

## Weather station

Order no.: 1010 00

### System information

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

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



#### 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 (risk of irreparable damage).**
- **The terminal block for the connection of the combination sensor must be plugged on before the mains voltage is switched on and during operation to prevent the digital input from unintentional contact with live wires. This would endanger the safety of the entire system.**  
**As a result, the device and any connected sensors may be irreparably damaged.**

### Function

- The weather station serves to collect and to transmit weather data and events. Up to four analog transducers as well as a digital combination sensor (order no. 1025 00, measuring wind intensity, brightness and rain; with DCF77 receiver) can be connected.
- The weather station 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 can be monitored for wire breakage (parameter setting).

## Installation

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

For operation, the 4-channel analog input needs an external 24 V power source, e.g. order no. 1024 00. This source can additionally supply the connected sensors as e.g. WS 10W, WS 10R, the combination sensor or their heatings.

Prior to switching on the voltage, plug on the terminal block for the connection of a combination sensor, even if no such sensor is used.



### Safety warnings

The terminal block for the connection of the combination sensor **must** be plugged on before the mains voltage is switched on and during operation to prevent the digital input from unintentional contact with live wires. This would endanger the safety of the entire system.

As a result, the device and any connected sensors may be irreparably damaged.

## 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

EIB: EIB connecting terminal

24 V AC: external power supply voltage

(A): programming key

(B): programming LED

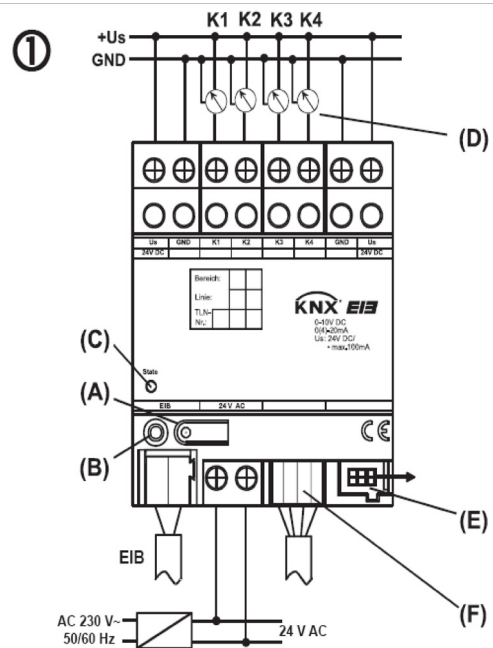
(C): status LED, three-colour (red, orange, green)

(D): transducer

(E): system connector, 6-pole, for future extensions

(F): connecting terminal, 4-pole, for combination sensor (wind, rain, brightness, twilight)

## Wiring diagram



### Power supply of sensors connected

- The connected sensors can be supplied from terminals +U<sub>s</sub> 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<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

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	Model	Order No.
Wind, brightness, Twilight, rain	outdoor	Combination sensor	1025 00
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 weather station starts a module scan (status LED: 'Orange / on').

As a new device comes by default without configuration, the status LED shows then 'Red / quickly blinking'.

After connection, a combination sensor is ready for operation (as programmed in the weather station).

After downloading a project configuration into the weather station, the status LED shows 'Green / on'.

### Status LED

- OFF: no power supply
- Orange/ON: weather station scanning
- Red/slowly blinking: error: undervoltage at combination sensor connection / short-circuit U<sub>s</sub>
- Red/quickly blinking: error: no project configuration/ false parameters
- Green/slowly blinking: address assignment, scan completed, configuration OK

- Green/quickly blinking: parameter download into combination sensor
- Green/ON: scan completed, everything OK

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

**Technical Data**

Power supply		Connections	
Supply voltage:	AC 24 V ± 10 %	Inputs, power supply:	screw terminals
Current consumption:	250 mA max.	single-wire:	0.5 mm <sup>2</sup> to 4 mm <sup>2</sup>
KNX/EIB voltage:	21 - 32 V DC	stranded wire	
KNX/EIB power consumption:	150 mW typ.	(without ferrule):	0.34 mm <sup>2</sup> to 4 mm <sup>2</sup>
Ambient temperature:	-5 °C ... +45 °C	stranded wire	
		(with ferrule):	0.14 mm <sup>2</sup> to 2.5 mm <sup>2</sup>
Storage/transport temp.:	-25 °C ... +70 °C	KNX/EIB:	connecting and branch terminal
Humidity		Combination sensor:	4-pole connecting terminal
Ambient/storage/transport:	93 % r.h. max., no condensation	Sensor inputs	
Protective system:	IP 20 as per EN 60529	Number:	4 x analog, 1x digital
Installation width:	4 modules / 72 mm	Evaluable sensor signals (analog):	0 ... 1 V DC, 0 ... 10 V DC, 0 ... 20 mA, 4 ... 20 mA
Weight:	approx. 150 g	Voltage measurement impedance:	approx. 18 kΩ
		Current measurement impedance:	approx. 100 Ω
		External sensor power supply (+U <sub>s</sub> ):	24 VDC, 100 mA max.

**Acceptance of guarantee**

We accept the guarantee in accordance with the corresponding legal provisions.

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

Gira  
Giersiepen GmbH & Co. KG  
**Service Center**  
Dahlienstrasse 12  
D-42477 Radevormwald

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