KNX Serial BAOS 870 (RS-232, rail mounted)

Serial Interface and ObjectServer for KNX Bus
Operating and installation manual

Application

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 BAOS 870 uses the proven FT1.2 protocol (PEI 10) as message.

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, free SDKs, a demonstration tool as well as an ETS entry with 250 group objects are available.
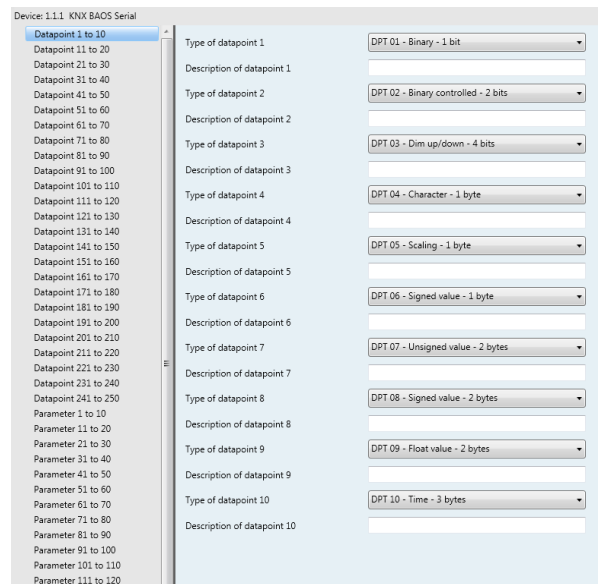Furthermore, individual ETS representations for OEM versions can be created.

ETS-Database

Via ETS the following parameters can be set:

Data points:

It's possible to parameterize up to 250 data points. Every data point can be allocated with a group address to send to bus. For receiving, more group addresses can be allocated per object.

Type of data points:
For every data point the type can be set.
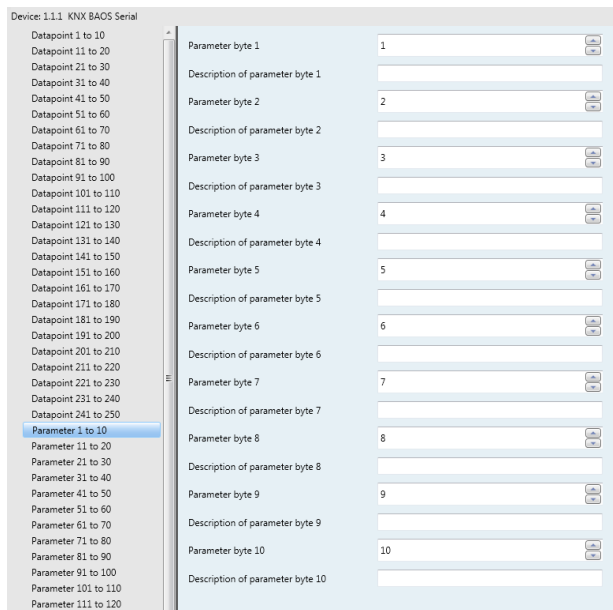The following data point types are selectable:

DPT 01 – Binary – 1 bit
DPT 02 – Binary controlled – 2 bits
DPT 03 – Dim up/down – 4 bits
DPT 04 – Character – 1 byte
DPT 05 – Scaling – 1 byte
DPT 06 – Signed value – 1 byte
DPT 07 – Unsigned value – 2 bytes
DPT 08 – Signed value – 2 bytes
DPT 09 – Float value – 2 bytes
DPT 10 – Time – 3 bytes
DPT 11 – Date – 3 bytes
DPT 12 – Unsigned value – 4 bytes
DPT 13 – Signed value – 4 bytes
DPT 14 – Float value – 4 bytes
DPT 15 – Access data – 4 bytes
DPT 17 – Scene – 1 byte
DPT 18 – Scene controlled – 1 byte
DPT – Unknown – 1 bit
DPT – Unknown – 2 bits
DPT – Unknown – 4 bits
DPT – Unknown – 6 bits
DPT – Unknown – 1 byte
DPT – Unknown – 2 bytes
DPT – Unknown – 3 bytes
DPT – Unknown – 4 bytes

Additional types for data points 1 to 32:
DPT 16 – Character string – 14 bytes
DPT – Unknown – 6 bytes
DPT – Unknown – 8 bytes
DPT – Unknown – 10 bytes
DPT – Unknown – 14 bytes

Parameter:

KNX Serial BAOS 870 has 250 free programmable bytes, which can be read via UART-Interface. The interpretation is performed by the client.
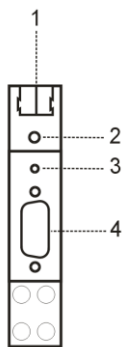

Parameter byte:
For each one of the 250 bytes a value between 0 and 255 is possible.

Description of parameter byte:
For each parameter byte there is a label, which is not downloaded in the device.

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