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application software

ETS 5 PROFESSIONAL

▲ ▤ Manufacturers
▲ ▤ Hager Electro
▲ ▤ Meter
▤ Energy meter

KNX interface for energy meters

Electrical/Mechanical characteristics: see product user manual

	Product reference	Product designation	Application software ref	TP device ▬▬ Radio device («
	TXF121	KNX interface for energy meters	STXF121 1.x Version	▬▬

Content

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 ETS software appearance

1.2.1 ETS compatibility

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

ETS Version	File extension of compatible files
ETS5 (V5.7.2 or higher)	*.knxprod

1.2.2 Application descriptions

Application	Product reference
STXF121	TXF121

1.3 Easy Tool software appearance

This product can also be configured using the TXA100 configuration tool. It is composed of a TJA665 configuration server.

Compatible software version TXA100: V 1.4.10.0 or higher

It is essential to update the configuration server software version.
(Please refer to the TXA100 user manual).

2. General Description

2.1 Installation of the device

2.1.1 Principle

The KNX interface for energy meters allows the remote reading of the data and values from Hager single-phase and three-phase energy meters. Thanks to the infrared connection, the interface receives telegrams from a Hager energy meter and transmits them via the KNX installation bus.
The power supply for the interface comes directly from the KNX installation bus.
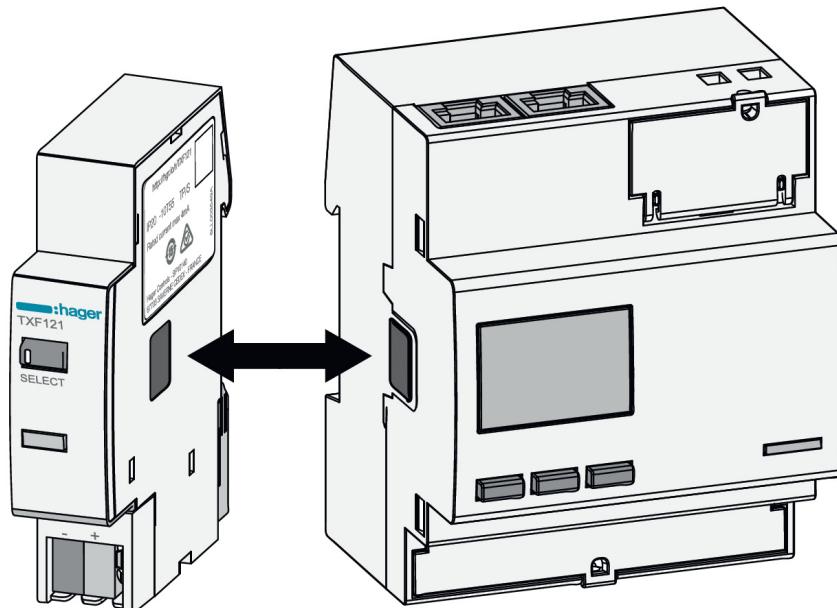
2.1.2 List of compatible meters

Single-phase	
Product reference	**Product designation**
ECN140D	40A 1M direct single-phase meter
ECP140D	40A 1M S0 MID direct single-phase meter
ECP180D	80A 2M S0 MID direct single-phase meter
ECM180D	80A 2M MBUS MID direct single-phase meter
ECR180D	80A 2M MODBUS MID direct single-phase meter
ECA180D	80A 2M AGARDIO MID direct single-phase meter
ECP180T	3x80A 4M S0 direct single-phase meter
ECM180T	3x80A 4M MBUS direct single-phase meter
ECR180T	3x80A 4M MODBUS direct single-phase meter
ECA180T	3x80A 4M AGARDIO direct single-phase meter

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Three-phase	
Product reference	**Product designation**
ECP380D	80A 4M S0 MID direct three-phase meter
ECM380D	80A 4M MBUS MID direct three-phase meter
ECR380D	80A 4M MODBUS MID direct three-phase meter
ECA380D	80A 4M AGARDIO MID direct three-phase meter
ECP310D	125A 6M S0 MID direct three-phase meter
ECM310D	125A 6M MBUS MID direct three-phase meter
ECR310D	125A 6M MODBUS MID direct three-phase meter
ECA310D	125A 6M AGARDIO MID direct three-phase meter
ECP300C	Three-phase meter via TI 1A or 5A 4M S0 MID
ECM300C	Three-phase meter via TI 1A or 5A 4M MBUS MID
ECR300C	Three-phase meter via TI 1A or 5A 4M MODBUS MID
ECA300C	Three-phase meter via TI 1A or 5A 4M AGARDIO MID

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2.1.3 Overview presentation

KNX

Clock*

Power manager

Room unit*

TXF121

Meter

Single-phase
40 A

Single-phase
80 A

Three-phase
80 A

Local server

TCP/IP

Touchscreen

Touchpad

Smartphone

Router / Switch / Box

Internet
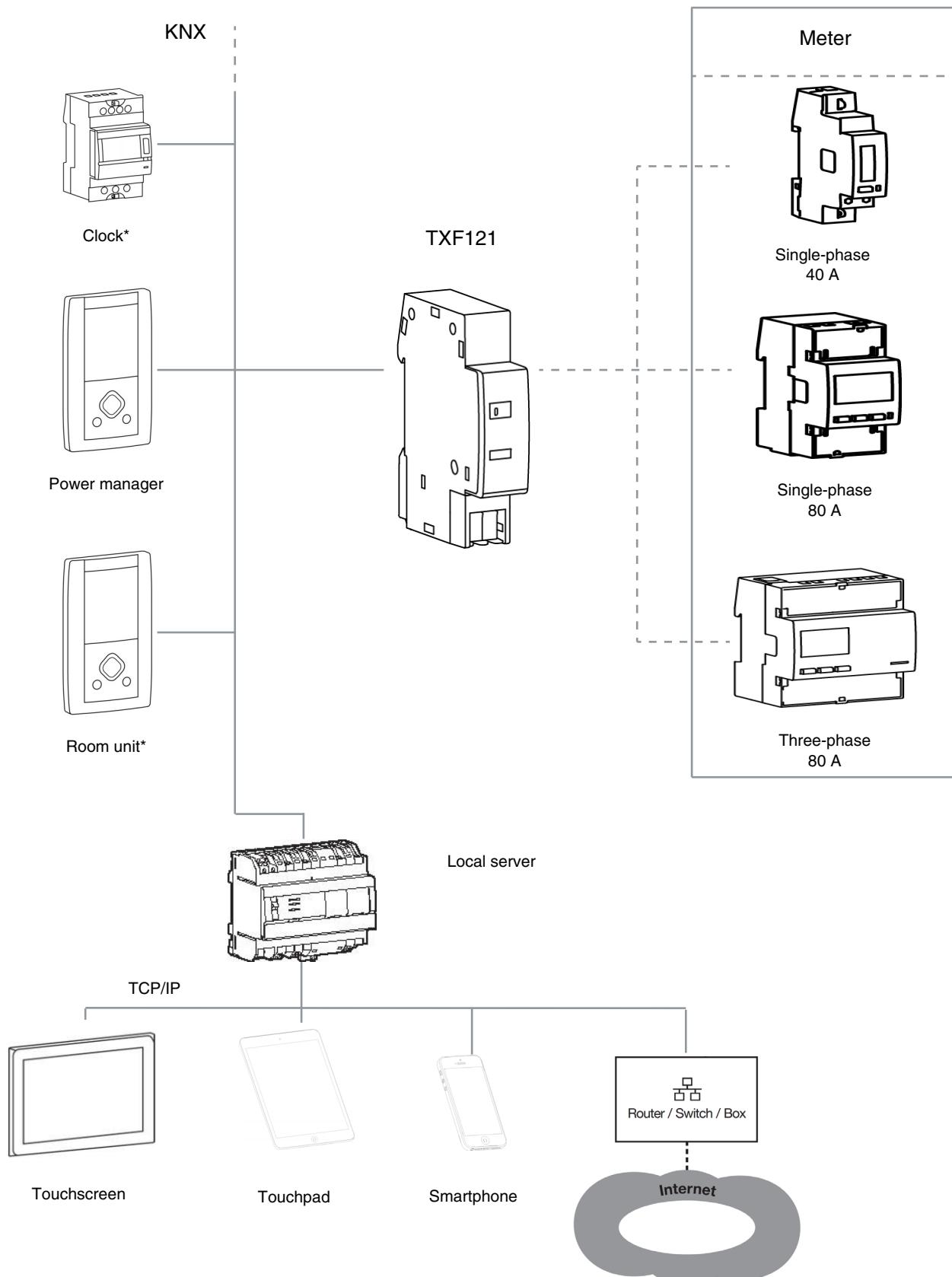
* Only programmable with ETS

2.1.4 Description of the device

① Localisation push-buttons
   (Easy) + Status LED
② IR Interface (on the side)
③ Illuminated physical
   addressing push-button
④ KNX bus connection
   terminals (-, +)
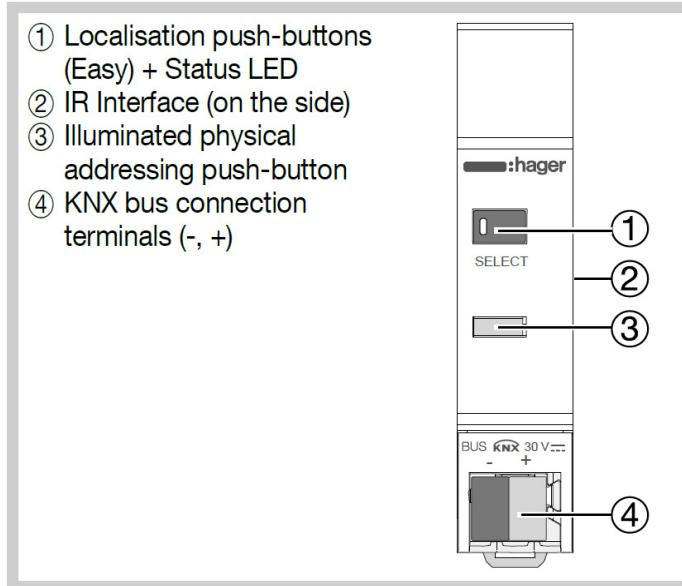
2.1.5 Physical addressing

In order to perform the physical addressing or to check whether or not the bus is connected, press the lighted push button (3) on the right-hand side above the identification plates on the front of the device.

Light on = bus connected and ready for physical addressing.

Programming mode is activated, until the physical address is transferred from ETS. Pressing the button again, exits programming mode.

2.1.6 LED meaning

LED	LED/Operation status	
Off		OFF: LED deactivated/product off
Green		ON: LED activated/product on
		energy metering: 1 x pulse/Wh
		meter tariff 1
Red		meter tariff 2
White		meter tariff 3 to 8
Orange		energy meter incompatible with the configuration
		loss of communication with energy meter
Orange and red		incorrect phase sequence (only three-phase)
Red		wrong application downloaded

2.2 Function modules of the application

2.2.1 Primary functions

- Energy

The function is used to supply the value of the energy consumed and produced for each metering channel on the bus. It is available in 4 byte or 6 byte format.

A distinction is made between:
- Active energy:
  - Total: This indicator adds up the active energy consumed from when the meter was brought into service. This indicator cannot be reset.
  - Partial: This indicator adds up the active energy consumed since the last reset. This indicator can be reset by the bus (depending on the configuration).
- Reactive energy:
  - Total: This indicator adds up the reactive energy consumed since the meter was brought into service. This indicator cannot be reset.
  - Partial: This indicator adds up the reactive energy consumed since the last reset. This indicator can be reset by the bus (depending on the configuration).

- 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.
The tariff can come either from the meter (T1/T2) or the KNX bus.

- Power

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

- Voltage

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

- Strength of current

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

- Partial meter reset

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

- Dynamic mode

The function is used to refresh the power information at a higher frequency.
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 interface has received the date and time at least once.

2.2.2 Communication objects

KNX interface for energy meters

Date

Time

Date and time

Restore ETS-params settings

Device LED switch off

Date and time request

Tariff

Net frequency

Wrong meter type

Meter communication loss

Meter serial number

Phase sequence error

Metering channel 1 to 3
Addition metering

Active power

Apparent power

Reactive power

Total and partial imported active energy

Total and partial exported active energy

Total and partial imported reactive energy

Total and partial exported reactive energy

Voltage

Current

Power factor

Energy direction

Reactive energy type

Tariff

Active power timestamped

Apparent power timestamped

Reactive power timestamped

Dynamic mode activation

Partial meter reset

History request

Total and partial imported active energy timestamped

Total and partial exported active energy timestamped

Total and partial imported reactive energy timestamped

Total and partial exported reactive energy timestamped

Overconsumption threshold

Voltage timestamped

Current timestamped

Power factor timestamped

Energy direction timestamped

Reactive energy type timestamped

Overvoltage alarm

Undervoltage alarm

Overconsumption alarm

2.2.3 Behaviour after bus power cut

During the KNX bus power cut, the interface no longer operates. However, the meter connected to it continues to operate.

When the bus power supply is restored:
- The total energy values are updated.
- The partial energy values are updated with the new value delta.
- If the tariff comes from the KNX bus, all the energy values are defined with the tariff before the bus power cut.
- The history is updated.
- The values of the consumption lost during the power cut are updated with the first valid date and time after the bus power was restored.

2.2.4 Behaviour if communication with the meter is lost

The interface and the meter communicate via infrared communication. Communication can be interrupted at any time by mechanical movements or dust.
The interface then displays a communication error and sends a lost communication message on the KNX bus.
When communication is restored, the metering values are updated and the interface sends a resumption of communication message on the KNX bus.

2.2.5 Behaviour when the meter is changed

When the meter is changed, the stored data is different to the previous meter. This replacement is detected by the presence of a new serial number.

After the meter is changed:
- The total energy values are updated.
- The partial energy values are kept with no change.
- The history is erased.

3. Programming by ETS

3.1 Definition of the general parameters

3.1.1 General

This configuration window is used for general configuration of the device.

Parameter	Description	Value
Meter type	This parameter defines the type of meter connected to the interface. Metering takes place on: - 1 circuit 1 phase - 3 circuits 1 phase - 1 three-phase circuit - 1 three-phase circuit with a Modbus link	 **Single-phase*** 3 x Single-phase Three-phase Three-phases Modbus
Energy object format	This parameter defines the type of metering of the energy objects used by the product for the metering channels. Metering of the energy objects is performed: - Without tariff. - With tariff.	 4 bytes (energy only) **6 bytes (energy + tariff information)**

* Default value

Parameter	Description	Value
Reactive energy	This parameter is used for reactive energy metering.	
	The objects and the associated parameters are hidden.	**No***
	The objects and the associated parameters are displayed.	Yes
Exported energy	This parameter is used for exported energy metering (production).	
	The objects and the associated parameters are hidden.	**No***
	The objects and the associated parameters are displayed.	Yes
Timestamp	The measurement and display of the objects concerning the total and partial energy, the power, the current and the voltage are performed:	
	Without timestamp	**No***
	With timestamp	Yes
Tariff input	This parameter defines the type of tariff used by the product from the meter connected by infrared	
	The objects and the associated parameters are hidden.	**No***
	The objects and the associated parameters are displayed.	Yes

3.1.1.1 Restore ETS-params objects: over-consumption threshold

There are 2 types of parameters in the device.
- Parameters that can only be changed via ETS.
- Parameters that can be changed via ETS or via the KNX bus.

For parameters that can be changed via ETS and via the KNX bus, 2 values are stored in the device memory: The value corresponding to the ETS-parameter and the currently used value.
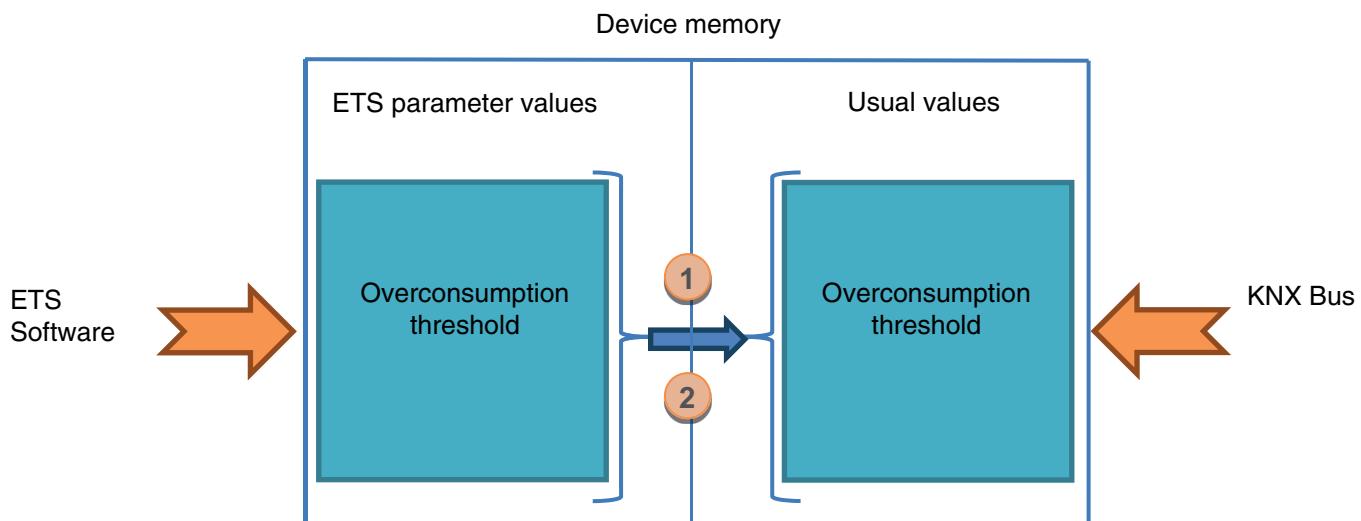
1 Receipt of the value 1 on the object, **Resets the ETS parameter values**: Current parameter values are replaced by the ETS-parameter values.

2 Download of the ETS application: Current parameter values are replaced by the ETS parameter values on download.

* Default value

Parameter	Description	Value
Restore ETS-params settings	The objects and the associated parameters are hidden.	**No***
	The objects and the associated parameters are displayed.	Yes
Restore ETS-params settings objects	The **Restore ETS-params settings** communication object is hidden.	**No***
	The **Restore ETS-params settings** communication object is displayed.	Yes
	On receipt of a 1 on this object, the parameters*** that are adjustable via the bus are overwritten with values set in the ETS before the last download.	

***The parameters in question are: Overconsumption threshold.

Communication objects: **268 - General - Restore ETS-params settings** (1-bit-1.001 DPT_Switch)

3.1.1.2 Emission of objects

In order to avoid overloading the KNX bus during a system restart, emission of the communication objects can be delayed.

Parameter	Description	Value
Objects emission delay at bus return	This parameter determines the time after which the object values must be sent on KNX bus return.	0…**20***…65535 (ss)

3.1.1.3 Net frequency

Parameter	Description	Value
Emission	The **Net frequency** object is sent on the bus:	
	On each change	On status change
	Periodically after a configurable time.	Periodically
	On change and periodically after a configurable time.	**On status change and periodically***

Parameter	Description	Value
Value emission by variation of	This parameter determines the dimming value beyond which the **Net frequency** object is sent.	0,001…**5***…65,535 Hz

*This parameter is only visible if the **Emission** parameter has the following value: **On status change** Or **On status change and periodically**.*

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the **Net frequency** object.	00:00:01…**00:30:00***…99:59:59 (hh:mm:ss)

*This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

Communication objects: **265 - General - Net frequency** (4-byte-14.033 DPT_Value_Frequency)

* Default value

3.1.1.4 Meter serial number

Parameter	Description	Value
Emission	The **Meter serial number** object is sent on the bus:	
	On each change	On status change
	Periodically after a configurable time.	Periodically
	On change and periodically after a configurable time.	**On status change and periodically***

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the **Meter serial number** object.	00:00:01…**01:00:00***…99:59:59 (hh:mm:ss)

*This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

Communication objects: **266 - General - Meter serial number** (character string-16.000 DPT_String_ASCII)

3.1.1.5 Tariff

The **Tariff** object is a value sent by the interface on the KNX bus from the meter.
There are a great many different specific tariffs depending on the countries and suppliers.

Parameter	Description	Value
Number of meter's tariffs	This setting defines the number of tariffs used in the installation.	**2 tariffs*** 4 tariffs 8 tariffs

The following parameters are therefore used to define the right index.

Parameter	Description	Value
Value meter index tariff T1	This parameter determines the value of the index sent on the KNX bus for tariff T1.	0…**1***…10
Value meter index tariff T2	This parameter determines the value of the index sent on the KNX bus for tariff T2.	0…**2***…10
Value meter index tariff T3	This parameter determines the value of the index sent on the KNX bus for tariff T3.	0…**3***…10
Value meter index tariff T4	This parameter determines the value of the index sent on the KNX bus for tariff T4.	0…**4***…10
Value meter index tariff T5	This parameter determines the value of the index sent on the KNX bus for tariff T5.	0…**5***…10
Value meter index tariff T6	This parameter determines the value of the index sent on the KNX bus for tariff T6.	0…**6***…10

* Default value

Parameter	Description	Value
Value meter index tariff T7	This parameter determines the value of the index sent on the KNX bus for tariff T7.	0…**7***…10
Value meter index tariff T8	This parameter determines the value of the index sent on the KNX bus for tariff T8.	0…**8***…10

> *This parameter is only visible when the **Tariff input** parameter has the value: **Active**.*

Communication objects: **257 - General - Tariff** (8-bit-5.006 DPT_Tariff)

3.1.1.6 Date and time

Parameter	Description	Value
Date and time request delay at initialization	This parameter determines the time after which a request is sent for a date and time request if they hve not been received before.	00 :00…**20***…04 :15 hh :mm

> *This parameter is only visible when the **Timestamp** parameter has the value: **Active**.*

Communication objects: **261 - General - Date and time request** (1-bit-1.017 DPT_Trigger)

Parameter	Description	Value
Date and time objects	This parameter determines the format of the **Date and time** object.	
	The **Date and time** object is defined by an 8 byte object.	**1 object (8 bytes)**
	The **Date and time** object is defined by 2 objects of 3 bytes each.	2 objects (3 bytes + 3 bytes)

> *This parameter is only visible when the **Timestamp** parameter has the value: **Active**.*

- 1 object (8 bytes)

Communication objects: **260 - General - Date and time** (8-byte-19.001 DPT_DateTime)

- 2 objects (3 bytes + 3 bytes)

Communication objects: **258 - General - Date** (3-byte-11.01 DPT_Date)
259 - General - Time (3-byte-10.01 DPT_TimeOfDay)

* Default value

3.1.2 Alarm and status indication

Parameters

Meter communication timeout	00:10 mm:ss
LED behaviour	ON ▼

Polarity

Meter communication lost alarm	◉ 0 = Alarm deactivated, 1 = Alarm activated ○ 0 = Alarm activated, 1 = Alarm deactivated
Wrong meter alarm	◉ 0 = Alarm deactivated, 1 = Alarm activated ○ 0 = Alarm activated, 1 = Alarm deactivated
Device LED switch off	◉ 0 = Status indication, 1 = Always OFF ○ 0 = Always OFF, 1 = Status indication

Emission

Emission	On change and periodically ▼
Emission of value every	00:10:00 hh:mm:ss

3.1.2.1 Parameters

Parameter	Description	Value
Meter communication timeout	The interface and the meter communicate via infrared communication. Communication can be interrupted at any time by mechanical movements or dust. This parameter determines the time after which the communication is no longer valid.	00 :07 …**00 :10***…04 :15 (mm :ss)

Parameter	Description	Value
LED behaviour	This parameter determines the operation of the LED located on the front. The indicator is: - Always OFF. - Flashes for each Wh consumed. - Always ON. - Indicates the status of the meter's T1/T2 tariff contact (T1 green - T2 red).	 Not active Pulse **ON*** Tariff

* Default value

3.1.2.2 Polarity

Parameter	Description	Value
Phase sequence alarm	The counter enables the detection of a wiring error concerning the wiring order of the 3 phases. The **Phase sequence error** object sends:	
	0 when the wiring is correct. 1 when the wiring is incorrect.	**0 = Alarm deactivated,** **1 = Alarm activated***
	0 when the wiring is incorrect. 1 when the wiring is correct.	0 = Alarm activated, 1 = Alarm deactivated

ℹ️ *This parameter is only visible according to the value of the following parameters:*
- ***Meter type:** Three-phase.*

Communication objects: **267 - General - Phase sequence error** (1-bit-1.005 DPT_Alarm)

Parameter	Description	Value
Meter communication lost alarm	Communication between the interface and the meter is interrupted. The **Meter communication loss** object sends:	
	0 when communication is correct. 1 when communication is interrupted.	**0 = Alarm deactivated,** **1 = Alarm activated***
	0 when communication is interrupted. 1 when communication is correct.	0 = Alarm activated, 1 = Alarm deactivated

Communication objects: **264 - General - Meter communication loss** (1-bit-1.005 DPT_Alarm)

Parameter	Description	Value
Wrong meter alarm	This alarm indicates that the meter connected by infrared is not compatible with the **Meter type** parameter. The **Wrong meter type** object sends:	
	0 when the meter type is correct. 1 when the meter type is incorrect.	**0 = Alarm deactivated,** **1 = Alarm activated***
	0 when the meter type is incorrect. 1 when the meter type is correct.	0 = Alarm activated, 1 = Alarm deactivated

Communication objects: **263 - General - Wrong meter type** (1-bit-1.005 DPT_Alarm)

* Default value

Parameter	Description	Value
Device LED switch off	This function is used to reduce the overall power consumption of the device. It allows the LEDs on the front of the device to be switched off. Object **Device LED lock** receives:	
	0 = The LED display is activated. 1 = The LED display is deactivated.	**0 = Status indication, 1 = Always OFF***
	0 = The LED display is deactivated. 1 = The LED display is activated.	0 = Always OFF, 1 = Status indication

Communication objects: **262 - General - Device LED switch off** (1-bit-1.001 DPT_Switch)

3.1.2.3 Emission

Parameter	Description	Value
Emission	The objects concerning the alarms are sent on the bus:	
	On each change	On status change
	Periodically after a configurable time.	Periodically
	On change and periodically after a configurable time.	**On status change and periodically***

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the objects concerning the alarms.	00:00:01…**01:00:00***…99:59:59 (hh:mm:ss)

> *This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

Communication objects: **263 - General - Wrong meter type** (1-bit-1.005 DPT_Alarm)
264 - General - Meter communication loss (1-bit-1.005 DPT_Alarm)
267 - General - Phase sequence error (1-bit-1.005 DPT_Alarm)

* Default value

3.1.3 Tariff input

Emission	On change and periodically	▼
Emission of value every	00:10:00	hh:mm:ss

ℹ️ *This tab is only visible when the **Tariff input** parameter is active.*

Parameter	Description	Value
Emission	The **Tariff** object from the meter is sent on the bus:	
	On each change	On status change
	Periodically after a configurable time.	Periodically
	On change and periodically after a configurable time.	**On status change and periodically***

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the **Tariff** object.	00:00:01…**01:00:00***…99:59:59 (hh:mm:ss)

ℹ️ *This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

Communication objects: **257 - General - Tariff** (8-bit-5.006 DPT_Tariff)

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* Default value

3.2 Input 1 to 3 metering and addition metering

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

3.2.1 General

Naming

| Input metering name | Input 1 |

Polarity

Partial meter reset polarity — ◉ Reset by 1 ○ Reset by 0

Energy direction polarity
- ◉ 0 = Import, 1 = Export
- ○ 0 = Export, 1 = Import

Reactive energy type polarity
- ◉ 0 = Inductive, 1 = Capacitive
- ○ 0 = Capacitive, 1 = Inductive

History

History request polarity — ◉ 1 = Start, 0 = Stop ○ 1 = Stop, 0 = Start

Interframe delay on history emission — 00:00:02 — hh:mm:ss

Dynamic mode

Dynamic mode activation polarity — ◉ 1 = Start, 0 = Stop ○ 1 = Stop, 0 = Start

Dynamic mode duration — 00:15:00 — hh:mm:ss

Emission of power (dynamic mode) by variation of — 10 — W / VA / VAr

Overvoltage / Undervoltage

Overvoltage threshold — 276 — V

Undervoltage threshold — 184 — V

Voltage threshold hysteresis — 10 — V

Overvoltage alarm polarity
- ◉ 0 = Alarm deactivated, 1 = Alarm activated
- ○ 0 = Alarm activated, 1 = Alarm deactivated

Undervoltage alarm polarity
- ◉ 0 = Alarm deactivated, 1 = Alarm activated
- ○ 0 = Alarm activated, 1 = Alarm deactivated

Overconsumption

ℹ Activate the parameter "Restore ETS-params settings" in General / General so that the parameter value is taken into account after next download.

Overconsumption threshold — 5 — A

Overconsumption hysteresis — 0,5 — A

Overconsumption alarm polarity
- ◉ 0 = Alarm deactivated, 1 = Alarm activated
- ○ 0 = Alarm activated, 1 = Alarm deactivated

* Default value

3.2.1.1 Naming

Parameter	Description	Value
Naming	This free text field is used to assign a name to the metering channel in question. The **Name of the group objects** field will be automatically updated after the input.	**Input x ***

3.2.1.2 Polarity

Parameter	Description	Value
Partial meter reset polarity	The partial energy can be reset using the **Partial meter reset** object.	
	If the object receives the value 1, the partial meter is reset.	**Reset by 1**
	If the object receives the value 0, the partial meter is reset.	Reset by 0

Communication objects:
59 ,123 ,187 ,251 - Input x metering - Partial meter reset (1 bit - 1.015 DPT_Reset)

Parameter	Description	Value
Energy direction polarity	The objects concerned by the energy direction send:	
	0 = When energy is imported (consumption) 1 = When energy is exported (production)	**0 = Import, 1 = Export***
	0 = When energy is exported (production) 1 = When energy is imported (consumption)	0 = Export, 1 = Import

Communication objects:
40 ,104 ,168 ,232 - Input x metering - Energy direction (1-bit-1.1201 DPT_EnergyDirection)
56 ,120 ,184 ,248 - Input x metering - Energy direction timestamped (9-byte-265.1201
DPT_DateTime_EnergyDirection)

Parameter	Description	Value
Reactive energy type polarity	The objects concerned by the reactive energy type send:	
	0 = For inductive type reactive energy. 1 = For capacitive type reactive energy.	**0 = Inductive, 1 = Capacitive***
	0 = For capacitive type reactive energy. 1 = For inductive type reactive energy.	0 = Capacitive, 1 = Inductive

Communication objects:
41 ,105 ,169 ,233 - Input x metering - Reactive energy type (1-bit-1.1202 DPT_ReactiveLoad_Type)
57 ,121 ,185 ,249 - Input x metering - Reactive energy type timestamped (9-byte-265.1202
DPT_DateTime_ReactiveLoad_Type)

* Default value

3.2.1.3 History

The measurement information can be used to monitor the consumption of a building.
When communication with the display is interrupted, the function enables the measurement indexes to be stored for 31 rolling days with a resolution of 1 hour. This storage does not operate if the KNX bus is not connected.
This function is only available if the interface has received the date and time at least once.

Parameter	Description	Value
History request polarity	The history request is made using the **History request** object.	
	If the object receives the value 1, the history for the relevant channel is transmitted on the KNX bus.	**1 = Start, 0 = Stop***
	If the object receives the value 0, the history for the relevant channel is transmitted on the KNX bus.	1 = Stop, 0 = Start

ℹ️ *It takes several minutes per channel for a full history to load*

Communication objects:
60 ,124 ,188 ,252 - Input x metering - History request (1-bit-1.017 DPT_Trigger)

Parameter	Description	Value
Interframe delay on history emission	This parameter determines the time between the individual transmissions of the objects in question.	00:00:00…**00:00:02***…18:12:15 (hh:mm:ss)

3.2.1.4 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 activation polarity	Dynamic mode is activated using the **Dynamic mode activation** object.	
	If the object receives the value 1, standby mode is active. If the object receives the value 0, standby mode is inactive.	**1 = Start, 0 = Stop***
	If the object receives the value 0, standby mode is inactive. If the object receives the value 1, standby mode is active.	1 = Stop, 0 = Start

Parameter	Description	Value
Dynamic mode duration	This parameter determines the maximum duration where dynamic mode is active for a request.	00:00 :00…**00:15 :00***…18 :12:15 (hh :mm :ss)

Parameter	Description	Value
Emission of power (dynamic mode) by variation of (W)	This parameter defines the value of the interval (in W/VA/VAr) of the frequency at which power objects are sent during dynamic mode.	0…**10***…65535

* Default value

Communication objects:
2 ,66 ,130 ,194 - Input x metering - Active power (4-byte-14.056 DPT_Value_Power)
3 ,67 ,131 ,195 - Input x metering - Apparent power (4-byte-14.080 DPT_Value_ApparentPower)
4 ,68 ,132 ,196 - Input x metering - Reactive power (4-byte-14.081 DPT_Value_ReactivePower)

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

Communication objects:
58 ,122 ,186 ,250 - Input x metering - Dynamic mode activation (1 bit - 1.003 DPT_Enable)

When the interface comes out of dynamic mode (end of the duration or end of dynamic mode), the product resumes the previous operating mode.

3.2.1.5 Overvoltage - Undervoltage

As the meter connected to the interface measures voltages, it is possible to detect an overvoltage or undervoltage alarm according to a defined threshold.
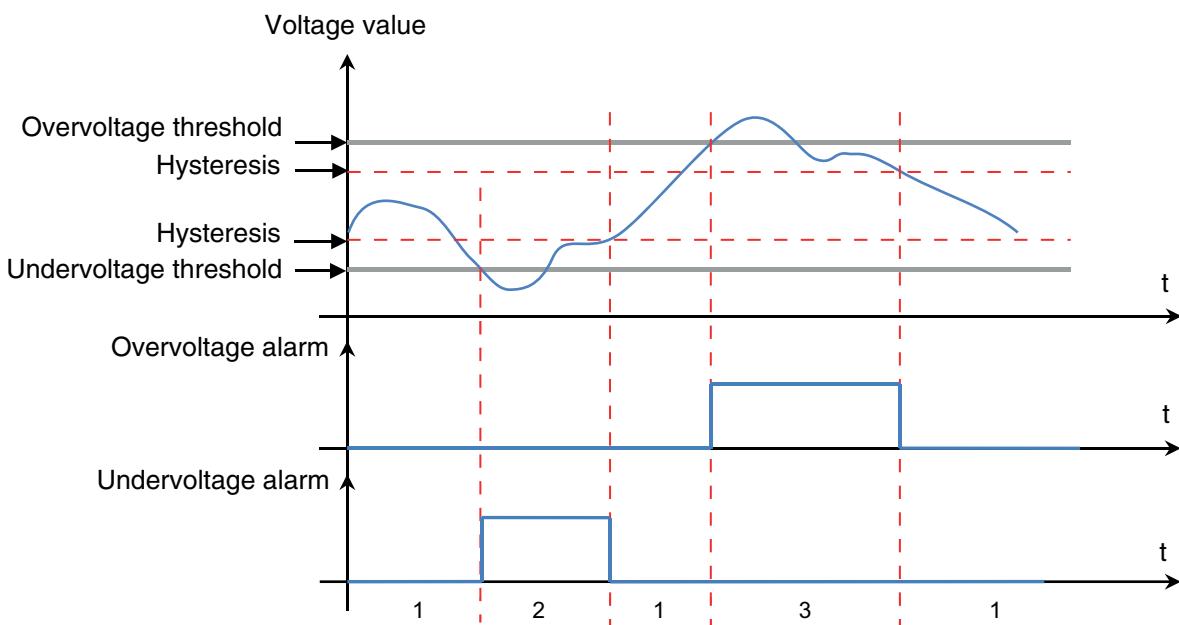
1 no alarm.

2 The undervoltage alarm is only active if the voltage falls below the undervoltage threshold.

3 The overvoltage alarm is only active if the voltage exceeds the overvoltage threshold.

Parameter	Description	Value
Overvoltage threshold	This parameter defines the threshold for transmission of the overvoltage alarm.	184…**276*** (V)

Parameter	Description	Value
Undervoltage threshold	This parameter defines the threshold for transmission of the undervoltage alarm.	**184***…276 (V)

* Default value

Parameter	Description	Value
Voltage threshold hysteresis	This parameter defines the hysteresis for the overvoltage threshold and the undervoltage threshold. The overvoltage alarm ceases to be active when the value falls below the threshold minus this hysteresis. The undervoltage alarm ceases to be active when the value rises above the threshold with this hysteresis added.	0.1…**10***…50 (V)

Parameter	Description	Value
Overvoltage alarm polarity	The **Overvoltage alarm** sends: 0 = When the overvoltage alarm is inactive. 1 = When the undervoltage alarm is active. 0 = When the undervoltage alarm is active. 1 = When the overvoltage alarm is inactive.	 **0 = Alarm deactivated, 1 = Alarm activated*** 0 = Alarm activated, 1 = Alarm deactivated

Communication objects:
61 ,125 ,189 ,253 - Input x metering - Overvoltage alarm (1-bit-1.005 DPT_Alarm)

Parameter	Description	Value
Undervoltage alarm polarity	The **Undervoltage alarm** sends: 0 = When the undervoltage alarm is inactive. 1 = When the undervoltage alarm is active. 0 = When the undervoltage alarm is active. 1 = When the undervoltage alarm is inactive.	 **0 = Alarm deactivated, 1 = Alarm activated*** 0 = Alarm activated, 1 = Alarm deactivated

Communication objects:
62 ,126 ,190 ,254 - Input x metering - Undervoltage alarm (1-bit-1.005 DPT_Alarm)

3.2.1.6 Overconsumption
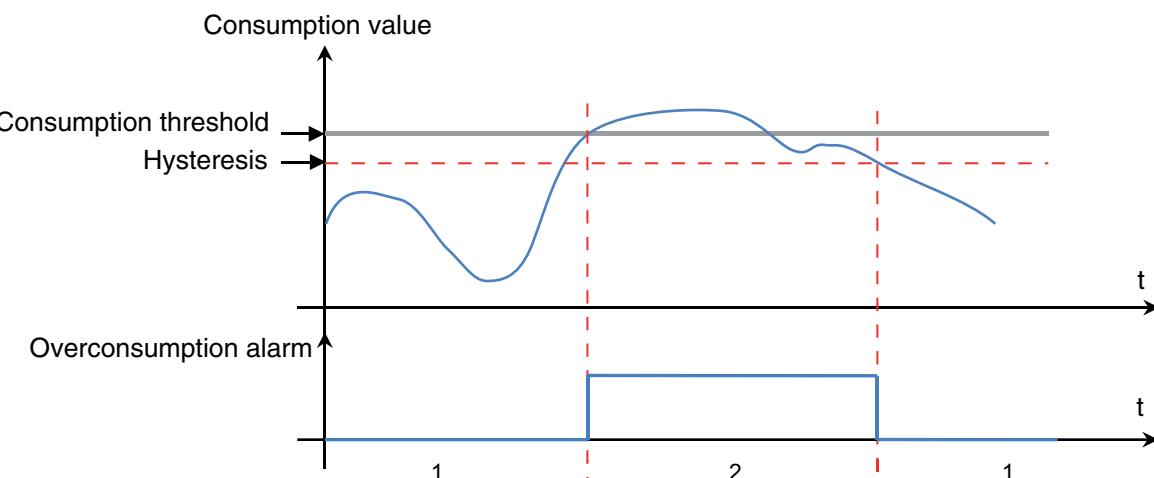
1 no alarm.

2 The overconsumption alarm is only active if the current exceeds the overconsumption threshold.

* Default value

Parameter	Description	Value
Overconsumption threshold	This parameter defines the threshold for the transmission of the overconsumption alarm.	0.1…**5***…6553.5 (A)

*This threshold can also be defined using the **Consumption threshold** from the KNX bus.*

Communication objects:
64 ,128 ,192 ,256 - Input x metering - Overconsumption threshold (4-byte-14.019 DPT_Value_Electric_Current)

Parameter	Description	Value
Overconsumption hysteresis	This parameter defines the hysteresis for the overconsumption threshold. The overconsumption alarm ceases to be active when the value falls below the threshold minus this hysteresis.	0.1…**0.5***…6553.5 (A)

Parameter	Description	Value
Overconsumption alarm polarity	The **Overconsumption alarm** sends: 0 = When the overconsumption alarm is inactive. 1 = When the overconsumption alarm is active.	**0 = Alarm deactivated, 1 = Alarm activated***
	0 = When the overconsumption alarm is active. 1 = When the overconsumption alarm is inactive.	0 = Alarm activated, 1 = Alarm deactivated

Communication objects:
63 ,127 ,191 ,255 - Input x metering - Overconsumption alarm (1-bit-1.005 DPT_Alarm)

3.2.2 Tariff

The function is used to index each metering measurement to the current pricing. The tariff can come either from the meter (T1 to T8) or the KNX bus.

Tariff input selection	Tariff from KNX bus ▼	
Complete energy meters synchronization delay	00:30:00	hh:mm:ss
Interframe delay on energy meters emission	00:00:01	hh:mm:ss

Parameter	Description	Value
Tariff input selection	Energy metering is performed:	
	Without tariff	Not active
	With the tariff from the meter.	Tariff from meter
	With the tariff from the KNX bus.	**KNX bus tariff***

*The **Tariff from meter** parameter is only visible if the **General** tab **Tariff input** parameter is **active**.*

Communication objects:

* Default value

1 ,65 ,129 ,193 - Input x metering - Tariff (8-bit-5.006 DPT_Tariff)

Parameter	Description	Value
Complete energy meters synchronisation delay	This parameter determines the time interval between each emission of all the energy objects with the tariff. This synchronisation is used to recall the various tariffs.	00:00:01…**00:30:00***…18:12:15 (hh:mm:ss)

> **i** This parameter is only visible according to the value of the following parameters:
> - **Energy object format**: 6 bytes (energy + tariff information).

Parameter	Description	Value
Interframe delay on energy meters emission	This parameter determines the time interval between the emission of each energy object with the tariff. By default, the interval between the emission of each object will be 1 second.	**00:00:01***…18:12:15 (hh:mm:ss)

> **i** This parameter is only visible according to the value of the following parameters:
> - **Energy object format**: 6 bytes (energy + tariff information).

If the energy objects do not have any tariff information, it is possible to define the value of tarif T1 and T2 for the emission of energies in 4 bytes.

Parameter	Description	Value
Value meter index tariff T1	This parameter determines the value of the index sent on the KNX bus for tariff T1.	0...**1***…10
Value meter index tariff T2	This parameter determines the value of the index sent on the KNX bus for tariff T2.	0...**2***…10

> **i** This parameter is only visible according to the value of the following parameters:
> - **Energy object format**: 4 bytes (energy only).
> - **Tariff input selection**: KNX bus tariff or meter tariff .

* Default value

3.2.3 Imported active energy emission

The conditions for sending the communication objects can be configured to avoid overloading the KNX bus.

3.2.3.1 Total imported active energy

Parameter	Description	Value
Emission	The objects concerning the total imported active energy are sent on the bus:	
	On each change.	On status change
	Periodically after a configurable time.	Periodically
	On change and periodically after a configurable time.	**On status change and periodically***

-   Objects concerned: <u>Without timestamp</u>

5 ,69 ,133 ,197 - Input x metering - Total imported active energy (6 Bytes - 235.001 DPT_Tariff_ActiveEnergy)
6 ,70 ,134 ,198 - Input x metering - Total imported active energy T1 (4-byte-13.010 DPT_ActiveEnergy)
7 ,71 ,135 ,199 - Input x metering - Total imported active energy T2 (4-byte-13.010 DPT_ActiveEnergy)
8 ,72 ,136 ,200 - Input x metering - Total imported active energy T1 + T2 (4-byte-13.010 DPT_ActiveEnergy)
Or
8 ,72 ,136 ,200 - Input x metering - Total imported active energy (4-byte-13.010 DPT_ActiveEnergy)

Objects concerned: <u>With timestamp</u>
45 ,109 ,173 ,237 - Input x metering - Total imported active energy timestamped (14-byte-269.1200 DPT_DateTime_Tariff_ActiveEnergy)

Parameter	Description	Value
Value emission by variation of	This parameter determines the dimming value beyond which the objects concerning the total imported active energy are sent.	1…**100***…65535 (Wh)

*This parameter is only visible if the **Emission** parameter has the following value: **On status change** Or **On status change and periodically**.*

* Default value

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the objects concerning the total imported active energy.	00:00:01…**00:15:00***…99:59:59 (hh:mm:ss)

ℹ️ *This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

3.2.3.2 Partial imported active energy

Parameter	Description	Value
Emission	The objects concerning the partial imported active energy are sent on the bus:	
	On each change.	On status change
	Periodically after a configurable time.	Periodically
	On change and periodically after a configurable time.	**On status change and periodically***

Objects concerned: <u>Without timestamp</u>
21 ,85 ,149 ,213 - Input x metering - Partial imported active energy (6 Bytes - 235.001 DPT_Tariff_ActiveEnergy)
22 ,86 ,150 ,214 - Input x metering - Partial imported active energy T1 (4-byte-13.010 DPT_ActiveEnergy)
23 ,87 ,151 ,215 - Input x metering - Partial imported active energy T2 (4-byte-13.010 DPT_ActiveEnergy)
24 ,88 ,152 ,216 - Input x metering - Partial imported active energy T1 + T2 (4-byte-13.010 DPT_ActiveEnergy)
Or
24 ,88 ,152 ,216 - Input x metering - Partial imported active energy (4-byte-13.010 DPT_ActiveEnergy)

Objects concerned: <u>With timestamp</u>
49 ,113 ,177 ,241 - Input x metering - Partial imported active energy timestamped (14-byte-269.1200 DPT_DateTime_Tariff_ActiveEnergy)

Parameter	Description	Value
Value emission by variation of	This parameter determines the dimming value beyond which the objects concerning the partial imported active energy are sent.	1…**100***…65535 (Wh)

ℹ️ *This parameter is only visible if the **Emission** parameter has the following value: **On status change** Or **On status change and periodically**.*

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the objects concerning the partial imported active energy.	00:00:01…**00:15:00***…99:59:59 (hh:mm:ss)

ℹ️ *This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

* Default value

3.2.4 Exported active energy emission

The conditions for sending the communication objects can be configured to avoid overloading the KNX bus.

3.2.4.1 Total exported active energy

Parameter	Description	Value
Emission	The objects concerning the total exported active energy are sent on the bus:	
	On each change.	On status change
	Periodically after a configurable time.	Periodically
	On change and periodically after a configurable time.	**On status change and periodically***

Objects concerned: <u>Without timestamp</u>
9 ,73 ,137 ,201 - Input x metering - Total exported active energy (6 Bytes - 235.001 DPT_Tariff_ActiveEnergy)
10 ,74 ,138 ,202 - Input x metering - Total exported active energy T1 (4-byte-13.010 DPT_ActiveEnergy)
11 ,75 ,139 ,203 - Input x metering - Total exported active energy T2 (4-byte-13.010 DPT_ActiveEnergy)
12 ,76 ,140 ,204 - Input x metering - Total exported active energy T1 + T2 (4-byte-13.010 DPT_ActiveEnergy)
<div align="center">Or</div>

12 ,76 ,140 ,204 - Input x metering - Total exported active energy (4-byte-13.010 DPT_ActiveEnergy)

Objects concerned: <u>With timestamp</u>
46 ,110 ,174 ,238 - Input x metering - Energie active exportée totale horodatée (14-byte-269.1200 DPT_DateTime_Tariff_ActiveEnergy)

Parameter	Description	Value
Value emission by variation of	This parameter determines the dimming value beyond which the objects concerning the total exported active energy are sent.	1…**100***…65535 (Wh)

*This parameter is only visible if the **Emission** parameter has the following value: **On status change** Or **On status change and periodically**.*

* Default value

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the objects concerning the total exported active energy.	00:00:01…**00:15:00***…99:59:59 (hh:mm:ss)

ℹ️ *This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

3.2.4.2 Partial exported active energy

Parameter	Description	Value
Emission	The objects concerning the partial exported active energy are sent on the bus:	
	On each change.	On status change
	Periodically after a configurable time.	Periodically
	On change and periodically after a configurable time.	**On status change and periodically***

Objects concerned: Without timestamp
25 ,89 ,153 ,217 - Input x metering - Partial exported active energy (6 Bytes - 235.001 DPT_Tariff_ActiveEnergy)
26 ,90 ,154 ,218 - Input x metering - Partial exported active energy T1 (4-byte-13.010 DPT_ActiveEnergy)
27 ,91 ,155 ,219 - Input x metering - Partial exported active energy T2 (4-byte-13.010 DPT_ActiveEnergy)
28 ,92 ,156 ,220 - Input x metering - Partial exported active energy T1 + T2 (4-byte-13.010 DPT_ActiveEnergy)
Or
28 ,92 ,156 ,220 - Input x metering - Partial exported active energy (4-byte-13.010 DPT_ActiveEnergy)

Objects concerned: With timestamp
50 ,114 ,178 ,242 - Input x metering - Partial exported active energy timestamped (14-byte-269.1200 DPT_DateTime_Tariff_ActiveEnergy)

Parameter	Description	Value
Value emission by variation of	This parameter determines the dimming value beyond which the objects concerning the partial exported active energy are sent.	1…**100***…65535 (Wh)

ℹ️ *This parameter is only visible if the **Emission** parameter has the following value: **On status change** Or **On status change and periodically**.*

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the objects concerning the partial exported active energy.	00:00:01…**00:15:00***…99:59:59 (hh:mm:ss)

ℹ️ *This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

* Default value

3.2.5 Imported reactive energy emission

The conditions for sending the communication objects can be configured to avoid overloading the KNX bus.

Total imported reactive energy		
Emission	On change and periodically ▼	
Value emission by variation of	100 ⬍	VArh
Emission of value every	00:15:00	hh:mm:ss
Partial imported reactive energy		
Emission	On change and periodically ▼	
Value emission by variation of	100 ⬍	VArh
Emission of value every	00:15:00	hh:mm:ss

3.2.5.1 Total imported reactive energy

Parameter	Description	Value
Emission	The objects concerning the total imported reactive energy are sent on the bus: On each change. Periodically after a configurable time. On change and periodically after a configurable time.	On status change Periodically **On status change and periodically***

Objects concerned: <u>Without timestamp</u>
13 ,77 ,141 ,205 - Input x metering - Total imported reactive energy (6 Bytes - 235.002 DPT_DateTime_Tariff_ReactiveEnergy)
14 ,78 ,142 ,206 - Input x metering - Total imported reactive energy T1 (4-byte-13.012 DPT_ReactiveEnergy)
15 ,79 ,143 ,207 - Input x metering - Total imported reactive energy T2 (4-byte-13.012 DPT_ReactiveEnergy)
16 ,80 ,144 ,208 - Input x metering - Total imported reactive energy T1 + T2 (4-byte-13.012 DPT_ReactiveEnergy)

Or

16 ,80 ,144 ,208 - Input x metering - Total imported reactive energy (4-byte-13.012 DPT_ReactiveEnergy)

Objects concerned: <u>With timestamp</u>
47 ,111 ,175 ,239 - Input x metering - Total imported reactive energy timestamped (14-byte-269.1201 DPT_DateTime_Tariff_ReactiveEnergy)

Parameter	Description	Value
Value emission by variation of	This parameter determines the dimming value beyond which the objects concerning the total imported reactive energy are sent.	1…**100***…65535 (VArh)

ℹ️ *This parameter is only visible if the **Emission** parameter has the following value: **On status change** Or **On status change and periodically**.*

* Default value

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the objects concerning the total imported reactive energy.	00:00:01…**00:15:00***…99:59:59 (hh:mm:ss)

> *This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

3.2.5.2 Partial imported reactive energy

Parameter	Description	Value
Emission	The objects concerning the partial imported reactive energy are sent on the bus:	
	On each change.	On status change
	Periodically after a configurable time.	Periodically
	On change and periodically after a configurable time.	**On status change and periodically***

Objects concerned: Without timestamp
29 ,93 ,157 ,221 - Input x metering - Partial imported reactive energy (6 Bytes - 235.002 DPT_DateTime_Tariff_ReactiveEnergy)
30 ,94 ,158 ,222 - Input x metering - Partial imported reactive energy T1 (4-byte-13.012 DPT_ReactiveEnergy)
31 ,95 ,159 ,223 - Input x metering - Partial imported reactive energy T2 (4-byte-13.012 DPT_ReactiveEnergy)
32 ,96 ,160 ,224 - Input x metering - Partial imported reactive energy T1 + T2 (4-byte-13.012 DPT_ReactiveEnergy)

Or

32 ,96 ,160 ,224 - Input x metering - Partial imported reactive energy (4-byte-13.012 DPT_ReactiveEnergy)
Objects concerned: With timestamp
51 ,115 ,179 ,243 - Input x metering - Partial imported reactive energy timestamped (14-byte-269.1201 DPT_DateTime_Tariff_ReactiveEnergy)

Parameter	Description	Value
Value emission by variation of	This parameter determines the dimming value beyond which the objects concerning the partial imported reactive energy are sent.	1…**100***…65535 (VArh)

> *This parameter is only visible if the **Emission** parameter has the following value: **On status change** Or **On status change and periodically**.*

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the objects concerning the partial imported reactive energy.	00:00:01…**00:15:00***…99:59:59 (hh:mm:ss)

> *This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

* Default value

3.2.6 Exported reactive energy emission

The conditions for sending the communication objects can be configured to avoid overloading the KNX bus.

Total exported reactive energy

Emission	On change and periodically ▼
Value emission by variation of	100 ▲▼ VArh
Emission of value every	00:15:00 hh:mm:ss

Partial exported reactive energy

Emission	On change and periodically ▼
Value emission by variation of	100 ▲▼ VArh
Emission of value every	00:15:00 hh:mm:ss

* Default value

3.2.6.1 Total exported reactive energy

Parameter	Description	Value
Emission	The objects concerning the total exported reactive energy are sent on the bus: On each change. Periodically after a configurable time. On change and periodically after a configurable time.	 On status change Periodically **On status change and periodically***

Objects concerned: <u>Without timestamp</u>
17 ,81 ,145 ,209 - Input x metering - Total exported reactive energy (6 Bytes - 235.002 DPT_DateTime_Tariff_ReactiveEnergy)
18 ,82 ,146 ,210 - Input x metering - Total exported reactive energy T1 (4-byte-13.012 DPT_ReactiveEnergy)
19 ,83 ,147 ,211 - Input x metering - Total exported reactive energy T2 (4-byte-13.012 DPT_ReactiveEnergy)
20 ,84 ,148 ,212 - Input x metering - Total exported reactive energy T1 + T2 (4-byte-13.012 DPT_ReactiveEnergy)
<div align="center">Or</div>

20 ,84 ,148 ,212 - Input x metering - Total exported reactive energy (4-byte-13.012 DPT_ReactiveEnergy)

Objects concerned: <u>With timestamp</u>
48 ,112 ,176 ,240 - Input x metering - Total exported reactive energy timestamped (14-byte-269.1201 DPT_DateTime_Tariff_ReactiveEnergy)

Parameter	Description	Value
Value emission by variation of	This parameter determines the dimming value beyond which the objects concerning the total exported reactive energy are sent.	1…**100***…65535 (VArh)

> ℹ️ *This parameter is only visible if the **Emission** parameter has the following value: **On status change** Or **On status change and periodically**.*

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the objects concerning the total exported reactive energy.	00:00:01…**00:15:00***…99:59:59 (hh:mm:ss)

> ℹ️ *This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

* Default value

3.2.6.2 Partial exported reactive energy

Parameter	Description	Value
Emission	The objects concerning the partial exported reactive energy are sent on the bus:	
	On each change.	On status change
	Periodically after a configurable time.	Periodically
	On change and periodically after a configurable time.	**On status change and periodically***

Objects concerned: <u>Without timestamp</u>
33 ,97 ,161 ,225 - Input x metering - Partial exported reactive energy (6 Bytes - 235.002 DPT_DateTime_Tariff_ReactiveEnergy)
34 ,98 ,162 ,226 - Input x metering - Partial exported reactive energy T1 (4-byte-13.012 DPT_ReactiveEnergy)
35 ,99 ,163 ,227 - Input x metering - Partial exported reactive energy T2 (4-byte-13.012 DPT_ReactiveEnergy)
36 ,100 ,164 ,228 - Input x metering - Partial exported reactive energy T1 + T2 (4-byte-13.012 DPT_ReactiveEnergy)

Or

36 ,100 ,164 ,228 - Input x metering - Partial exported reactive energy (4-byte-13.012 DPT_ReactiveEnergy)

Objects concerned: <u>With timestamp</u>
52 ,116 ,180 ,244 - Input x metering - Partial exported reactive energy timestamped (14-byte-269.1201 DPT_DateTime_Tariff_ReactiveEnergy)

Parameter	Description	Value
Value emission by variation of	This parameter determines the dimming value beyond which the objects concerning the partial exported reactive energy are sent.	1…**100***…65535 (VArh)

ℹ *This parameter is only visible if the **Emission** parameter has the following value: **On status change** Or **On status change and periodically**.*

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the objects concerning the partial exported reactive energy.	00:00:01…**00:15:00***…99:59:59 (hh:mm:ss)

ℹ *This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

* Default value

3.2.7 Other values emission

The conditions for sending the communication objects can be configured to avoid overloading the KNX bus.

Power

Emission	On change and periodically ▼
Value emission by variation of	500 W / VA / VAr
Emission of value every	00:05:00 hh:mm:ss

Voltage

Emission	On change and periodically ▼
Value emission by variation of	5 V
Emission of value every	00:15:00 hh:mm:ss

Current

Emission	On change and periodically ▼
Value emission by variation of	2 A
Emission of value every	00:05:00 hh:mm:ss

Power factor

Emission	On change and periodically ▼
Value emission by variation of	0,05
Emission of value every	00:15:00 hh:mm:ss

Energy direction

Emission	On change and periodically ▼
Emission of value every	00:30:00 hh:mm:ss

Reactive energy type

Emission	On change and periodically ▼
Emission of value every	00:30:00 hh:mm:ss

Voltage alarms

Emission	On change and periodically ▼
Emission of value every	01:00:00 hh:mm:ss

Overconsumption

Emission	On change and periodically ▼
Emission of value every	01:00:00 hh:mm:ss

* Default value

3.2.7.1 Power

Parameter	Description	Value
Emission	The objects concerning the power are sent on the bus:	
	On each change.	On status change
	Periodically after a configurable time.	Periodically
	On change and periodically after a configurable time.	**On status change and periodically***

Objects concerned: <u>Without timestamp</u>
2 ,66 ,130 ,194 - Input x metering - Active power (4-byte-14.056 DPT_Value_Power)
3 ,67 ,131 ,195 - Input x metering - Apparent power (4-byte-14.080 DPT_Value_ApparentPower)
4 ,68 ,132 ,196 - Input x metering - Reactive power (4-byte-14.081 DPT_Value_ReactivePower)

Objects concerned: <u>With timestamp</u>
42 ,106 ,170 ,234 - Input x metering - Active power timestamped (12-byte-266.56 DPT_DateTime_Value_Power)
43 ,107 ,171 ,235 - Input x metering - Apparent power timestamped (12-byte-266.80 DPT_DateTime_Value_ApparentPower)
44 ,108 ,172 ,236 - Input x metering - Reactive power timestamped (12-byte-266.81 DPT_DateTime_Value_ReactivePower)

Parameter	Description	Value
Value emission by variation of	This parameter determines the dimming value beyond which the objects concerning the power are sent.	1…**500***…65535 (W / VA / VAr)

ℹ️ *This parameter is only visible if the **Emission** parameter has the following value: **On status change** Or **On status change and periodically**.*

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the objects concerning the power.	00:00:01…**00:05:00***…99:59:59 (hh:mm:ss)

ℹ️ *This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

* Default value

3.2.7.2 Voltage

Parameter	Description	Value
Emission	The objects concerning the voltage are sent on the bus:	
	On each change.	On status change
	Periodically after a configurable time.	Periodically
	On change and periodically after a configurable time.	**On status change and periodically***

Objects concerned: <u>Without timestamp</u>
37 ,101 ,165 ,229 - Input x metering - Voltage (4-byte-14.027 DPT_Value_Electric_Potential)

Objects concerned: <u>With timestamp</u>
53 ,117 ,181 ,245 - Input x metering - Voltage timestamped (12-byte-266.027 DPT_DateTime_Value_Electric_Potential)

Parameter	Description	Value
Value emission by variation of	This parameter determines the dimming value beyond which the objects concerning the voltage are sent.	1…**5***…65535 (V)

*This parameter is only visible if the **Emission** parameter has the following value: **On status change** Or **On status change and periodically**.*

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the objects concerning the voltage.	00:00:01…**00:15:00***…99:59:59 (hh:mm:ss)

*This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

* Default value

3.2.7.3 Current

Parameter	Description	Value
Emission	The objects concerning the current are sent on the bus:	
	On each change.	On status change
	Periodically after a configurable time.	Periodically
	On change and periodically after a configurable time.	**On status change and periodically***

Objects concerned: <u>Without timestamp</u>
38 ,102 ,166 ,230 - Input x metering - Current (4-byte-14.019 DPT_Value_Electric_Current)

Objects concerned: <u>With timestamp</u>
54 ,118 ,182 ,246 - Input x metering - Current timestamped (12-byte-266.019 DPT_DateTime_Electric_Current)

Parameter	Description	Value
Value emission by variation of	This parameter determines the dimming value beyond which the objects concerning the current are sent.	1…**2***…65535 (A)

ℹ️ *This parameter is only visible if the **Emission** parameter has the following value: **On status change** Or **On status change and periodically**.*

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the objects concerning the current.	00:00:01…**00:05:00***…99:59:59 (hh:mm:ss)

ℹ️ *This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

* Default value

3.2.7.4 Power factor

Parameter	Description	Value
Emission	The objects concerning the power factor are sent on the bus: On each change. Periodically after a configurable time. On change and periodically after a configurable time.	 On status change Periodically **On status change and periodically***

Objects concerned: <u>Without timestamp</u>
39 ,103 ,167 ,231 - Input x metering - Power factor (4-byte-14.057 DPT_Value_Power_Factor)

Objects concerned: <u>With timestamp</u>
55 ,119 ,183 ,247 - Input x metering - Power factor timestamped (12-byte-266.057 DPT_DateTime_Value_Power_Factor)

Parameter	Description	Value
Value emission by variation of	This parameter determines the dimming value beyond which the objects concerning the power factor are sent.	0.001…**0.05***…1

*This parameter is only visible if the **Emission** parameter has the following value: **On status change** Or **On status change and periodically**.*

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the objects concerning the power factor.	00:00:01…**00:15:00***…99:59:59 (hh:mm:ss)

*This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

* Default value

3.2.7.5 Energy direction

Parameter	Description	Value
Emission	The objects concerning the energy direction are sent on the bus: On each change. Periodically after a configurable time. On change and periodically after a configurable time.	 On status change Periodically **On status change and periodically***

Objects concerned: Without timestamp
40 ,104 ,168 ,232 - Input x metering - Energy direction (1-bit-1.1201 DPT_EnergyDirection)

Objects concerned: With timestamp
56 ,120 ,184 ,248 - Input x metering - Energy direction timestamped (9-byte-265.1201 DPT_DateTime_EnergyDirection)

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the objects concerning the energy direction.	00:00:01…**00:30:00***…99:59:59 (hh:mm:ss)

*This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

3.2.7.6 Reactive energy type

Parameter	Description	Value
Emission	The objects concerning the reactive energy type are sent on the bus: On each change. Periodically after a configurable time. On change and periodically after a configurable time.	 On status change Periodically **On status change and periodically***

Objects concerned: Without timestamp
41 ,105 ,169 ,233 - Input x metering - Type d'énergie réactive (1-bit-1.1202 DPT_ReactiveLoad_Type)

Objects concerned: With timestamp
57 ,121 ,185 ,249 - Input x metering - Type d'énergie réactive horodatée (9-byte-265.1202 DPT_DateTime_ReactiveLoad_Type)

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the objects concerning the reactive energy type.	00:00:01…**00:30:00***…99:59:59 (hh:mm:ss)

*This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

* Default value

3.2.7.7 Voltage alarms

Parameter	Description	Value
Emission	The objects concerning the voltage alarms are sent on the bus: On each change. Periodically after a configurable time. On change and periodically after a configurable time.	 On status change Periodically **On status change and periodically***

Objects concerned:
61 ,125 ,189 ,253 - Input x metering - Alarme de surtension (1-bit-1.005 DPT_Alarm)
62 ,126 ,190 ,254 - Input x metering - Alarme de soustension (1-bit-1.005 DPT_Alarm)

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the objects concerning the voltage alarms.	00:00:01…**01:00:00***…99:59:59 (hh:mm:ss)

ℹ *This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

3.2.7.8 Overconsumption alarm

Parameter	Description	Value
Emission	The objects concerning overconsumption are sent on the bus: On each change. Periodically after a configurable time. On change and periodically after a configurable time.	 On status change Periodically **On status change and periodically***

Objects concerned:
63 ,127 ,191 ,255 - Input x metering - Overconsumption alarm (1-bit-1.005 DPT_Alarm)

Parameter	Description	Value
Emission of value every	This parameter determines the time between the individual transmissions of the objects concerning overconsumption.	00:00:01…**01:00:00***…99:59:59 (hh:mm:ss)

ℹ *This parameter is only visible if the **Emission** parameter has the following value: **Periodically** Or **On status change and periodically**.*

* Default value

3.3 Communication objects

3.3.1 Objects per channel

	Number	Name	Function of the object	Length	C	R	W	T
	1	Input 1 metering	Tariff	1 bit	C	-	W	T
	2	Input 1 metering	Active power	4 byte	C	R	-	T
	3	Input 1 metering	Apparent power	4 byte	C	R	-	T
	4	Input 1 metering	Reactive power	4 byte	C	R	-	T
	5	Input 1 metering	Total imported active energy	6 byte	C	R	-	T
	6	Input 1 metering	Total imported active energy T1	4 byte	C	R	-	T
	7	Input 1 metering	Total imported active energy T2	4 byte	C	R	-	T
	8	Input 1 metering	Total imported active energy T1 + T2	4 byte	C	R	-	T
	9	Input 1 metering	Total exported active energy	6 byte	C	R	-	T
	10	Input 1 metering	Total exported active energy T1	4 byte	C	R	-	T
	11	Input 1 metering	Total exported active energy T2	4 byte	C	R	-	T
	12	Input 1 metering	Total exported active energy T1 + T2	4 byte	C	R	-	T
	13	Input 1 metering	Total imported reactive energy	6 byte	C	R	-	T
	14	Input 1 metering	Total imported reactive energy T1	4 byte	C	R	-	T
	15	Input 1 metering	Total imported reactive energy T2	4 byte	C	R	-	T
	16	Input 1 metering	Total imported reactive energy T1 + T2	4 byte	C	R	-	T
	17	Input 1 metering	Total exported reactive energy	6 byte	C	R	-	T
	18	Input 1 metering	Total exported reactive energy T1	4 byte	C	R	-	T
	19	Input 1 metering	Total exported reactive energy T2	4 byte	C	R	-	T
	20	Input 1 metering	Total exported reactive energy T1 + T2	4 byte	C	R	-	T
	21	Input 1 metering	Partial imported active energy	6 byte	C	R	-	T
	22	Input 1 metering	Partial imported active energy T1	4 byte	C	R	-	T
	23	Input 1 metering	Partial imported active energy T2	4 byte	C	R	-	T
	24	Input 1 metering	Partial imported active energy T1 + T2	4 byte	C	R	-	T
	25	Input 1 metering	Partial exported active energy	6 byte	C	R	-	T
	26	Input 1 metering	Partial exported active energy T1	4 byte	C	R	-	T
	27	Input 1 metering	Partial exported active energy T2	4 byte	C	R	-	T
	28	Input 1 metering	Partial exported active energy T1 + T2	4 byte	C	R	-	T
	29	Input 1 metering	Partial imported reactive energy	6 byte	C	R	-	T
	30	Input 1 metering	Partial imported reactive energy T1	4 byte	C	R	-	T
	31	Input 1 metering	Partial imported reactive energy T2	4 byte	C	R	-	T
	32	Input 1 metering	Partial imported reactive energy T1 + T2	4 byte	C	R	-	T
	33	Input 1 metering	Partial exported reactive energy	6 byte	C	R	-	T
	34	Input 1 metering	Partial exported reactive energy T1	4 byte	C	R	-	T
	35	Input 1 metering	Partial exported reactive energy T2	4 byte	C	R	-	T
	36	Input 1 metering	Partial exported reactive energy T1 + T2	4 byte	C	R	-	T
	37	Input 1 metering	Voltage	4 byte	C	R	-	T

	Number	Name	Function of the object	Length	C	R	W	T
	38	Input 1 metering	Current	4 byte	C	R	-	T
	39	Input 1 metering	Power factor	4 byte	C	R	-	T
	40	Input 1 metering	Energy direction	1 bit	C	R	-	T
	41	Input 1 metering	Reactive energy type	1 bit	C	R	-	-
	42	Input 1 metering	Active power timestamped	12 byte	C	R	-	-
	43	Input 1 metering	Apparent power timestamped	12 byte	C	R	-	T
	44	Input 1 metering	Reactive power timestamped	12 byte	C	R	-	T
	45	Input 1 metering	Total imported active energy timestamped	14 byte	C	R	-	T
	46	Input 1 metering	Total exported active energy timestamped	14 byte	C	R	-	T
	47	Input 1 metering	Total imported reactive energy timestamped	14 byte	C	R	-	T
	48	Input 1 metering	Total exported reactive energy timestamped	14 byte	C	R	-	T
	49	Input 1 metering	Partial imported active energy timestamped	14 byte	C	R	-	T
	50	Input 1 metering	Partial exported active energy timestamped	14 byte	C	R	-	T
	51	Input 1 metering	Partial imported reactive energy timestamped	14 byte	C	R	-	T
	52	Input 1 metering	Partial exported reactive energy timestamped	14 byte	C	R	-	T
	53	Input 1 metering	Voltage timestamped	12 byte	C	R	-	T
	54	Input 1 metering	Current timestamped	12 byte	C	R	-	T
	55	Input 1 metering	Power factor timestamped	12 byte	C	R	-	T
	56	Input 1 metering	Energy direction timestamped	9 byte	C	R	-	T
	57	Input 1 metering	Reactive energy type timestamped	9 byte	C	R	-	T
	58	Input 1 metering	Dynamic mode	1 bit	C	R	-	T
	59	Input 1 metering	Partial meter reset	1 bit	C	R	-	T
	60	Input 1 metering	History request	1 bit	C	R	-	T
	61	Input 1 metering	Overvoltage alarm	1 bit	C	R	-	T
	62	Input 1 metering	Undervoltage alarm	1 bit	C	R	-	T
	63	Input 1 metering	Overconsumption alarm	1 bit	C	R	-	T
	64	Input 1 metering	Overconsumption threshold	4 byte	C	R	-	T

As the device has additional metering channels, the designation of the objects for these channels is identical. Only the object number differs.

3.3.1.1 Tariff

No.	Name	Function of the object	Data type	Flags
1 ,65 ,129 ,193	Input x metering	Tariff	8-bit-5.006 DPT_Tariff	C, W, T

This object is activated according to the value of the following parameters:
- **Tariff input:** Active

This object is used to receive the tariff to be applied from the KNX bus.
Object value: 11 different tariffs of a value ranging from 0 to 10.
For further information, see: 3.2.2 Tariff .

3.3.1.2 Power

No.	Name	Function of the object	Data type	Flags
2 ,66 ,130 ,194	Input x metering	Active power	4-byte-14.056 DPT_Value_Power	C, R, T

These objects are always activated.
This object is used to send the active power value on the KNX bus.
Object value: Power in W.

Byte 4 (MSB)		Byte 3	Byte 2	Byte 1 (LSB)
S	Exponent		Fraction	
S	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	Value
Sign (S)	0 = positive or 1 = negative (1 bit)
Exponent (E)	0 to 255 (8 bit)
Fraction (F)	0 to 8388607 (23 bit)

This object is sent periodically and/or on status change.

For further information, see: 3.2.7.1 Power .

No.	Name	Function of the object	Data type	Flags
3 ,67 ,131 ,195	Input x metering	Apparent power	4-byte-14.080 DPT_Value_ApparentPower	C, R, T

These objects are always activated.
This object is used to send the apparent power value on the KNX bus.
Object value: Power in VA. See object No. 2.
This object is sent periodically and/or on status change.

For further information, see: 3.2.7.1 Power .

No.	Name	Function of the object	Data type	Flags
4 ,68 ,132 ,196	Input x metering	Reactive power	4-byte-14.081 DPT_Value_ReactivePower	C, R, T

These objects are always activated.
This object is used to send the reactive power value on the KNX bus.
Object value: Power in VAR. See object No. 2.
This object is sent periodically and/or on status change.

For further information, see: 3.2.7.1 Power .

3.3.1.3 Total imported active energy

No.	Name	Function of the object	Data type	Flags
5 ,69 ,133 ,197	Input x metering	Total imported active energy	6-byte-235.001 DPT_Tariff_ActiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 6 bytes (energy + tariff information)

This object is used to send the total value of the imported active energy with the tariff on the KNX bus.
Object value:

Byte 6 (MSB)								Byte 5								Byte 4								Byte 3							
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

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

Fields	Code	Value	Units
Active electrical energy	Binary	-2 147 483 648 to 2 147 483 647 (4 Bytes)	Wh
Tariff	Binary	0 to 254 (1 byte) 11 different tariffs of a value ranging from 0 to 10.	-
Tariff validity (T)	Binary	1 to 31 (5 bit)	-
Day of the week	Binary	0: Valid 1: Invalid	-
Active electrical energy validity (E)	Binary	0: Valid 1: Invalid	-

This object is sent periodically and/or on status change.

For further information, see: 3.2.3.1 Total imported active energy .

No.	Name	Function of the object	Data type	Flags
6 ,70 ,134 ,198	Input x metering	Total imported active energy T1	4-byte-13.010 DPT_ActiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active

This object is used to send the total value of the imported active energy corresponding to tariff T1 on the KNX bus.
Object value:

Byte 4 (MSB)								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
Active electrical energy	Binary	-2 147 483 648 to 2 147 483 647 (4 Bytes)	Wh

This object is sent periodically and/or on status change.

For further information, see: 3.2.3.1 Total imported active energy .

No.	Name	Function of the object	Data type	Flags
7 ,71 ,135 ,199	Input x metering	Total imported active energy T2	4-byte-13.010 DPT_ActiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active

This object is used to send the total value of the imported active energy corresponding to tariff T2 on the KNX bus.
Object value: See object No. 6.
This object is sent periodically and/or on status change.

For further information, see: 3.2.3.1 Total imported active energy .

No.	Name	Function of the object	Data type	Flags
8 ,72 ,136 ,200	Input x metering	Total imported active energy T1 + T2	4-byte-13.010 DPT_ActiveEnergy	C, R, T
8 ,72 ,136 ,200	Input x metering	Total imported active energy	4-byte-13.010 DPT_ActiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active

ℹ️   For the total energy without tariff, the **Tariff input selection** parameter must be inactive.

This object is used to send the total value of the imported active energy corresponding to the sum of all the tariffs on the KNX bus.
Object value: See object No. 6.
This object is sent periodically and/or on status change.

For further information, see: 3.2.3.1 Total imported active energy .

3.3.1.4 Total exported active energy

No.	Name	Function of the object	Data type	Flags
9 ,73 ,137 ,201	Input x metering	Total exported active energy	6-byte-235.001 DPT_Tariff_ActiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 6 bytes (energy + tariff information)
- **Exported energy:** Active

This object is used to send the value of the total active energy exported with the tariff on the KNX bus.
Object value: See object No. 5.
This object is sent periodically and/or on status change.

For further information, see: 3.2.4.1 Total exported active energy .

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* Default value

No.	Name	Function of the object	Data type	Flags
10 ,74 ,138 ,202	Input x metering	Total exported active energy T1	4-byte-13.010 DPT_ActiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active
- **Exported energy:** Active

This object is used to send the total value of the exported active energy corresponding to tariff T1 on the KNX bus.
Object value: See object No. 6.
This object is sent periodically and/or on status change.

For further information, see: 3.2.4.1 Total exported active energy .

No.	Name	Function of the object	Data type	Flags
11 ,75 ,139 ,203	Input x metering	Total exported active energy T2	4-byte-13.010 DPT_ActiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active
- **Exported energy:** Active

This object is used to send the total value of the exported active energy corresponding to tariff T2 on the KNX bus.
Object value: See object No. 7.
This object is sent periodically and/or on status change.

For further information, see: 3.2.4.1 Total exported active energy .

No.	Name	Function of the object	Data type	Flags
12 ,76 ,140 ,204	Input x metering	Total exported active energy T2	4-byte-13.010 DPT_ActiveEnergy	C, R, T
12 ,76 ,140 ,204	Input x metering	Total exported active energy	4-byte-13.010 DPT_ActiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active
- **Exported energy:** Active

> For the total energy without tariff, the **Tariff input selection** parameter must be inactive.

This object is used to send the total value of the exported active energy corresponding to the sum of all the tariffs on the KNX bus.
Object value: See object No. 8.
This object is sent periodically and/or on status change.

For further information, see: 3.2.4.1 Total exported active energy .

* Default value

3.3.1.5 Total imported reactive energy

No.	Name	Function of the object	Data type	Flags
13 ,77 ,141 ,205	Input x metering	Total imported reactive energy	6-byte-235.002 DPT_Tariff_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 6 bytes (energy + tariff information)
- **Reactive energy:** Active

This object is used to send the value of the total reactive energy imported with the tariff on the KNX bus.
Object value:

Byte 6 (MSB)								Byte 5								Byte 4								Byte 3							
Reactive 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

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

Fields	Code	Value	Units
Reactive electrical energy	Binary	-2 147 483 648 to 2 147 483 647 (4 Bytes)	VArh
Tariff	Binary	0 to 254 (1 byte) 11 different tariffs of a value ranging from 0 to 10.	-
Tariff validity (T)	Binary	0: Valid 1: Invalid	-
Active electrical energy validity (E)	Binary	0: Valid 1: Invalid	-

This object is sent periodically and/or on status change.

For further information, see: 3.2.5.1 Total imported reactive energy .

No.	Name	Function of the object	Data type	Flags
14 ,78 ,142 ,206	Input x metering	Total imported reactive energy T1	4-byte-13.012 DPT_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active
- **Reactive energy:** Active

This object is used to send the total value of the imported reactive energy corresponding to tarif T1 on the KNX bus.
Object value:

Byte 4 (MSB)								Byte 3								Byte 2								Byte 1 (LSB)							
Reactive 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
Reactive electrical energy	Binary	-2 147 483 648 to 2 147 483 647 (4 Bytes)	VArh

This object is sent periodically and/or on status change.

For further information, see: 3.2.5.1 Total imported reactive energy .

* Default value

No.	Name	Function of the object	Data type	Flags
15 ,79 ,143 ,207	Input x metering	Total imported reactive energy T2	4-byte-13.012 DPT_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active
- **Reactive energy:** Active

This object is used to send the total value of the imported reactive energy corresponding to tarif T2 on the KNX bus.
Object value: See object No. 14.
This object is sent periodically and/or on status change.

For further information, see: 3.2.5.1 Total imported reactive energy .

No.	Name	Function of the object	Data type	Flags
16 ,80 ,144 ,208	Input x metering	Total imported reactive energy T1 + T2	4-byte-13.012 DPT_ReactiveEnergy	C, R, T
16 ,80 ,144 ,208	Input x metering	Total imported reactive energy	4-byte-13.012 DPT_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active
- **Reactive energy:** Active

For the total energy without tariff, the **Tariff input selection** parameter must be inactive.

This object is used to send the total value of the imported reactive energy corresponding to the sum of all the tariffs on the KNX bus.
Object value: See object No. 14.
This object is sent periodically and/or on status change.

For further information, see: 3.2.5.1 Total imported reactive energy .

3.3.1.6 Total exported reactive energy

No.	Name	Function of the object	Data type	Flags
17 ,81 ,145 ,209	Input x metering	Total exported reactive energy	6-byte-235.002 DPT_Tariff_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 6 bytes (energy + tariff information)
- **Reactive energy:** Active
- **Exported energy:** Active

This object is used to send the total value of the exported reactive energy with the tariff on the KNX bus.
Object value: See object No. 13.
This object is sent periodically and/or on status change.

For further information, see: 3.2.6.1 Total exported reactive energy .

No.	Name	Function of the object	Data type	Flags
18 ,82 ,146 ,210	Input x metering	Total exported reactive energy T1	4-byte-13.012 DPT_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active
- **Reactive energy:** Active
- **Exported energy:** Active

This object is used to send the total value of the exported reactive energy corresponding to tarif T1 on the KNX bus.
Object value: See object No. 14.
This object is sent periodically and/or on status change.

For further information, see: 3.2.6.1 Total exported reactive energy .

No.	Name	Function of the object	Data type	Flags
19 ,83 ,147 ,211	Input x metering	Total exported reactive energy T2	4-byte-13.012 DPT_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active
- **Reactive energy:** Active
- **Exported energy:** Active

This object is used to send the total value of the exported reactive energy corresponding to tarif T2 on the KNX bus.
Object value: See object No. 14.
This object is sent periodically and/or on status change.

For further information, see: 3.2.6.1 Total exported reactive energy .

No.	Name	Function of the object	Data type	Flags
20 ,84 ,148 ,212	Input x metering	Total exported reactive energy T1 + T2	4-byte-13.012 DPT_ReactiveEnergy	C, R, T
20 ,84 ,148 ,212	Input x metering	Total exported reactive energy	4-byte-13.012 DPT_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active
- **Reactive energy:** Active
- **Exported energy:** Active

> For the total energy without tariff, the **Tariff input selection** parameter must be inactive.

This object is used to send the total value of the exported reactive energy corresponding to the sum of all the tariffs on the KNX bus.
Object value: See object No. 14.
This object is sent periodically and/or on status change.

For further information, see: 3.2.6.1 Total exported reactive energy .

3.3.1.7 Partial imported active energy

No.	Name	Function of the object	Data type	Flags
21 ,85 ,149 ,213	Input x metering	Partial imported active energy	6-byte-235.001 DPT_Tariff_ActiveEnergy	C, R, T
This object is activated according to the value of the following parameters: - **Energy object format:** 6 bytes (energy + tariff information) This object is used to send the partial value of the imported active energy with the tariff on the KNX bus. Object value: See object No. 5. This object is sent periodically and/or on status change. For further information, see: 3.2.3.2 Partial imported active energy .				

No.	Name	Function of the object	Data type	Flags
22 ,86 ,150 ,214	Input x metering	Partial imported active energy T1	4-byte-13.010 DPT_ActiveEnergy	C, R, T
This object is activated according to the value of the following parameters: - **Energy object format:** 4 bytes (energy only) - **Tariff input selection:** Active This object is used to send the partial value of the imported active energy corresponding to tarif T1 on the KNX bus. Object value: See object No. 6. This object is sent periodically and/or on status change. For further information, see: 3.2.3.2 Partial imported active energy .				

No.	Name	Function of the object	Data type	Flags
23 ,87 ,151 ,215	Input x metering	Partial imported active energy T2	4-byte-13.010 DPT_ActiveEnergy	C, R, T
This object is activated according to the value of the following parameters: - **Energy object format:** 4 bytes (energy only) - **Tariff input selection:** Active This object is used to send the partial value of the imported active energy corresponding to tarif T2 on the KNX bus. Object value: See object No. 6. This object is sent periodically and/or on status change. For further information, see: 3.2.3.2 Partial imported active energy .				

No.	Name	Function of the object	Data type	Flags
24 ,88 ,152 ,216	Input x metering	Partial imported active energy T1 + T2	4-byte-13.010 DPT_ActiveEnergy	C, R, T
24 ,88 ,152 ,216	Input x metering	Partial imported active energy	4-byte-13.010 DPT_ActiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active

ℹ For the partial energy without tarif, the **Tariff input selection** parameter must be inactive.

This object is used to send the partial value of the imported active energy corresponding to the sum of all the tariffs on the KNX bus.
Object value: See object No. 6.
This object is sent periodically and/or on status change.

For further information, see: 3.2.3.2 Partial imported active energy .

3.3.1.8 Partial exported active energy

No.	Name	Function of the object	Data type	Flags
25 ,89 ,153 ,217	Input x metering	Partial exported active energy	6-byte-235.001 DPT_Tariff_ActiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 6 bytes (energy + tariff information)
- **Exported energy:** Active

This object is used to send the value of the partial active energy exported with the tariff on the KNX bus.
Object value: See object No. 5.
This object is sent periodically and/or on status change.

For further information, see: 3.2.4.2 Partial exported active energy .

No.	Name	Function of the object	Data type	Flags
26 ,90 ,154 ,218	Input x metering	Partial exported active energy T1	4-byte-13.010 DPT_ActiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active
- **Exported energy:** Active

This object is used to send the partial value of the exported active energy corresponding to tarif T1 on the KNX bus.
Object value: See object No. 6.
This object is sent periodically and/or on status change.

For further information, see: 3.2.4.2 Partial exported active energy .

No.	Name	Function of the object	Data type	Flags
27 ,91 ,155 ,219	Input x metering	Partial exported active energy T2	4-byte-13.010 DPT_ActiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active
- **Exported energy:** Active

This object is used to send the partial value of the exported active energy corresponding to tarif T2 on the KNX bus.
Object value: See object No. 6.
This object is sent periodically and/or on status change.

For further information, see: 3.2.4.2 Partial exported active energy .

No.	Name	Function of the object	Data type	Flags
28 ,92 ,156 ,220	Input x metering	Partial exported active energy T1 + T2	4-byte-13.010 DPT_ActiveEnergy	C, R, T
28 ,92 ,156 ,220	Input x metering	Partial exported active energy	4-byte-13.010 DPT_ActiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active
- **Exported energy:** Active

ℹ️   For the partial energy without tarif, the **Tariff input selection** parameter must be inactive.

This object is used to send the partial value of the exported active energy corresponding to the sum of all the tariffs on the KNX bus.
Object value: See object No. 6.
This object is sent periodically and/or on status change.

For further information, see: 3.2.4.2 Partial exported active energy .

3.3.1.9 Partial imported reactive energy

No.	Name	Function of the object	Data type	Flags
29 ,93 ,157 ,221	Input x metering	Partial imported reactive energy	6-byte-235.002 DPT_Tariff_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 6 bytes (energy + tariff information)
- **Reactive energy:** Active

This object is used to send the value of the partial reactive energy imported with the tariff on the KNX bus.
Object value: See object No. 13.
This object is sent periodically and/or on status change.

For further information, see: 3.2.5.2 Partial imported reactive energy .

No.	Name	Function of the object	Data type	Flags
30 ,94 ,158 ,222	Input x metering	Partial imported reactive energy T1	4-byte-13.012 DPT_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active
- **Reactive energy:** Active

This object is used to send the partial value of the improted reactive energy corresponding to tariff T1 on the KNX bus.
Object value: See object No. 14.
This object is sent periodically and/or on status change.

For further information, see: 3.2.5.2 Partial imported reactive energy .

No.	Name	Function of the object	Data type	Flags
31 ,95 ,159 ,223	Input x metering	Partial imported reactive energy T2	4-byte-13.012 DPT_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active
- **Reactive energy:** Active

This object is used to send the partial value of the improted reactive energy corresponding to tariff T2 on the KNX bus.
Object value: See object No. 14.
This object is sent periodically and/or on status change.

For further information, see: 3.2.5.2 Partial imported reactive energy .

No.	Name	Function of the object	Data type	Flags
32 ,96 ,160 ,224	Input x metering	Partial imported reactive energy T1 + T2	4-byte-13.012 DPT_ReactiveEnergy	C, R, T
32 ,96 ,160 ,224	Input x metering	Partial imported reactive energy	4-byte-13.012 DPT_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active
- **Reactive energy:** Active

ℹ️ For the partial energy without tarif, the **Tariff input selection** parameter must be inactive.

This object is used to send the partial value of the imported reactive energy corresponding to the sum of all the tariffs on the KNX bus.
Object value: See object No. 14.
This object is sent periodically and/or on status change.

For further information, see: 3.2.5.2 Partial imported reactive energy .

3.3.1.10 Partial exported reactive energy

No.	Name	Function of the object	Data type	Flags
33 ,97 ,161 ,225	Input x metering	Partial exported reactive energy	6-byte-235.002 DPT_Tariff_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
  - **Energy object format:** 6 bytes (energy + tariff information)
  - **Reactive energy:** Active
  - **Exported energy:** Active
 	
This object is used to send the partial value of the exported reactive energy with the tariff on the KNX bus.
Object value: See object No. 13.
This object is sent periodically and/or on status change.
 	
For further information, see: 3.2.6.2 Partial exported reactive energy .				

No.	Name	Function of the object	Data type	Flags
34 ,98 ,162 ,226	Input x metering	Partial exported reactive energy T1	4-byte-13.012 DPT_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
  - **Energy object format:** 4 bytes (energy only)
  - **Tariff input selection:** Active
  - **Reactive energy:** Active
  - **Exported energy:** Active
 	
This object is used to send the partial value of the exported reactive energy corresponding to tariff T1 on the KNX bus.
Object value: See object No. 14.
This object is sent periodically and/or on status change.
 	
For further information, see: 3.2.6.2 Partial exported reactive energy .				

No.	Name	Function of the object	Data type	Flags
35 ,99 ,163 ,227	Input x metering	Partial exported reactive energy T2	4-byte-13.012 DPT_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
  - **Energy object format:** 4 bytes (energy only)
  - **Tariff input selection:** Active
  - **Reactive energy:** Active
  - **Exported energy:** Active
 	
This object is used to send the partial value of the exported reactive energy corresponding to tariff T2 on the KNX bus.
Object value: See object No. 14.
This object is sent periodically and/or on status change.
 	
For further information, see: 3.2.6.2 Partial exported reactive energy .				

No.	Name	Function of the object	Data type	Flags
36 ,100 ,164 ,228	Input x metering	Partial exported reactive energy T1 + T2	4-byte-13.012 DPT_ReactiveEnergy	C, R, T
36 ,100 ,164 ,228	Input x metering	Partial exported reactive energy	4-byte-13.012 DPT_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 4 bytes (energy only)
- **Tariff input selection:** Active
- **Reactive energy:** Active
- **Exported energy:** Active

ℹ️ For the partial energy without tarif, the **Tariff input selection** parameter must be inactive.

This object is used to send the partial value of the imported reactive energy corresponding to the sum of all the tariffs on the KNX bus.
Object value: See object No. 14.
This object is sent periodically and/or on status change.

For further information, see: 3.2.6.2 Partial exported reactive energy .

3.3.1.11 Voltage

No.	Name	Function of the object	Data type	Flags
37 ,101 ,165 ,229	Input x metering	Voltage	4-byte-14.027 DPT_Value_Electric_Potential	C, R, T

These objects are always activated.
This object is used to send the measured voltage value on the KNX bus.
Object value: Voltage in V.

Byte 4 (MSB)		Byte 3		Byte 2		Byte 1 (LSB)	
S	Exponent			Fraction			
S	E 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			

Fields	Value
Sign (S)	0 = positive or 1 = negative (1 bit)
Exponent (E)	0 to 255 (8 bit)
Fraction (F)	0 to 8388607 (23 bit)

This object is sent periodically and/or on status change.

For further information, see: 3.2.7.2 Voltage .

3.3.1.12 Current

No.	Name	Function of the object	Data type	Flags
38 ,102 ,166 ,230	Input x metering	Current	4-byte-14.019 DPT_Value_Electric_Current	C, R, T

These objects are always activated.
This object allows the status of the current value to be sent over the KNX bus.
Object value: Current in A.

Byte 4 (MSB)								Byte 3								Byte 2								Byte 1 (LSB)							
S		Exponent												Fraction																	
S	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	Value
Sign (S)	0 = positive or 1 = negative (1 bit)
Exponent (E)	0 to 255 (8 bit)
Fraction (F)	0 to 8388607 (23 bit)

This object is sent periodically and/or on status change.

For further information, see: 3.2.7.3 Current .

3.3.1.13 Power factor

No.	Name	Function of the object	Data type	Flags
39 ,103 ,167 ,231	Input x metering	Power factor	4-byte-14.057 DPT_Value_Power_Factor	C, R, T

These objects are always activated.
This object is used to send the power factor value measured on the KNX bus.
Object value:

Byte 4 (MSB)								Byte 3								Byte 2								Byte 1 (LSB)							
S		Exponent												Fraction																	
S	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	Value
Sign (S)	0 = positive or 1 = negative (1 bit)
Exponent (E)	0 to 255 (8 bit)
Fraction (F)	0 to 8388607 (23 bit)

This object is sent periodically and/or on status change.
For further information, see: 3.2.7.4 Power factor .

3.3.1.14 Energy direction

No.	Name	Function of the object	Data type	Flags
40 ,104 ,168 ,232	Input x metering	Energy direction	1-bit-1.1201 DPT_EnergyDirection	C, R, T
These objects are always activated. This object is used to determine and send the type of measured energy (consumption or production) on the KNX bus. Object value: It depends on the **Energy direction polarity** paramter. **0 = Import, 1 = Export** 0 = When energy is imported (consumption). 1 = When energy is exported (production). **0 = Export, 1 = Import** 0 = When energy is exported (production). 1 = When energy is imported (consumption). This object is sent periodically and/or on status change. For further information, see: 3.2.7.5 Energy direction Or 3.2.1.2 Polarity .				

3.3.1.15 Reactive energy type

No.	Name	Function of the object	Data type	Flags
41 ,105 ,169 ,233	Input x metering	Reactive energy type	1-bit-1.1202 DPT_ReactiveLoad_Type	C, R, T
These objects are always activated. This object is used to determine and send the reactive energy type (inductive or capacitive) on the KNX bus. Object value: It depends on the **Reactive energy type polarity** parameter. **0 = Inductive, 1 = Capacitive** 0 = For inductive type reactive energy. 1 = For capacitive type reactive energy. **0 = Capacitive, 1 = Inductive** 0 = For capacitive type reactive energy. 1 = For inductive type reactive energy. This object is sent periodically and/or on status change. For further information, see: 3.2.7.6 Reactive energy type Or 3.2.1.2 Polarity .				

3.3.1.16 Power timestamped

No.	Name	Function of the object	Data type	Flags
42 ,106 ,170 ,234	Input x metering	Active power timestamped	12-byte-266.56 DPT_DateTime_Value_Power	C, R, T

This object is activated according to the value of the following parameters:
- **Timestamp:** Active

This object is used to send the value of the active power with timestamp on the KNX bus.

Object value:

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

Byte 8 (MSB)								Byte 7								Byte 6								Byte 5							
		Minutes								Seconds						D	JT	VJT	VA	VD	VJS	VH	HEH	QH							
0	0	M	M	M	M	M	M	0	0	S	S	S	S	S	S	B	B	B	B	B	B	B	B	B	0	0	0	0	0	0	0

Byte 4 (MSB)								Byte 3								Byte 2								Byte 1 (LSB)							
S	Exponent							Fraction																							
S	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 (JT)	Binary	0: Day Worked Or 1: Holiday (1 bit)	
DWV (VJT)	Binary	0: Day Worked valid Or 1: Invalid DW (1 bit)	
Year Validated (VA)	Binary	0: Year valid Or 1: Invalid year (1 bit)	
DV (VD)	Binary	0: Date valid Or 1: Invalid date (1 bit)	
Weekday validated (VJS)	Binary	0: Day valid Or 1: Invalid day (1 bit)	
Time Validated (VH)	Binary	0: Time valid Or 1: Invalid time (1 bit)	
Summer/Winter Period (HEH)	Binary	0: standard time or 1: Summertime (1 bit)	
Clock Accuracy (QH)	Binary	0: No external synchronisation Or 1: External synchronisation (1 bit)	
Sign (S)	Binary	0 = positive or 1 = negative (1 bit)	
Exponent (E)	Binary	0 to 255 (8 bit)	
Fraction (F)	Binary	0 to 8388607 (23 bit)	

This object is sent periodically and/or on status change.

For further information, see: 3.2.7.1 Power .

No.	Name	Function of the object	Data type	Flags
43 ,107 ,171 ,235	Input x metering	Apparent power timestamped	12-byte-266.80 DPT_DateTime_Value_ApparentPower	C, R, T

This object is activated according to the value of the following parameters:
- **Timestamp:** Active

This object is used to send the value of the apparent power with timestamp on the KNX bus.
Object value: See object No. 42.

This object is sent periodically and/or on status change.
For further information, see: 3.2.7.1 Power .

No.	Name	Function of the object	Data type	Flags
44 ,108 ,172 ,236	Input x metering	Apparent power timestamped	12-byte-266.81 DPT_DateTime_Value_ReactivePower	C, R, T

This object is activated according to the value of the following parameters:
- **Timestamp:** Active

This object is used to send the value of the reactive power with timestamp on the KNX bus.
Object value: See object No. 42.

This object is sent periodically and/or on status change.
For further information, see: 3.2.7.1 Power .

3.3.1.17 Total energy timestamped

No.	Name	Function of the object	Data type	Flags
45 ,109 ,173 ,237	Input x metering	Total imported active energy timestamped	14-byte-269.1200 DPT_DateTime_Tariff_Active Energy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 6 bytes (energy + tariff information)
- **Timestamp:** Active

This object is used to send the value of the total imported active energy with the tariff and timestamp on the KNX bus.

Object value:

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

Byte 8 (MSB)								Byte 7								Byte 6								Byte 5							
	Minutes									Seconds						D	JT	VJT	VA	VD	VJS	VH	HEH	QH							
0	0	M	M	M	M	M	M	0	0	S	S	S	S	S	S	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

Byte 2								Byte 1 (LSB)							
Tariff								Validity							
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 (JT)	Binary	0: Day Worked Or 1: Holiday (1 bit)	
DWV (VJT)	Binary	0: Day Worked valid Or 1: Invalid DW (1 bit)	
Year Validated (VA)	Binary	0: Year valid Or 1: Invalid year (1 bit)	
DV (VD)	Binary	0: Date valid Or 1: Invalid date (1 bit)	
Weekday validated (VJS)	Binary	0: Day valid Or 1: Invalid day (1 bit)	
Time Validated (VH)	Binary	0: Time valid Or 1: Invalid time (1 bit)	
Summer/Winter Period (HEH)	Binary	0: standard time Or 1: Summertime (1 bit)	
Clock Accuracy (QH)	Binary	0: No external synchronisation Or 1: External synchronisation (1 bit)	
Active electrical energy (V)	Binary	-2 147 483 648 to 2 147 483 647 (4 Bytes)	Wh
Tariff	Binary	0 to 254 (1 byte) 11 different tariffs of a value ranging from 0 to 10	-
Tariff validity (T)	Binary	0: Invalid 1: Valid	-
Active electrical energy validity (E)	Binary	0: Invalid 1: Valid	-

This object is sent periodically and/or on status change.

For further information, see: 3.2.3.1 Total imported active energy .

No.	Name	Function of the object	Data type	Flags
46 ,110 ,174 ,238	Input x metering	Total exported active energy timestamped	14-byte-269.1200 DPT_DateTime_Tariff_ActiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 6 bytes (energy + tariff information)
- **Timestamp:** Active
- **Exported energy:** Active

This object is used to send the value of the total exported active energy with the tariff and timestamp on the KNX bus.
Object value: See object No. 45.

This object is sent periodically and/or on status change.
For further information, see: 3.2.4.1 Total exported active energy .

No.	Name	Function of the object	Data type	Flags
47 ,111 ,175 ,239	Input x metering	Total imported reactive energy timestamped	14-byte-269.1201 DPT_DateTime_Tariff_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 6 bytes (energy + tariff information)
- **Timestamp:** Active
- **Reactive energy:** Active

This object is used to send the value of the total imported active energy with the tariff and timestamp on the KNX bus.
Object value: See object No. 45.

This object is sent periodically and/or on status change.
For further information, see: 3.2.5.1 Total imported reactive energy .

No.	Name	Function of the object	Data type	Flags
48 ,112 ,176 ,240	Input x metering	Total exported reactive energy timestamped	14-byte-269.1201 DPT_DateTime_Tariff_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 6 bytes (energy + tariff information)
- **Timestamp:** Active
- **Reactive energy:** Active
- **Exported energy:** Active

This object is used to send the value of the total exported reactive energy with the tariff and timestamp on the KNX bus.
Object value: See object No. 45.

This object is sent periodically and/or on status change.
For further information, see: 3.2.6.1 Total exported reactive energy

3.3.1.18 Partial energy timestamped

No.	Name	Function of the object	Data type	Flags
49 ,113 ,177 ,241	Input x metering	Partial imported active energy timestamped	14-byte-269.1200 DPT_DateTime_Tariff_ActiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 6 bytes (energy + tariff information)
- **Timestamp:** Active

This object is used to send the value of the partial imported active energy with the tariff and timestamp on the KNX bus.
Object value: See object No. 45.

This object is sent periodically and/or on status change.
For further information, see: 3.2.3.2 Partial imported active energy .

No.	Name	Function of the object	Data type	Flags
50 ,114 ,178 ,242	Input x metering	Partial exported active energy timestamped	14-byte-269.1200 DPT_DateTime_Tariff_ActiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 6 bytes (energy + tariff information)
- **Timestamp:** Active
- **Exported energy:** Active

This object is used to send the value of the partial exported active energy with the tariff and timestamp on the KNX bus.
Object value: See object No. 45.

This object is sent periodically and/or on status change.
For further information, see: 3.2.4.2 Partial exported active energy .

No.	Name	Function of the object	Data type	Flags
51 ,115 ,179 ,243	Input x metering	Partial imported reactive energy timestamped	14-byte-269.1201 DPT_DateTime_Tariff_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 6 bytes (energy + tariff information)
- **Timestamp:** Active
- **Reactive energy:** Active

This object is used to send the value of the partial imported reactive energy with the tariff and timestamp on the KNX bus.
Object value: See object No. 45.

This object is sent periodically and/or on status change.
For further information, see: 3.2.5.2 Partial imported reactive energy .

No.	Name	Function of the object	Data type	Flags
52 ,116 ,180 ,244	Input x metering	Partial exported reactive energy timestamped	14-byte-269.1201 DPT_DateTime_Tariff_ReactiveEnergy	C, R, T

This object is activated according to the value of the following parameters:
- **Energy object format:** 6 bytes (energy + tariff information)
- **Timestamp:** Active
- **Reactive energy:** Active
- **Exported energy:** Active

This object is used to send the value of the partial exported reactive energy with the tariff and timestamp on the KNX bus.
Object value: See object No. 45.

This object is sent periodically and/or on status change.
For further information, see: 3.2.6.2 Partial exported reactive energy .

3.3.1.19 Other timestamped values

No.	Name	Function of the object	Data type	Flags
53 ,117 ,181 ,245	Input x metering	Voltage timestamped	12-byte-266.027 DPT_DateTime_Value_Electric_ Potential	C, R, T

This object is activated according to the value of the following parameters:
- **Timestamp:** Active

This object is used to send the measured voltage value with the timestamp on the KNX bus.
Object value: See object No. 42.

This object is sent periodically and/or on status change.
For further information, see: 3.2.7.2 Voltage .

No.	Name	Function of the object	Data type	Flags
54 ,118 ,182 ,246	Input x metering	Current timestamped	12-byte-266.019 DPT_DateTime_Value_Electric_Current	C, R, T

This object is activated according to the value of the following parameters:
- **Timestamp:** Active

This object is used to send the measured current value with the timestamp on the KNX bus.
Object value: See object No. 42.

This object is sent periodically and/or on status change.
For further information, see: 3.2.7.3 Current .

No.	Name	Function of the object	Data type	Flags
55 ,119 ,183 ,247	Input x metering	Power factor timestamped	12-byte-266.057 DPT_DateTime_Value_Power_Factor	C, R, T

This object is activated according to the value of the following parameters:
- **Timestamp:** Active

This object is used to send the measured power factor value with the timestamp on the KNX bus.
Object value: See object No. 42.

This object is sent periodically and/or on status change.
For further information, see: 3.2.7.4 Power factor .

No.	Name	Function of the object	Data type	Flags
56 ,120 ,184 ,248	Input x metering	Energy direction timestamped	9-byte-265.1201 DPT_DateTime_EnergyDirection	C, R, T

This object is activated according to the value of the following parameters:
- **Timestamp:** Active

This object is used to determine and send the type of measured energy (consumption or production) with the timestamp on the KNX bus.

Object value: It depends on the **Energy direction polarity** paramter.
0 = Import, 1 = Export
0 = When energy is imported (consumption).
1 = When energy is exported (production).
0 = Export, 1 = Import
0 = When energy is exported (production).
1 = When energy is imported (consumption).

Byte 9 (MSB)								Byte 8								Byte 7								Byte 6							
Year												Month								Day of the month				Weekday			Hours				
A	A	A	A	A	A	A	A	0	0	0	0	M	M	M	M	0	0	0	D	D	D	D	D	D	D	D	H	H	H	H	H

Byte 5 (MSB)								Byte 4								Byte 3								Byte 2							
		Minutes								Seconds						D	JT	VJT	VA	VD	VJS	VH	HEH	QH							
0	0	M	M	M	M	M	M	0	0	S	S	S	S	S	S	B	B	B	B	B	B	B	B	B	0	0	0	0	0	0	0

Byte 4							
Energy direction							
0	0	0	0	0	0	0	S

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 (JT)	Binary	0: Day Worked Or 1: Holiday (1 bit)	
DWV (VJT)	Binary	0: Day Worked valid Or 1: Invalid DW (1 bit)	
Year Validated (VA)	Binary	0: Year valid Or 1: Invalid year (1 bit)	
DV (VD)	Binary	0: Date valid Or 1: Invalid date (1 bit)	
Weekday validated (VJS)	Binary	0: Day valid Or 1: Invalid day (1 bit)	
Time Validated (VH)	Binary	0: Time valid Or 1: Invalid time (1 bit)	
Summer/Winter Period (HEH)	Binary	0: standard time Or 1: Summertime (1 bit)	
Clock Accuracy (QH)	Binary	0: No external synchronisation Or 1: External synchronisation (1 bit)	
Energy direction(SE)	Binary	0 = Import, 1 = Export (1 bit) Or 0 = Export, 1 = Import (1 bit)	

This object is sent periodically and/or on status change.
For further information, see: 3.2.7.5 Energy direction Or 3.2.1.2 Polarity .

No.	Name	Function of the object	Data type	Flags
57 ,121 ,185 ,249	Input x metering	Reactive energy type timestamped	9-byte-265.1202 DPT_DateTime_ReactiveLoad_Type	C, R, T

This object is activated according to the value of the following parameters:
- **Timestamp:** Active

This object is used to determine and send the reactive energy type (inductive or capacitive) with the timestamp on the KNX bus.

Object value: It depends on the **Reactive energy type polarity** parameter.
0 = Inductive, 1 = Capacitive
0 = For inductive type reactive energy.
1 = For capacitive type reactive energy.
0 = Capacitive, 1 = Inductive
0 = For capacitive type reactive energy.
1 = For inductive type reactive energy.

See object No. 56.
This object is sent periodically and/or on status change.
For further information, see: 3.2.7.6 Reactive energy type Or 3.2.1.2 Polarity .

3.3.1.20 Controls

No.	Name	Function of the object	Data type	Flags
58 ,122 ,186 ,250	Input x metering	Dynamic mode activation	1-bit-1.003 DPT_Enable	C, W, T

These objects are always activated.
This object is used to activate dynamic mode for a faster display of data.

Object value: It depends on the **Dynamic mode activation polarity** parameter.
1 = Start, 0 = Stop
If the object receives the value 1, dynamic mode starts.
If the object receives the value 0, dynamic mode stops.

0 = Stop, 1 = Start
If the object receives the value 0, dynamic mode starts.
If the object receives the value 1, dynamic mode stops.

For further information, see: 3.2.1.4 Dynamic mode .

No.	Name	Function of the object	Data type	Flags
59 ,123 ,187 ,251	Input x metering	Partial meter reset	1-bit-1.015 DPT_Reset	C, W, T

These objects are always activated.
This object is used to reset the partial meters of the measurement channel in question.

Object value: .It depends on the **Partial meter reset polarity** paramter
Reset by 1
-    If the object receives the value 1, the partial meter is reset.

Reset by 0
-    If the object receives the value 0, the partial meter is reset.

For further information, see: 3.2.1.2 Polarity .

No.	Name	Function of the object	Data type	Flags
60 ,124 ,188 ,252	Input x metering	History request	1-bit-1.017 DPT_Trigger	C, W, T

These objects are always activated.
This object is used to emit the measurement history on request for the relevant channel.

Object value: . It depends on the **History request polarity** paramter.
1 = Start, 0 = Stop
- If the object receives the value 1, the history for the relevant channel is transmitted on the KNX bus.

0 = Stop, 1 = Start
- If the object receives the value 0, the history for the relevant channel is transmitted on the KNX bus.

It takes several minutes per channel for a full history to load

For further information, see: 3.2.1.3 History .

3.3.1.21 Alarms

No.	Name	Function of the object	Data type	Flags
61 ,125 ,189 ,253	Input x metering	Overvoltage alarm	1-bit-1.005 DPT_Alarm	C, R, T

These objects are always activated.
This object is used for notification that the overvoltage threshold of the channel in question has been exceeded.

Object value: It depends on the **Overvoltage alarm polarity** parameter.
0 = Alarm deactivated, 1 = Alarm activated
If the voltage value is higher than the overvoltage threshold, a telegram with a logic value of 1 is sent on the object.
If the voltage value is less than the overvoltage threshold minus the hysteresis, a telegram with a logic value of 0 is sent on the object.

0 = Alarm activated, 1 = Alarm deactivated
If the voltage value is higher than the overvoltage threshold, a telegram with a logic value of 0 is sent on the object.
If the voltage value is less than the overvoltage threshold minus the hysteresis, a telegram with a logic value of 1 is sent on the object.

This object is sent periodically and/or on status change.
For further information, see: 3.2.1.5 Overvoltage - Undervoltage Or 3.2.7.7 Voltage alarms .

No.	Name	Function of the object	Data type	Flags
62 ,126 ,190 ,254	Input x metering	Undervoltage alarm	1-bit-1.005 DPT_Alarm	C, R, T

These objects are always activated.
This object is used for notification that the undervoltage threshold for the channel in question has been exceeded.

Object value: It depends on the **Undervoltage alarm polarity** paramter.
0 = Alarm deactivated, 1 = Alarm activated
If the voltage value is less than the undervoltage threshold, a telegram with a logic value of 1 is sent on the object.
If the voltage value is higher than the undervoltage threshold plus the hysteresis, a telegram with a logic value 0 is sent on the object.

0 = Alarm activated, 1 = Alarm deactivated
If the voltage value is less than the undervoltage threshold, a telagram with a logic value of 0 is sent on the object.
If the voltage value is higher than the undervoltage threshold plus the hysteresis, a telagram with a logic value 1 is sent on the object.

This object is sent periodically and/or on status change.
For further information, see: 3.2.1.5 Overvoltage - Undervoltage Or 3.2.7.7 Voltage alarms .

No.	Name	Function of the object	Data type	Flags
63 ,127 ,191 ,255	Input x metering	Overconsumption alarm	1-bit-1.005 DPT_Alarm	C, R, T

These objects are always activated.
This object is used for notification that the overconsumption threshold for the channel in question has been exceeded.

Object value: It depends on the **Overconsumption alarm polarity** parameter.
0 = Alarm deactivated, 1 = Alarm activated
If the consumption value is greater than the overconsumption threshold, a telegram with a logic value of 1 is sent on the object.
If the consumption value is less than the overconsumption threshold minus the hysteresis, a telegram with a logic value of 0 is sent on the object.

0 = Alarm activated, 1 = Alarm deactivated
If the consumption value is greater than the overconsumption threshold, a telegram with a logic value of 0 is sent on the object.
If the consumption value is less than the overconsumption threshold minus the hysteresis, a telegram with a logic value of 1 is sent on the object.

This object is sent periodically and/or on status change.
For further information, see: 3.2.1.6 Overconsumption Or 3.2.7.8 Overconsumption alarm .

No.	Name	Function of the object	Data type	Flags
64 ,128 ,192 ,256	Input x metering	Consumption threshold	4-byte-14.019 DPT_Value_Electric_Current	C, R, T

These objects are always activated.
This object is used to define the overconsumption threshold from the KNX bus.

Object value: Current in A

Byte 4 (MSB)								Byte 3								Byte 2								Byte 1 (LSB)							
S		Exponent							Fraction																						
S	E	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

Fields	Value
Sign (S)	0 = positive or 1 = negative (1 bit)
Exponent (E)	0 to 255 (8 bit)
Fraction (F)	0 to 8388607 (23 bit)

For further information, see: 3.2.1.6 Overconsumption .

3.3.2 General objects

	Number	Name	Function of the object	Length	C	R	W	T
	257	General	Tariff	1 bit	C	R	-	T
	258	General	Date	3 byte	C	-	W	T
	259	General	Time	3 byte	C	-	W	T
	260	General	Date and time	8 byte	C	-	W	T
	261	General	Date and time request	1 bit	C	R	-	T
	262	General	Device LED switch off	1 bit	C	-	W	T
	263	General	Wrong meter type	1 bit	C	R	-	T
	264	General	Meter communication loss	1 bit	C	R	-	T
	265	General	Net frequency	4 byte	C	R	-	T
	266	General	Meter serial number	14 byte	C	R	-	T
	267	General	Phase sequence error	1 bit	C	R	-	T
	268	General	Restore ETS-params settings	1 bit	C	-	W	T

No.	Name	Function of the object	Data type	Flags
257	General	Tariff	8-bit-5.006 DPT_Tariff	C, R, T

This object is activated according to the value of the following parameters:
- **Tariff input:** Active

This object is used to send the tariff from the meter on the KNX bus.
Object value: 11 different tariffs of a value ranging from 0 to 10.

This object is sent periodically and/or on status change.
For further information, see: 3.1.1.5 Tariff Or 3.1.3 Tariff input .

No.	Name	Function of the object	Data type	Flags
258	General	Date	3 bytes -11.001 DPT_Date	C, W, T

This object is activated according to the value of the following parameters:
- **Date and time objects:** 2 objects (3 bytes + 3 bytes)
- **Timestamp:** Active

This object receives the reference date of an external device.

Object value:

Byte 3 (MSB)								Byte 2								Byte 1 (LSB)							
		Day										Month				Year							
0	0	0	J	J	J	J	J	0	0	0	0	M	M	M	M	0	H	H	H	H	H	H	H

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

For further information, see: 3.1.1.6 Date and time .

No.	Name	Function of the object	Data type	Flags
259	General	Time	3 bytes - 10.001 DPT_Time of day	C, W, T

This object is activated according to the value of the following parameters:
- **Date and time objects:** 2 objects (3 bytes + 3 bytes)
- **Timestamp:** Active

This object receives the reference time of an external device.

Object value:

Byte 3 (MSB)								Byte 2								Byte 1 (LSB)							
Day			Time							Minutes								Seconds					
J	J	J	H	H	H	H	H	0	0	M	M	M	M	M	M	0	0	S	S	S	S	S	S

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

For further information, see: 3.1.1.6 Date and time .

No.	Name	Function of the object	Data type	Flags
260	General	Date and time	8 Byte - 19.001 DPT_Date_Time	C, W, T

This object is activated according to the value of the following parameters:
- **Date and time objects:** 1 object (8 bytes)
- **Timestamp:** Active

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				
A	A	A	A	A	A	A	A	0	0	0	0	M	M	M	M	0	0	0	D	D	D	D	D	D	D	D	H	H	H	H	H

Byte 4 (MSB)								Byte 3								Byte 2								Byte 1 (LSB)							
		Minutes								Seconds						D	JT	VJT	VA	VD	VJS	VH	HEH	QH							
0	0	M	M	M	M	M	M	0	0	S	S	S	S	S	S	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 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 (JT)	Binary	0: Day Worked Or 1: Holiday (1 bit)	
DWV (VJT)	Binary	0: Day Worked valid Or 1: Invalid DW (1 bit)	
Year Validated (VA)	Binary	0: Year valid Or 1: Invalid year (1 bit)	
DV (VD)	Binary	0: Date valid Or 1: Invalid date (1 bit)	
Weekday validated (VJS)	Binary	0: Day valid Or 1: Invalid day (1 bit)	
Time Validated (VH)	Binary	0: Time valid Or 1: Invalid time (1 bit)	
Summer/Winter Period (HEH)	Binary	0: standard time Or 1: Summertime (1 bit)	
Clock Accuracy (QH)	Binary	0: No external synchronisation Or 1: External synchronisation (1 bit)	

For further information, see: 3.1.1.6 Date and time .

No.	Name	Function of the object	Data type	Flags
261	General	Date and time request	1-bit-1.017 DPT_Trigger	C, R, T

This object is activated according to the value of the following parameters:
- **Timestamp:** Active

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.

For further information, see: 3.1.1.6 Date and time .

No.	Name	Function of the object	Data type	Flags
262	General	Device LED switch off	1-bit-1.017 DPT_Trigger	C, W, T

These objects are always activated.
This function is used to reduce the overall power consumption of the device. It allows the LEDs on the front of the device to be switched off.

Object value: It depends on the **Device LED switch off** parameter.
0 = Status indication, 1 = Always OFF
0 = The LED display is activated.
1 = The LED display is deactivated.

0 = Always OFF, 1 = Status indication
0 =The LED display is deactivated.
1 = The LED display is activated.

For further information, see: 3.1.2.2 Polarity .

No.	Name	Function of the object	Data type	Flags
263	General	Wrong meter type	1-bit-1.005 DPT_Alarm	C, R, T

These objects are always activated.
This alarm indicates that the meter connected by infrared is not compatible with the **Meter type** parameter.
Object value:
It depends on the **Wrong meter alarm** parameter.
0 = Alarm deactivated, 1 = Alarm activated
0 when the meter type is correct.
1 when the meter type is incorrect.

0 = Alarm activated, 1 = Alarm deactivated
0 when the meter type is incorrect.
1 when the meter type is correct.

For further information, see: 3.1.2.2 Polarity .

No.	Name	Function of the object	Data type	Flags
264	General	Meter communication loss	1-bit-1.005 DPT_Alarm	C, R, T

These objects are always activated.
Communication between the interface and the meter is interrupted.
Object value: It depends on the **Meter communication lost alarm** parameter.

0 = Alarm deactivated, 1 = Alarm activated
0 when communication is correct.
1 when communication is interrupted.

0 = Alarm activated, 1 = Alarm deactivated
0 when communication is interrupted.
1 when communication is correct.

For further information, see: 3.1.2.2 Polarity .

No.	Name	Function of the object	Data type	Flags
265	General	Net frequency	4-byte-14.033 DPT_Value_Frequency	C, R, T

These objects are always activated.
This object is used to send the net frequency measured by the meter connected to the interface on the KNX bus.

Object value: Frequency in Hz.

Byte 4 (MSB)		Byte 3	Byte 2	Byte 1 (LSB)
S	Exponent		Fraction	
S	E 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	Value
Sign (S)	0 = positive or 1 = negative (1 bit)
Exponent (E)	0 to 255 (8 bit)
Fraction (F)	0 to 8388607 (23 bit)

For further information, see: 3.1.1.3 Net frequency .

No.	Name	Function of the object	Data type	Flags
266	General	Meter serial number	character string-16.000 DPT_String_ASCII	C, R, T

These objects are always activated.
This object is used to send the serial number of the meter connected to the interface on the KNX bus.

Object value: String of a maximum of 14 characters.

For further information, see: 3.1.1.4 Meter serial number .

No.	Name	Function of the object	Data type	Flags
267	General	Phase sequence error	1-bit-1.005 DPT_Alarm	C, R, T

These objects are always activated.
The counter enables the detection of a wiring error concerning the wiring order of the 3 phases. This object is used for notification of this error on the KNX bus. It is only used with a three-phase meter.
Object value: It depends on the **Phase sequence alarm** parameter.

0 = Alarm deactivated, 1 = Alarm activated
0 when the wiring is correct.
1 when the wiring is incorrect.

0 = Alarm activated, 1 = Alarm deactivated
0 when the wiring is incorrect.
1 when the wiring is correct.

For further information, see: 3.1.2.2 Polarity .

No.	Name	Function of the object	Data type	Flags
268	General	Restore ETS-params settings	1-bit-1.001 DPT_Switch	C, W, T

These objects are always activated.
- **Activ. of restore ETS-parameters object:** Active

This object enables the current parameter value to be replaced at any time with the ETS parameter value.

Object value:
On receipt of a 1 on this object, the parameters*** that are adjustable via the bus are overwritten with values set in the ETS before the last download.
*** The parameters in question are: Overconsumption threshold.

For further information, see: 3.1.1.1 Restore ETS-params objects: over-consumption threshold .

4. Programming by Easy Tool

4.1 Function modules of the application

4.1.1 Primary functions

• Energy

The function is used to supply the consumed energy value for each metering channel on the bus in 6 byte format only.

A distinction is made between:
- The total active energy: This indicator adds up the active energy consumed from when the meter was brought into service. This indicator cannot be reset.
- The partial active energy: This indicator adds up the active energy consumed since the last reset. This indicator can be reset by the bus (depending on the configuration).

• 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.
The tariff can come either from the meter (T1/T2) or the KNX bus.

• Power

The function is used to supply the value of the power demand for 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 interface has received the date and time at least once.

4.1.2 Communication objects
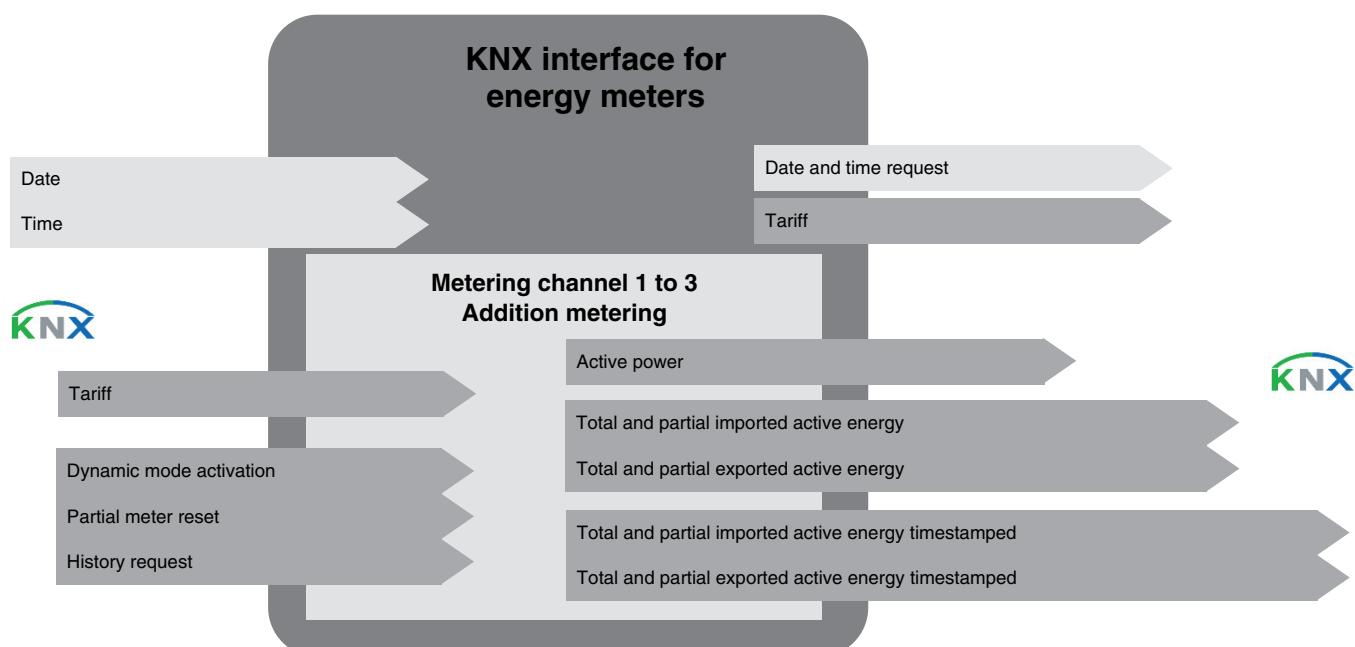
4.2 Product overview

The product can only be found if the interface is connected to the meter and the meter is under power.
If the meter is not under power, the interface is detected as an unknown product. It is therefore the meter connected to the interface which determines the number of metering channels (1 channel or 3 channels + addition).

TXF121: Interface for energy meters: 1 metering channel

Product view:

Product	▲		⇄ 2 Inputs	
Name:	TXF121 - Interface for energy meter		1 ⚡ TXF121 - 1 - 1 House	▶
Use:	Metering		2 € TXF121 - 1 - 2 House	▶
Place:	House ⌄			
Electrical tracking:	TXF121 - 1			
ⓘ Product :	TXF121 Interface for energy meter			
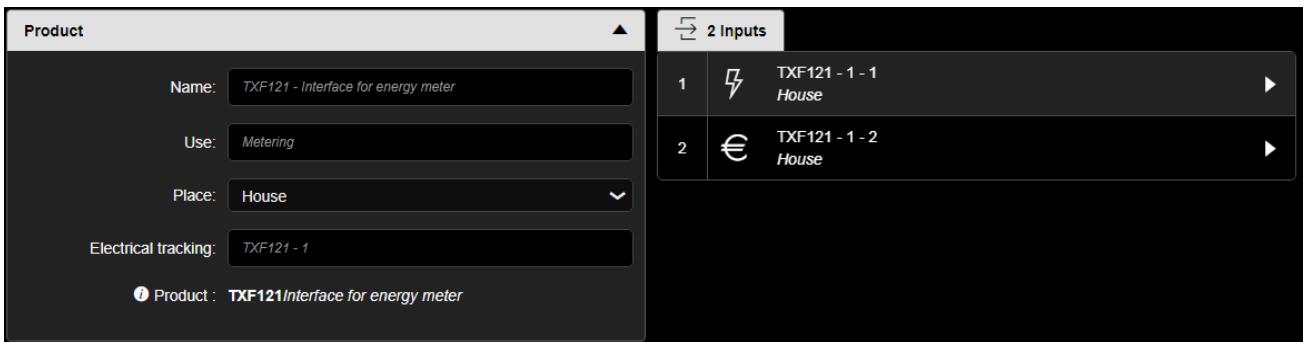
View of channels:

2 Inputs				0 Output	
⚡	TXF121 - 1 - 1 *Housing*	Input 1 metering			
€	TXF121 - 1 - 2 *Housing*	Tariff input			

TXF121: Interface for energy meters: 3 metering channels + Addition

Product view:

Product ▲		5 Inputs	
Name:	*TXF121 - Interface for energy meter*	1 ⚡	TXF121 - 1 - 1 *House* ▶
Use:	*Metering*	2 ⚡	TXF121 - 1 - 2 *House* ▶
Place:	House ⌄	3 ⚡	TXF121 - 1 - 3 *House* ▶
Electrical tracking:	*TXF121 - 1*	4 ⚡	TXF121 - 1 - 4 *House* ▶
ⓘ Product :	**TXF121**/*Interface for energy meter*	5 €	TXF121 - 1 - 5 *House* ▶
Actions ⌄			

View of channels:

| 2 Inputs			0 Output	
⚡	TXF121 - 1 - 1 *Housing*	Input 1 metering		
⚡	TXF121 - 1 - 2 *Housing*	Input 2 metering		
⚡	TXF121 - 1 - 3 *Housing*	Input 3 metering		
⚡	TXF121 - 1 - 4 *Housing*	Addition metering		
€	TXF121 - 1 - 5 *Housing*	Tariff input		

4.3 Input operation mode

4.3.1 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.

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

| Inputs		Outputs	
⚡	TXF121 - 1 - 1 *Housing*	⚡	WKT660 - 1 - 2 *Housing - Metering*
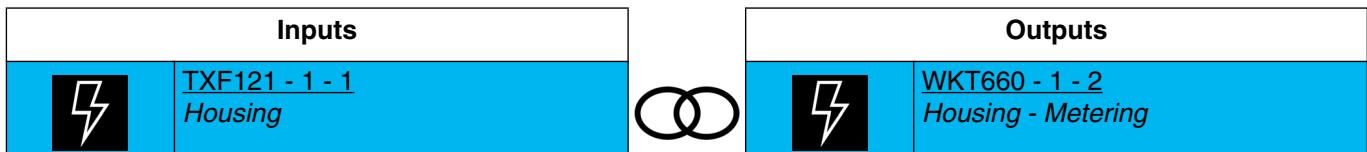
4.3.2 Tariff

The function is used to index each metering measurement to the current pricing.
The tariff can come either from the meter (T1/T2) or the KNX bus

- Tariff from meter: Used to send the tariff from the meter.
  - The connection

Inputs	
⚡	TXA230A - 1 - 2 *Housing*
€	TXF121 - 1 - 2 *Housing*
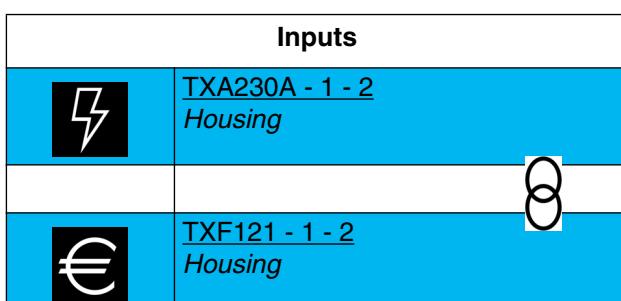
Value of the tariff: 11 different tariffs of a value ranging from 0 to 10.

- KNX bus tariff: Used to receive the current tariff from an external device.
 - The connection

Inputs	
€	TXA230A - 1 - 2 *Housing*
⚡	TXF121 - 1 - 2 *Housing*
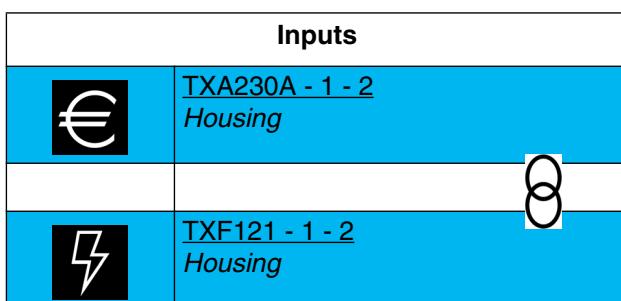
Value of the tariff: 11 different tariffs of a value ranging from 0 to 10.

ℹ️ *To use the tariff from the meter connected to the interface with the metering channels, the tariff channel and the metering channel of the product must be linked together.*

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.
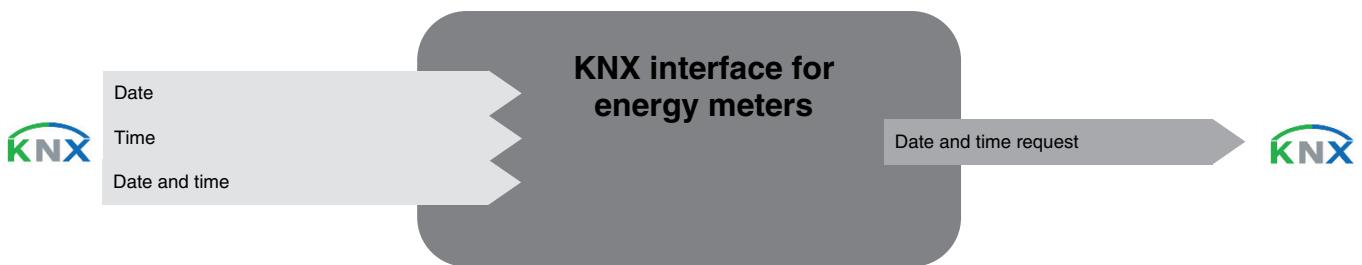

- Links

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).
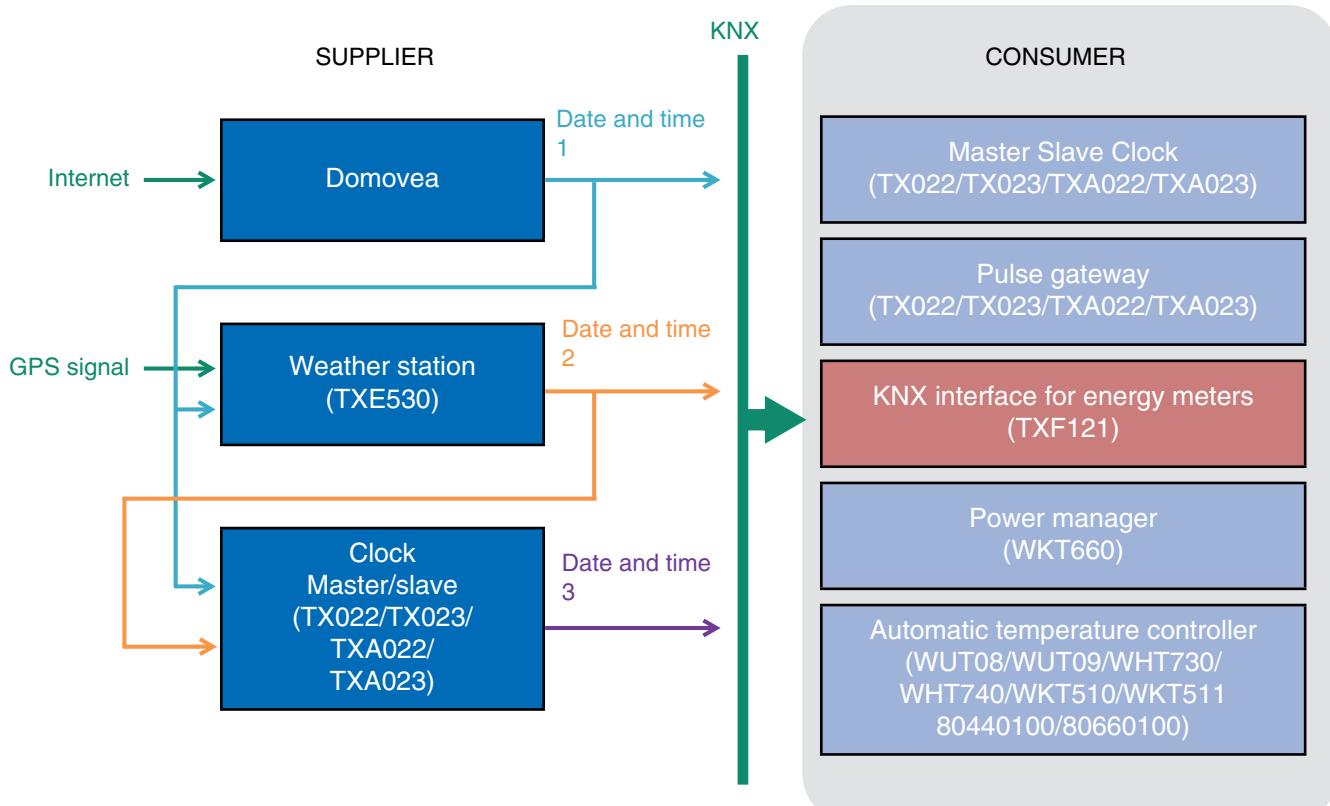
At the end of detection, the configuration tool sends the date and time on the predefined group address Date and time 3, Time 3 and Date 3. This means that at the end of the scan, the products requiring the date and time are immediately updated.
*A request system (Date and time request) was installed 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.
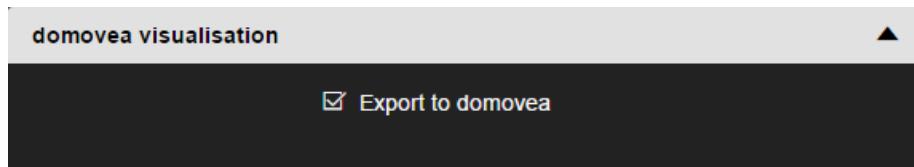
The domovea device is below

Tasks TXA100		Electrical energy
		Energy meter
Devices domovea		
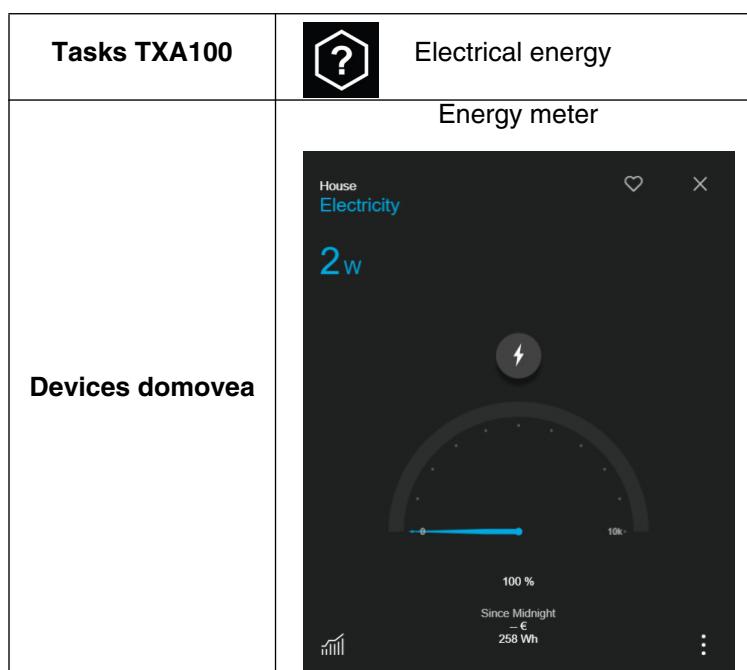
5. Specifications

5.1 Techncial Specifications

Power supply	
Supply voltage KNX	20 ... 30 V --- SELV
Typical consumption on the KNX bus:	4 mA
Ambient conditions	
Operating temperature	-10 ...+ 55°C
Storage temperature	- 20 ...+ 70°C
Ambient conditions	95% (25°C)
Pollution degree	2
Insulation class:	3
Overvoltage category:	3
Degree of protection of housing	IP20
Degree of protection of housing under front panel	IP30
IK (impact protection)	4
Operating altitude	2000 m max.
Surge voltage	4 kV
Box	
Footprint	18 mm / 1 mod.
Installation method: DIN rail according to	EN 60715

5.2 Characteristics

Device	TXF121
Max. number of group addresses	790
Max. number of allocations	790
Objects	268