

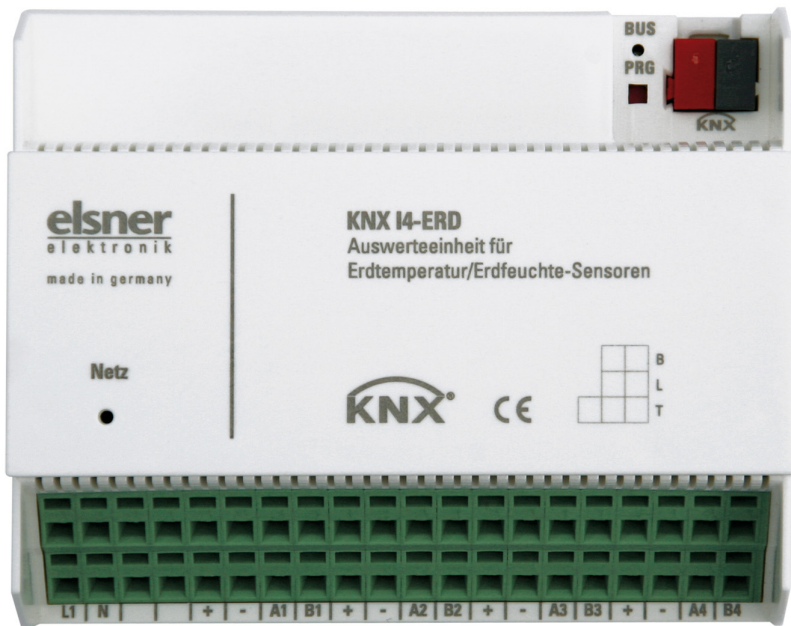


KNX I4-ERD

Evaluation Unit for Ground Sensors

Technical specifications and installation instructions

Item number 70310



Elsner Elektronik GmbH Control and Automation Engineering

Sohlengrund 16

D - 75395 Ostelsheim Phone +49 (0) 70 33 / 30 945-0 info@elsner-elektronik.de

Germany Fax +49 (0) 70 33 / 30 945-20 www.elsner-elektronik.de

1. Description

The **KNX I4-ERD evaluation unit** monitors ground temperature and humidity. You can control an automatic watering system objectively with the data. Up to four TH-ERD sensors can be connected to the evaluation unit. The two **KNX I4-ERD** threshold-value dependent switching outputs for humidity and temperature are available for each sensor channel.

KNX I4-ERD evaluation unit receives external readings via the bus and reconciles these to composite values with proprietary data. In this way, you can work with an overall temperature or an overall humidity reading for each channel.

Functions:

- Reception of **temperature and humidity information from up to four external sensors**
- **Composite readings** for each sensor channel variable from proprietary measured and external readings (percentage variable)
- **2 switched outputs per channel** for temperature and humidity, with adjustable thresholds (thresholds are set optionally by parameters or via communication objects)

Configuration is made using the KNX software ETS. The **product file**, the data sheet and the manual can be downloaded from the Elsner Elektronik homepage on www.elsner-elektronik.de in the "Service" menu.

1.1. Deliverables

- Evaluation unit in series installation housing

You will *additionally* require (not included in scope of delivery):

- TH-ERD sensors (no. 70312), 1-4 units

1.2. Technical data

Housing	Plastic
Colour	White
Assembly	Series installation on mounting rail
Protection category	IP 20
Dimensions	approx. 107 x 88 x 60 (W x H x D, mm), 6 modules
Weight	approx. 300 g
Ambient temperature	Operation -20...+70°C, storage -55...+90°C
Ambient humidity	max. 95% RH, avoid condensation
Operating voltage	230V AC, 50 Hz
Power consumption	approx. 1.6 W without sensors, approx. 2.8 W with 4 sensors
Power	on bus: 10 mA

Inputs	4 x sensor inputs for TH-ERD (+/-/A/B)
Max. cable length Sensor inputs	100 m
Data output	KNX +/- Bus connector terminal
BCU type	own microcontroller
PEI type	0
Group addresses	max. 156
Assignments	max. 156
Communication objects	129

The product conforms with the provisions of EC guidelines

- EMC Directive 2004/108/EC
- Low Voltage Directive 2006/95/EC

The following standards and/or technical specifications have been applied:

- EN 50491-5-1: 2010
- EN 50491-5-2: 2011

2. Installation and Commissioning

2.1. Installation notes



Installation, testing, operational start-up and troubleshooting should only be performed by an electrician.



DANGER!

Risk to life from live voltage (mains voltage)!

There are unprotected live components within the device.

- VDE regulations and national regulations are to be followed.
- Ensure that all lines to be assembled are free of voltage and take precautions against accidental switching on.
- Do not use the device if it is damaged.
- Take the device or system out of service and secure it against unintentional use, if it can be assumed, that risk-free operation is no longer guaranteed.

The device is only to be used for its intended purpose. Any improper modification or failure to follow the operating instructions voids any and all warranty and guarantee claims.

After unpacking the device, check it immediately for possible mechanical damage. If it has been damaged in transport, inform the supplier immediately.

The device may only be used as a fixed-site installation; that means only when assembled and after conclusion of all installation and operational start-up tasks and only in the surroundings designated for it.

Elsner Elektronik is not liable for any changes in norms and standards which may occur after publication of these operating instructions.

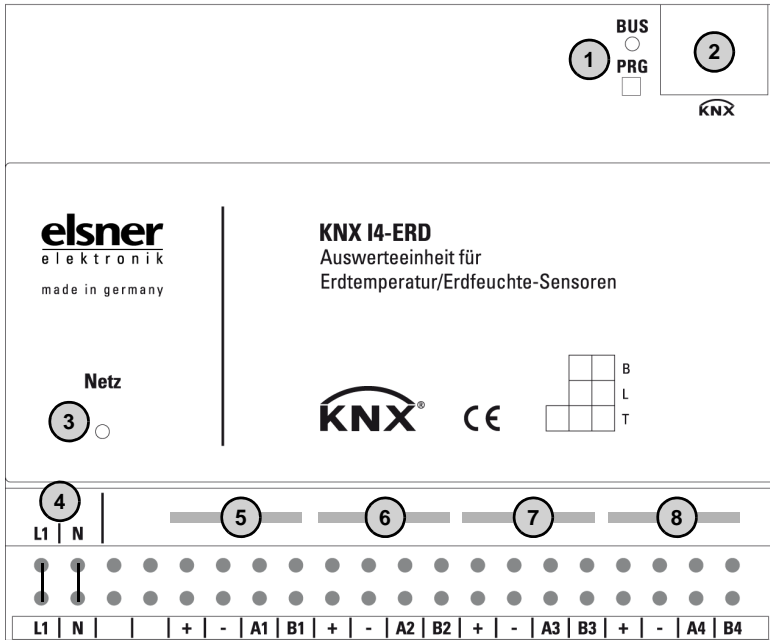
2.2. Installation location



The device must only be installed and operated in dry, indoor spaces. Avoid condensation.

The **KNX I4-ERD evaluation unit** is designed for series installation on mounting rails and occupies 6 modules.

2.3. Device design/sensor connection



- 1) Programming LED and programming buttons (PRG)
- 2) Bus terminal slot (KNX +/-)
- 3) Network LED (power)
- 4) Supply voltage input 230V AC L/N (top and bottom connections bridged internally)
- 5) Input 1 for TH-ERD sensor
- 6) Input 2 for TH-ERD sensor
- 7) Input 3 for TH-ERD sensor
- 8) Input 4 for TH-ERD sensor

Sensor connections are not protected against reverse polarity!

Pin assignment:

- + → brown (+4...24V DC)
- → white (ground)
- A → green (RS485 lead A)
- B → yellow (RS485 lead B)

2.4. Notes on mounting and commissioning

Never expose the device to water (e.g. rain) or dust. This can damage the electronics. You must not exceed a relative humidity of 95%. Avoid condensation.

After the bus voltage has been applied, the device will enter an initialisation phase lasting a few seconds. During this phase no information can be received via the bus.