

## 4-channel analog sensor interface

Bestell-Nr.: 1021 00

### System information

This device is a product of the Instabus-KNX/EIB system and complies with KNX directives.

[www.gira.de](http://www.gira.de).

Detailed technical knowledge obtained in Instabus training courses is a prerequisite to proper understanding.

The functionality 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 unit is effected by means of KNX-certified software.

An updated version of the product database and the technical descriptions are available in the Internet at



#### 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<sub>S</sub> and GND must not be interconnected with the corresponding terminals of another device (Risk of irreparable damage!).**

### Function

- The analog sensor interface processes measuring data from analog sensors. Up to four freely programmable analog transducers can be connected to the input.
- The analog sensor interface evaluates 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 are monitored for wire breakage.

### Installation

Snap the device onto a 35 x 7.5 top hat rail as per EN 50022.

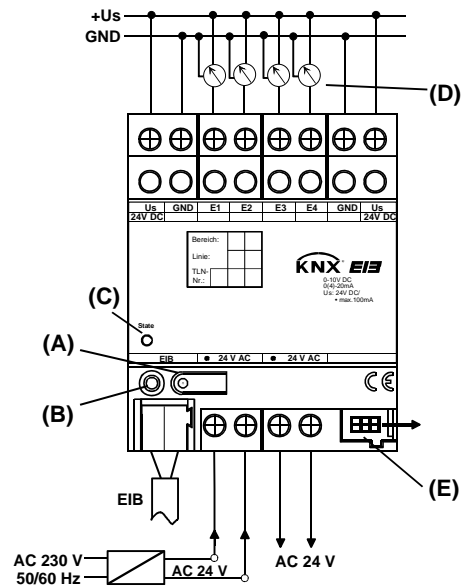
For operation, the analog sensor interface needs an external 24 V source as the power supply module, e.g. order no. 1024 00.

In addition, this source can supply the sensors connected as e.g. WS 10W, WS 10R or their heating circuits.

**Connection**

- +U<sub>S</sub>: power supply of external transducers
- GND: ref. potential for +U<sub>S</sub> and inputs K1...K4
- K1 ... K4: measured-value inputs
- KNX/EIB: KNX/EIB connecting terminal
- 24 V AC: external power supply voltage
- (A): programming key
- (B): programming LED
- (C): status LED, three-colour (red, orange, green)
- (D): transducer
- (E): system connector, 6-pole, for future extensions

**Wiring diagram**



**Power supply of sensors connected**

- The connected sensors can be supplied from terminals +US and GND (see fig). 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<sub>S</sub> 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<sub>S</sub> and GND must not be interconnected with the corresponding terminals of another device (Risk of irreparable damage!).**

**Sensors suitable for connection**

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

Type	Use	Model	Order. No.
Brightness	outdoor	WS 10H	0576 00
Twilight	outdoor	WS 10D	0572 00
Temperature	outdoor	WS 10T	0577 00
Wind	outdoor	WS 10W	0580 00
Rain	outdoor	WS 10R	0579 00

## Commissioning

After switching on the device for the first time, the analog input starts a module scan (status LED: „Orange / on“). As a new device comes by default without configuration, the status LED shows then „Red / flashing fast“.

After downloading a project configuration into the analog input, the status LED shows „Green / on“.

## Status LED

OFF:	no power supply
Red/slowly blinking:	error: short-circuit $U_S$ or overload
Red/quickly blinking:	error: no project configuration / false parameters
Green / ON:	everything OK
Slowly blinking = 1/s; quickly blinking = 2/s	

## Technical Data

Power supply		Instabus EIB:	connecting and branch terminal
Supply voltage:	24 V AC $\pm$ 10 %,	Sensor inputs	
Current consumption:	250 mA max.	Number:	4x analog
KNX/EIB voltage:	21 - 32 V DC	Evaluable sensor signals:	0 ... 1 V DC, 0 ... 10 V DC, 0 ... 20 mA, 4 ... 20 mA
KNX/EIB power consumption:	150 mW typ.	Voltage measurement impedance:	approx. 18 k $\Omega$
Ambient temperature:	-5 °C ... +45 °C	Current measurement impedance:	approx. 100 $\Omega$
Storage/transport temp.:	-25 °C ... +70 °C	External sensor power supply (+ $U_S$ ):	24 V DC, 100 mA max.
Humidity			
Ambient/storage/transport:	93 % r.h. max., no condensation		
Protective system:	IP 20 as per EN 60529		
Installation width:	4 pitch / 70 mm		
Weight:	approx. 150 g		
Connections			
Inputs, power supply:	screw terminals		
single-wire:	0.5 mm <sup>2</sup> to 4 mm <sup>2</sup>		
stranded wire (without ferrule):	0.34 mm <sup>2</sup> to 4 mm <sup>2</sup>		
stranded wire (with ferrule):	0.14 mm <sup>2</sup> to 2.5 mm <sup>2</sup>		

## Warranty

The warranty is provided in accordance with statutory requirements via the specialist trade.

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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