



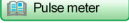






	<h2 style="margin: 0;">application software</h2>	
<ul style="list-style-type: none"> ▲  Manufacturers ▲  Hager Electro ▲  Energy meter <li style="margin-left: 20px;"> Pulse meter 	<p style="margin: 0;">KNX pulse gateway 1 and 3 channels</p> <p style="margin: 0;"><i>Electrical/Mechanical characteristics: see product user manual</i></p>	

	Product reference	Product designation	Application software ref	TP device  Radio device 
	TXE771	KNX pulse gateway 1 channel	STXE771	
	TXE773	KNX pulse gateway 3 channels	STXE773	

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1. Presentation

1.1 General

The purpose of this manual is to describe the operation and configuration of KNX devices using ETS software or Easy tool software.

It consists of 4 parts:

- General information.
- The parameters and KNX objects available.
- The Easy tool configurations are available.
- Technical characteristics.

1.2 About the program ETS

1.2.1 ETS compatibility

The application programs are compatible with ETS4 and ETS5. They can be downloaded from our website under the order number.

ETS Version	File extension of compatible files
ETS4 (V4.1.8 or higher)	*.knxprod
ETS5	*.knxprod

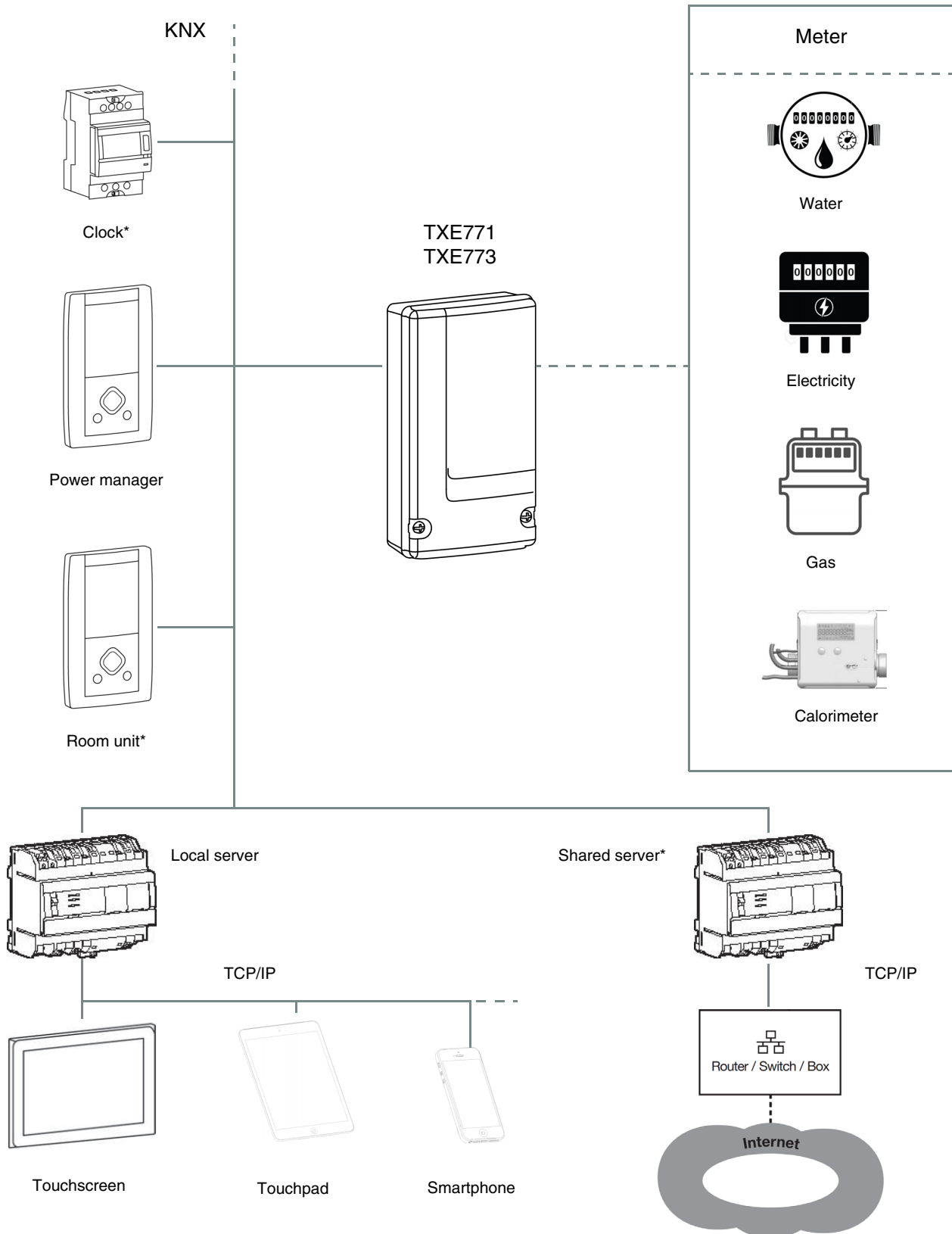
1.2.2 Application descriptions

Application	Product reference
STXE771	TXE771
STXE773	TXE773

2. General Description

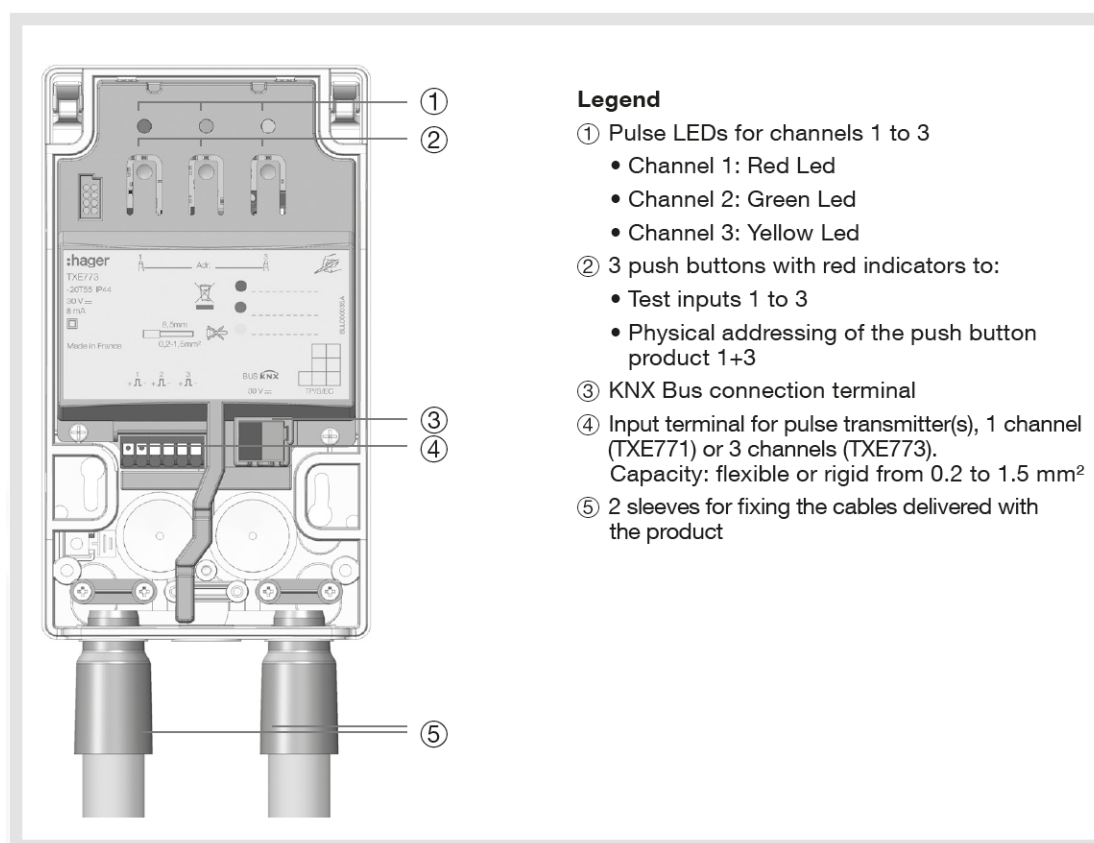
2.1 Installation of the device

2.1.1 Overview presentation



* Only programmable with ETS

2.1.2 Description of the device



2.1.3 Physical addressing

In order to perform the physical addressing or to check whether or not the bus is connected, simultaneously press buttons 1 and 3 on the product (see chapter 2.1.2 for the button location).

Light on = bus connected and ready for physical addressing

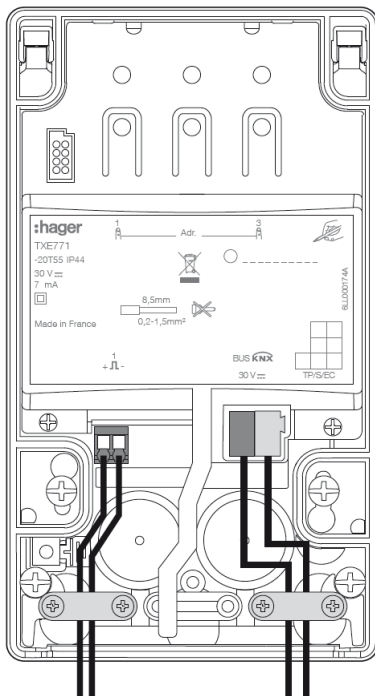
Programming mode is activated, until the physical address is transferred from ETS. Simultaneously pressing buttons 1 and 3 again exits physical addressing mode.

2.1.4 Test Function

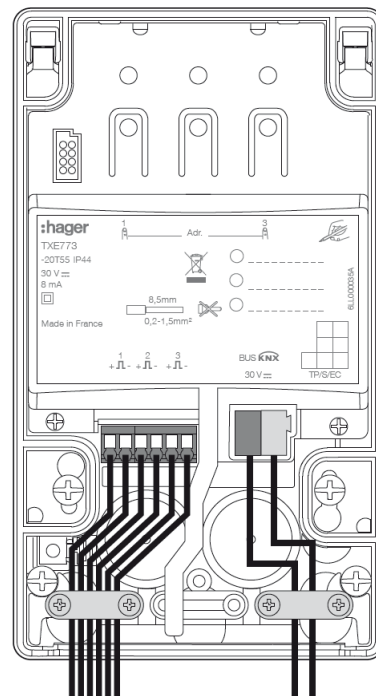
If the KNX bus is not connected, pressing pushbutton 2 activates the test function for a period of 5 minutes. This checks reception of the pulses by the flashing of the pulse LEDs. If the KNX bus is connected, pressing pushbutton 1, 2 or 3 forces sending of the index for the relevant channel on the bus.

2.1.5 Connection

TXE771



TXE773



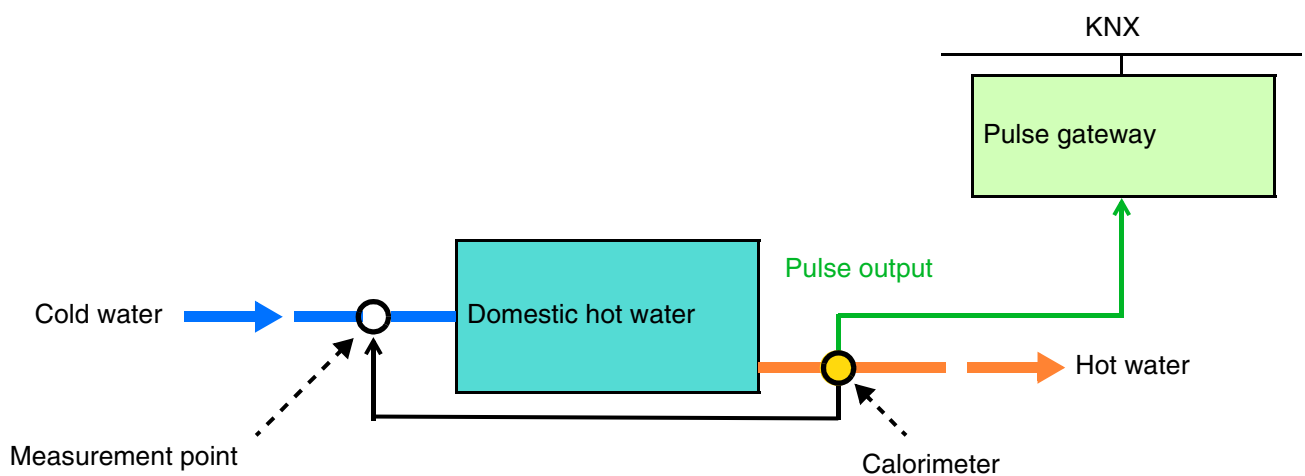
2.1.6 Principle

The gateway recovers the data from the energy meters (calorimeter or flowmeter) and then sends them on the KNX bus.

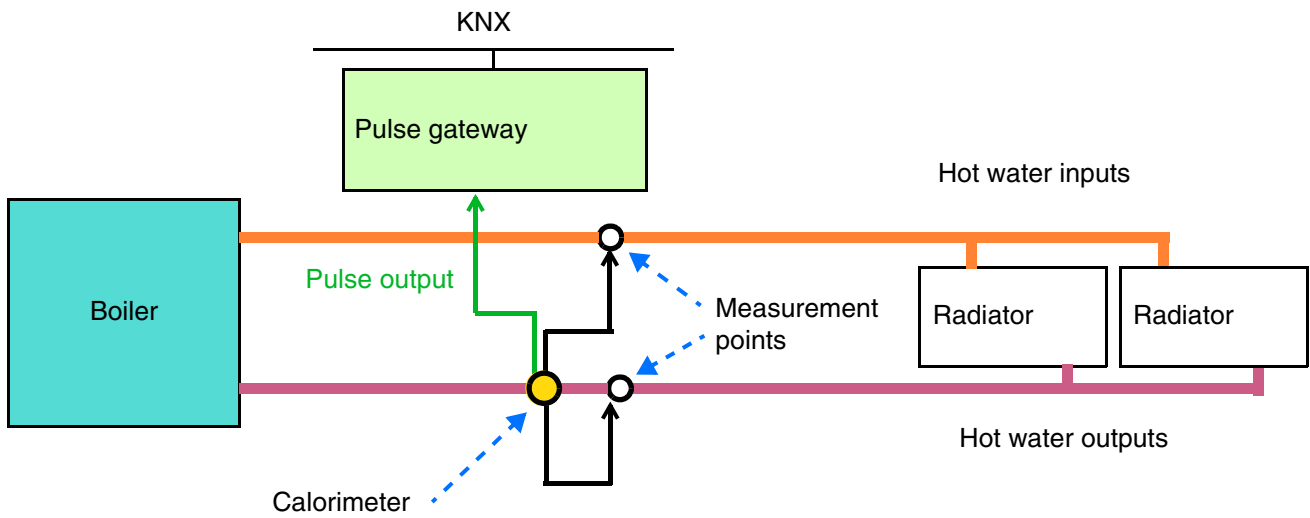
- Calorimeter

The calorimeter measures the temperature of the cold water and hot water and the water flow rate. This data determines the energy consumption which is then sent via the pulse gateway.

Example of calorimeter for domestic hot water



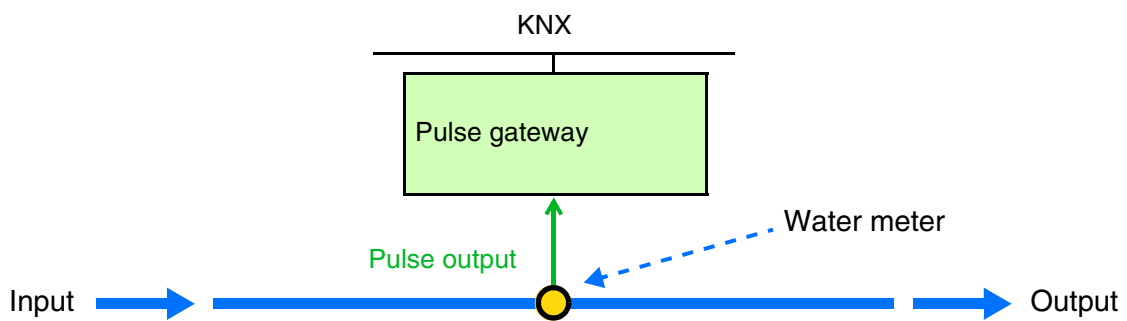
Example of calorimeter for warm water heating



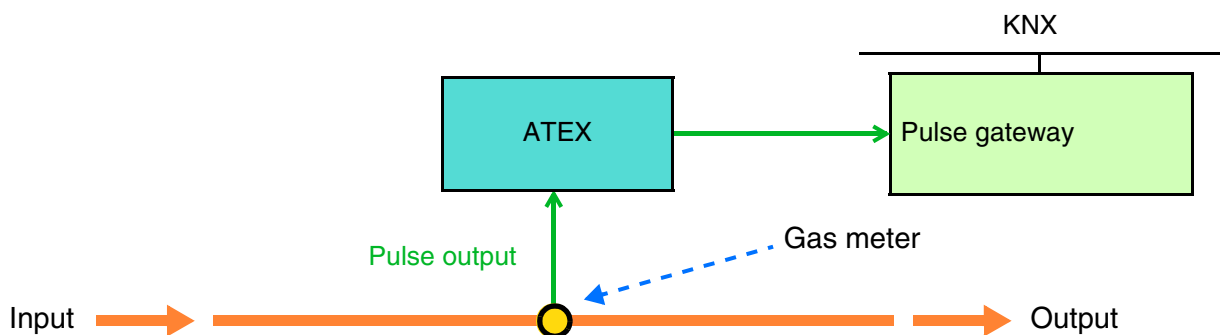
- Flow meter

The flow meter measures the amount of a fluid, liquid or gas. This data determines a consumption which is then sent via the pulse gateway.

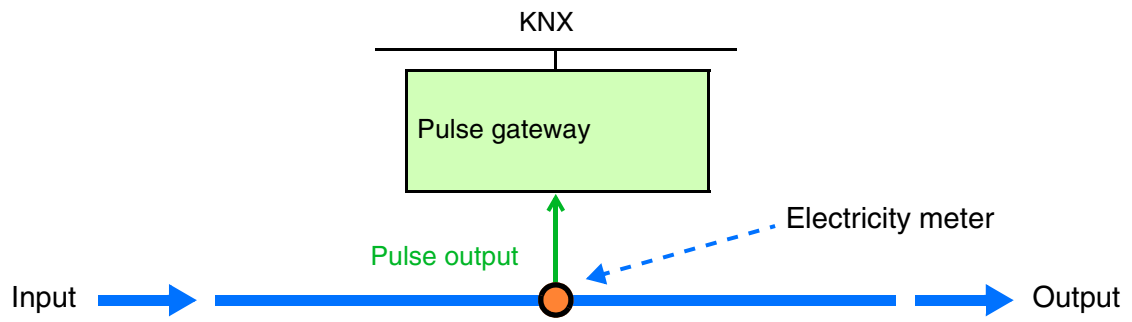
Example of flow meter for water consumption



Example of flow meter for gas consumption



Example of flow meter for electricity consumption



2.2 Function modules of the application

2.2.1 Primary functions

- Metering

The function comes in different formats:

- Volume expressed in liters or m³
- Electrical energy with or without tariff expressed in Wh or kWh
- Calorimeter expressed in Wh or kWh
- Pulse meter

For each meter (except the pulse meter) the product has:

- A partial meter which can be reset to 0
- A total meter where the initial value can be pre-set.

- Timestamp

The function is used to index the date and time of the measurement to each metering measurement.

- Tariff

The function is used to index each metering measurement to the current pricing.

- Power

The function is used to supply the value of the power demand for each metering channel via the bus.

- Energy

The function is used to supply the value of the energy consumed by each metering channel via the bus.

- Partial meter reset

The function is used to reset the partial meters for all the metering channels.

- Metering information dynamic mode

The function is used to refresh the metering information more frequently. The control is received from a viewing interface when the request to view the information is made.

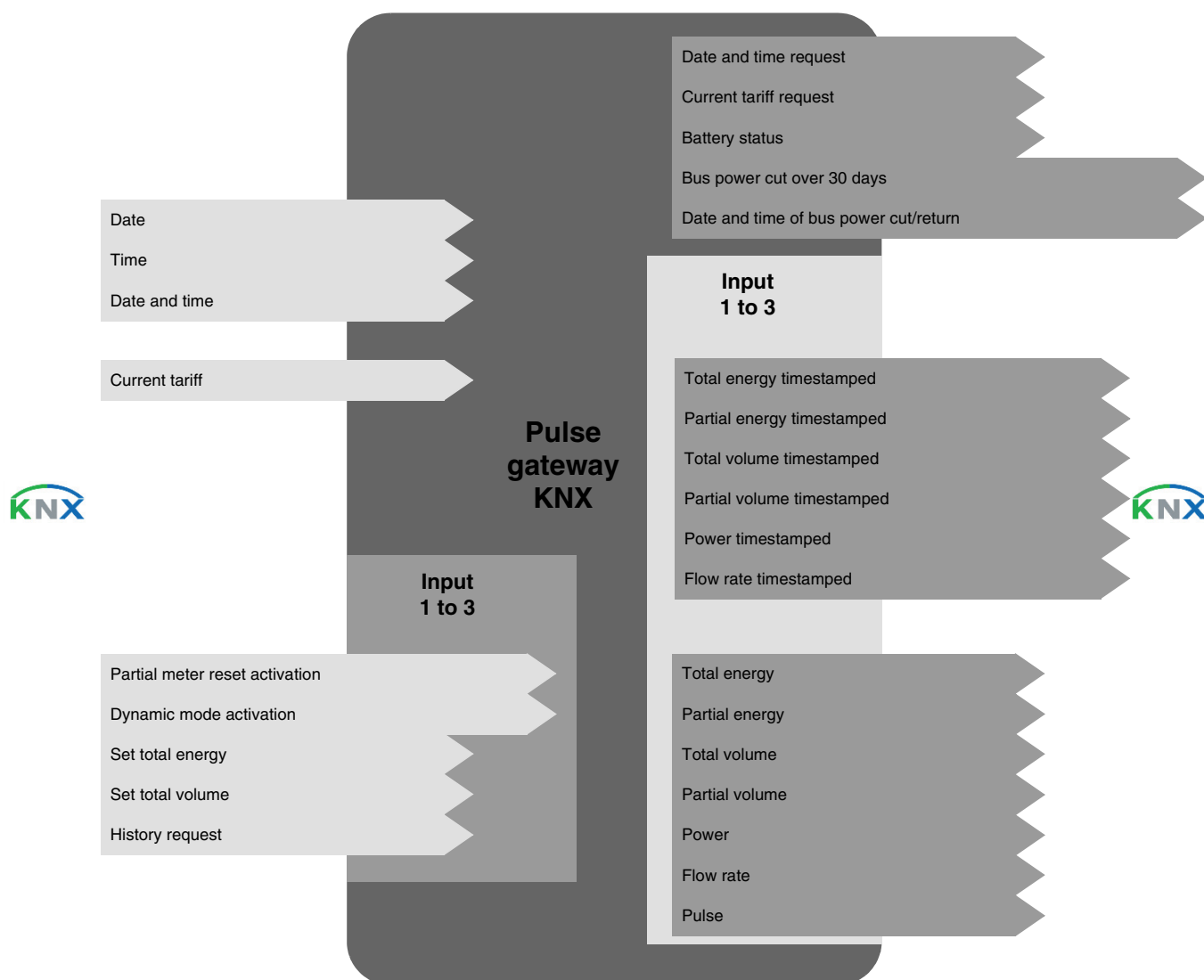
- Storing the measurement

The function is used to store the measuring indexes for 30 rolling days even if the KNX bus is not connected. This function is only available if the gateway has received the date and time at least once.

- Test

The function is used to check receipt of the pulses by the flashing of the LEDs.

2.2.2 Communication objects



2.2.3 Behaviour after bus power cut

During the KNX bus power cut, the product continues to carry out measurements for 30 days. Beyond 30 days, the product no longer makes measurements but stores the previous measurements in the memory.

When the power returns to the bus, the product sends all the measurements saved during the power cut on the KNX bus. The product sends information on the KNX bus when the bus power cut exceeds 30 days.

3. Programming by ETS

3.1 Meter type

This parameter defines the operating mode of each channel. These parameters are available for each channel individually.

The following parameters are available:

- Volume
- Energy + tariff information (6 bytes)
- Energy only (4 bytes)
- Calorimeter
- Pulse meter

3.1.1 Volume

This function is used to measure a volume expressed in liters or in m³. It is used to measure gas and water consumption.

Parameter	Description	Value
Timestamp	The objects concerning flow rate, total and partial volume are measured and displayed: Without timestamp With timestamp With and without timestamp	Without* With With and without

* Default value

Communication objects: Without timestamp

- 12 – Input 1 – Total volume (4 Bytes – 14.076 DPT_Value_Volume)
- 33 – Input 2 – Total volume (4 Bytes – 14.076 DPT_Value_Volume)
- 58 – Input 3 – Total volume (4 Bytes – 14.076 DPT_Value_Volume)
- 13 – Input 1 – Partial volume (4 Bytes – 14.076 DPT_Value_Volume)
- 34 – Input 2 – Partial volume (4 Bytes – 14.076 DPT_Value_Volume)
- 59 – Input 3 – Partial volume (4 Bytes – 14.076 DPT_Value_Volume)
- 15 – Input 1 – Flow rate (4 Bytes – 14.077 DPT_Value_Volume_Flux)
- 36 – Input 2 – Flow rate (4 Bytes – 14.077 DPT_Value_Volume_Flux)
- 61 – Input 3 – Flow rate (4 Bytes – 14.077 DPT_Value_Volume_Flux)

Communication objects: With timestamp

- 4 – Input 1 – Total volume timestamped (12 Bytes – 14.076 + DateTime DPT_DateTime_Value_Volume)
- 27 – Input 2 – Total volume timestamped (12 Bytes – 14.076 + DateTime DPT_DateTime_Value_Volume)
- 50 – Input 3 – Total volume timestamped (12 Bytes – 14.076 + DateTime DPT_DateTime_Value_Volume)
- 5 – Input 1 – Partial volume timestamped (12 Bytes – 14.076 + DateTime DPT_DateTime_Value_Volume)
- 28 – Input 2 – Partial volume timestamped (12 Bytes – 14.076 + DateTime DPT_DateTime_Value_Volume)
- 51 – Input 3 – Partial volume timestamped (12 Bytes – 14.076 + DateTime DPT_DateTime_Value_Volume)
- 7 – Input 1 – Flow rate timestamped (12 Bytes – 14.077 + DateTime DPT_DateTime_Value_Volume_Flux)
- 30 – Input 2 – Flow rate timestamped (12 Bytes – 14.077 + DateTime DPT_DateTime_Value_Volume_Flux)
- 53 – Input 3 – Flow rate timestamped (12 Bytes – 14.077 + DateTime DPT_DateTime_Value_Volume_Flux)

Communication objects: With and without timestamp

- 4 – Input 1 – Total volume timestamped (12 Bytes – 14.076 + DateTime DPT_DateTime_Value_Volume)
- 27 – Input 2 – Total volume timestamped (12 Bytes – 14.076 + DateTime DPT_DateTime_Value_Volume)
- 50 – Input 3 – Total volume timestamped (12 Bytes – 14.076 + DateTime DPT_DateTime_Value_Volume)
- 5 – Input 1 – Partial volume timestamped (12 Bytes – 14.076 + DateTime DPT_DateTime_Value_Volume)
- 28 – Input 2 – Partial volume timestamped (12 Bytes – 14.076 + DateTime DPT_DateTime_Value_Volume)
- 51 – Input 3 – Partial volume timestamped (12 Bytes – 14.076 + DateTime DPT_DateTime_Value_Volume)
- 7 – Input 1 – Flow rate timestamped (12 Bytes – 14.077 + DateTime DPT_DateTime_Value_Volume_Flux)
- 30 – Input 2 – Flow rate timestamped (12 Bytes – 14.077 + DateTime DPT_DateTime_Value_Volume_Flux)
- 53 – Input 3 – Flow rate timestamped (12 Bytes – 14.077 + DateTime DPT_DateTime_Value_Volume_Flux)
- 12 – Input 1 – Total volume (4 Bytes – 14.076 DPT_Value_Volume)
- 33 – Input 2 – Total volume (4 Bytes – 14.076 DPT_Value_Volume)
- 58 – Input 3 – Total volume (4 Bytes – 14.076 DPT_Value_Volume)
- 13 – Input 1 – Partial volume (4 Bytes – 14.076 DPT_Value_Volume)
- 34 – Input 2 – Partial volume (4 Bytes – 14.076 DPT_Value_Volume)
- 59 – Input 3 – Partial volume (4 Bytes – 14.076 DPT_Value_Volume)
- 15 – Input 1 – Flow rate (4 Bytes – 14.077 DPT_Value_Volume_Flux)
- 36 – Input 2 – Flow rate (4 Bytes – 14.077 DPT_Value_Volume_Flux)
- 61 – Input 3 – Flow rate (4 Bytes – 14.077 DPT_Value_Volume_Flux)

Parameter	Description	Value
Volume unit	The consumption measurement volume unit is expressed: In liters In m ³	Liter* m ³

* Default value

Parameter	Description	Value
Volume pulse value (l)	This parameter defines the value of a single pulse received from the channel concerned. According to the volume unit, the value entered is expressed: In liters In m ³	0.1... 1 *...1000 0.0001... 0.001 *...100

Parameter	Description	Value
Volume meter: preset value (l)	This parameter defines the initial value of the meter. If the number entered is 0, the value of the meter in the product is not deleted.	0 *...2147483647



The emission mode being the same for each type of meter (except the pulse meter), please refer to chapter 3.2.

Partial volume

The partial volume can be reset using the **Partial meter reset activation** object. If the object receives the value 1, the partial meter is reset.

3.1.2 Energy + tariff information (6 bytes)

This function is used to measure energy expressed in Wh or in kWh. It also has tariff information allowing an energy consumption calculation according to the tariff applied. It is used to measure electricity consumption with devices having the tariff information.

Meter type	Energy + tariff information (6 bytes)
Timestamp	Without
Energy unit	<input checked="" type="radio"/> Wh <input type="radio"/> kWh
Energy pulse value (Wh)	100
If preset = 0, the meter value in the product is not erased	
Energy meter: preset value tariff 0 (Wh)	0
Energy meter: preset value tariff 1 (Wh)	0
Energy meter: preset value tariff 2 (Wh)	0
Energy meter: preset value tariff 3 (Wh)	0
Energy meter: preset value tariff 4 (Wh)	0
Energy meter: preset value tariff 5 (Wh)	0
Energy meter: preset value tariff 6 (Wh)	0
Energy meter: preset value tariff 7 (Wh)	0
Energy meter: preset value tariff 8 (Wh)	0
Energy meter: preset value tariff 9 (Wh)	0
Energy meter: preset value tariff 10 (Wh)	0

* Default value

Parameter	Description	Value
Timestamp	The objects concerning power, total and partial energy are measured and displayed: Without timestamp With timestamp With and without timestamp	Without* With With and without

Communication objects: Without timestamp

- 8 – Input 1 – Total energy (6 Bytes – 235.001 DPT_Tariff_ActiveEnergy)
- 31 – Input 2 – Total energy (6 Bytes – 235.001 DPT_Tariff_ActiveEnergy)
- 54 – Input 3 – Total energy (6 Bytes – 235.001 DPT_Tariff_ActiveEnergy)
- 9 – Input 1 – Partial energy (6 Bytes – 235.001 DPT_Tariff_ActiveEnergy)
- 32 – Input 2 – Partial energy (6 Bytes – 235.001 DPT_Tariff_ActiveEnergy)
- 55 – Input 3 – Partial energy (6 Bytes – 235.001 DPT_Tariff_ActiveEnergy)
- 14 – Input 1 – Power (4 Bytes – 14.056 DPT_Value_Power)
- 35 – Input 2 – Power (4 Bytes – 14.056 DPT_Value_Power)
- 60 – Input 3 – Power (4 Bytes – 14.056 DPT_Value_Power)

Communication objects: With timestamp

- 0 – Input 1 – Total energy timestamped (14 Bytes – 249.001 DPT_DateTime_Tariff_ActiveEnergy)
- 23 – Input 2 – Total energy timestamped (14 Bytes – 249.001 DPT_DateTime_Tariff_ActiveEnergy)
- 46 – Input 3 – Total energy timestamped (14 Bytes – 249.001 DPT_DateTime_Tariff_ActiveEnergy)
- 1 – Input 1 – Partial energy timestamped (14 Bytes – 249.001 DPT_DateTime_Tariff_ActiveEnergy)
- 24 – Input 2 – Partial energy timestamped (14 Bytes – 249.001 DPT_DateTime_Tariff_ActiveEnergy)
- 47 – Input 3 – Partial energy timestamped (14 Bytes – 249.001 DPT_DateTime_Tariff_ActiveEnergy)
- 6 – Input 1 – Power timestamped (12 Bytes – 266.056 DPT_DateTime_Value_Power)
- 29 – Input 2 – Power timestamped (12 Bytes – 266.056 DPT_DateTime_Value_Power)
- 52 – Input 3 – Power timestamped (12 Bytes – 266.056 DPT_DateTime_Value_Power)

Communication objects: With and without timestamp

- 0 – Input 1 – Total energy timestamped (14 Bytes – 249.001 DPT_DateTime_Tariff_ActiveEnergy)
- 23 – Input 2 – Total energy timestamped (14 Bytes – 249.001 DPT_DateTime_Tariff_ActiveEnergy)
- 46 – Input 3 – Total energy timestamped (14 Bytes – 249.001 DPT_DateTime_Tariff_ActiveEnergy)
- 1 – Input 1 – Partial energy timestamped (14 Bytes – 249.001 DPT_DateTime_Tariff_ActiveEnergy)
- 24 – Input 2 – Partial energy timestamped (14 Bytes – 249.001 DPT_DateTime_Tariff_ActiveEnergy)
- 47 – Input 3 – Partial energy timestamped (14 Bytes – 249.001 DPT_DateTime_Tariff_ActiveEnergy)
- 6 – Input 1 – Power timestamped (12 Bytes – 266.056 DPT_DateTime_Value_Power)
- 29 – Input 2 – Power timestamped (12 Bytes – 266.056 DPT_DateTime_Value_Power)
- 52 – Input 3 – Power timestamped (12 Bytes – 266.056 DPT_DateTime_Value_Power)
- 8 – Input 1 – Total energy (6 Bytes – 235.001 DPT_Tariff_ActiveEnergy)
- 31 – Input 2 – Total energy (6 Bytes – 235.001 DPT_Tariff_ActiveEnergy)
- 54 – Input 3 – Total energy (6 Bytes – 235.001 DPT_Tariff_ActiveEnergy)
- 9 – Input 1 – Partial energy (6 Bytes – 235.001 DPT_Tariff_ActiveEnergy)
- 32 – Input 2 – Partial energy (6 Bytes – 235.001 DPT_Tariff_ActiveEnergy)
- 55 – Input 3 – Partial energy (6 Bytes – 235.001 DPT_Tariff_ActiveEnergy)
- 14 – Input 1 – Power (4 Bytes – 14.056 DPT_Value_Power)
- 35 – Input 2 – Power (4 Bytes – 14.056 DPT_Value_Power)
- 60 – Input 3 – Power (4 Bytes – 14.056 DPT_Value_Power)

* Default value

Parameter	Description	Value
Energy unit	The energy unit for consumption measurement is expressed: In Wh In kWh	Wh* kWh

Parameter	Description	Value
Energy pulse value (Wh)	This parameter defines the value of a single pulse received from the channel concerned. According to the energy unit, the value entered is expressed: In Wh In kWh	1...100*...1000 1*...100

Parameter	Description	Value
Energy meter: preset value tariff 0...10 (Wh)	This parameter defines the initial value of the meter. If the number entered is 0, the value of the meter in the product is not deleted.	0*...4294967295



The emission mode being the same for each type of meter (except the pulse meter), please refer to chapter 3.2.

Partial energy

The partial energy meter can be reset using the **Partial meter reset activation** object. If the object receives the value 1, the partial meter is reset.

3.1.3 Energy only (4 bytes)

This function is used to measure energy expressed in Wh or in kWh. It is used to measure electricity consumption.

Meter type	Energy only (4 bytes) ▼
Timestamp	Without ▼
Energy unit	<input checked="" type="radio"/> Wh <input type="radio"/> kWh
Energy pulse value (Wh)	100 ▲▼
If preset = 0, the meter value in the product is not erased	
Energy meter: preset value (Wh)	0 ▲▼

* Default value

Parameter	Description	Value
Timestamp	The objects concerning power, total and partial energy are measured and displayed: Without timestamp With timestamp With and without timestamp	Without* With With and without

Communication objects: Without timestamp

- 10 – Input 1 – Total energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 31 – Input 2 – Total energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 56 – Input 3 – Total energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 11 – Input 1 – Partial energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 32 – Input 2 – Partial energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 57 – Input 3 – Partial energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 14 – Input 1 – Power (4 Bytes – 14.056 DPT_Value_Power)
- 35 – Input 2 – Power (4 Bytes – 14.056 DPT_Value_Power)
- 60 – Input 3 – Power (4 Bytes – 14.056 DPT_Value_Power)

Communication objects: With timestamp

- 2 – Input 1 – Total energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 25 – Input 2 – Total energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 48 – Input 3 – Total energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 3 – Input 1 – Partial energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 26 – Input 2 – Partial energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 49 – Input 3 – Partial energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 6 – Input 1 – Power timestamped (12 Bytes – 266.056 DPT_DateTime_Value_Power)
- 29 – Input 2 – Power timestamped (12 Bytes – 266.056 DPT_DateTime_Value_Power)
- 52 – Input 3 – Power timestamped (12 Bytes – 266.056 DPT_DateTime_Value_Power)

Communication objects: With and without timestamp

- 2 – Input 1 – Total energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 25 – Input 2 – Total energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 48 – Input 3 – Total energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 3 – Input 1 – Partial energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 26 – Input 2 – Partial energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 49 – Input 3 – Partial energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 6 – Input 1 – Power timestamped (12 Bytes – 266.056 DPT_DateTime_Value_Power)
- 29 – Input 2 – Power timestamped (12 Bytes – 266.056 DPT_DateTime_Value_Power)
- 52 – Input 3 – Power timestamped (12 Bytes – 266.056 DPT_DateTime_Value_Power)
- 10 – Input 1 – Total energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 31 – Input 2 – Total energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 56 – Input 3 – Total energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 11 – Input 1 – Partial energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 32 – Input 2 – Partial energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 57 – Input 3 – Partial energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 14 – Input 1 – Power (4 Bytes – 14.056 DPT_Value_Power)
- 35 – Input 2 – Power (4 Bytes – 14.056 DPT_Value_Power)
- 60 – Input 3 – Power (4 Bytes – 14.056 DPT_Value_Power)

Parameter	Description	Value
Energy unit	The energy unit for consumption measurement is expressed: In Wh In kWh	Wh* kWh

* Default value

Parameter	Description	Value
Energy pulse value (Wh)	This parameter defines the value of a single pulse received from the channel concerned. According to the energy unit, the value entered is expressed: In Wh In kWh	 1...100*...1000 1*...100

Parameter	Description	Value
Energy meter: preset value (Wh)	This parameter defines the initial value of the meter. If the number entered is 0, the value of the meter in the product is not deleted.	0*...4294967295



The emission mode being the same for each type of meter (except the pulse meter), please refer to chapter 3.2.

Partial energy

The partial energy meter can be reset using the **Partial meter reset activation** object. If the object receives the value 1, the partial meter is reset.

3.1.4 Calorimeter

This function is used to measure energy expressed in Wh or in kWh. It is used to measure hot water or heating consumption.

Meter type	Calorimeter
Timestamp	Without
Energy unit	<input checked="" type="radio"/> Wh <input type="radio"/> kWh
Energy pulse value (Wh)	100
If preset = 0, the meter value in the product is not erased	
Energy meter: preset value (Wh)	0

Parameter	Description	Value
Timestamp	The objects concerning power, total and partial energy are measured and displayed: Without timestamp With timestamp With and without timestamp	 Without* With With and without

* Default value

Communication objects: Without timestamp

- 10 – Input 1 – Total energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 31 – Input 2 – Total energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 56 – Input 3 – Total energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 11 – Input 1 – Partial energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 32 – Input 2 – Partial energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 57 – Input 3 – Partial energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 14 – Input 1 – Power (4 Bytes – 14.056 DPT_Value_Power)
- 35 – Input 2 – Power (4 Bytes – 14.056 DPT_Value_Power)
- 60 – Input 3 – Power (4 Bytes – 14.056 DPT_Value_Power)

Communication objects: With timestamp

- 2 – Input 1 – Total energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 25 – Input 2 – Total energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 48 – Input 3 – Total energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 3 – Input 1 – Partial energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 26 – Input 2 – Partial energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 49 – Input 3 – Partial energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 6 – Input 1 – Power timestamped (12 Bytes – 266.056 DPT_DateTime_Value_Power)
- 29 – Input 2 – Power timestamped (12 Bytes – 266.056 DPT_DateTime_Value_Power)
- 52 – Input 3 – Power timestamped (12 Bytes – 266.056 DPT_DateTime_Value_Power)

Communication objects: With and without timestamp

- 2 – Input 1 – Total energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 25 – Input 2 – Total energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 48 – Input 3 – Total energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 3 – Input 1 – Partial energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 26 – Input 2 – Partial energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 49 – Input 3 – Partial energy timestamped (12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy)
- 6 – Input 1 – Power timestamped (12 Bytes – 266.056 DPT_DateTime_Value_Power)
- 29 – Input 2 – Power timestamped (12 Bytes – 266.056 DPT_DateTime_Value_Power)
- 52 – Input 3 – Power timestamped (12 Bytes – 266.056 DPT_DateTime_Value_Power)
- 10 – Input 1 – Total energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 31 – Input 2 – Total energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 56 – Input 3 – Total energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 11 – Input 1 – Partial energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 32 – Input 2 – Partial energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 57 – Input 3 – Partial energy (4 Bytes – 13.010 DPT_ActiveEnergy)
- 14 – Input 1 – Power (4 Bytes – 14.056 DPT_Value_Power)
- 35 – Input 2 – Power (4 Bytes – 14.056 DPT_Value_Power)
- 60 – Input 3 – Power (4 Bytes – 14.056 DPT_Value_Power)

Parameter	Description	Value
Energy unit	The energy unit for consumption measurement is expressed: In Wh In kWh	Wh* kWh

Parameter	Description	Value
Energy pulse value (Wh)	This parameter defines the value of a single pulse received from the channel concerned. According to the energy unit, the value entered is expressed: In Wh In kWh	1...100*...1000 1*...100

* Default value

Parameter	Description	Value
Energy meter: preset value (Wh)	This parameter defines the initial value of the meter. If the number entered is 0, the value of the meter in the product is not deleted.	0*...4294967295

The emission mode being the same for each type of meter (except the pulse meter), please refer to chapter 3.2.

Partial energy

The partial energy meter can be reset using the **Partial meter reset activation** object. If the object receives the value 1, the partial meter is reset.

3.1.5 Pulse meter

This function is used to send a pulse on the KNX bus according to the channel.

Meter type	Pulse meter
Emission on bus every x pulse	1

Parameter	Description	Value
Emission on bus every x pulse	This parameter defines the value of the interval (in numbers of pulses) for the frequency at which the Pulse object is emitted.	1*...65535

If the value entered is 10 pulses, the **Pulse** object will be emitted each time it has counted 10 pulses (one pulse on the KNX bus corresponds to 10 real pulses on the product input).

Communication objects:

16 – Input 1 – Pulse (1 bit – 1.002 DPT_Bool)

37 – Input 2 – Pulse (1 bit – 1.002 DPT_Bool)

62 – Input 3 – Pulse (1 bit – 1.002 DPT_Bool)

3.2 Emission mode

These parameters determine the meter emission conditions on the KNX bus. The objects are emitted according to a configurable variation of the meter or periodically according to a.

The emission mode parameters are identical whatever the type of meter (except for the pulse meter). Only the units and values of the variations change. The following description is for an energy type meter.

Total volume emission mode	On change and periodically
Emission of total volume every	2 min 30 s
Emission total volume by variation of (l)	10
Partial volume emission mode	On change and periodically
Emission of partial volume every	2 min 30 s
Emission partial volume by variation of (l)	10
Flow rate emission mode	On change and periodically
Emission of flow rate every	2 min 30 s
Emission of flow rate by variation of (l/h)	10
Dynamic mode duration	15 min
Emission of flow rate (dynamic mode) by variation of (l/h)	5

Parameter	Description	Value
Total energy emission mode	The Total energy object is emitted: Each time the object value changes. Periodically after a configurable time. Each time the value of the object changes and periodically according to an adjustable duration.	On change Periodically On change and periodically*

Parameter	Description	Value
Emission of total energy every	This parameter determines the time interval between each emission of the Total energy object.	1 min, 1 min 15 s, 1 min 30 s, 2 min, 2 min 30 s* , 3 min, 5 min, 15 min, 20 min, 30 min, 1 h, 2 h, 3 h, 5 h, 12 h, 24 h

Parameter	Description	Value
Emission total energy by variation of (Wh)	This parameter defines the value of the interval (in Wh) of the frequency at which the Total energy object is emitted.	1... 100* ...4294967295



If the value entered is 200Wh, the **Total energy** object will be emitted each time it has counted 200Wh.

* Default value

Parameter	Description	Value
Partial energy emission mode	The Partial energy object is emitted: Each time the object value changes. Periodically after a configurable time. Each time the value of the object changes and periodically according to an adjustable duration.	On change Periodically On change and periodically*

Parameter	Description	Value
Emission of partial energy every	This parameter determines the time interval between each emission of the Partial energy object.	1 min, 1 min 15 s, 1 min 30 s, 2 min, 2 min 30 s* , 3 min, 5 min, 15 min, 20 min, 30 min, 1 h, 2 h, 3 h, 5 h, 12 h, 24 h

Parameter	Description	Value
Emission partial energy by variation of (Wh)	This parameter defines the value (in Wh) of the frequency at which the Partial energy object is emitted.	1... 100* ...4294967295



If the value entered is 200Wh, the **Partial energy** object will be emitted each time it has counted 200Wh.

Parameter	Description	Value
Power emission mode	The Power object is emitted: Each time the object value changes. Periodically after a configurable time. Each time the value of the object changes and periodically according to an adjustable duration.	On change Periodically On change and periodically*

Parameter	Description	Value
Emission of power every	This parameter determines the time interval between each emission of the Power object.	1 min, 1 min 15 s, 1 min 30 s, 2 min, 2 min 30 s* , 3 min, 5 min, 15 min, 20 min, 30 min, 1 h, 2 h, 3 h, 5 h, 12 h, 24 h

Parameter	Description	Value
Emission of power by variation of (W)	This parameter defines the value of the interval (in Wh) of the frequency at which the Power object is emitted.	1... 500* ...2147483647



If the value entered is 200W, the **Power** object will be emitted each time it has counted 200W.

* Default value

Dynamic mode

The function is used to refresh the metering information more frequently. The control is received from a viewing interface when the request to view the information is made.

Parameter	Description	Value
Dynamic mode duration	This parameter determines the maximum duration where dynamic mode is active for a request.	1 min, 1 min 15 s, 1 min 30 s, 2 min, 2 min 30 s, 3 min, 5 min, 15 min* , 20 min, 30 min, 1 h, 2 h, 3 h, 5 h, 12 h, 24 h

Parameter	Description	Value
Emission of power (dynamic mode) by variation of (W)	This parameter defines the value of the interval (in Wh) of the frequency at which the Power object is emitted during dynamic mode.	1... 10* ...2147483647

Communication objects:

14 – Input 1 – Power (4 Bytes – 14.056 DPT_Value_Power)

35 – Input 2 – Power (4 Bytes – 14.056 DPT_Value_Power)

60 – Input 3 – Power (4 Bytes – 14.056 DPT_Value_Power)

Dynamic mode is triggered using the **Dynamic mode activation** object.

Communication objects:

18 – Input 1 – Dynamic mode activation (1 bit – 1.003 DPT_Enable)

39 – Input 2 – Dynamic mode activation (1 bit – 1.003 DPT_Enable)

64 – Input 3 – Dynamic mode activation (1 bit – 1.003 DPT_Enable)

When the product receives this information, it sends the instantaneous power or the flow rate according to the configuration of the device (1 = Dynamic mode starts, 0 = Dynamic mode stops).














































When the gateway leaves dynamic mode (end of the duration or end of dynamic mode) the product resumes the previous operating mode.

* Default value

3.3 Communication objects

3.3.1 Objects per channel

	Number	Name	Function of the object	Length	C	R	W	T
	0	Input 1	Total energy timestamped	14 byte	C	R	-	T
	1	Input 1	Partial energy timestamped	14 byte	C	R	-	T
	2	Input 1	Total energy timestamped	12 byte	C	R	-	T
	3	Input 1	Partial energy timestamped	12 byte	C	R	-	T
	4	Input 1	Total volume timestamped	12 byte	C	R	-	T
	5	Input 1	Partial volume timestamped	12 byte	C	R	-	T
	6	Input 1	Power timestamped	12 byte	C	R	-	T
	7	Input 1	Flow rate timestamped	12 byte	C	R	-	T
	8	Input 1	Total energy	6 byte	C	R	-	T
	9	Input 1	Partial energy	6 byte	C	R	-	T
	10	Input 1	Total energy	4 byte	C	R	-	T
	11	Input 1	Partial energy	4 byte	C	R	-	T
	12	Input 1	Total volume	4 byte	C	R	-	T
	13	Input 1	Partial volume	4 byte	C	R	-	T
	14	Input 1	Power	4 byte	C	R	-	T
	15	Input 1	Flow rate	4 byte	C	R	-	T
	16	Input 1	Pulse	1 bit	C	R	-	T
	17	Input 1	Partial meter reset activation	1 bit	C	R	W	-
	18	Input 1	Dynamic mode activation	1 bit	C	R	W	-
	19	Input 1	Set total energy	6 byte	C	R	W	-
	20	Input 1	Set total energy	4 byte	C	R	W	-
	21	Input 1	Set total volume	4 byte	C	R	W	-
	22	Input 1	History request	1 bit	C	R	W	-

	Number	Name	Function of the object	Length	C	R	W	T
 	23	Input 2	Total energy timestamped	14 byte	C	R	-	T
 	24	Input 2	Partial energy timestamped	14 byte	C	R	-	T
 	25	Input 2	Total energy timestamped	12 byte	C	R	-	T
 	26	Input 2	Partial energy timestamped	12 byte	C	R	-	T
 	27	Input 2	Total volume timestamped	12 byte	C	R	-	T
 	28	Input 2	Partial volume timestamped	12 byte	C	R	-	T
 	29	Input 2	Power timestamped	12 byte	C	R	-	T
 	30	Input 2	Flow rate timestamped	12 byte	C	R	-	T
 	31	Input 2	Total energy	6 byte	C	R	-	T
 	32	Input 2	Partial energy	6 byte	C	R	-	T
 	33	Input 2	Total energy	4 byte	C	R	-	T
 	34	Input 2	Partial energy	4 byte	C	R	-	T
 	35	Input 2	Total volume	4 byte	C	R	-	T
 	36	Input 2	Partial volume	4 byte	C	R	-	T
 	37	Input 2	Power	4 byte	C	R	-	T
 	38	Input 2	Flow rate	4 byte	C	R	-	T
 	39	Input 2	Pulse	1 bit	C	R	-	T
 	40	Input 2	Partial meter reset activation	1 bit	C	R	W	-
 	41	Input 2	Dynamic mode activation	1 bit	C	R	W	-
 	42	Input 2	Set total energy	6 byte	C	R	W	-
 	43	Input 2	Set total energy	4 byte	C	R	W	-
 	44	Input 2	Set total volume	4 byte	C	R	W	-
 	45	Input 2	History request	1 bit	C	R	W	-

	Number	Name	Function of the object	Length	C	R	W	T
	46	Input 3	Total energy timestamped	14 byte	C	R	-	T
	47	Input 3	Partial energy timestamped	14 byte	C	R	-	T
	48	Input 3	Total energy timestamped	12 byte	C	R	-	T
	49	Input 3	Partial energy timestamped	12 byte	C	R	-	T
	50	Input 3	Total volume timestamped	12 byte	C	R	-	T
	51	Input 3	Partial volume timestamped	12 byte	C	R	-	T
	52	Input 3	Power timestamped	12 byte	C	R	-	T
	53	Input 3	Flow rate timestamped	12 byte	C	R	-	T
	54	Input 3	Total energy	6 byte	C	R	-	T
	55	Input 3	Partial energy	6 byte	C	R	-	T
	56	Input 3	Total energy	4 byte	C	R	-	T
	57	Input 3	Partial energy	4 byte	C	R	-	T
	58	Input 3	Total volume	4 byte	C	R	-	T
	59	Input 3	Partial volume	4 byte	C	R	-	T
	60	Input 3	Power	4 byte	C	R	-	T
	61	Input 3	Flow rate	4 byte	C	R	-	T
	62	Input 3	Pulse	1 bit	C	R	-	T
	63	Input 3	Partial meter reset activation	1 bit	C	R	W	-
	64	Input 3	Dynamic mode activation	1 bit	C	R	W	-
	65	Input 3	Set total energy	6 byte	C	R	W	-
	66	Input 3	Set total energy	4 byte	C	R	W	-
	67	Input 3	Set total volume	4 byte	C	R	W	-
	68	Input 3	History request	1 bit	C	R	W	-

No.	Name	Function of the object	Data type	Flags
0, 23, 46	Input x	Total energy timestamped	14 Bytes – 249.001 DPT_DateTime_Tariff_ActiveEnergy	C, R, T

This object is activated when the **Type of meter** parameter has the value **Energy+tariff information (6 bytes)** (with timestamp).

This object is used to emit the total energy value with the tariff and the timestamp on the KNX bus.

Object value:

Byte 12 (MSB)	Byte 11	Byte 10	Byte 9
Year	Month	Day of the month	Weekday Hours
Y Y Y Y Y Y Y Y Y	0 0 0 0 M M M M	0 0 0 D D D D D	D D D T T T T T

Byte 8	Byte 7	Byte 6	Byte 5
Minutes	Seconds	D DW DW V YV DV WD TV SW P CA	
0 0 M M M M M M M	0 0 W W W W W W W	B B B B B B B B	B 0 0 0 0 0 0 0

Byte 4	Byte 3	Byte 2	Byte 1 (LSB)
Active electrical energy			
V V			

Byte 2	Byte 1 (LSB)
Tariff	Validity
T T T T T T T T T	0 0 0 0 0 0 0 E T

Fields	Code	Value	Units
Year	Binary	0 (1900) to 255 (2155) (8 bit)	Year
Month	Binary	1 to 12 (4 bit)	Month
Day of the month	Binary	1 to 31 (5 bit)	Day
Day of the week	Binary	0 = Any day 1 = Monday ... 7 = Sunday (3 bit)	
Hours	Binary	0 to 23 (5 bit)	Hours
Minutes	Binary	0 to 59 (6 bit)	Minutes
Seconds	Binary	0 to 59 (6 bit)	Seconds
Error (D)	Binary	0 = No error or 1 = Error (1 bit)	
Day Worked (DW)	Binary	0 = Day Worked or 1 = Holiday (1 bit)	
DWV (DWV)	Binary	0 = Day Worked valid or 1 = Invalid DW (1 bit)	
Year Validated (YV)	Binary	0 = Year valid or 1 = Invalid year (1 bit)	
DV (DV)	Binary	0 = Date valid or 1 = Invalid date (1 bit)	
Weekday validated (WDV)	Binary	0 = Day valid or 1 = Invalid day (1 bit)	
Time Validated (TV)	Binary	0 = Time valid or 1 = Invalid time (1 bit)	
Summer/Winter Period (SWP)	Binary	0 = standard time or 1 = Summertime (1 bit)	
Clock Accuracy (CA)	Binary	0 = No external synchronisation or 1 = External synchronisation (1 bit)	
Active electrical energy (V)	Binary	-2 147 483 648 à 2 147 483 647 (4 Bytes)	Wh
Tariff	Binary	0 to 254 (1 byte) 0 = Basic tariff 1 = Off-peak time (OPT) 2 = Peak time (PT) 3 = EJP 4 = EJP Flexible peak time 5 = Blue tariff off-peak time (Blue OPT) 6 = White tariff off-peak time (White OPT) 7 = Red tariff off-peak time (Red OPT) 8 = Blue tariff peak time (Blue PT) 9 = White tariff peak time (White PT) 10 = Red tariff peak time (Red PT)	-
Tariff validity (T)	Binary	0: Valid 1: Invalid	-
Active electrical energy validity (E)	Binary	0: Valid 1: Invalid	-

For further information, see: [Energy + tariff information \(6 bytes\)](#).

No.	Name	Function of the object	Data type	Flags
1, 24, 47	Input x	Partial energy timestamped	14 Bytes – 249.001 DPT_DateTime_Tariff_ActiveEnergy	C, R, T

This object is activated when the **Type of meter** parameter has the value **Energy+tariff information (6 bytes)** (with timestamp).

This object is used to emit the partial energy value with the tariff and the timestamp on the KNX bus.

Object value:

Byte 12 (MSB)	Byte 11	Byte 10	Byte 9
Year	Month	Day of the month	Weekday Hours
Y Y Y Y Y Y Y Y Y	0 0 0 0 M M M M	0 0 0 D D D D D	D D D T T T T T

Byte 8	Byte 7	Byte 6	Byte 5
Minutes	Seconds	D DW DW V YV DV WD V TV SW P CA	
0 0 M M M M M M M	0 0 W W W W W W W	B B B B B B B B	B 0 0 0 0 0 0 0

Byte 4	Byte 3	Byte 2	Byte 1 (LSB)
Active electrical energy			
V V V V V V V V V	V V V V V V V V V	V V V V V V V V V	V V V V V V V V V

Byte 2	Byte 1 (LSB)
Tariff	Validity
T T T T T T T T T	0 0 0 0 0 0 E T

Fields	Code	Value	Units
Year	Binary	0 (1900) to 255 (2155) (8 bit)	Year
Month	Binary	1 to 12 (4 bit)	Month
Day of the month	Binary	1 to 31 (5 bit)	Day
Day of the week	Binary	0 = Any day 1 = Monday ... 7 = Sunday (3 bit)	
Hours	Binary	0 to 23 (5 bit)	Hours
Minutes	Binary	0 to 59 (6 bit)	Minutes
Seconds	Binary	0 to 59 (6 bit)	Seconds
Error (D)	Binary	0 = No error or 1 = Error (1 bit)	
Day Worked (DW)	Binary	0 = Day Worked or 1 = Holiday (1 bit)	
DWV (DWV)	Binary	0 = Day Worked valid or 1 = Invalid DW (1 bit)	
Year Validated (YV)	Binary	0 = Year valid or 1 = Invalid year (1 bit)	
DV (DV)	Binary	0 = Date valid or 1 = Invalid date (1 bit)	
Weekday validated (WDV)	Binary	0 = Day valid or 1 = Invalid day (1 bit)	
Time Validated (TV)	Binary	0 = Time valid or 1 = Invalid time (1 bit)	
Summer/Winter Period (SWP)	Binary	0 = standard time or 1 = Summertime (1 bit)	
Clock Accuracy (CA)	Binary	0 = No external synchronisation or 1 = External synchronisation (1 bit)	
Active electrical energy (V)	Binary	-2 147 483 648 à 2 147 483 647 (4 Bytes)	Wh
Tariff	Binary	0 to 254 (1 byte) 0 = Basic tariff 1 = Off-peak time (OPT) 2 = Peak time (PT) 3 = EJP 4 = EJP Flexible peak time 5 = Blue tariff off-peak time (Blue OPT) 6 = White tariff off-peak time (White OPT) 7 = Red tariff off-peak time (Red OPT) 8 = Blue tariff peak time (Blue PT) 9 = White tariff peak time (White PT) 10 = Red tariff peak time (Red PT)	-
Tariff validity (T)	Binary	0: Valid 1: Invalid	-
Active electrical energy validity (E)	Binary	0: Valid 1: Invalid	-

For further information, see: [Energy + tariff information \(6 bytes\)](#).

No.	Name	Function of the object	Data type	Flags
2, 25, 48	Input x	Total energy timestamped	12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy	C, R, T

This object is activated when the **Type of meter** parameter has the value **Energy only (4 bytes)** or **Calorimeter** (with timestamp).

This object is used to emit the total energy value with the timestamp on the KNX bus.

Object value:

Byte 12 (MSB)	Byte 11	Byte 10	Byte 9
Year	Month	Day of the month	Weekday Hours
Y Y Y Y Y Y Y Y	0 0 0 0 M M M M	0 0 0 D D D D D	D D D T T T T T

Byte 8	Byte 7	Byte 6	Byte 5
Minutes	Seconds	D DW DW V DV WD TV SW P	CA
0 0 M M M M M M M	0 0 W W W W W W W	B B B B B B B	B 0 0 0 0 0 0 0

Byte 4	Byte 3	Byte 2	Byte 1 (LSB)
Active electrical energy			
V V V V V V V V	V V V V V V V V	V V V V V V V V	V V V V V V V V

Fields	Code	Value	Units
Year	Binary	0 (1900) to 255 (2155) (8 bit)	Year
Month	Binary	1 to 12 (4 bit)	Month
Day of the month	Binary	1 to 31 (5 bit)	Day
Day of the week	Binary	0 = Any day	
	Binary	1 = Monday ... 7 = Sunday (3 bit)	
Hours	Binary	0 to 23 (5 bit)	Hours
Minutes	Binary	0 to 59 (6 bit)	Minutes
Seconds	Binary	0 to 59 (6 bit)	Seconds
Error (D)	Binary	0 = No error or 1 = Error (1 bit)	
Day Worked (DW)	Binary	0 = Day Worked or 1 = Holiday (1 bit)	
DWV (DWV)	Binary	0 = Day Worked valid or 1 = Invalid DW (1 bit)	
Year Validated (YV)	Binary	0 = Year valid or 1 = Invalid year (1 bit)	
DV (DV)	Binary	0 = Date valid or 1 = Invalid date (1 bit)	
Weekday validated (WDV)	Binary	0 = Day valid or 1 = Invalid day (1 bit)	
Time Validated (TV)	Binary	0 = Time valid or 1 = Invalid time (1 bit)	
Summer/Winter Period (SWP)	Binary	0 = standard time or 1 = Summertime (1 bit)	
Clock Accuracy (CA)	Binary	0 = No external synchronisation or	
		1 = External synchronisation (1 bit)	
Active electrical energy (V)	Binary	-2 147 483 648 à 2 147 483 647 (4 Bytes)	Wh

For further information, see: [Energy only \(4 bytes\)](#).

No.	Name	Function of the object	Data type	Flags
3, 26, 49	Input x	Partial energy timestamped	12 Bytes – 13.010 + DateTime DPT_DateTime_ActiveEnergy	C, R, T

This object is activated when the **Type of meter** parameter has the value **Energy only (4 bytes)** or **Calorimeter** (with timestamp).

This object is used to emit the partial energy value with the timestamp on the KNX bus.

Object value:

Byte 12 (MSB)	Byte 11	Byte 10	Byte 9
Year	Month	Day of the month	Weekday Hours
Y Y Y Y Y Y Y Y	0 0 0 0 M M M M	0 0 0 D D D D D	D D D T T T T T

Byte 8	Byte 7	Byte 6	Byte 5
Minutes	Seconds	D DW DW V DV WD TV SW P	CA
0 0 M M M M M M M	0 0 W W W W W W W	B B B B B B B	B 0 0 0 0 0 0 0

Byte 4	Byte 3	Byte 2	Byte 1 (LSB)
Active electrical energy			
V V V V V V V V	V V V V V V V V	V V V V V V V V	V V V V V V V V

Fields	Code	Value	Units
Year	Binary	0 (1900) to 255 (2155) (8 bit)	Year
Month	Binary	1 to 12 (4 bit)	Month
Day of the month	Binary	1 to 31 (5 bit)	Day
Day of the week	Binary	0 = Any day	
	Binary	1 = Monday ... 7 = Sunday (3 bit)	
Hours	Binary	0 to 23 (5 bit)	Hours
Minutes	Binary	0 to 59 (6 bit)	Minutes
Seconds	Binary	0 to 59 (6 bit)	Seconds
Error (D)	Binary	0 = No error or 1 = Error (1 bit)	
Day Worked (DW)	Binary	0 = Day Worked or 1 = Holiday (1 bit)	
DWV (DWV)	Binary	0 = Day Worked valid or 1 = Invalid DW (1 bit)	
Year Validated (YV)	Binary	0 = Year valid or 1 = Invalid year (1 bit)	
DV (DV)	Binary	0 = Date valid or 1 = Invalid date (1 bit)	
Weekday validated (WDV)	Binary	0 = Day valid or 1 = Invalid day (1 bit)	
Time Validated (TV)	Binary	0 = Time valid or 1 = Invalid time (1 bit)	
Summer/Winter Period (SWP)	Binary	0 = standard time or 1 = Summertime (1 bit)	
Clock Accuracy (CA)	Binary	0 = No external synchronisation or 1 = External synchronisation (1 bit)	
Active electrical energy (V)	Binary	-2 147 483 648 à 2 147 483 647 (4 Bytes)	Wh

For further information, see: [Energy only \(4 bytes\)](#).

No.	Name	Function of the object	Data type	Flags
4, 27, 50	Input x	Total volume timestamped	12 Bytes – 14.076 + DateTime DPT_DateTime_Value_Volume	C, R, T

This object is activated when the **Type of meter** parameter has the value **Volume** (with timestamp).

This object is used to transmit the total volume value with the timestamp on the KNX bus.

Object value: Volume in m³

Byte 12 (MSB)	Byte 11	Byte 10	Byte 9
Year	Month	Day of the month	Weekday Hours
Y Y Y Y Y Y Y Y Y	0 0 0 0 M M M M	0 0 0 D D D D D	D D D T T T T T

Byte 8	Byte 7	Byte 6	Byte 5
Minutes	Seconds	D DW DW V DV WD TV SW P	CA
0 0 M M M M M M M	0 0 W W W W W W W	B B B B B B B B	B 0 0 0 0 0 0 0

Byte 4	Byte 3	Byte 2	Byte 1 (LSB)
W Exponent	Fraction		
W E E E E E E E	F F F F F F F F	F F F F F F F F	F F F F F F F F

Fields	Code	Value	Units
Year	Binary	0 (1900) to 255 (2155) (8 bit)	Year
Month	Binary	1 to 12 (4 bit)	Month
Day of the month	Binary	1 to 31 (5 bit)	Day
Day of the week	Binary	0 = Any day	
	Binary	1 = Monday ... 7 = Sunday (3 bit)	
Hours	Binary	0 to 23 (5 bit)	Hours
Minutes	Binary	0 to 59 (6 bit)	Minutes
Seconds	Binary	0 to 59 (6 bit)	Seconds
Error (D)	Binary	0 = No error or 1 = Error (1 bit)	
Day Worked (DW)	Binary	0 = Day Worked or 1 = Holiday (1 bit)	
DWV (DWV)	Binary	0 = Day Worked valid or 1 = Invalid DW (1 bit)	
Year Validated (YV)	Binary	0 = Year valid or 1 = Invalid year (1 bit)	
DV (DV)	Binary	0 = Date valid or 1 = Invalid date (1 bit)	
Weekday validated (WDV)	Binary	0 = Day valid or 1 = Invalid day (1 bit)	
Time Validated (TV)	Binary	0 = Time valid or 1 = Invalid time (1 bit)	
Summer/Winter Period (SWP)	Binary	0 = standard time or 1 = Summertime (1 bit)	
Clock Accuracy (CA)	Binary	0 = No external synchronisation or 1 = External synchronisation (1 bit)	
Sign (W)	Binary	0 = Positive or 1 = Negative	Wh
Exponent (E)	Binary	0 to 255 (8 bit)	
Fraction (F)	Binary	0 to 8388607 (23 bit)	

For further information, see: [Volume](#).

No.	Name	Function of the object	Data type	Flags
5, 28, 51	Input x	Partial volume timestamped	12 Bytes – 14.076 + DateTime DPT_DateTime_Value_Volume	C, R, T

This object is activated when the **Type of meter** parameter has the value **Volume** (with timestamp).

This object is use to emit the partial volume value with the timestamp on the KNX bus.

Object value: Volume in m³

Byte 12 (MSB)	Byte 11	Byte 10	Byte 9
Year	Month	Day of the month	Weekday Hours
Y Y Y Y Y Y Y Y Y	0 0 0 0 M M M M	0 0 0 D D D D D	D D D T T T T T

Byte 8	Byte 7	Byte 6	Byte 5
Minutes	Seconds	D DW DW V DV WD TV SW P	CA
0 0 M M M M M M M	0 0 W W W W W W W	B B B B B B B	B 0 0 0 0 0 0 0

Byte 4	Byte 3	Byte 2	Byte 1 (LSB)
W Exponent	Fraction		
W E E E E E E E	F F F F F F F F	F F F F F F F F	F F F F F F F F

Fields	Code	Value	Units
Year	Binary	0 (1900) to 255 (2155) (8 bit)	Year
Month	Binary	1 to 12 (4 bit)	Month
Day of the month	Binary	1 to 31 (5 bit)	Day
Day of the week	Binary	0 = Any day 1 = Monday ... 7 = Sunday (3 bit)	
Hours	Binary	0 to 23 (5 bit)	Hours
Minutes	Binary	0 to 59 (6 bit)	Minutes
Seconds	Binary	0 to 59 (6 bit)	Seconds
Error (D)	Binary	0 = No error or 1 = Error (1 bit)	
Day Worked (DW)	Binary	0 = Day Worked or 1 = Holiday (1 bit)	
DWV (DWV)	Binary	0 = Day Worked valid or 1 = Invalid DW (1 bit)	
Year Validated (YV)	Binary	0 = Year valid or 1 = Invalid year (1 bit)	
DV (DV)	Binary	0 = Date valid or 1 = Invalid date (1 bit)	
Weekday validated (WDV)	Binary	0 = Day valid or 1 = Invalid day (1 bit)	
Time Validated (TV)	Binary	0 = Time valid or 1 = Invalid time (1 bit)	
Summer/Winter Period (SWP)	Binary	0 = standard time or 1 = Summertime (1 bit)	
Clock Accuracy (CA)	Binary	0 = No external synchronisation or 1 = External synchronisation (1 bit)	
Sign (W)	Binary	0 = Positive or 1 = Negative	Wh
Exponent (E)	Binary	0 to 255 (8 bit)	
Fraction (F)	Binary	0 to 8388607 (23 bit)	

For further information, see: [Volume](#).

No.	Name	Function of the object	Data type	Flags
6, 29, 52	Input x	Power timestamped	12 Bytes – 266.056 DPT_DateTime_Value_Power	C, R, T

This object is activated when the **Type of meter** parameter has the value [Energy+tariff information (6 bytes) or (Energy only (4 bytes) or **Calorimeter** (with timestamp)].

This object is used to emit the power value with the timestamp on the KNX bus.

Object value:

Byte 12 (MSB)	Byte 11	Byte 10	Byte 9
Year	Month	Day of the month	Weekday Hours
Y Y Y Y Y Y Y Y	0 0 0 0 M M M M	0 0 0 D D D D D	D D D T T T T T

Byte 8	Byte 7	Byte 6	Byte 5
Minutes	Seconds	D DW DW V DV WD TV SW P	CA
0 0 M M M M M M M	0 0 W W W W W W W	B B B B B B B	B 0 0 0 0 0 0 0

Byte 4	Byte 3	Byte 2	Byte 1 (LSB)
W Exponent	Fraction		
W E E E E E E E	F F F F F F F F	F F F F F F F F	F F F F F F F F

Fields	Code	Value	Units
Year	Binary	0 (1900) to 255 (2155) (8 bit)	Year
Month	Binary	1 to 12 (4 bit)	Month
Day of the month	Binary	1 to 31 (5 bit)	Day
Day of the week	Binary	0 = Any day 1 = Monday ... 7 = Sunday (3 bit)	
Hours	Binary	0 to 23 (5 bit)	Hours
Minutes	Binary	0 to 59 (6 bit)	Minutes
Seconds	Binary	0 to 59 (6 bit)	Seconds
Error (D)	Binary	0 = No error or 1 = Error (1 bit)	
Day Worked (DW)	Binary	0 = Day Worked or 1 = Holiday (1 bit)	
DWV (DWV)	Binary	0 = Day Worked valid or 1 = Invalid DW (1 bit)	
Year Validated (YV)	Binary	0 = Year valid or 1 = Invalid year (1 bit)	
DV (DV)	Binary	0 = Date valid or 1 = Invalid date (1 bit)	
Weekday validated (WDV)	Binary	0 = Day valid or 1 = Invalid day (1 bit)	
Time Validated (TV)	Binary	0 = Time valid or 1 = Invalid time (1 bit)	
Summer/Winter Period (SWP)	Binary	0 = standard time or 1 = Summertime (1 bit)	
Clock Accuracy (CA)	Binary	0 = No external synchronisation or 1 = External synchronisation (1 bit)	
Sign (W)	Binary	0 = Positive or 1 = Negative	Wh
Exponent (E)	Binary	0 to 255 (8 bit)	
Fraction (F)	Binary	0 to 8388607 (23 bit)	

For further information, see: [Energy + tariff information \(6 bytes\)](#).

No.	Name	Function of the object	Data type	Flags
7, 30, 53	Input x	Flow rate timestamped	12 Bytes – 14.077 + DateTime DPT_DateTime_Value_Volume _Flux	C, R, T

This object is activated when the **Type of meter** parameter has the value **Volume** (with timestamp).

This object is used to emit the flow rate value with the timestamp on the KNX bus.

Object value: Flow in m³/s

Byte 12 (MSB)								Byte 11				Byte 10				Byte 9																	
Year								Month				Day of the month				Weekday		Hours															
Y	Y	Y	Y	Y	Y	Y	Y	0	0	0	0	M	M	M	M	0	0	0	0	D	D	D	D	D	D	D	D	D	T	T	T	T	T

Byte 8				Byte 7				Byte 6						Byte 5																						
Minutes				Seconds				D	DW	DW	YV	DV	WD	TV	SW	CA																				
0	0	M	M	M	M	M	M	0	0	W	W	W	W	W	W	B	B	B	B	B	B	B	B	B	B	B	B	B	0	0	0	0	0	0	0	0

Byte 4				Byte 3				Byte 2				Byte 1 (LSB)																				
W	Exponent							Fraction																								
W	E	E	E	E	E	E	E	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F

Fields	Code	Value	Units
Year	Binary	0 (1900) to 255 (2155) (8 bit)	Year
Month	Binary	1 to 12 (4 bit)	Month
Day of the month	Binary	1 to 31 (5 bit)	Day
Day of the week	Binary	0 = Any day	
	Binary	1 = Monday ... 7 = Sunday (3 bit)	
Hours	Binary	0 to 23 (5 bit)	Hours
Minutes	Binary	0 to 59 (6 bit)	Minutes
Seconds	Binary	0 to 59 (6 bit)	Seconds
Error (D)	Binary	0 = No error or 1 = Error (1 bit)	
Day Worked (DW)	Binary	0 = Day Worked or 1 = Holiday (1 bit)	
DWV (DWV)	Binary	0 = Day Worked valid or 1 = Invalid DW (1 bit)	
Year Validated (YV)	Binary	0 = Year valid or 1 = Invalid year (1 bit)	
DV (DV)	Binary	0 = Date valid or 1 = Invalid date (1 bit)	
Weekday validated (WDV)	Binary	0 = Day valid or 1 = Invalid day (1 bit)	
Time Validated (TV)	Binary	0 = Time valid or 1 = Invalid time (1 bit)	
Summer/Winter Period (SWP)	Binary	0 = standard time or 1 = Summertime (1 bit)	
Clock Accuracy (CA)	Binary	0 = No external synchronisation or 1 = External synchronisation (1 bit)	
Sign (W)	Binary	0 = Positive or 1 = Negative	Wh
Exponent (E)	Binary	0 to 255 (8 bit)	
Fraction (F)	Binary	0 to 8388607 (23 bit)	

For further information, see: [Volume](#).

3.3.2 General objects

	Number	Name	Function of the object	Length	C	R	W	T
	69	Date and time	Date	3 byte	C	R	W	-
	70	Date and time	Time	3 byte	C	R	W	-
	71	Date and time	Date and time	8 byte	C	R	W	-
	72	Date and time	Date and time request	1 bit	C	R	-	T
	73	Tariff	Current tariff request	1 bit	C	R	-	T
	74	Tariff	Current tariff	1 byte	C	R	W	-
	75	General	Battery status	1 bit	C	R	-	T
	76	General	Bus power cut over 30 days	1 bit	C	R	-	T
	77	General	Date and time of bus power cut/return	8 byte	C	R	-	T

No.	Name	Function of the object	Data type	Flags																																																																								
69	Date and time	Date	3 bytes – 11.001 DPT_Date	C, R, W																																																																								
<p>These objects are always activated.</p> <p>This object receives the reference date of an external device.</p> <p>Object value:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5">Byte 3 (MSB)</th> <th colspan="4">Byte 2</th> <th colspan="7">Byte 1 (LSB)</th> </tr> <tr> <td colspan="5">Day</td> <td colspan="4">Month</td> <td colspan="7">Year</td> </tr> <tr> <td>0</td><td>0</td><td>0</td><td>D</td><td>D</td><td>D</td><td>D</td><td>D</td><td>0</td><td>0</td><td>0</td><td>0</td><td>M</td><td>M</td><td>M</td><td>M</td><td>0</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td> </tr> </thead> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Fields</th> <th>Code</th> <th>Value</th> <th>Units</th> </tr> </thead> <tbody> <tr> <td>Day</td> <td>Binary</td> <td>1 to 31 (5 bit)</td> <td>Day</td> </tr> <tr> <td>Month</td> <td>Binary</td> <td>1 to 12 (4 bit)</td> <td>Month</td> </tr> <tr> <td>Year</td> <td>Binary</td> <td>0 to 99 (7 bit)</td> <td>Year</td> </tr> </tbody> </table>					Byte 3 (MSB)					Byte 2				Byte 1 (LSB)							Day					Month				Year							0	0	0	D	D	D	D	D	0	0	0	0	M	M	M	M	0	Y	Y	Y	Y	Y	Y	Y	Fields	Code	Value	Units	Day	Binary	1 to 31 (5 bit)	Day	Month	Binary	1 to 12 (4 bit)	Month	Year	Binary	0 to 99 (7 bit)	Year
Byte 3 (MSB)					Byte 2				Byte 1 (LSB)																																																																			
Day					Month				Year																																																																			
0	0	0	D	D	D	D	D	0	0	0	0	M	M	M	M	0	Y	Y	Y	Y	Y	Y	Y																																																					
Fields	Code	Value	Units																																																																									
Day	Binary	1 to 31 (5 bit)	Day																																																																									
Month	Binary	1 to 12 (4 bit)	Month																																																																									
Year	Binary	0 to 99 (7 bit)	Year																																																																									

No.	Name	Function of the object	Data type	Flags																																																																												
70	Date and time	Time	3 bytes – 10.001 DPT_Time of day	C, R, W																																																																												
<p>These objects are always activated.</p> <p>This object receives the reference time of an external device.</p> <p>Object value:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5">Byte 3 (MSB)</th> <th colspan="4">Byte 2</th> <th colspan="7">Byte 1 (LSB)</th> </tr> <tr> <td colspan="2">Day</td> <td colspan="3">Hours</td> <td colspan="4">Minutes</td> <td colspan="7">Seconds</td> </tr> <tr> <td>D</td><td>D</td><td>D</td><td>T</td><td>T</td><td>T</td><td>T</td><td>T</td><td>0</td><td>0</td><td>M</td><td>M</td><td>M</td><td>M</td><td>M</td><td>M</td><td>0</td><td>0</td><td>W</td><td>W</td><td>W</td><td>W</td><td>W</td><td>W</td> </tr> </thead> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Fields</th> <th>Code</th> <th>Value</th> <th>Units</th> </tr> </thead> <tbody> <tr> <td>Day</td> <td>Binary</td> <td>0 = Any day 1 = Monday ... 7 = Sunday (3 bit)</td> <td></td> </tr> <tr> <td>Hours</td> <td>Binary</td> <td>0 to 23 (5 bit)</td> <td>Hours</td> </tr> <tr> <td>Minutes</td> <td>Binary</td> <td>0 to 59 (6 bit)</td> <td>Minutes</td> </tr> <tr> <td>Seconds</td> <td>Binary</td> <td>0 to 59 (6 bit)</td> <td>Seconds</td> </tr> </tbody> </table>					Byte 3 (MSB)					Byte 2				Byte 1 (LSB)							Day		Hours			Minutes				Seconds							D	D	D	T	T	T	T	T	0	0	M	M	M	M	M	M	0	0	W	W	W	W	W	W	Fields	Code	Value	Units	Day	Binary	0 = Any day 1 = Monday ... 7 = Sunday (3 bit)		Hours	Binary	0 to 23 (5 bit)	Hours	Minutes	Binary	0 to 59 (6 bit)	Minutes	Seconds	Binary	0 to 59 (6 bit)	Seconds
Byte 3 (MSB)					Byte 2				Byte 1 (LSB)																																																																							
Day		Hours			Minutes				Seconds																																																																							
D	D	D	T	T	T	T	T	0	0	M	M	M	M	M	M	0	0	W	W	W	W	W	W																																																									
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Minutes	Binary	0 to 59 (6 bit)	Minutes																																																																													
Seconds	Binary	0 to 59 (6 bit)	Seconds																																																																													

No.	Name	Function of the object	Data type	Flags
71	Date and time	Date and time	8 Byte – 19.001 DPT_Date_Time	C, R, W

These objects are always activated.

This object receives the reference date and time of an external device.

Object value:

Byte 8 (MSB)								Byte 7				Byte 6				Byte 5															
Year								Month				Day of the month				Weekday		Hours													
Y	Y	Y	Y	Y	Y	Y	Y	0	0	0	0	M	M	M	M	0	0	0	0	D	D	D	D	D	D	D	D	T	T	T	T

Byte 4				Byte 3				Byte 2						Byte 1 (LSB)																	
Minutes				Seconds				D	DW	DW	YV	DV	WD	TV	SW	CA															
0	0	M	M	M	M	M	M	0	0	W	W	W	W	W	W	B	B	B	B	B	B	B	B	B	0	0	0	0	0	0	0

Fields	Code	Value	Units
Year	Binary	0 (1900) to 255 (2155) (8 bit)	Year
Month	Binary	1 to 12 (4 bit)	Month
Day of the month	Binary	1 to 31 (5 bit)	Day
Day of the week	Binary	0 = Any day	
	Binary	1 = Monday ... 7 = Sunday (3 bit)	
Hours	Binary	0 to 23 (5 bit)	Hours
Minutes	Binary	0 to 59 (6 bit)	Minutes
Seconds	Binary	0 to 59 (6 bit)	Seconds
Error (D)	Binary	0 = No error Or 1 = Error (1 bit)	
Day Worked (DW)	Binary	0 = Day Worked Or 1 = Holiday (1 bit)	
DWV (DWV)	Binary	0 = Day Worked valid Or 1 = Invalid DW (1 bit)	
Year Validated (YV)	Binary	0 = Year valid Or 1 = Invalid year (1 bit)	
DV (DV)	Binary	0 = Date valid Or 1 = Invalid date (1 bit)	
Weekday validated (WDV)	Binary	0 = Day valid Or 1 = Invalid day (1 bit)	
Time Validated (TV)	Binary	0 = Time valid Or 1 = Invalid time (1 bit)	
Summer/Winter Period (SWP)	Binary	0 = standard time Or 1 = Summertime (1 bit)	
Clock Accuracy (CA)	Binary	0 = No external synchronisation Or	
		1 = External synchronisation (1 bit)	

No.	Name	Function of the object	Data type	Flags
72	Date and time	Date and time request	1 Bit – 1.010 DPT Start_Stop	C, R, T

These objects are always activated.

This object is used to emit a date and time request to an external device.

Object value:

- For a date and time emission request, a telegram with a logical value 1 is emitted.

No.	Name	Function of the object	Data type	Flags
73	Tariff	Current tariff request	1 Bit – 1.010 DPT Start_Stop	C, R, T

These objects are always activated.

This object is used to emit a request for the current tariff to an external device.

Object value:

- For a request for the current tariff, a telegram with a logical value 1 is emitted.

No.	Name	Function of the object	Data type	Flags
74	Tariff	Current tariff	1 byte – 5.006 DPT_Tariff	C, R, W

These objects are always activated.

This object is used to receive the current tariff from an external device.

Object value:

Fields	Code	Value	Units
Tariff	Binary	0 to 254 (1 byte) 0 = Basic tariff 1 = Off-peak time (OPT) 2 = Peak time (PT) 3 = EJP 4 = EJP Flexible peak time 5 = Blue tariff off-peak time (Blue OPT) 6 = White tariff off-peak time (White OPT) 7 = Red tariff off-peak time (Red OPT) 8 = Blue tariff peak time (Blue PT) 9 = White tariff peak time (White PT) 10 = Red tariff peak time (Red PT)	-

No.	Name	Function of the object	Data type	Flags
75	General	Battery status	1 bit – 1.005 DPT_Alarm	C, R, T

These objects are always activated.

This object is used to emit the battery status for measurement backup.

Object value:

- When the battery voltage reaches a lower threshold of 2.2 volts, a telegram with a logical value 0 is emitted. This indicates low battery and the measurements are no longer backed up.

For further information, see: [Behaviour after bus power cut.](#)

No.	Name	Function of the object	Data type	Flags
76	General	Bus power cut over 30 days	1 bit – 1.002 DPT_Boolean	C, R, T

These objects are always activated.

This object is used to emit information signalling a bus power cut over 30 days.

Object value:

- If the bus power cut is over 30 days, a telegram with a logical value 1 is emitted.

For further information, see: [Behaviour after bus power cut.](#)

No.	Name	Function of the object	Data type	Flags
77	General	Date and time of bus power cut/return	8 Byte – 19.001 DPT_Date_Time	C, R, T

These objects are always activated.

This object is used to emit the date and time of the power cut and of the KNX bus return. It will be emitted when the bus power returns.

Object value:

Byte 8 (MSB)								Byte 7				Byte 6				Byte 5															
Year								Month				Day of the month				Weekday		Hours													
Y	Y	Y	Y	Y	Y	Y	Y	0	0	0	0	M	M	M	M	0	0	0	D	D	D	D	D	D	D	D	T	T	T	T	T

Byte 4				Byte 3				Byte 2						Byte 1 (LSB)																				
Minutes				Seconds				D	DW	DW	YV	DV	WD	TV	SW	CA																		
0	0	M	M	M	M	M	M	0	0	W	W	W	W	W	W	B	B	B	B	B	B	B	B	B	B	B	0	0	0	0	0	0	0	0

Fields	Code	Value	Units
Year	Binary	0 (1900) to 255 (2155) (8 bit)	Year
Month	Binary	1 to 12 (4 bit)	Month
Day of the month	Binary	1 to 31 (5 bit)	Day
Day of the week	Binary	0 = Any day	
	Binary	1 = Monday ... 7 = Sunday (3 bit)	
Hours	Binary	0 to 23 (5 bit)	Hours
Minutes	Binary	0 to 59 (6 bit)	Minutes
Seconds	Binary	0 to 59 (6 bit)	Seconds
Error (D)	Binary	0 = No error Or 1 = Error (1 bit)	
Day Worked (DW)	Binary	0 = Day Worked Or 1 = Holiday (1 bit)	
DWV (DWV)	Binary	0 = Day Worked valid Or 1 = Invalid DW (1 bit)	
Year Validated (YV)	Binary	0 = Year valid Or 1 = Invalid year (1 bit)	
DV (DV)	Binary	0 = Date valid Or 1 = Invalid date (1 bit)	
Weekday validated (WDV)	Binary	0 = Day valid Or 1 = Invalid day (1 bit)	
Time Validated (TV)	Binary	0 = Time valid Or 1 = Invalid time (1 bit)	
Summer/Winter Period (SWP)	Binary	0 = standard time Or 1 = Summertime (1 bit)	
Clock Accuracy (CA)	Binary	0 = No external synchronisation Or	
		1 = External synchronisation (1 bit)	

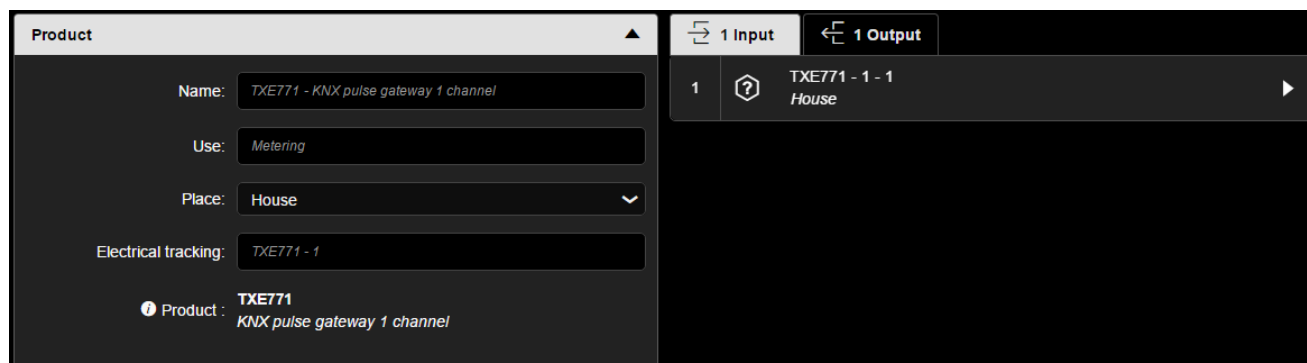
For further information, see: [Behaviour after bus power cut.](#)

4. Programming by Easy Tool

4.1 Product overview

TXE771: KNX pulse gateway 1 channel

Product view:



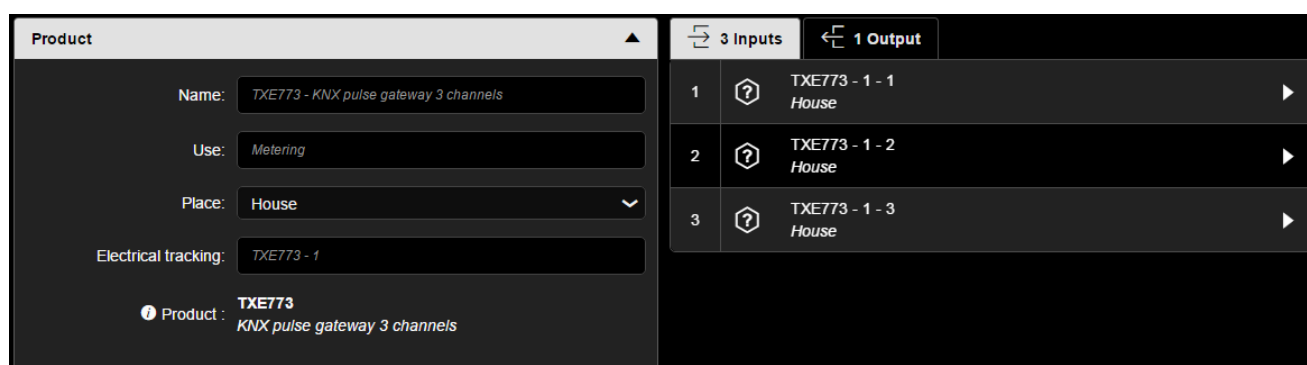
View of channels:

1 Input	
	TXE771 - 1 - 1 Housing

1 Output	
	TXE771 - 1 - 1 Housing - Metering

TXE773: KNX pulse gateway 3 channels

Product view:



View of channels:

1 Input	
	TXE773 - 1 - 1 Housing
	TXE773 - 1 - 2 Housing
	TXE773 - 1 - 3 Housing

1 Output	
	TXE773 - 1 - 1 Housing - Metering

- Pathway parameters
 - Electrical energy

Settings ▲

Energy pulse value (Wh):	100
Energy meter preset value tariff 0 / no tariff (Wh):	0
Energy meter preset value tariff 1 (Wh):	0
Energy meter preset value tariff 2 (Wh):	0
Energy meter preset value tariff 3 (Wh):	0
Energy meter preset value tariff 4 (Wh):	0
Energy meter preset value tariff 5 (Wh):	0
Energy meter preset value tariff 6 (Wh):	0
Energy meter preset value tariff 7 (Wh):	0
Energy meter preset value tariff 8 (Wh):	0
Energy meter preset value tariff 9 (Wh):	0
Energy meter preset value tariff 10 (Wh):	0

- Calorimeter

Settings ▲

Energy pulse value (Wh):	100
Energy meter preset value (Wh):	0

- Volume

Settings ▲

Volume pulse value (m3):	0
Volume meter preset value (m3):	0

4.2 Input operation mode

■ Available functionalities

	Electrical energy
	Calorimeter
	Volume

4.2.1 Electrical energy

This function is used to measure energy expressed in Wh or in kWh. It also has tariff information allowing an energy consumption calculation according to the tariff applied. It is used to measure electricity consumption with devices having the tariff information.

Settings ▲

Energy pulse value (Wh):

Energy meter preset value tariff 0 / no tariff (Wh):

Energy meter preset value tariff 1 (Wh):

Energy meter preset value tariff 2 (Wh):

Energy meter preset value tariff 3 (Wh):

Energy meter preset value tariff 4 (Wh):

Energy meter preset value tariff 5 (Wh):

Energy meter preset value tariff 6 (Wh):

Energy meter preset value tariff 7 (Wh):

Energy meter preset value tariff 8 (Wh):

Energy meter preset value tariff 9 (Wh):

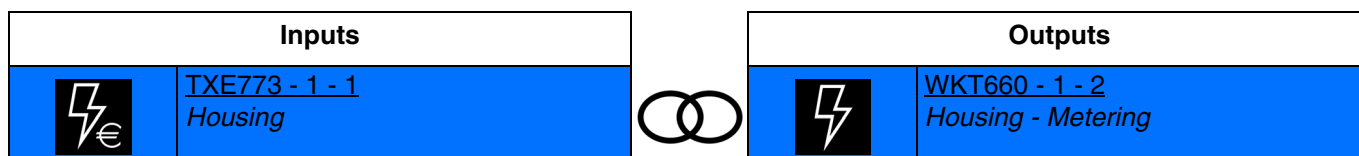
Energy meter preset value tariff 10 (Wh):

Parameter	Description	Value
Energy pulse value (Wh)	This parameter defines the value of a single pulse received from the channel concerned. According to the energy unit, the value entered is expressed. In Wh	1...100*...1000

Parameter	Description	Value
Energy meter: preset value tariff 0...10 (Wh)	This parameter defines the initial value of the meter. If the number entered is 0, the value of the meter in the product is not deleted.	0*...4294967295

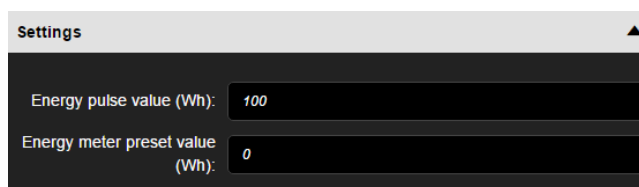
■ The connection

- Used to transmit the value of the energy meter with tariff information to an output (to a display for example).



4.2.2 Calorimeter

This function is used to measure energy expressed in Wh or in kWh. It is used to measure hot water or heating consumption.

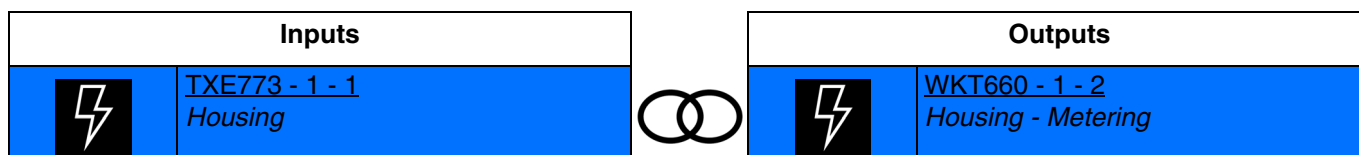


Parameter	Description	Value
Energy pulse value (Wh)	This parameter defines the value of a single pulse received form the channel concerned. According to the energy unit, the value entered is expressed: In Wh In kWh	1...100*...1000 1*...100

Parameter	Description	Value
Energy meter: preset value (Wh)	This parameter defines the initial value of the meter. If the number entered is 0, the value of the meter in the product is not deleted.	0*...4294967295

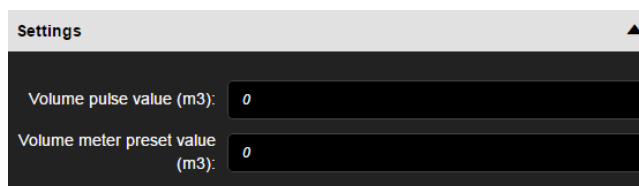
■ The connection

- Used to transmit the value of the energy meter to an output (to a display for example).



4.2.3 Volume

This function is used to measure a volume expressed in liters or in m³. It is used to measure gas and water consumption.



Parameter	Description	Value
Volume pulse value (l)	This parameter defines the value of a single pulse received from the channel concerned. According to the volume unit, the value entered is expressed: In Wh	0.0001... 0.001 *...100

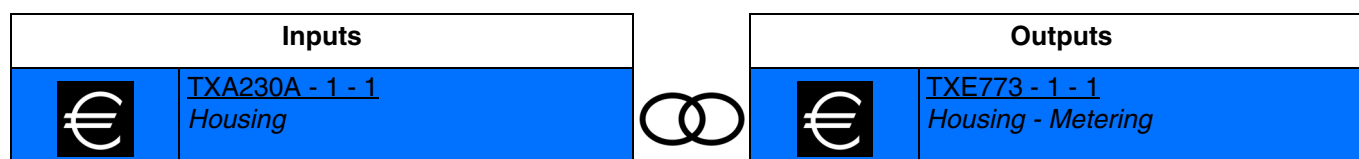
Parameter	Description	Value
Volume meter: preset value (l)	This parameter defines the initial value of the meter. If the number entered is 0, the value of the meter in the product is not deleted.	0 *...2147483647

- The connection
 - Used to transmit the value of the volume counter to the domovea system (see chapter 4.5).

4.3 Product functions at output

- **Tariff:** used to receive the current tariff from an external device.

- The connection



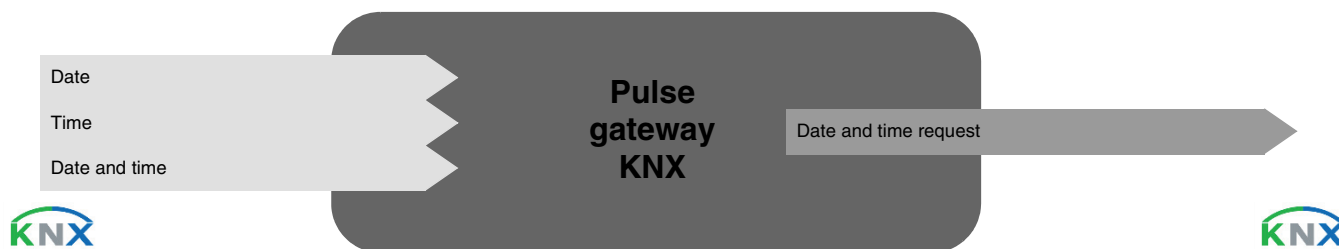
Value of the tariff:

- 0 = Basic tariff
- 1 = Off-peak time (OPT)
- 2 = Peak time (PT)
- 3 = EJP
- 4 = EJP Flexible peak time
- 5 = Blue tariff off-peak time (Blue OPT)
- 6 = White tariff off-peak time (White OPT)
- 7 = Red tariff off-peak time (Red OPT)
- 8 = Blue tariff peak time (Blue PT)
- 9 = White tariff peak time (White PT)
- 10 = Red tariff peak time (Red PT)

* Default value

4.4 Date and time

The product makes measurements with timestamp. To do so, the date and time information must be given from an external device connected to the KNX bus.



■ The connection

For this function, the link is made automatically if compatible products are present in the installation.

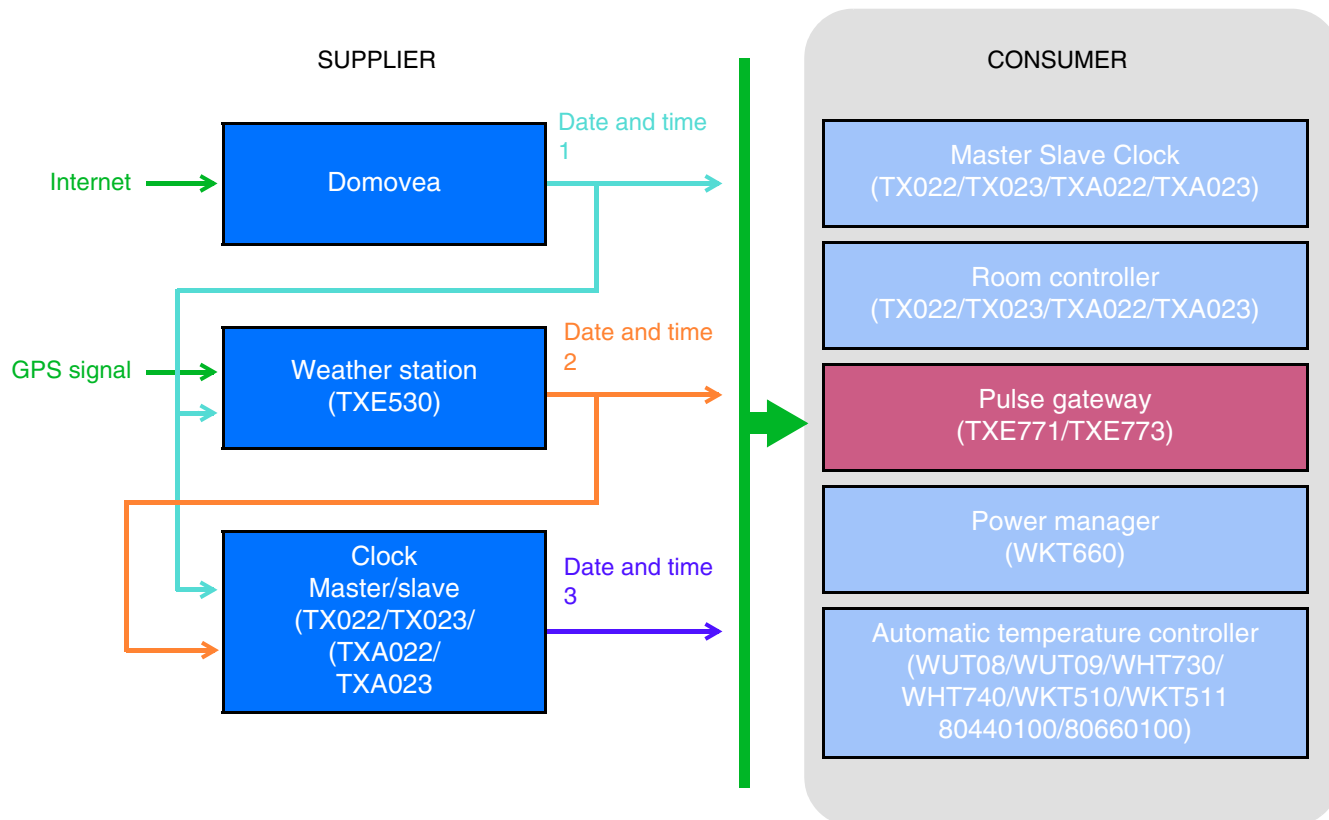
This automatic link is used for several products. They are composed of several objects:

- Date and time
- Time
- Date

The information from these objects may come from 3 different sources, each with its own priority:

- The domovea system (priority 1 - the highest)
- The weather station (priority 2 - medium)
- A clock (priority 3 - the lowest)

If there is a domovea system in the installation, the reference date and time will come from this system (priority 1). Otherwise, it is the weather station that will send the reference date and time (priority 2). And finally, if there are none of these products in the installation, the reference date and time will be sent by a clock (see the illustration below).



* Default value



At the end of detection, the configuration tool sends the date and time on the predefined group address Date and time 3, Time 3 and Date 3. This means that at the end of the scan, the products requiring the date and time are immediately updated.

A request system (Date and time request) was installed for automatic management of the date and time.

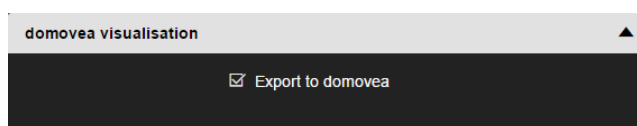
Group address

Date 1	30/0/032
Time 1	30/0/033
Date and time 1	30/0/034
Date 2	30/0/035
Time 2	30/0/036
Date and time 2	30/0/037
Date 3	30/0/038
Time 3	30/0/039
Date and time 3	30/0/040
Request Date and time	30/0/041

4.5 Export the installation to domovea

When configuration of the parameters is complete, the configuration can be transferred automatically to a domovea server. In this case, all the types of device and the architecture of the house are generated.

By checking the **Export to domovea** box in the channel configuration, the device corresponding to the function will be generated during export.



Below is the table indicating the domovea devices according to the chosen function:

Tasks TXA100	Electrical energy	Calorimeter	Volume
Devices domovea	Electricity metering	Electricity metering	Water meter

* Default value

5. Specifications

5.1 Technical Specifications

Powering through the bus	20 to 30 V $\overline{\text{---}}$ TBTS
Bus consumption	TXE771: 7 mA max (6 mA typ) / TXE773: 8 mA max (6 mA typ)
Battery capacity	1.2 Ah
Battery life	15 years
Installation altitude	\leq 2000 m
Degree of pollution	III
Class	II
Overall dimensions	150 x 85 x 35 mm
Protection index	IP44
Operating temperature	-20°C to +55°C
Storage temperature	-20°C to +70°C

5.2 Pulse input characteristics

Current	64 μ A (metering other than electric) or 2.5 mA (electric metering)
Voltage	4 V $\overline{\text{---}}$
Frequency	max. 100 Hz
Minimum duration of pulse	5 ms
Compatible output	Open collector or Reed relay
Max. cable length	3 m

Measurement category	Load, pulse settings	Unit
Calorimetry: Energy	100 to 1000Wh; 1 to 10 kWh	Wh; kWh
Flowmeter: Volume	0.1 to 1000l; 0.0001 to 1000m ³	Litre; m ³
Gas meter: Volume	0.1 to 1000l; 0.0001 to 1000m ³	Litre; m ³
Electric meter : Energy	100 to 1000Wh; 1 to 10 kWh	Wh; kWh

