Operating Instructions
4-channel analog input module

1. Safety instructions

Attention:
Electrical equipment must be installed and fitted by qualified electricians only and in strict observance of the relevant accident prevention regulations.

Failure to observe any of the installation instructions may result in fire and other hazards.

U_s **and GND must not be interconnected with the corresponding terminals of another device.**
Connected sensors must not be supplied with power from the connected KNX/EIB device (Risk of irreparable damage!).

2. Function

- This analog input module extends a KNX/EIB weather station Art. no. 2224 REG W or a KNX/EIB analog input Art. no. 2114 REG A by four additional sensor inputs for analog transducers.

- Measuring data evaluation and limit processing take place in the KNX/EIB device.

- The analog input module accepts both voltage and current signals:
  Voltage signals: 0 ... 1 V DC   0 ... 10 V DC
  Current signals: 0 ... 20 mA DC   4 ... 20 mA DC

- The current inputs 4 ... 20 mA can be monitored for wire breakage (parameter setting).

3. Installation

The device is snap-fastened on a 35 x 7.5 mm rail as per EN 50022.

An analog input module must be connected to the KNX/EIB device by means of the 6-pole system connector only (supplied with the analog input module).

For operation, the 4-channel analog input module needs an external 24 V power source Art. no. WSSV10.

4. Power supply of connected sensors

- The connected sensors can be supplied from terminals + U_s and GND (see fig. ①). These terminals are provided in duplicate and internally interconnected.

- The total current consumption of all sensors supplied this way must not exceed 100 mA.

- In the event of overload or short-circuit between +U_s and GND, the power will be switched off. After removal of the fault, the power is switched on again automatically.

- Sensors connected can also be supplied externally (e. g. if their current consumption exceeds 100 mA). In such case, they must be connected between terminals K1... K4 and GND.
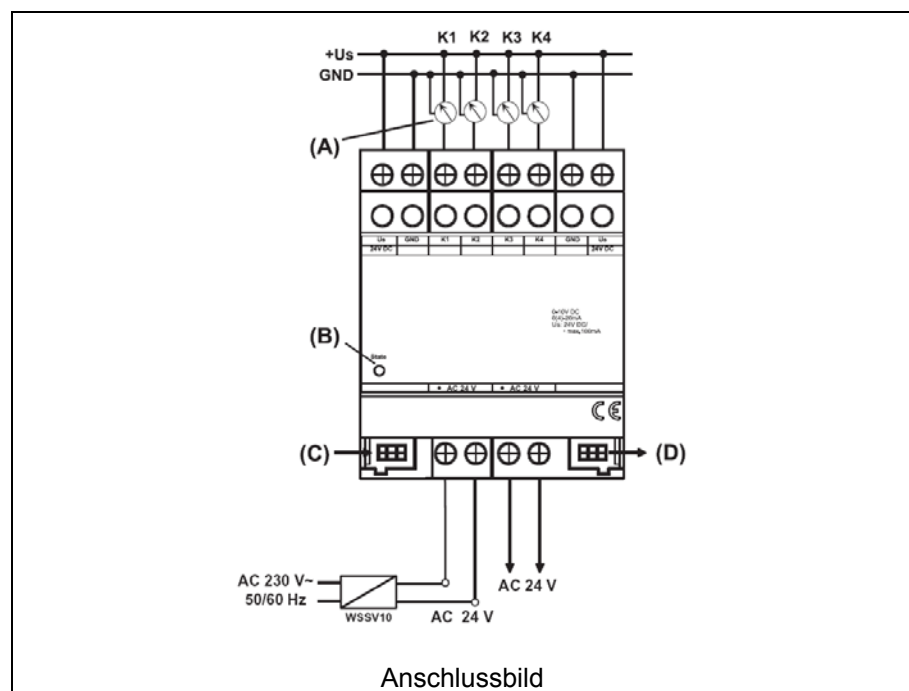
Attention!
U_s and GND must not be interconnected with the corresponding terminals of another device.
Connected sensors must not be supplied with power from the connected KNX/EIB device (Risk of irreparable damage!).

5. Connection

Anschlussbild

+U$_s$:   power supply of external transducers

GND :   ref. potential for +U$_s$ and inputs K1 ... K4

K1 ... K4 :   measured-value inputs

AC 24 V :   external power supply voltage

(A) :   transducers

(B) :   status LED (red)

(C) :   system connector, 6-pole, for module connection

(D) :   no function

6. Installation of an analog input module

Please observe the following basic rules when installing an analog input module:

- Replacement of a module (e.g. in case of defect) by one of the same type can be effected during operation (for this purpose, disconnect the module from the power supply). After replacement, the KNX/EIB device will reset after abt. 25 s. All inputs and outputs of the KNX/EIB device and the modules connected are then re-initialized and reset to their original state.

- Removing or adding modules without adapting their project configuration and subsequent downloading into the KNX/EIB device is not allowed as this will result in system failure.

7. Status LED

During commissioning of the module:

On :   Module ready for operation (self-test OK).

Quickly blinking :   Module initialization in progress
Slowly blinking :   Module not configured (in KNX/EIB device)

Off :   Module initialized and in operation
            Precondition: LED must have been on beforehand!

Normal operation:

On :   Module not ready for operation (fault condition)

Off :   Module initialized and in operation.
Precondition: LED must have been on beforehand!

Slowly blinking = 1/s; quickly blinking = 2/s

8. Sensors suitable for connection

Connection to a KNX/EIB weather station:

For any of the following transducers, the software provides preset values. If other sensors are used, the parameters to be set must be determined beforehand.

Type	Use	Order no.
Brightness	outdoor	WS 10H
Twilight	outdoor	WS 10D
Temperature	outdoor	WS 10T
Wind	outdoor	WS 10W
Rain	outdoor	WS 10R

Connection to a KNX/EIB analog input:

The parameters to be set for connected sensors must be determined beforehand.

Type	Use	Order no.
Brightness	outdoor	WS 10H
Twilight	outdoor	WS 10D
Temperature	outdoor	WS 10T
Wind	outdoor	WS 10W
Rain	outdoor	WS 10R

9. Technical Data

Power supply
Supply voltage :   AC 24 V ± 10 %
Current consumption :   170 mA max.
Current consumption
on system connector :   typically 150 mW

Ambient temperature :   -5 °C ... +45 °C
Storage/transport temp. :   -25 °C ... +70 °C

Humidity
Ambient/storage/transport :   93 % r.h. max., no
                                           condensation

Protective system :   IP 20 as per EN 60529

Installation width :   4 modules / 72 mm

Weight :   approx. 150 g

Connections
Inputs, power supply :   screw terminals
single-wire :   0.5 mm² to 4 mm²
stranded wire (without ferrule) :   0.34 mm² to 4 mm²
stranded wire (with ferrule) :   0.14 mm² to 2.5 mm²

Connection to KNX/EIB device : 6-pole system connector

Sensor inputs
Number :   4x analog
Evaluable sensor signals :   0 … 1 V DC, 0 … 10 V DC,
                                           0 … 20 mA, 4 … 20 mA

Voltage measurement impedance :   approx. 18 kΩ
Current measurement impedance :   approx. 100 Ω

External sensor power supply ($+U_s$) :   24 V DC, 100 mA max.

Subject to technical modifications.

10. Acceptance of guarantee

Our products are under guarantee within the scope of the statutory provisions.

Please return the unit postage paid to our central service department giving a brief description of the fault:

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