

Binary input, 8-gang 12-48 V AC/DC, zero-voltage

Order No. : 2128 00

Operating instructions**1 Safety instructions**

Electrical devices may only be mounted and connected 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.

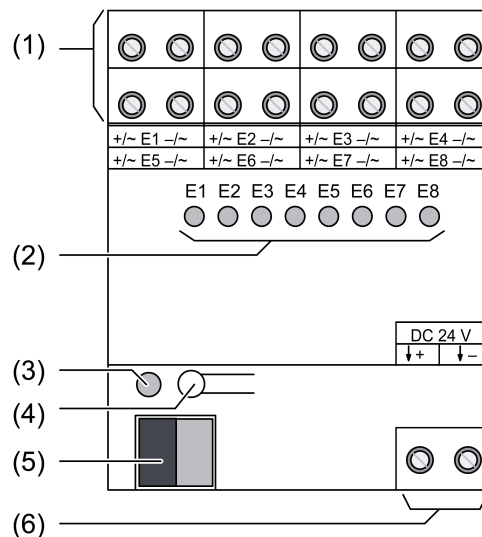
2 Device components

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 button
- (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, window contacts etc. in KNX systems, for reporting of states, meter levels, 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
- Pulse and switch counter function (S0 pulses)
- 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 electrically skilled persons



DANGER!

Electrical shock when live parts are touched.

Electrical shocks can be fatal.

Before working on the device, disconnect all the corresponding miniature circuit breakers. Cover up live parts in the working environment.

4.1 Mounting and electrical connection

Fitting the device

Observe the temperature range. Ensure adequate cooling.

- Mount device on DIN rail.

Connect 24 V binary input

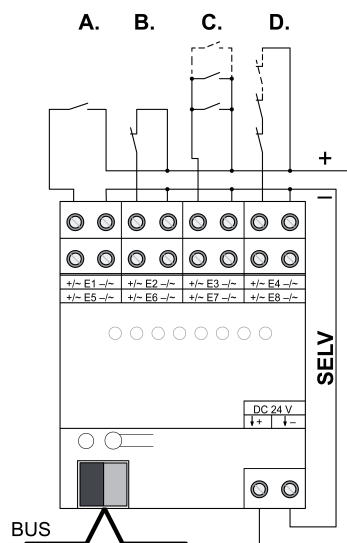


Figure 2: Connection example – contacts supplied internally

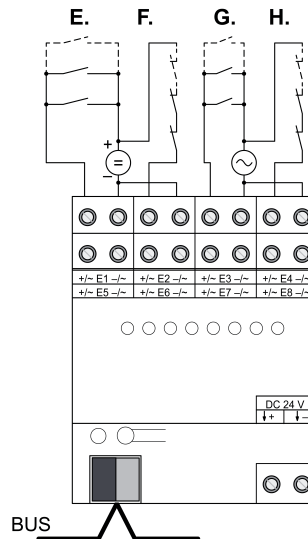


Figure 3: Connection example – contacts supplied externally

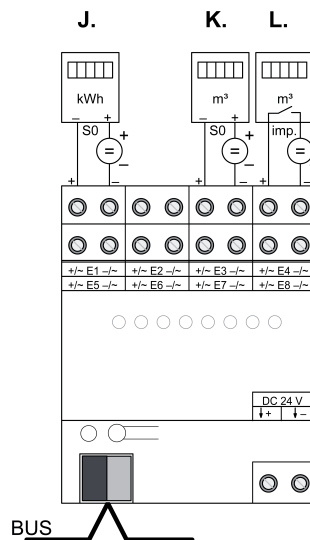


Figure 4: Connection example - connection of meters with S0 or pulse interface

- (A.) 1 NO contact, internally supplied, DC, SELV
- (B.) 1 NC contact, internally supplied, DC, SELV
- (C.) NO contact, internally supplied, DC, SELV
- (D.) NC contact, internally supplied, DC, SELV
- (E.) NO contact, externally supplied, DC
- (F.) NC contact, externally supplied, DC
- (G.) NO contact, externally supplied, AC
- (H.) NC contact, externally supplied, AC
- (J.) Electricity meter with S0 interface
- (K.) Water meter with S0 interface
- (L.) Water meter with potential-free pulse interface

For DC operation: observe polarity of the input voltage.

- Connect device as shown in the connection example.

i The **DC 24 V** output is used solely for polling potential-free switching contacts. Do not use it to supply other components (meters or otherwise).

- i** Only use inputs supplied by the **DC 24 V** output for SELV/PELV circuits.
- i** Use an external power supply to connect multiple meters to an S0 or pulse interface.
- 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).

Connect SELV/PELV and FELV circuits together

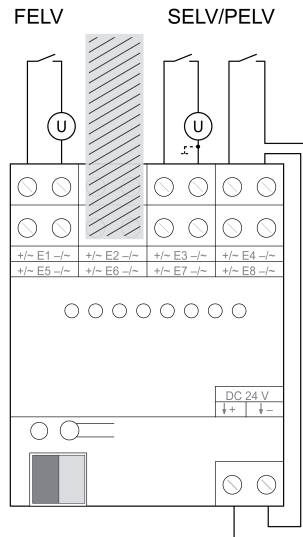


Figure 5

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.

Installing the cover

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

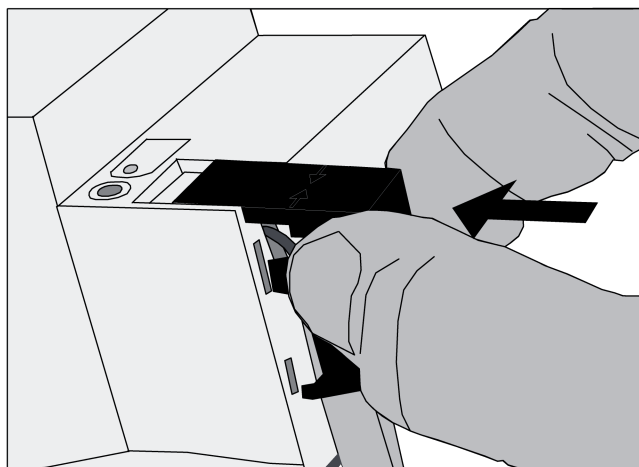


Figure 6: Installing the cover

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

Removing the cover

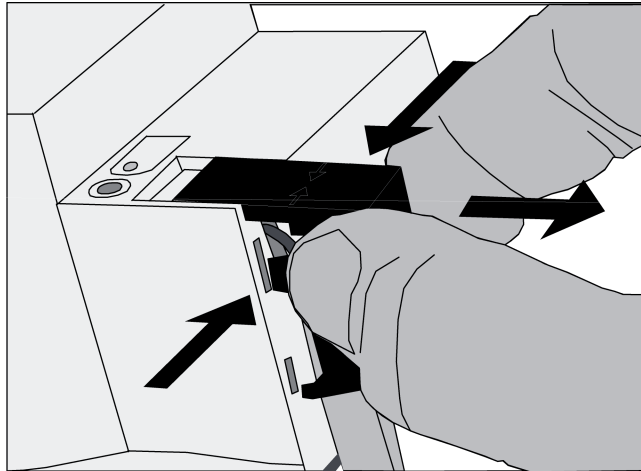


Figure 7: Removing the cover

- 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
Commissioning mode	S-mode
Rated voltage KNX	DC 21 ... 32 V SELV
Current consumption KNX	max. 15 mA
Standby	max. 200 mW
Connection type for bus	device 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	-48 ... +2 V
Signal level "1" signal	8 ... 48 V
Input current at nominal voltage	approx. 2 mA
Rated voltage S0	max. DC 27 V
Rated frequency AC signal	30 ... 60 Hz
Signal duration	min. 15 ms
Pulse frequency S0	max. 33 Hz
Number of contacts per input	
NO contacts	unlimited
NC contacts	max. 20
Output DC 24 V	
Output voltage	DC 24 V SELV
Output current	max. 4 mA

Housing	
Fitting width	72 mm / 4 modules
Power consumption	
Standby	max. 200 mW
Power loss	max. 1 W
Connection	
single stranded	0.2 ... 4 mm ²
Finely stranded without conductor sleeve	0.34 ... 4 mm ²
Finely stranded with conductor sleeve	0.14 ... 2.5 mm ²
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

The warranty follows about the specialty store in between the legal framework as provided for by law

Please submit or send faulty devices postage paid together with an error description to your responsible salesperson (specialist trade/installation company/electrical specialist trade). They will forward the devices to the Gira Service Center.

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