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KNX to RS232 Interface

# KNX to RS232 Interface

The KNX Serial Interface BAOS 870 serves as a simple integration solution for non-KNX devices. Designed as a RS-232 interface, the KNX Serial 870 uses the proven FT1.2 protocol (PEI 10) as message format. Moreover, the device supports the BAOS protocol for accessing data points. This allows non-KNX devices to be fully integrated into a KNX network via a RS-232 link. For a quick start, a demonstration tool as well as an ETS entry with 250 group objects are available. Furthermore, individual ETS representations for OEM versions can be created.

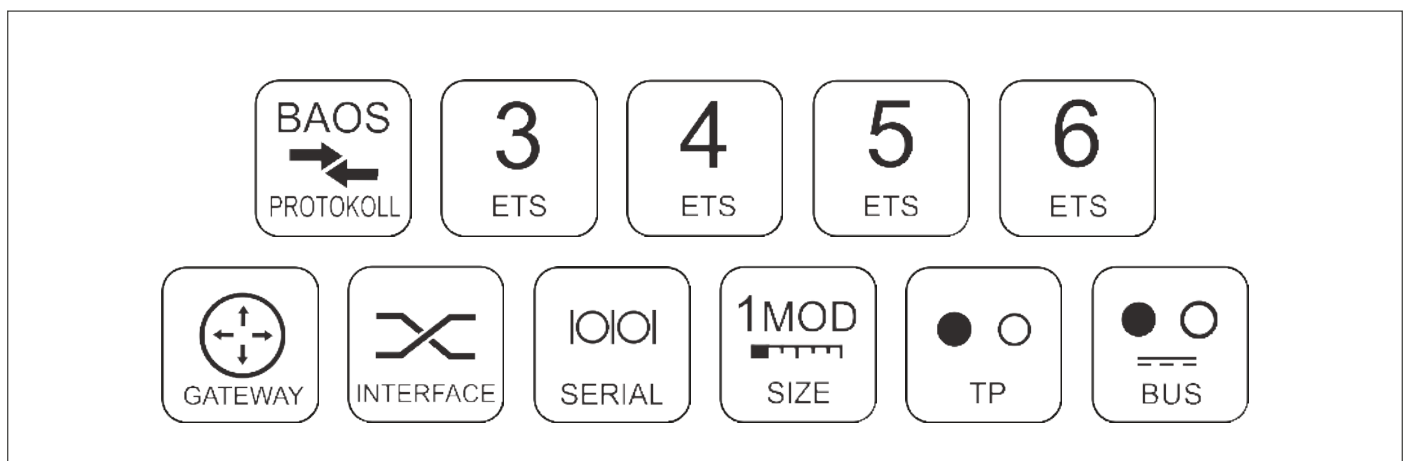


## Intended Use

The tasks **below**, like generating and interpreting KNX telegrams, as well as the knowledge about the used group addresses, are handled by KNX/RS-232 Interface. In this case, the KNX/RS-232 interface assumes the role of a KNX end device. This means, that the KNX communication software of the device manages data-points in order to assign received telegrams to the according communication objects. The device independently creates and sends group telegrams, too. With the ETS (Engineering Tool Software), the group objects can be configured. In the ETS, the device appears as a conventional participant of the bus. Over the parameter dialog, data types of the group objects are configured. After that, group addresses can be set as customary.

The client can access data-points via RS-232 without knowledge about the KNX syntax. One client addresses a data point over the index of that object. If group addresses in the KNX network should change at any time, the Interface can be updated without problems by an ETS-Download. There is no need to update the configuration of the clients.

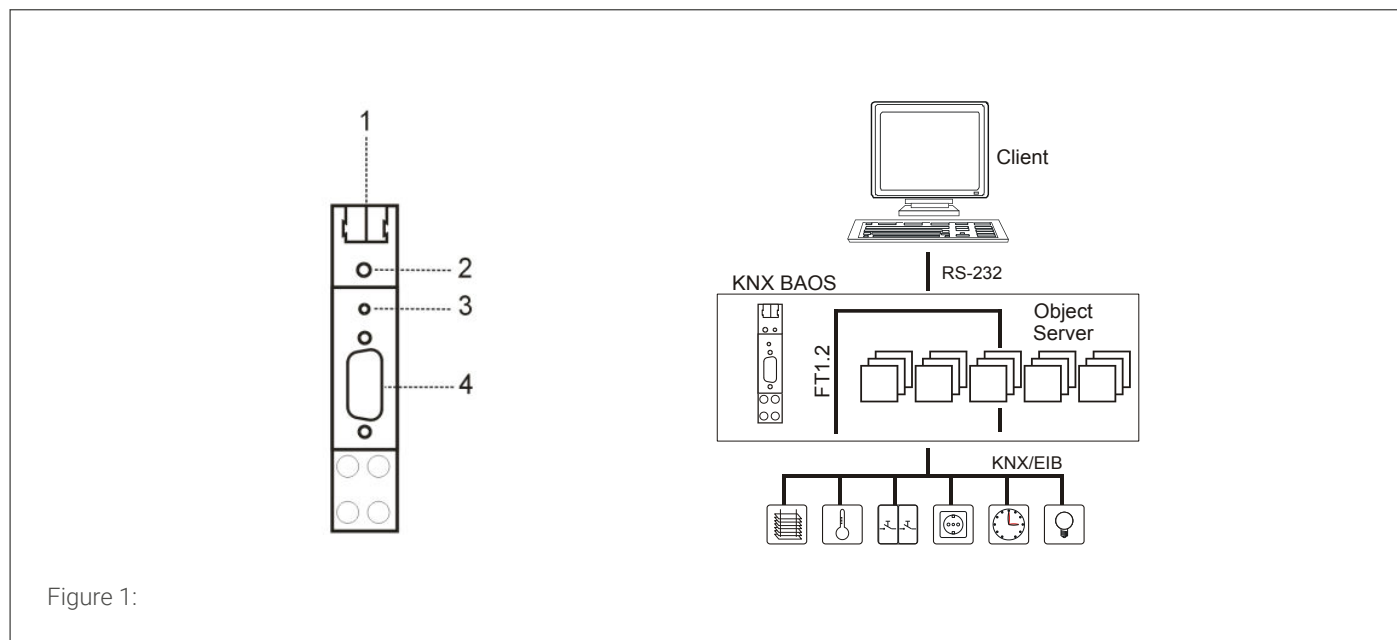
The interface supports up to 250 group objects and for each object there is separate memory reserved. Values of the communication objects will be updated automatically when they are addressed by a telegram, even if there is no client connected. This is advantageous, for a client; if it starts or wakes up, it can read the data image from the interface without stressing the KNX bus and without a noteworthy delay.



# Technical Information

## Installation and Connection

The KNX Serial BAOS 870 is designed for installation on DIN rail with a width of 1 unit (18mm). It has the following display and control elements:



1. Connector for KNX with a bus terminal
2. Learn key and learn LED (red)
3. Signal-LED (green) for KNX-Connection
4. Connector for RS-232

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## Technical Data

### Electrical Safety

- Protection classification (EN 60529): IP 20
- Safety extra low voltage SELV DC 29 V
- Galvanic isolation: 2,5 kV DC

### Ce Marking According to

- Low voltage directive 2014 / 35 / EU
- EMC directive 2014 / 30 / EU
- RoHS directive 2011 / 65 / EU (RoHS2)
- EN 50491-3: 2009, EN 50491-5-1: 2010
- EN 50491-5-2: 2010, EN 50491-5-3: 2010
- EN 61000-6-2: 2005, EN 61000-6-3: 2007 + A1: 2011
- EN 50581: 2012 (RoHS2)
- \*CE declaration can be requested at [info@weinzierl.de](mailto:info@weinzierl.de).

### Environmental Requirements

- Ambient temp. operating: - 5 ... + 45 °C
- Ambient temp. Non-op.: - 25 ... + 70 °C
- Rel. humidity (non-condensing): 5 % ... 93 %

### Mechanical Data

- Housing: Plastic
- DIN rail mounted device, width: 18 mm
- Weight: approx. 45 g

### Operating Controls

- Learning key for KNX

### Indicators

- Signal-LED (green) for KNX-Connection

### Power Supply

- The device is supplied by KNX bus.
- Current consumption: ca. 10 mA

### Connectors

- KNX: KNX connector
- RS-232: SUB-D connector (female, 9 pole)

### Protocol

- UART (19,2 kbit/s, 8 data bits, parity even, 1 stop bit)
- Frame Format: FT1.2 (IEC 870-5-1 and 870-5-2)
- Protocol telegrams: EMI2
- Protocol Data points: BAOS Binary V1  
Up to 250 group objects and 250 parameters



