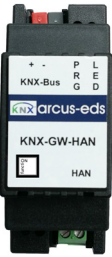arcus-eds | KNX

GW
HAN

KNX-GW-HAN-REG

KNX Gateway HAN	Product Group 1

Application : KNX bus coupling for counters with HAN interface

The HAN gateway is a slave for the HAN-bus which is similar to the MBUS.
Each used meter needs one gateway and one Gateway can only serve one meter.

In Norway the device is only available from function Products AS (https://www.function.no/produkter) and support is only available from them.

functiON

Product Data Base: **KNX-GW-HAN_v9.knxproj**

KNX Readable Data:
Active Power Import/Export
Reactive Power Import/Export
Instantaneous Current L1..L3
Instantaneous Voltage L1..L3
Cumulated Active Energy Import/Export
Cumulated Reactive Energy Import/Export

KNX-GW-HAN	Article	Article Description	Article-No.
KNX		Document: 4450_ex_KNX-GW-HAN-REG.pdf	
	KNX-GW-HAN REG	HAN gateway for one HAN Meter from - Kaifa - Kamstrup or - AIDON DIN Rail mounted housing 2 units width (35 mm) IP20 1,5m connection cable to meter included	60400012

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1 Application Description

The HAN Gateway is set up using the ETS (KNX Tool Software) with the associated application program.
The device is delivered unprogrammed.
All functions are parameterized and programmed by ETS.

Functions

The HAN-gateway is fetching metering values from smart meters with HAN interface and pushing them onto the KNX-bus.

The HAN Meters are sending their informations in different intervalls. Some Information, as active power, is sent every 10 seconds, other values like Cumulated energy only once per hour.

Also the sending of timestamps differ with manufacturers.

2 KNX Parameter

2.1 Global Settings

Global Settings

Active Power [Import]: DP1

Active Power [Export]: DP2

Reactive Power [Import]: DP3

Reactive Power [Export]: DP4

Instantaneous Current [L1]: DP5

Instantaneous Current [L2]: DP6

Instantaneous Current [L3]: DP7

Instantaneous Voltage [L1-L2]: DP8

Instantaneous Voltage [L1-L3]: DP9

Instantaneous Voltage [L2-L3]: DP10

Cumulated Active Energy [Import (A+)]: DP11

Cumulated Active Energy [Export (A-)]: DP12

Cumulated Reactive Energy [Import (R+)]: DP13

Cumulated Reactive Energy [Export (R-)]: DP14

KNX Settings

Sending Cycle   5 Minutes

HAN Settings

Meter Type   Kaifa

Kaifa ✓
Kamstrup
Aidon

Global Settings - KNX-GW-HAN-REG

Parameter	Setting	Description
KNX Sending Cycle	None 1 min .. 12 h	The global parameter "Sending cycle" determines the repetition rate of sending the values which are marked as "Send cyclical" on the DP-pages.
HAN Setting	Kaifa Kamstrup Aidon	The Meter Type defines the Manufacturer of the used meter.

2.2 HAN DPx

HAN DPx - KNX-GW-HAN-REG

Parameter	Setting	Description
Description	64 Characters ASCII	Description only for documentation purposes.
Send on Change	No Yes	Send new values to the KNX-bus if the value changed.
Send on Change of more than	0 % 1 % 3 % 5 % 10 %	Send new values only if the change is greater than xx%.
Send Cyclically	No Yes	Send the values to the bus also in a defined cycle time as set on the global settings page.
KNX DPT Type		Define the type of data sent to the KNX.
Adjustment Multiplier		(only for 4-Byte values) Adjustment For different measurement bases ex. KW->MW MWh->GWh etc.

3 KNX Objects

Nummer	Name	Objektfunktion
0	Output, Active Power [Import] -- DP1	Meter Value
1	Output, Active Power [Export] -- DP2	Meter Value
2	Output, Reactive Power [Import] -- DP3	Meter Value
3	Output, Reactive Power [Export] -- DP4	Meter Value
4	Output, Instantaneous Current [L1] -- DP5	Meter Value
5	Output, Instantaneous Current [L2] -- DP6	Meter Value
6	Output, Instantaneous Current [L3] -- DP7	Meter Value
7	Output, Instantaneous Voltage [L1-L2] -- DP8	Meter Value
8	Output, Instantaneous Voltage [L1-L3] -- DP9	Meter Value
9	Output, Instantaneous Voltage [L2-L3] -- DP10	Meter Value
10	Output, Cumulated Active Energy [Import (A+)] -- DP11	Meter Value
11	Output, Cumulated Active Energy [Export (A-)] -- DP12	Meter Value
12	Output, Cumulated Reactive Energy [Import (R+)] -- DP13	Meter Value
13	Output, Cumulated Reactive Energy [Export (R-)] -- DP14	Meter Value
32	Output, Serialnumber	Serialnumber
33	Output, Last Received Date	Date
35	Output, Last Received Time	Time
39	Output, Communication Error	Error

Object Description - KNX-GW-HAN-REG

Object	Description
Output, Value x	Measured value from meter
Output, Serialnumber	Serial number of the meter, only the last 14 characters are sent to the bus
Output, Last Received Date	Datestamp of the last measuring frame sent from the meter
Output, Last Received Time	Timestamp of the last measuring frame sent from the meter
Output, Communication Error	No Telegram received for more than 30 Seconds

4 Product Page

The HAN-gateway is fetching metering values from smart meters with HAN interface and pushing them onto the KNX-bus.

The HAN Meters are sending their informations in different intervalls. Some Information, as active power, is sent every
10 seconds, other values like Cumulated energy only once per hour.

Also the sending of timestamps differ with manufacturers.

The KNX-GW-HAN is set up using the ETS (KNX Tool Software) and the applicable application program.
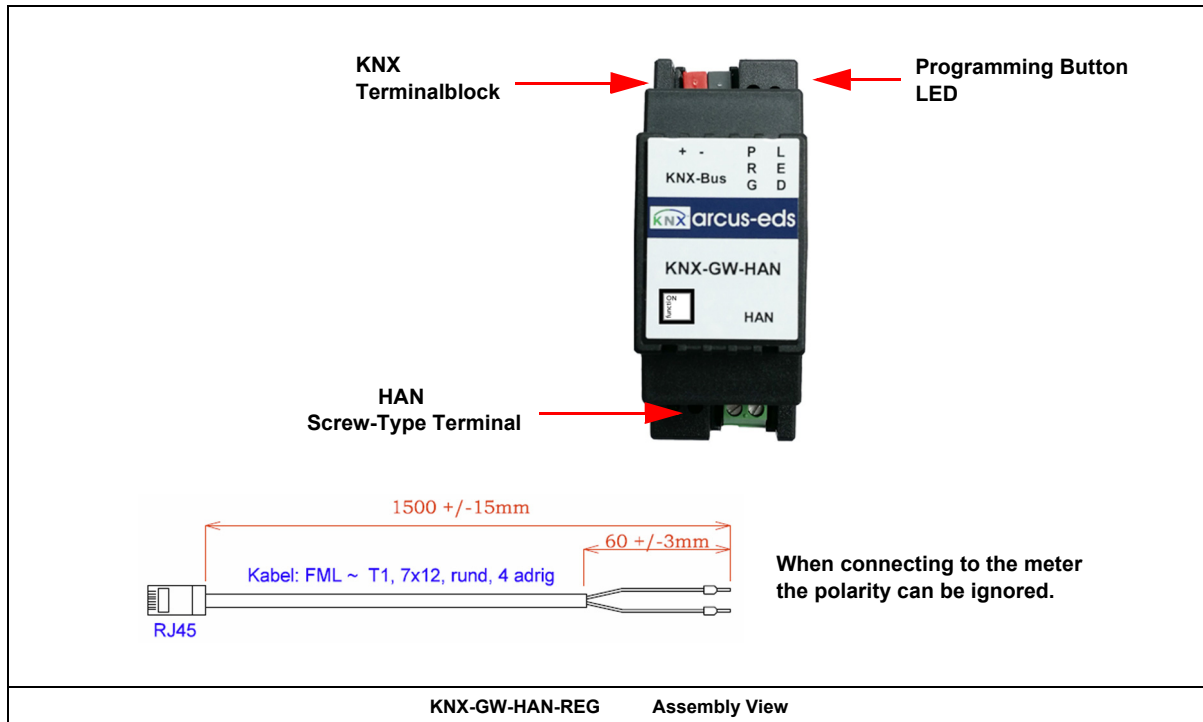
Article No.: 60400012

KNX-GW-HAN-RE

5 Technical Data

Technical Data   -   KNX-GW-HAN-REG

Maximum number of HAN devices	1
Maximum number of HAN data values	14
HAN Reading cycle time	10s bis 12h
HAN short circuit immunity	unlimited
Supply voltage	KNX Busvoltage 21 .. 32VDC
Power consumption	approx. 240 mW (at 24VDC)
Auxiliary power	not necessary
Bus coupler	integrated
Environment temperature	Storage: -20 .. +85 °C Operation: -20 .. +55 °C
ETS data file	**KNX-GW-HAN_v9.knxproj**
Connections	KNX 2-pin Terminal (red / black) HAN 2-pin terminal with screws
Protection class REG	IP20
Mounting style	DIN rail mounting
Housing	Plastics housing DIN rail / 2 units (35 mm)
Article number	60400012

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e1

6 Startup

The KNX-GW-HAN-REG is set up using the ETS (KNX Tool Software) and the applicable application program.
The gateway is delivered unprogrammed.
All functions are programmed and parameterized with ETS.
Please read the ETS instructions.

KNX
Terminalblock

Programming Button
LED

HAN
Screw-Type Terminal

1500 +/-15mm

60 +/-3mm

Kabel: FML ~ T1, 7x12, rund, 4 adrig

RJ45

**When connecting to the meter
the polarity can be ignored.**

KNX-GW-HAN-REG   Assembly View

7 Assembly

The **KNX-GW-HAN-REG** device is intended for DIN rail mounting in dry indoor environment.
Mountig is done by clipping the device on the DIN rail.
Protection class IP20 is achieved.

In Case of Bus Voltage Recurrence

The values of HAN devices are available again after a new reading.
The ETS parameter settings are retained.

Discharge Program and Reset Sensor

In order to delete the programming (projecting) and to reset the module back to delivery status, it must be switched to zero potential (disconnect the KNX bus coupler).
Press and hold the programming button while reconnecting the KNX-bus coupler and wait until the programming LED
lights up (approx. 5-10 seconds).
Now you can release the programming button.
The module is ready for renewed projecting.
If you release the programming button too early, repeat the aforementioned procedure.

Imprint

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Safety Regulations

Attention! Installation and mounting must be carried out by a qualified electrician.
The buyer/operator of the facility has to make sure that all relevant safety regulations, issued by VDE, TÜV and the responsible energy suppliers are respected. There is no warranty for defects and damages caused by improper use of the devices or by non-compliance with the operating manuals.

Warranty

We take over guarantees as required by law.
Please contact us if malfunctions occur. In this case, please send the device including a description of the error to the company's address named below.

Manufacturer

Registered Trademarks

   The CE trademark is a curb market sign that exclusively directs to autorities and does not include any assurance of product properties.

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