input device N 262E01 (D1).
- The bus terminal (D2) consists of two sections (D2.1, D2.2) each with four terminal contacts. Care should be taken not to damage the two test sockets (D2.3) either by accidentally trying to put in the bus cable or with the screwdriver (when trying to remove the bus terminal).
- Carefully insert the screwdriver into the wire entry slot underneath the bus terminal (D2) and pull the bus terminal (D2) forwards out of the binary input device (D1).

Note:

Care should be taken as there is a risk of shorting the bus pins with the screwdriver!

Attaching the bus terminal (Figure 3)

Insert the bus terminal into the guide slot and press the bus terminal (D2) backwards until it reaches the stop position.

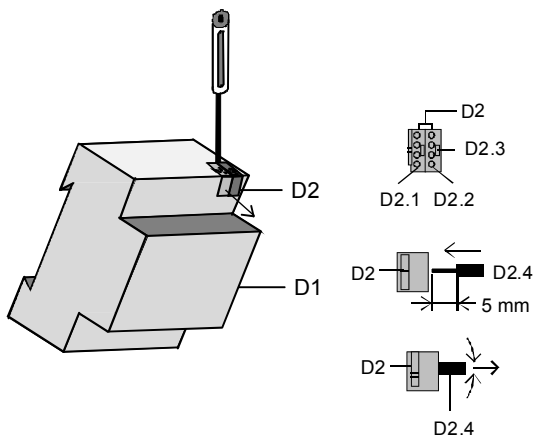


Figure 3: Attaching / removing the bus terminal

Mounting the insulating cap

If the device is to be mounted on a DIN rail without a data rail, then the contact system must be covered using the supplied insulating cap.

Removing the locating clamp (Figure 4)

- The locating clamp (E3) encloses the contact system (E2) on the rear of the device (E1).
- Insert the screwdriver between the DIN rail mounted device (E1) and the locating clamp (E3) and remove the clamp.

Clipping on the insulating cap (Figure 4)

- Place the insulating cap (E4) on the contact system and press so that it snaps into place.

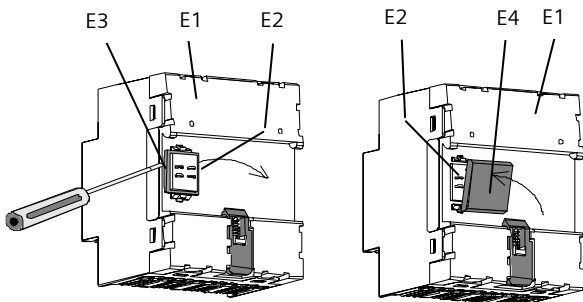
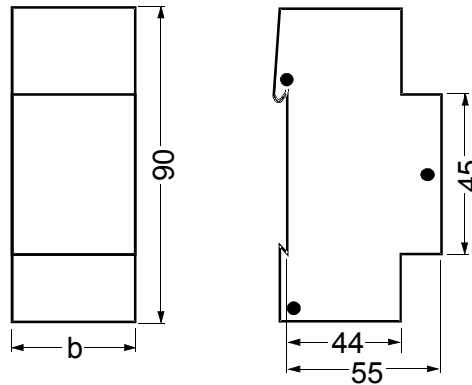


Figure 4: Covering the contact system

Dimension drawing

Dimensions in mm.



b = 6 module units

1 module unit (MU) = 18 mm

General notes

- Any faulty device should be returned to the local Siemens office.
- If you have further questions concerning the product, please contact our Technical Support:

+49 (0) 180 50 50-222

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www.siemens.com/automation/support-request