Binary input 8-gang, 24 V
Art.-No.: 2128 REG

Operating instructions

1 Safety instructions

Electrical equipment may only be installed and fitted by electrically skilled persons.

Serious injuries, fire or property damage possible. Please read and follow manual fully.

Danger of electric shock. When connecting SELV/PELV systems, ensure safe isolation from other voltages.

These instructions are an integral part of the product, and must remain with the end customer.

2 Device components

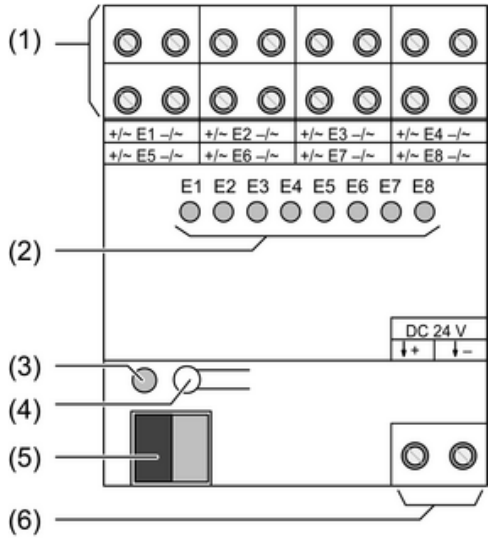

Figure 1: Binary input 8gang 24 V

(1) Connection for inputs
(2) Status LED inputs, yellow
On: voltage for signal level '1' present.
Off: voltage for signal level '0' present.
(3) Programming LED
(4) Programming key
(5) KNX connection
(6) Voltage output for potential-free contacts

3 Function

System information

This device is a product of the KNX system and complies with the KNX directives. Detailed technical knowledge obtained in KNX training courses is a prerequisite to proper understanding.

The function of this device depends upon the software. Detailed information on loadable software and attainable functionality as well as the software itself can be obtained from the manufacturer´s product database. Planning, installation and commissioning of the device are carried out with the aid of KNX-certified software. The latest versions of product database and the technical descriptions are available on our website.

Intended use

- Polling of conventional switching or push-button contacts, glass break detectors etc. in KNX systems, for reporting of states, operation of loads, etc.
- Mounting on DIN rail according to EN 60715 in distribution boxes

Product characteristics

- Status LED for each input
- Detection of voltage levels and changes on the input
- Transmitting the input state to the bus
- Transmission behaviour freely settable
- Functions: switching, dimming, blinds up/down, brightness values, temperatures, calling up and saving scenes
- Inputs can be disabled separately
- External AC and DC voltages can be connected
- Auxiliary voltage output for polling potential-free contacts
- No separate power supply required.
- Separate reference potentials for inputs

4 Information for qualified electricians

4.1 Fitting and electrical connection

DANGER!

Electrical shock when live parts are touched.

Electrical shocks can be fatal.

Before carrying out work on the device or load, disengage all the corresponding circuit breakers. Cover up live parts in the working environment.

Fitting the device

Observe the temperature range. Ensure adequate cooling.

- Mount device on DIN rail.

Connect 24 V binary input

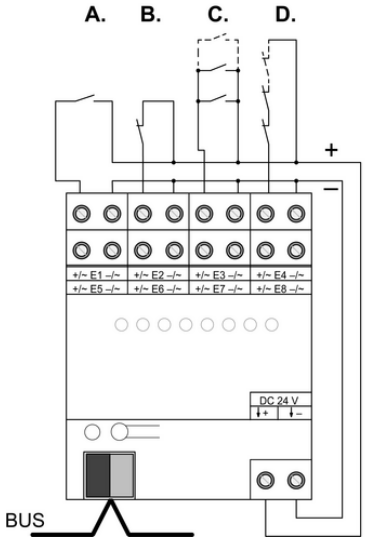

Figure 2: Connection example – contacts supplied internally

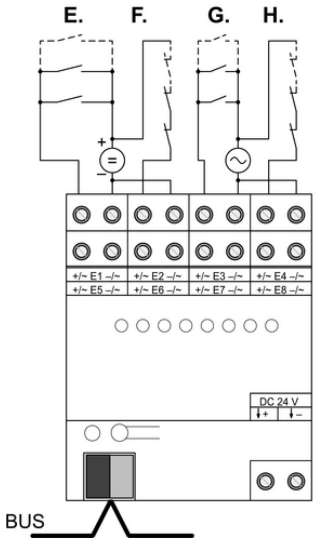

Figure 3: Connection example – contacts supplied externally

(A.) 1 NO contact, internally supplied, DC
(B.) 1 NC contact, internally supplied, DC
(C.) NO contact, internally supplied, DC
(D.) NC contact, internally supplied, DC
(E.) NO contact, externally supplied, DC
(F.) NC contact, externally supplied, DC
(G.) NO contact, externally supplied, AC
(H.) NC contact, externally supplied, AC

For DC operation: observe polarity of the input voltage.

- Connect device as shown in the connection example.

i Use the output **DC 24 V** only for supplying its own inputs.

i If the output **DC 24 V** is used, no more than 4 switching events should take place simultaneously on the supplied inputs. Otherwise the output could detect a fault and generate an error message (see chapter 5.2. Troubleshooting).

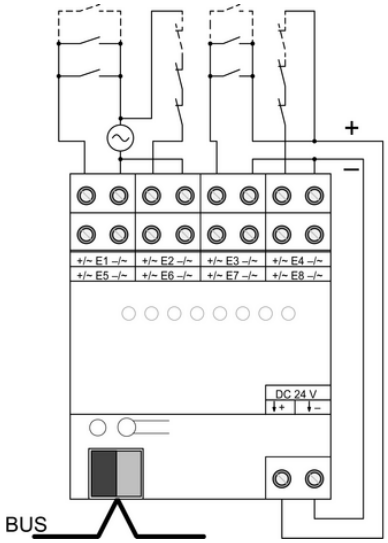

Figure 4: Connection example – contacts supplied externally and internally

Connect SELV/PELV and FELV circuits together

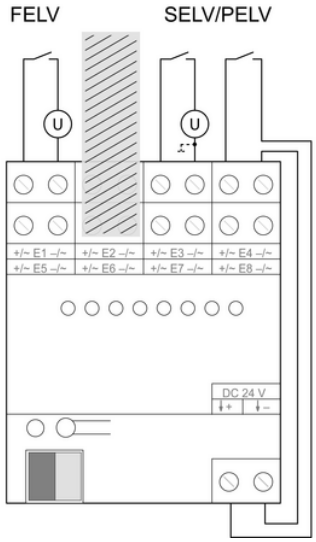

Figure 5

FELV circuits do not have a safe separation for hazardous voltages. Therefore, they must be insulated from safe extra low voltages SELV/PELV like mains circuits are.

- Leave two inputs unused (figure 5) between the inputs wired with SELV/PELV and FELV circuits.

i Only use inputs supplied by auxiliary voltage **DC 24 V** for SELV/PELV circuits.

Installing the cover

It is necessary to install a cover to protect the bus connection against hazardous voltages in the connection area.

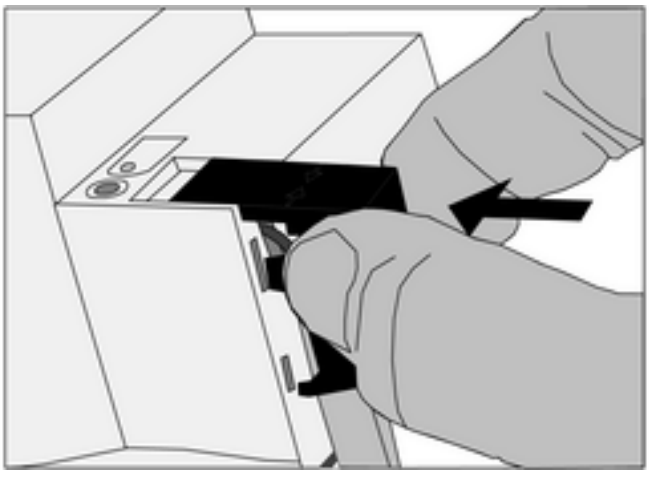

Figure 6: Installing the cover

- Route the bus cable towards the rear.
- Install cover on top of the bus terminal so that it snaps into place (figure 6).

Removing the cover

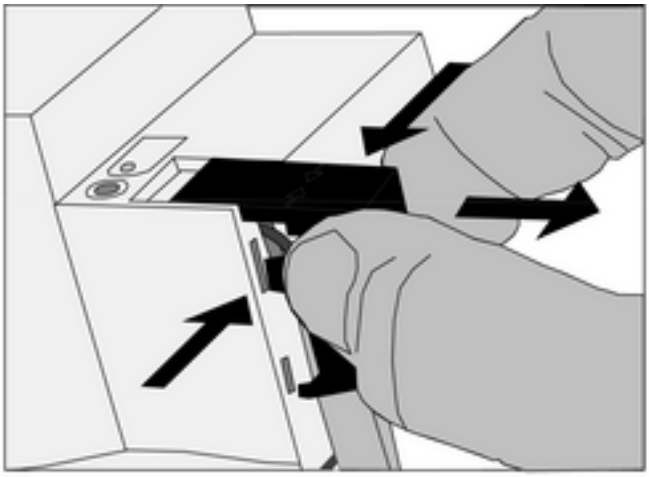

Figure 7: Removing the cover

- Press the cover to the side and pull it off (figure 7).

4.2 Commissioning

Load the address and the application software

- Switch on the bus voltage
- Assign physical address.
- Load the application software into the device.
- Note the physical address on the device label.

5 Appendix

5.1 Technical data

KNX	
KNX medium	TP 1
Commissioning mode	S-mode
Rated voltage KNX	DC 21 ... 32 V SELV
Power consumption KNX	max. 350 mW
Standby	max. 200 mW
Connection type for bus	Connection terminal
Ambient temperature	-5 ... +45 °C
Storage/transport temperature	-25 ... +70 °C
Inputs	
Rated voltage	AC/DC 12 ... 48 V
Signal level "0" signal	AC/DC -48...+2 V
Signal level "1" signal	AC/DC 8...48 V
Input voltage at nominal voltage	2 mA
Signal duration	min. 30 ms
Rated frequency AC signal	30 ... 60 Hz
Number of contacts per input	
NO contacts	unlimited
NC contacts	max. 20
Output **DC 24 V**	
Output voltage	DC 24 V SELV
Housing	
Fitting width	72 mm / 4 modules
Power consumption	

Standby	max. 200 mW
Power loss	max. 1 W
Connection	
single stranded	0.2 ... 4 mm²
finely stranded without conductor sleeve	0.34 ... 4 mm²
finely stranded with conductor sleeve	0.14 ... 2.5 mm²
Cable length	max. 100 m

5.2 Troubleshooting

All LEDs flash

Cause 1: Installation error, output voltage 24 V is short-circuited.

Eliminate short-circuit.

Cause 2: Installation error, the power supply voltage or another external voltage is connected at the output **DC 24 V**.

Correct the connection, disconnect output terminal.

Cause 3: The output **DC 24 V** supplies more than 4 inputs that are impinged simultaneously with the '1-'level during operation.

Correct connection. Use an additional external power supply if necessary.

5.3 Warranty

We reserve the right to make technical and formal changes to the product in the interest of technical progress.

We provide a warranty as provided for by law.

Please send the unit postage-free with a description of the defect to our central customer service office.

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