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simulation entwicklung consulting

Manual and Configuration

Enertex® KNX SmartMeter²

for 85 A and 800 A variants



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Table of Contents

Notices . . . 3
Support . . . 3
Device Description . . . 4
Functional Overview . . . 4
Mounting and Connection . . . 4
  Use of Current Transformers from Other Manufacturers . . . 6
Measurements . . . 6
Energy Counters . . . 7
Intermediate Counters . . . 7
Energy Costs . . . 8
Energy Management . . . 8
  Operating Principle . . . 8
  Trigger Parameterization . . . 9
  Parameterization per Stage . . . 10
  Stage Switching Logic . . . 12
  Telegrams per Stage . . . 13
  Feedback and Auxiliary Objects . . . 13
  Parameterization Notes . . . 14
  Practical Examples: Optimize Self-Consumption . . . 14
  Practical Example: Control Loads Depending on Price . . . 18
Grid-Friendly Operation . . . 20
  Interaction with Energy Management . . . 21
  Practical Example: Limit the Power Consumption of Three Wallboxes . . . 22
  Practical Example: Apartment Building . . . 25
Factory Reset . . . 26
ETS Application . . . 26
  Specification . . . 26
  Database File . . . 26
  Parameters . . . 26
  Communication Objects . . . 26
Technical Data . . . 58

Notices

- Installation and assembly of electrical equipment must be performed by qualified electricians.
- When connecting KNX/EIB interfaces skills are provided by KNX™-Training.
- Ignoring the instructions may damage the device as well as causing fire or other hazards.
- This manual is part of the product and must remain with the end user.
- The manufacturer is not liable for any costs or damages incurred by the user or third parties through the use of this device, misuse or malfunction of the connection, malfunction of the device or the subscriber equipment.
- Opening the case or other authorized changes or modifications will void the warranty!
- The manufacturer is not liable for improper use.

Support

If you have any questions or encounter problems with your Enertex® KNX SmartMeter², please contact us at support@enertex.de.

In the KNX-User-Forum you can contact our experts and get advice from experienced users and professionals.

You can find videos about our products on our Youtube channel.

Please understand that individual parameterization of energy management systems is not covered by our product support due to their complexity.

Device Description

The Enertex® KNX SmartMeter² is an energy meter for single-phase or three-phase electrical networks. The device records electrical values, provides these values to the system, and can derive additional functions from them such as energy counters, cost counters, intermediate counters, and energy management.

In practical use, variants `1182-85` and `1182-800` mainly differ by the current transformers used. For correct operation, the transformer type must therefore be parameterized in the ETS application.

In addition to pure measurement acquisition, the SmartMeter² can also be used as a functional block for energy visualization and energy management. Measured values, counter readings, cost values, and switching information can be integrated into logic functions, visualizations, and automation functions.

Functional Overview

The SmartMeter² combines several functions in a single device:

- **Measurements**: Acquisition of electrical values per phase and as a total value.
- **Energy counters**: Summation of energy consumption and energy generation.
- **Intermediate counters**: Self-resetting counters, for example for hourly values, daily values, or freely defined evaluation periods.
- **Energy costs**: Calculation of cost values based on measured energy and predefined or dynamic prices.
- **Energy management**: Output of enables, switching telegrams, or setpoint values based on a defined input value.
- **Logic block**: Flexibly configurable logic block.
- **Device for grid support** in Germany (EMS according to §14a)

Mounting and Connection

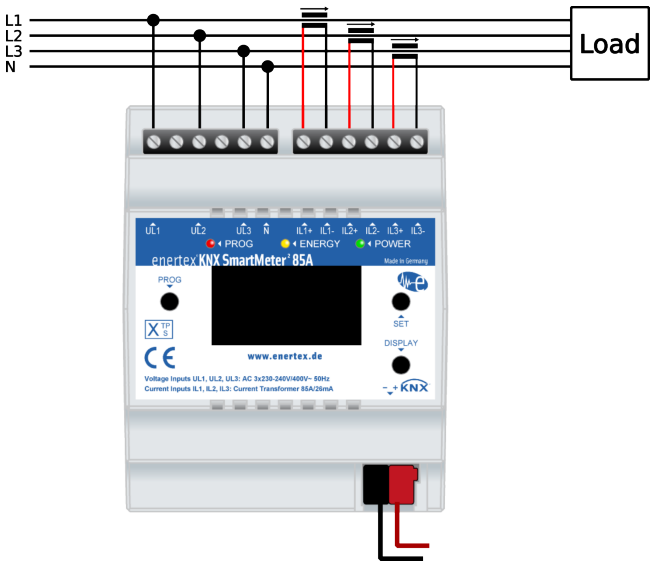


Figure 1. Connection diagram with example wiring for the 85 A variant with load

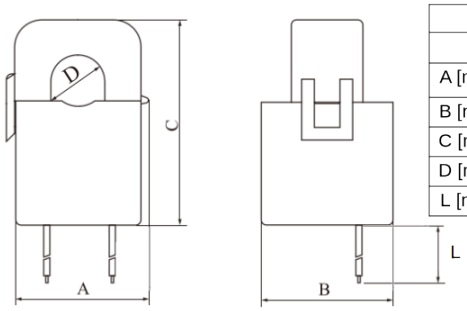
Danger to life due to electric shock!

Before working on the device, disconnect it from power and cover live parts in the surrounding area!

Mount the device on a DIN rail inside the distribution board. The connection diagram shown in Figure 1 is only an example and illustrates the application for connection to a three-phase AC system with neutral conductor. The neutral conductor and the measurement inputs for the three voltages UL1, UL2, and UL3 are connected to the corresponding screw terminals. If the SmartMeter² is not operated in a three-phase system, the phase voltage of the respective current channel must be connected to voltage inputs UL1, UL2, and UL3. For example, if three power values are to be measured on a single phase, this phase must be connected to all three channels UL1, UL2, and UL3.

In IT systems without a neutral conductor, the neutral conductor terminal remains unused. In this case, the parameter **IT system** must be selected in ETS under the network type parameter.

There are two device variants for different current measurement ranges, which also differ in the supplied current transformers. The Enertex® KNX SmartMeter² 85 A includes 85 A transformers of type SCT010, whereas the Enertex® KNX SmartMeter² 800 A includes transformers of type SCT051.



	Type	
	85A	800A
A [mm]	22.8	80
B [mm]	25.8	50
C [mm]	40	11.4
D [mm]	10	48
L [mm]	600	600

Figure 2. Current transformers

The current transformers must be connected to the corresponding SmartMeter² terminals according to Figure 1 with the following assignment:

- I+ : red
- I- : black

The corresponding current sensor must be mounted around the live conductor to be measured. For correct active power and energy measurement, make sure that the current transformers are connected to the correct phase. This means that the current transformer on channel IL1 (or IL2 or IL3) must be mounted around the conductor that is connected to voltage input UL1 (or UL2 or UL3). **Caution: Only insulated conductors may be routed through the current sensor; bare conductors are not permitted!**

Each current sensor is marked with a power counting arrow indicating the positive power counting direction. Power flow in this direction corresponds to a positive power value. Current sensors are typically mounted so that the power counting arrow points from the energy source to the consumer, so that energy consumption is counted positively in the balance energy counter. The current direction can also be corrected in software in ETS.

Current transformers from other manufacturers can also be used. Please note the information in the next section.

The KNX bus is connected to the black/red terminal. The SmartMeter² is powered exclusively by the KNX bus. Therefore, ETS parameterization can also be carried out even if no 230 V mains voltage is yet present at the device.

Use of Current Transformers from Other Manufacturers

Both SmartMeter² 85 A devices and SmartMeter² 800 A devices can also be operated with current transformers from other manufacturers.

Caution: Only current transformers with a secondary current below 58 mA may be used. Transformers with a higher secondary current can damage the device.

The primary current and secondary current of the current transformers used must be parameterized in ETS. Only after this parameterization will the measured values be displayed correctly on the display.

If current transformers with higher secondary currents are to be used, an additional measuring transducer is required to convert the secondary current to the maximum permissible SmartMeter² input current of 58 mA.

Measurements

The SmartMeter² can acquire measured values per phase as well as a three-phase total value. The measured values that are actually available are enabled through parameterization.

Enabling a measured value makes all associated communication objects visible in ETS. For each measured value, the value change from which a new telegram is sent can be specified separately. For a measured value to be sent cyclically, on change, or on request, the measurement for the respective channel must be activated using the corresponding checkbox. This allows the bus load to be adapted to the actual requirements of the installation.

In addition, a common interval for cyclic sending of measured values can be configured. This interval applies to all enabled measurements. If the optional request of measured values via a communication object is used, all enabled measured values are also sent together.

For voltage measurement, an additional alarm for voltage failure can be provided per phase. This means the device can not only deliver measured values, but can also signal changes in the network state at an early stage.

For active power measurement, separate unsigned communication objects for generation and consumption can also be enabled on the `General` tab.

Energy Counters

Based on the measured values, the SmartMeter² provides energy counters per phase and as a three-phase total counter. These counters are suitable for recording consumption and generation values and for forwarding them to visualizations, higher-level logic functions, or energy management functions.

Enabling an energy counter makes all associated communication objects visible in ETS. For each counter value, the change from which a new telegram is sent can be specified separately. For a counter value to be sent cyclically, on change, or on request, the counter for the respective channel must be activated using the corresponding checkbox. In addition, a common interval for cyclic sending of all enabled counter values is available.

Using the optional request object, all enabled counter values can be sent together. To synchronize existing counter readings, it is also possible to write to the corresponding counter objects. For a counter to accept the value received via the bus, the `Write` flag must be set in ETS.

Sending to the Reset communication object resets all energy counters of one channel. However, the energy counters are retained after a factory reset or firmware update.

Intermediate Counters

Intermediate counters are used to accumulate input values over a defined period and then reset automatically. They are particularly suitable for partial consumption or partial cost values, for example per day, per week, or for other freely selected evaluation periods.

An intermediate counter works like an additional energy or cost counter, but it receives its input value from a selected source and is additionally reset according to the parameterized reset interval. This makes it easy to record, for example, daily energy costs or daily consumption values.

The value of an intermediate counter is sent automatically at every reset. This means completed partial values are immediately available for further evaluation or visualization.

Energy Costs

The SmartMeter² can calculate energy costs based on its measured values and provide them as values. Cost calculation is performed using a predefined price in `ct/kWh`. For dynamic tariffs, the price can alternatively be set via a communication object from the bus.

If a price is provided via the bus, it can be defined whether this value is adopted permanently. If the function `Permanently adopt price from bus` is not activated, the device uses the price stored in the parameterization again after a restart.

Enabling a cost counter makes all associated communication objects visible in ETS. For each cost value, the value change from which a new telegram is sent can be specified separately. For a cost value to be sent cyclically, on change, or on request, the cost counter for the respective channel must be activated using the corresponding checkbox. A common interval for cyclic sending and a change threshold can also be specified. Using the optional request object, all enabled cost values can be transmitted together.

Sending to the Reset communication object resets all cost counters of one channel. However, the cost counters are retained after a factory reset or firmware update.

Energy Management

Energy management is used to output telegrams, enables, or setpoints in stages depending on measured values or price values. Up to 2 independent energy management blocks are available in the device for this purpose. Each block can manage up to 6 stages. Each stage can provide its own output telegrams or setpoint values.

The following operating modes can be selected for each block:

- **Universal**: Free selection of the trigger source, thresholds, and trigger direction.
- **Optimize self-consumption**: Loads are enabled when sufficient power is being fed into the grid.
- **Limit power consumption**: Loads are switched off or throttled when grid import is high.
- **Optimize costs**: Loads are enabled depending on the energy price.

Operating Principle

An energy management block continuously monitors a parameterized input value and compares it with a lower and an upper threshold. When triggering on exceeding the thresholds, stages are activated above the upper threshold and deactivated below the lower threshold. When triggering on falling below the thresholds, stages are activated below the lower threshold and deactivated above the upper threshold. Between the thresholds and exactly at either threshold, the previous state is retained. This hysteresis prevents frequent switching in response to small value fluctuations. If the lower threshold is parameterized higher than the upper threshold, the device uses the upper threshold value for both thresholds.

The activation of stages is intentionally performed step by step. After each activation, the input situation is evaluated again. Additional stages are therefore only activated if the trigger condition is still

met after the previous action. This is particularly important for PV surplus applications, because a load enabled or controlled via telegrams can immediately change the available surplus.

The state machine shows the overall sequence of an energy management block.

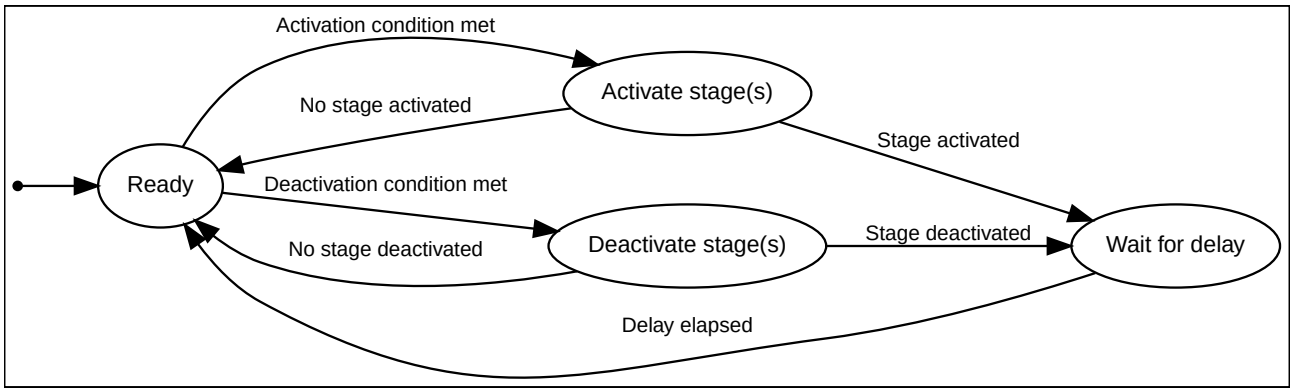


Figure 3. State machine of an energy management block

In the **Ready** state, the block evaluates the activation and deactivation conditions. If at least one suitable stage has been switched, the block waits for the delay between stages to elapse and then evaluates the input situation again. If no suitable stage is available, the block remains immediately ready for a new evaluation. If a switching condition persists, the next priority group can follow after each delay. A block lock telegram acts directly on all stages and is therefore included in the stage decision diagram.

Trigger Parameterization

For each energy management block, the global trigger parameters are defined first.

- **Input value**: Internal SmartMeter² measured values and price values or an external communication object can be used as the trigger. In particular, the following are available:
  - Active power L1
  - Active power L2
  - Active power L3
  - Three-phase active power
  - Energy consumption price
  - Energy generation price
  - Reactive energy consumption price
  - Communication object
- **CO type**: If a communication object is used as the input value, its data type must be selected accordingly. Supported are 1-byte, 2-byte, and 4-byte values, both integer and floating-point.
- **Lower and upper threshold**: Both thresholds are entered to match the selected data type and define the hysteresis band.
- **Trigger on**: Defines whether activation is performed when the input rises above or falls below the hysteresis band.

- **Delay between switching stages**: After each activation or deactivation of a stage, the block waits before the next regular action is executed. For the `Universal` type, this time can be parameterized; for `Optimize self-consumption`, `Limit power consumption`, and `Optimize costs`, it is fixed at one minute.
- **Lock object**: An optional lock object locks the entire energy management block.
- **Polarity of the lock object**: Defines whether `0` or `1` represents the locked state.

If a communication object is used as the trigger, the energy management works with the last value received from this object. Without a valid input value, no trigger decision can be made. The last received value is retained across a restart if the type, source, and data type remain compatible. After a factory reset or reprogramming of the application, this stored value is discarded.

Parameterization per Stage

Each stage is enabled and parameterized separately. This allows the block to implement simple enables and switching telegrams as well as more complex multi-stage setpoint or enable logics.

- **Enable stage**: Only enabled stages are taken into account.
- **Label for COs**: This label makes it easier to assign the stage-related communication objects in ETS.
- **Priority**: The priority determines the activation order. Higher priorities are preferably activated earlier and deactivated later. This means that a priority of 6 is activated in preference to a priority of 5.
- **Minimum runtime**: After activation, the stage remains active for at least the parameterized time. Only after that may it be switched off again.
- **Enables per day**: Limits the number of daily activations. The value `0` means unlimited.
- **Dead time**: After switching off, the stage remains blocked for the parameterized time and cannot be activated again during this period.
- **Enable lock object**: Activates an additional lock object for this stage if required.
- **Polarity of the lock object**: Defines whether `0` or `1` represents the locked state.

Minimum runtime, dead time, and locking determine the state of a stage between two switching operations.

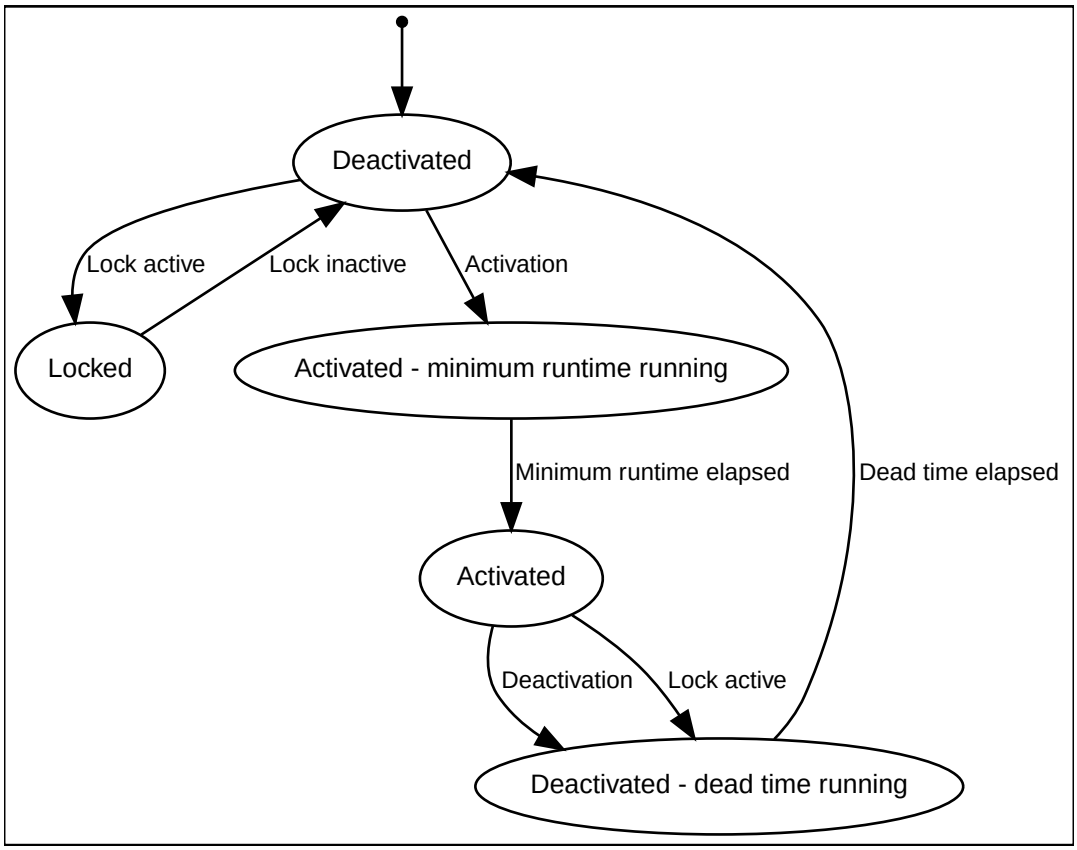


Figure 4. State machine of an energy management stage

Activation starts the minimum runtime, during which the stage may not be deactivated again. Deactivation starts the dead time, during which reactivation is not possible. If no minimum runtime or dead time is parameterized, the respective state is passed through immediately. A locked inactive stage remains locked until the lock is released. If an active stage is locked, it is only deactivated once its minimum runtime has elapsed.

Stage Switching Logic

The following decision diagram shows the conditions under which the stage state changes and a switching telegram is sent.

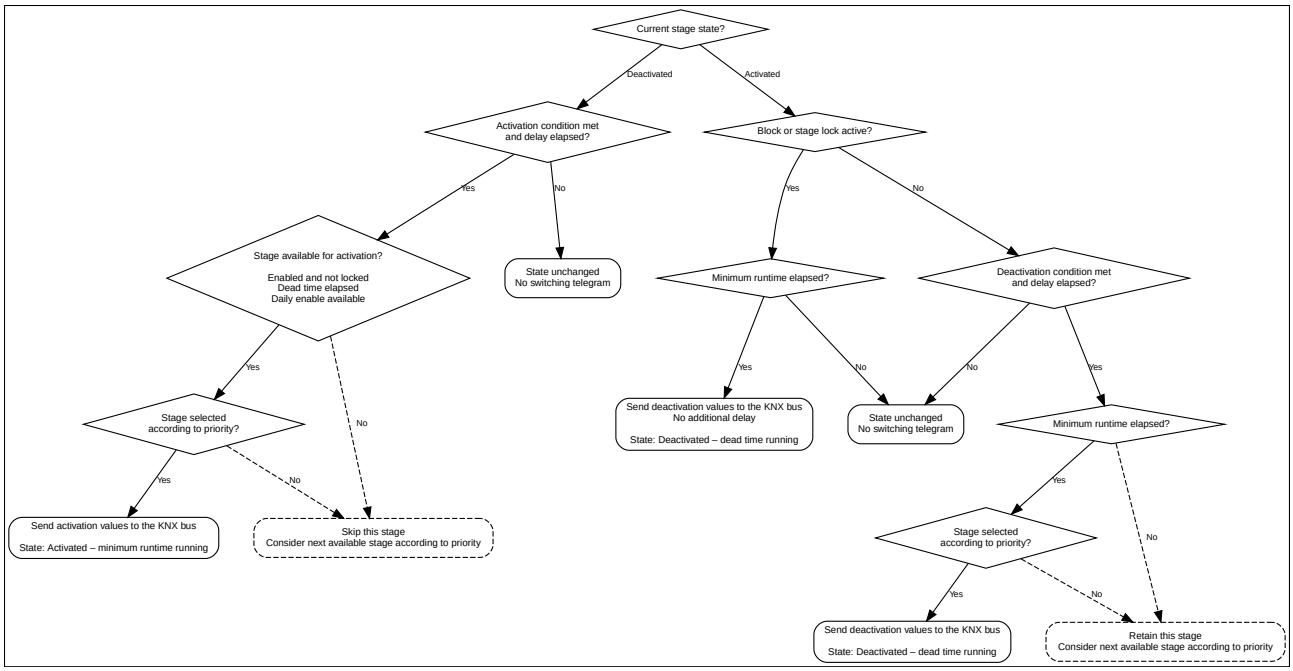


Figure 5. Decision diagram for stage activation and deactivation

For regular activation or deactivation, the corresponding trigger condition must first be met and the block delay must have elapsed. If either of these global conditions is not met, no stage is switched. An inactive stage can only be activated if it is enabled and not locked, its dead time has elapsed, and a daily enable is still available. If only the stage under consideration is unavailable or not selected according to priority, the next available stage is considered. For activation, the highest available priority is selected; for deactivation, the lowest. Stages with the same selected priority are switched together. As a result, a higher-priority stage is activated earlier and deactivated later than a lower-priority stage. A block or stage lock deactivates an active stage after its minimum runtime has elapsed, without waiting for the regular trigger condition or an additional delay. After each deactivation, the stage’s dead time begins.

Telegrams per Stage

Up to 4 telegrams can be parameterized per stage. Each telegram has:

- a telegram type
- a value for activation
- a value for deactivation

This allows a stage to send specifically different values when activated and deactivated. On activation or deactivation, only the enabled telegram slots are sent to the KNX bus with their respective parameterized values. The energy management does not confirm whether the receiving KNX device has actually implemented the transmitted value. Supported telegram types include the following:

- Switching (DPT 1.001)
- Bool (DPT 1.002)
- Percentage value (DPT 5.001)
- Temperature value (DPT 9.001)
- DHW Mode (DPT 20.103)
- DPT 20.XXX
- Current (DPT 14.019)
- Power (DPT 14.056)

This allows the energy management to transmit switching telegrams, setpoints, or operating modes to other devices without acting as an actuator itself. Remaining runtime, dead time, remaining cycles, and operating hours can be transmitted via separate status objects independently of these switching telegrams.

Feedback and Auxiliary Objects

For each stage, additional communication objects are also available to monitor or influence the current operating state. These include in particular:

- Lock object of the stage
- Remaining cycles
- Minimum remaining runtime
- Operating hours counter day
- Operating hours counter total
- Priority

This means that the priority can not only be parameterized, but can also be specified via communication objects if required. The counter and remaining runtime objects simplify diagnostics, visualization, and higher-level logic functions. Operating hours are recorded while a stage is active. At the start of a new day, the daily activation count and the daily operating hours counter are reset. Detecting the start of a new day requires a valid date and an enabled device time. After a restart, the daily activation

count and the daily operating hours counter also start at zero. The total operating hours counter is stored persistently and restored after a restart. The counter reset object of an energy management block resets the daily and total operating hours of all stages in that block.

Parameterization Notes

- A high priority activates a load earlier and deactivates it later than loads with a lower priority.
- A sufficiently long minimum runtime prevents premature switching off, but can temporarily lead to unwanted grid import during rapid changes.
- A dead time prevents immediate reactivation after switching off.
- The enables per day limit switching frequency; the value `0` allows unlimited activations.

Practical Examples: Optimize Self-Consumption

Initial Situation

During the day, a PV system often generates more energy than the building currently needs. Without energy management, this surplus flows into the public grid. The following practical examples show how the surplus can instead be used for an immersion heater or to charge a vehicle.

The daily profiles shown illustrate the control behavior for different load powers and settings. For a real installation, the settings must be adapted to its power, measurement, and operating conditions.

Operating Principle

The active power measurement at the grid connection provides the decisive measured value for energy management:

- A positive value means that energy is being drawn from the grid.
- A negative value means that PV energy is being fed into the grid.

The energy management only switches on a load when its power can be covered by the current surplus with sufficient reserve. After switching on, the feed-in decreases by the power of the load. If grid import occurs later, the load is switched off again. The switch-off threshold of 0 W and the waiting time of one minute between two stage switching operations are predefined for the `Optimize self-consumption` operating mode and do not need to be parameterized.

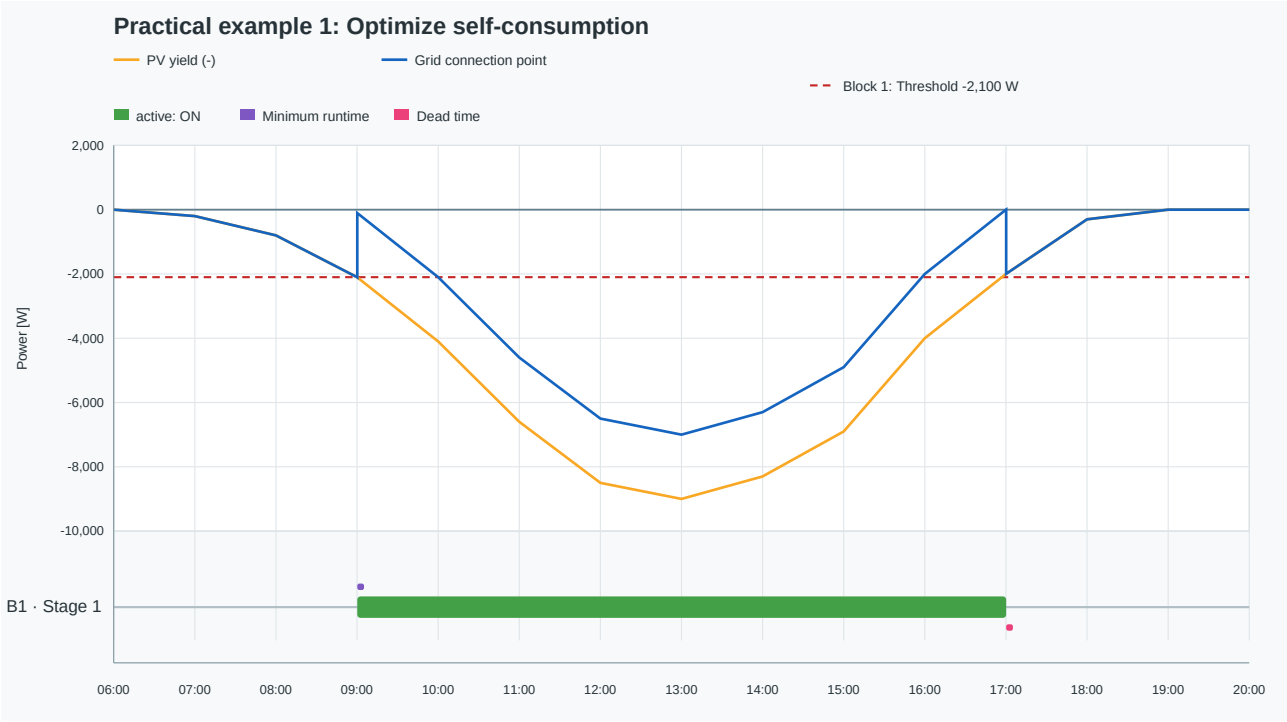
In the daily profile shown, the PV system starts with low generation in the morning, reaches around 9 kW at midday, and no longer delivers any power in the evening. Three variants illustrate the most important functions step by step.

Example 1: An Immersion Heater Uses Available PV Power

In the first example, a hot water tank has a 2 kW immersion heater. It is to operate only on PV surplus.

Setting	Value	Meaning
Switch-on threshold	-2.1 kW	Only when slightly more than 2 kW is being fed into the grid is enough energy available for the immersion heater and a small reserve.
Minimum runtime	5 minutes	After switching on, the immersion heater remains active for at least five minutes.
Dead time	5 minutes	An immediate restart after switching off is prevented.

At around 09:00, feed-in exceeds 2.1 kW. The immersion heater is switched on and uses 2 kW of this power. At around 17:00, PV generation is no longer sufficient; the immersion heater is switched off.



The orange curve shows PV generation with a negative sign. The blue curve shows the remaining energy flow at the grid connection. The stage track below indicates the immersion heater's runtime.

Example 2: Two Heating Stages Are Switched On in Sequence

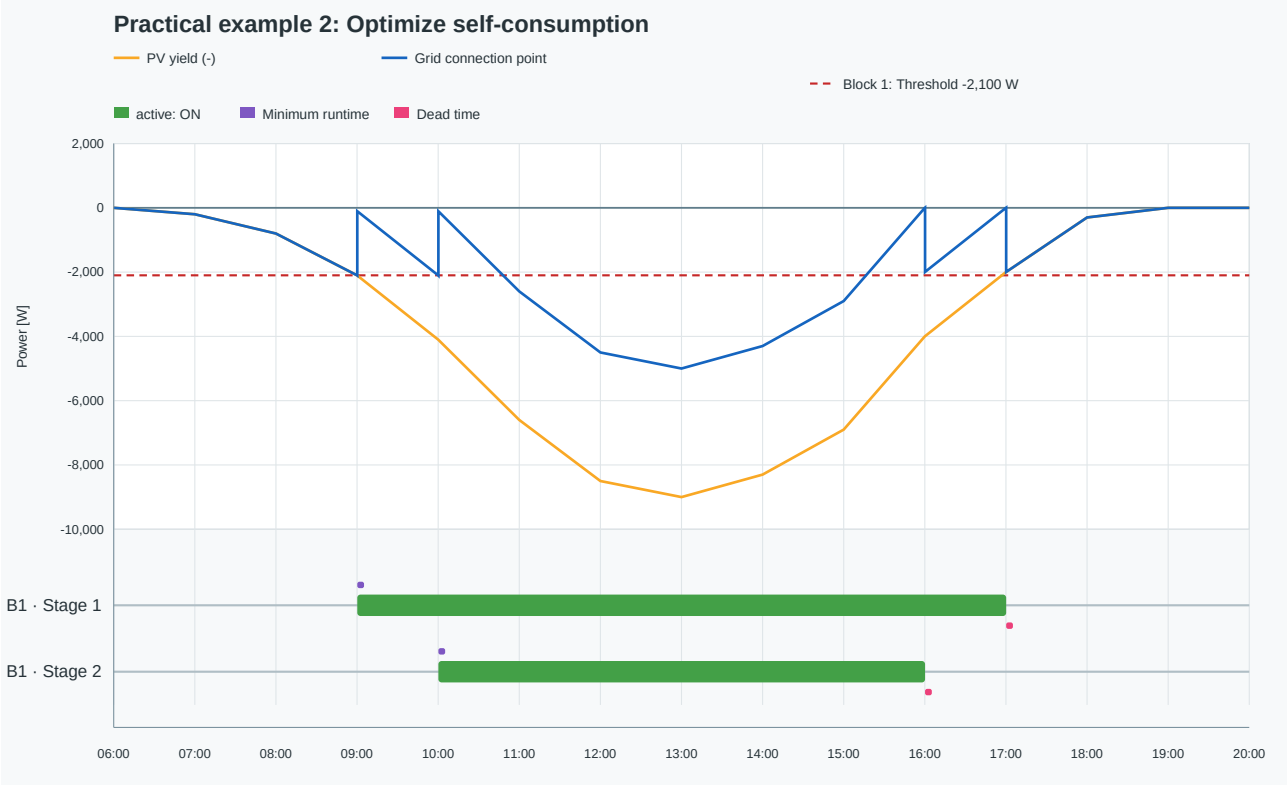
A larger tank has two heating stages of 2 kW each. Both use the same limits, but their order is determined by priority.

Setting	Value	Meaning
Switch-on threshold	-2.1 kW	Only when slightly more than 2 kW is being fed into the grid is enough energy available for the next heating stage and a small reserve.
Priority of heating stage 1	1	Heating stage 1 is switched on first.
Priority of heating stage 2	0	Heating stage 2 is switched on with lower priority.

Setting	Value	Meaning
Minimum runtime of both heating stages	5 minutes	After switching on, each heating stage remains active for at least five minutes.
Dead time of both heating stages	5 minutes	An immediate restart after switching off is prevented.

At 09:00, heating stage 1 is switched on first. Its power consumption immediately reduces the measured surplus by 2 kW. Only when PV generation has increased further at around 10:00 and more than 2.1 kW is again being fed into the grid does heating stage 2 follow.

In the afternoon, the sequence is reversed: at around 16:00, heating stage 2, which was switched on last, is switched off first. Heating stage 1 can operate on PV energy for another hour and stops at around 17:00.



This example illustrates the feedback in energy management: every load that is switched on changes the measured value. The next stage is only activated when sufficient surplus becomes available again afterwards.

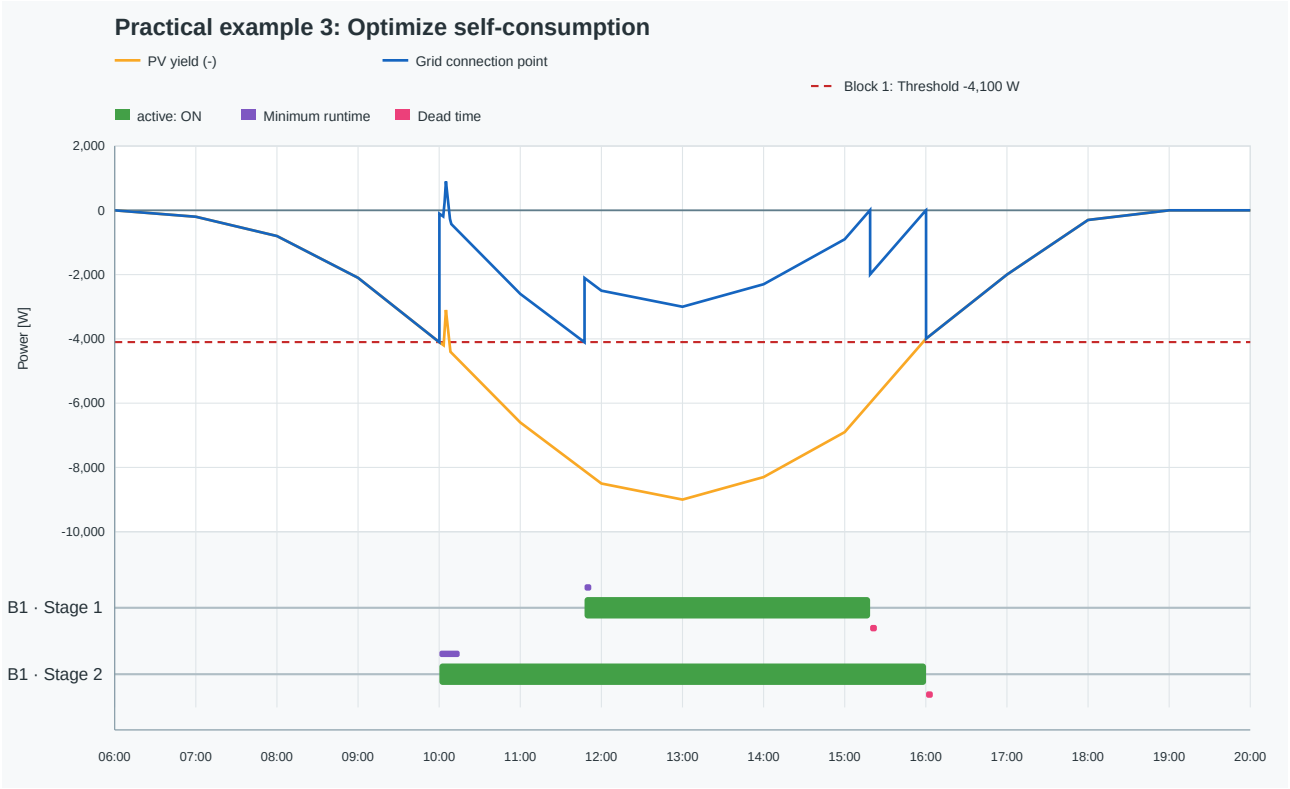
Example 3: Control a Wallbox and Immersion Heater by Priority

In the third example, a 4 kW wallbox and a 2 kW immersion heater compete for the same PV surplus. Both are in a common energy management block. The wallbox has the higher priority.

Setting	Value	Meaning
Switch-on threshold	-4.1 kW	Only when slightly more than 4 kW is being fed into the grid is enough energy available for the wallbox and a small reserve.
Wallbox priority	2	The wallbox is enabled first when sufficient surplus is available.
Immersion heater priority	1	The immersion heater is enabled with lower priority.
Wallbox minimum runtime	15 minutes	After being enabled, the wallbox remains active for at least 15 minutes.
Immersion heater minimum runtime	5 minutes	After switching on, the immersion heater remains active for at least five minutes.
Dead time of wallbox and immersion heater	5 minutes	An immediate restart after switching off is prevented.

At around 10:00, feed-in exceeds 4.1 kW for the first time; the wallbox is therefore enabled first. The brief drop in PV power a few minutes later does not immediately cause it to switch off, because a minimum runtime of 15 minutes has been parameterized for the wallbox. Only at around 11:47, after deducting the wallbox power, is more than 4.1 kW of surplus available again; the immersion heater is now also switched on.

In the afternoon, the immersion heater stops first at around 15:19. At around 16:00, PV power is no longer sufficient for the wallbox either.



Priorities thus determine which load may use a limited surplus first. Minimum runtime and dead time

ensure that brief changes in cloud cover do not cause unnecessarily frequent switching.

Planning and Operating Notes

- The sign convention of the energy meter must be checked before commissioning.
- The magnitude of the switch-on threshold should be slightly greater than the actual load power. This reserve compensates for measurement deviations and small load fluctuations.
- A minimum runtime protects contactors, heating systems, and charging equipment against excessively frequent switching. However, it can briefly cause grid import during a rapid drop in power.
- The immersion heater still requires its own temperature control and safety cutout. The energy management does not replace these functions.
- The wallbox must support an external enable or the specified control method. State of charge, departure time, and minimum charge are not considered in these simple examples.

The examples deliberately show fixed load powers. The same principle can also be applied to heat pumps, air conditioning units, or other loads whose operation can be shifted in time.

Practical Example: Control Loads Depending on Price

Initial Situation

With a dynamic electricity tariff, the energy price changes throughout the day. Loads with flexible operating times should therefore preferably operate during inexpensive hours. Examples include water heating, a heat pump, battery storage, or vehicle charging.

In this example, the energy management only decides whether to issue an enable. No specific load power is defined. This keeps the principle easy to understand, independently of the connected installation.

The price profile shown explains the enable at the price threshold; the values are neither a tariff forecast nor a recommendation for a particular price threshold.

Selected Settings

Setting	Value	Meaning
Price threshold	25 ct/kWh	Below the threshold, the load is enabled; above the threshold, the enable is withdrawn.
Telegram on activation	ON	The connected load receives the economic enable.
Telegram on deactivation	OFF	The economic enable is withdrawn.

How the Price-Based Enable Works

The current energy price is provided to the energy management as a measured value in ct/kWh. A price threshold of 25 ct/kWh separates inexpensive from expensive periods:

Price	State	Effect
below 25 ct/kWh	Enable active	The connected load may operate according to its own control system.
above 25 ct/kWh	Enable inactive	The load does not receive an economic enable.
exactly 25 ct/kWh	State retained	Switching only occurs when the price actually falls below or rises above the threshold.

When the price falls below the threshold, the stage sends an ON telegram. When the price rises above it, the stage sends an OFF telegram. The lower and upper thresholds have the same value; this example therefore uses a single price threshold without a hysteresis band.

Daily Sequence in the Example

At 06:00, the price is 39.8 ct/kWh. The enable remains off. Over the following hours, the price falls continuously.

At around 08:00, it drops below 25 ct/kWh. The energy management activates the stage and enables the load. The price remains low around midday, so the enable remains active.

At around 15:00, the price rises above 25 ct/kWh again. The stage is deactivated, and the OFF telegram withdraws the enable. For the rest of the day shown, the price remains above the threshold.



The colored curve shows the energy price. The horizontal line marks the price threshold. The stage track below directly shows the period during which the economic enable is active. Power values are not shown because they do not affect this decision.

Operation with a Single Price Threshold

The cost optimization function shown here uses the same price threshold for switching on and off. This makes the function particularly easy to follow.

If a hysteresis band is required, a universal energy management block with the trigger source `Energy consumption price` can be used instead. For example, it can switch the enable on below 24 ct/kWh and only switch it off again above 27 ct/kWh. Between these two values, the last state reached is retained. Minimum runtime and dead time can provide additional protection for sensitive loads.

Planning and Operating Notes

- The price source and thresholds must use the same unit. In this example, it is `ct/kWh`.
- A safe substitute value or a defined failure behavior must be provided for missing or outdated price data.
- An enable does not necessarily mean that the load starts immediately. Its own control system must continue to account for temperature, state of charge, departure time, comfort, and technical protection functions.
- Price-based control alone does not guarantee that a necessary energy demand is met in time. Additional minimum requirements are therefore useful for hot water or vehicle charging.
- The actual electricity price may include grid charges, taxes, and other variable components. The selected threshold should reflect the total price relevant to the customer.

The energy management thus provides the economic enable. Whether the load operates and at what power remains a decision for its own control system.

Grid-Friendly Operation

Grid-friendly load management helps keep the power drawn at the grid connection point within specified limits. For this purpose, the SmartMeter² measures the active power at the grid connection point and compares it with a parameterized upper power limit. Its integrated energy management can switch controllable loads off and on again in stages via KNX telegrams or reduce and subsequently increase their setpoints.

For controllable loads pursuant to Section 14a of the German Energy Industry Act (EnWG), a grid operator can specify an aggregate upper power limit for the connected controllable loads during a control event. A suitable control device transmits the corresponding signal to the KNX installation and thereby activates the parameterized limiting function of the SmartMeter². The SmartMeter² then controls the enabled stages based on the power measured at the grid connection point. Self-consumption from a PV system or battery storage is directly reflected in the measured grid import.

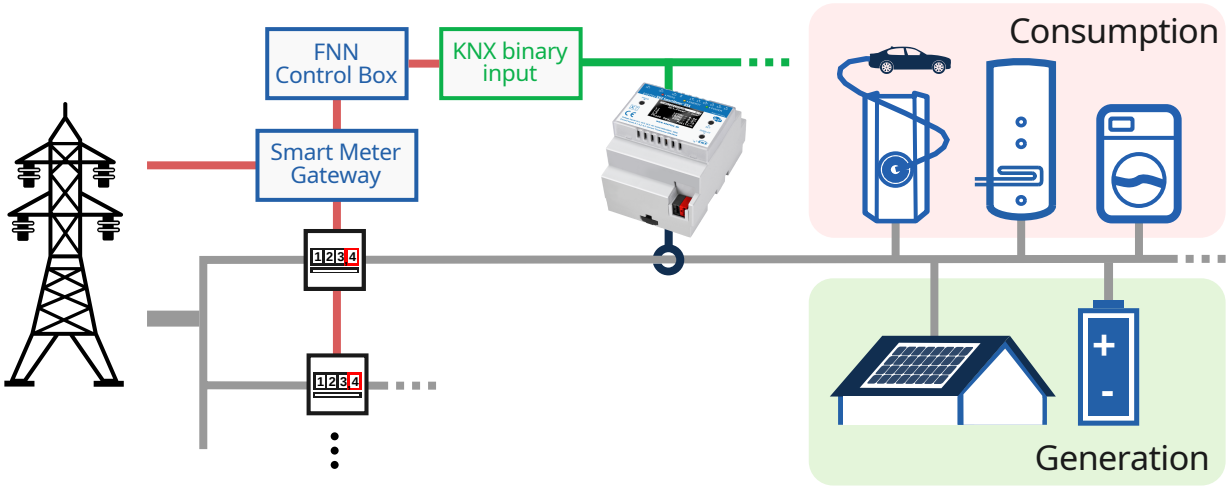


Figure 6. Schematic layout of grid-friendly power limitation

Figure 6 shows the signal path from the grid operator's specification to the control of the controllable loads. The path shown in red leads from the grid operator side through the Smart Meter Gateway and the FNN Control Box to the customer installation. A KNX binary input detects the control signal from the FNN Control Box and transmits it to the KNX bus shown in green. The SmartMeter² uses this signal to enable the limiting function and sends the resulting switching or setpoint telegrams to the controllable loads via KNX.

The gray path represents the electrical power flow from the public power supply grid. The SmartMeter² measures the resulting grid import directly downstream of the main meter (the metering point operator's billing meter), which reflects the connected loads as well as local PV generation and battery storage power. This allows the energy management to take the power actually drawn from the grid into account when controlling the load stages.

Interaction with Energy Management

For power limitation, the three-phase active power or the three-phase active power consumption is used as the input value of the energy management block. The specified upper power limit is parameterized as the upper threshold, and the trigger condition is set to exceeding the threshold. The lower threshold determines when limiting stages may be released again. The signal initiated by the grid operator can use the energy management block lock object, the stage lock objects, or an upstream logic function to determine whether the limiting stages are enabled.

If the measured grid import exceeds the upper power limit, the energy management first activates the enabled stage with the highest priority. For a limiting function, the activation telegram of this stage is parameterized to switch off a load or reduce its power consumption. After the delay between stage switching operations has elapsed, the SmartMeter² evaluates the grid import again. If it is still above the upper power limit, the next stage follows. This process continues until the grid import no longer exceeds the upper power limit or all available stages have been activated.

Once sufficient power reserve is available again, the energy management deactivates the stages in reverse priority order. The deactivation telegrams can switch the corresponding loads on again or increase their setpoints. With suitable dimensioning of the switchable load stages, switching delays, and power reserve, as well as reliable implementation of the KNX telegrams by the connected devices, the SmartMeter² can ensure compliance with the specified upper power limit. Priorities, minimum run-

times, dead times, and lock objects make it possible to adapt the control process to the requirements of the installation.

The SmartMeter² does not communicate with the grid operator itself. Grid-side specifications must be transmitted to the KNX installation via a suitable control device. This can be achieved, for example, by transmitting a switching contact of the grid operator's control device to the KNX bus via a KNX binary input. The device replaces neither an intelligent metering system nor a control device and does not, on its own, establish conformity with the requirements of Section 14a EnWG.

Practical Example: Limit the Power Consumption of Three Wallboxes

Initial Situation

Three wallboxes rated at 11 kW each are installed at an apartment building or business site. As long as only one vehicle is charging, the full power is available to it. If more vehicles start charging, 22 or 33 kW would be required for the wallboxes alone without control. This can place an unnecessary strain on the agreed connection capacity.

The energy management therefore automatically limits charging power. The vehicles remain connected and continue charging, but at reduced power when the total load is high.

The charging enable is not withdrawn. Instead, all wallboxes receive a lower power limit together:

- one active wallbox: 11 kW per wallbox
- two active wallboxes: 7.4 kW per wallbox
- three active wallboxes: 4.1 kW per wallbox

In this example, the term load shedding therefore refers to throttling in stages rather than completely switching off the vehicles.

The daily sequence shown illustrates the effect of the two throttling stages for different charging demands. For a real installation, the building's base load, connection capacity, and response times in particular must be taken into account.

How Power Limitation Works

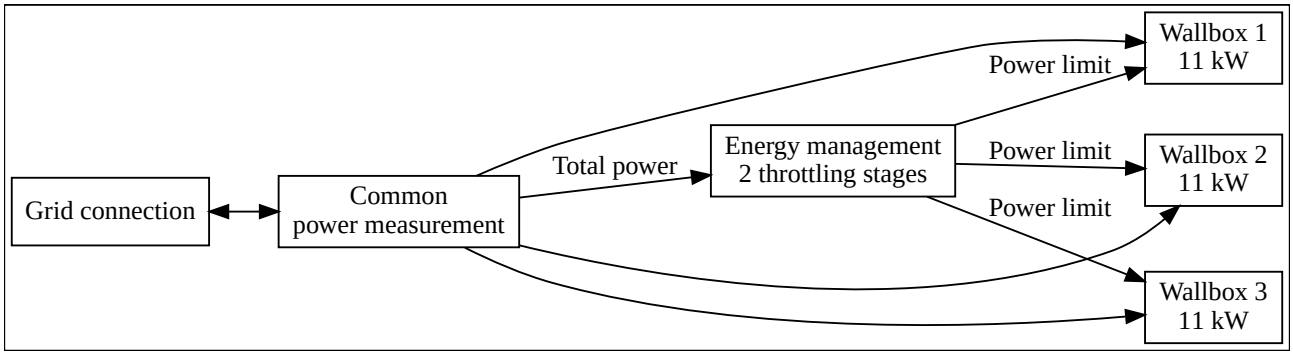
The total power is measured at the common grid connection point. The energy management sends the currently applicable power limit to all three wallboxes via a common group address.

The sequence repeats continuously:

1. The energy management reads the total power currently drawn.
2. Above 15 kW, it activates the next throttling stage.
3. The new power limit is sent to all wallboxes simultaneously.
4. If consumption later drops below 10 kW, the last activated stage is released again.

The difference between the activation and release thresholds prevents the control system from contin-

ually switching between two stages in response to small measured value fluctuations. Triggering on exceeding the threshold and the waiting time of one minute between two stage switching operations are predefined for the `Limit power consumption` operating mode and do not need to be parameterized.



A wallbox only draws power when a vehicle is connected and requests charging. The transmitted power limit is therefore a maximum value, not automatically the actual charging power. A wallbox without a charging request remains at 0 kW even with a limit of 7.4 kW.

Selected Settings

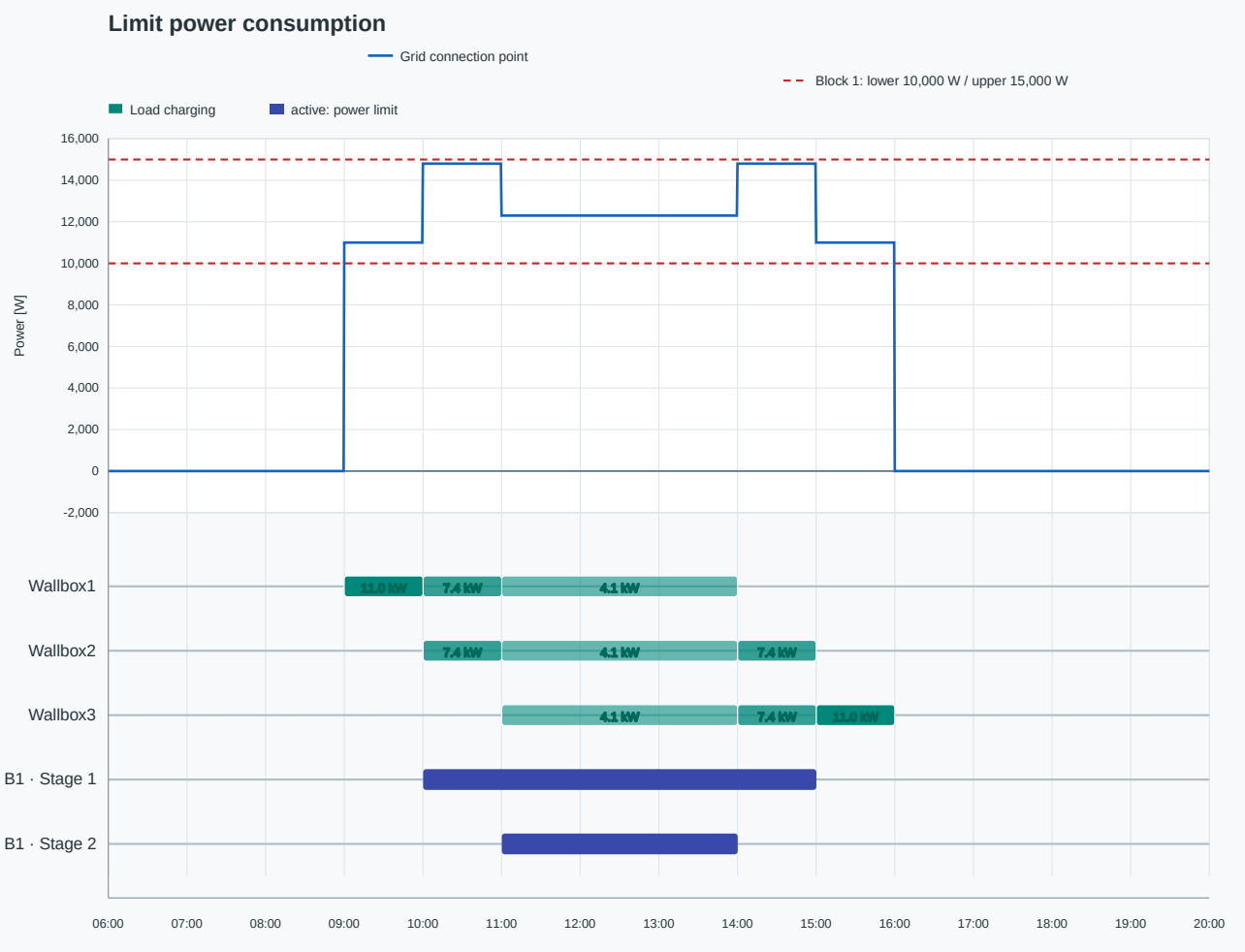
Setting	Value	Meaning for the Installation
Upper threshold	15 kW	Above this value, power is limited more strongly.
Lower threshold	10 kW	Below this value, a throttling stage can be released again.
Throttling stage 1	7.4 kW	Common limit when two vehicles are charging.
Throttling stage 2	4.1 kW	Common limit when three vehicles are charging.

The first throttling stage has the higher priority and is activated first. If this limitation is insufficient when another vehicle starts charging, the second stage follows. When the connection load decreases, the sequence is reversed so that charging power increases again gradually and in a controlled manner.

Daily Sequence in the Example

Time	Vehicles Charging	Behavior
09:00	Wallbox 1	The vehicle charges at 11 kW. No limitation is required.
10:00	Wallboxes 1 and 2	Demand rises to 22 kW. Stage 1 becomes active and limits both wallboxes to 7.4 kW. Total consumption drops to 14.8 kW.
11:00	Wallboxes 1, 2, and 3	Under the previous limit, 22.2 kW would be drawn. Stage 2 limits all wallboxes to 4.1 kW. Together, they charge at 12.3 kW.

Time	Vehicles Charging	Behavior
14:00	Wallboxes 2 and 3	Wallbox 1 finishes charging. The second throttling stage is released; the remaining vehicles again charge at 7.4 kW each.
15:00	Wallbox 3	Wallbox 2 also finishes charging. The first throttling stage is released, and wallbox 3 receives 11 kW again.
16:00	none	The last charging session ends.



The upper load tracks show when a wallbox is charging and how much power it actually draws. The two lower tracks show the active throttling stages.

The grid power curve shows the controlled value after each switching response. This directly reveals the remaining connection load after the energy management intervenes. The brief value between a vehicle starting to charge and the new power limit taking effect is not shown in the graphic.

Why Two Thresholds Are Used

The upper threshold determines when stronger throttling is applied. The lower release threshold prevents a limitation that has just been released from immediately being activated again.

When a wallbox finishes charging, power can drop significantly below 10 kW. The limitations are then

released in the specified sequence, and the vehicles still charging gradually receive more power. The wallboxes are therefore not limited earlier than necessary, and the limitation is released as soon as possible.

Planning and Operating Notes

- All wallboxes must be able to implement the transmitted power value as an effective upper limit.
- The common group address is only suitable if the same limit is to apply to all wallboxes.
- A real building base load must be taken into account when selecting the thresholds. No base load is included in the profile shown.
- Measurement, bus communication, and wallbox response take time. When another vehicle starts charging, the connection load can therefore briefly be higher.
- If a fixed connection limit must be guaranteed, the upper threshold must be set sufficiently below it to provide a reserve.
- Common throttling does not necessarily distribute power fairly. Dynamic allocation based on state of charge, departure time, or energy quantity requires a specialized charging management system.

The example shows a simple solution with fixed power stages. It is well suited where all wallboxes may receive the same limits. If power must instead be allocated individually by state of charge, user, or departure time, specialized dynamic charging management is appropriate.

Practical Example: Apartment Building

A SmartMeter² at the common grid connection point acts as the master EMS and measures the total power consumption of the apartment building. The signal transmitted from the FNN Control Box via the KNX binary input enables its limiting function.

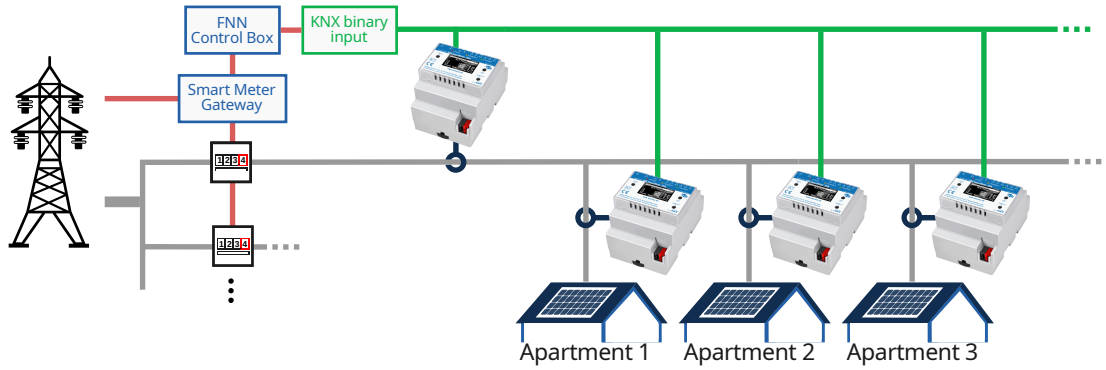


Figure 7. Two-level power limitation in an apartment building

Figure 7 shows the master EMS and the local SmartMeter² devices acting as the EMS for each apartment. The master EMS compares the measured total power consumption with the central upper power limit. If this limit is exceeded, the master EMS sends a binary enable signal via KNX to the slave EMS units in the individual apartments. The enable signal activates the local power limitation of the slave EMS units. Each slave EMS measures the power consumption of its apartment and controls the local loads independently of the other apartments so that the respective parameterized local upper power limit is maintained.

The local upper power limits can be set to different values. For an example central upper power limit of 10.5 kW, 2.5 kW can be parameterized for apartment 1, 3.5 kW for apartment 2, and 4.5 kW for apartment 3. Since the sum of the local upper power limits equals the central upper power limit, maintaining the local limits also maintains the limit at the common grid connection point. Any power consumption not measured by the slave EMS units must also be taken into account when allocating the limits.

The principle can also be applied to several buildings on a property, provided that their total power consumption is measured at a common grid connection point.

Factory Reset

The factory reset is triggered by pressing and holding the PROG button for a long time (approx. 10 seconds). The device then restarts, the application is unloaded, and all parameters are reset to the factory settings. The counter readings are retained in the device after a factory reset.

ETS Application

Specification

ETS: from version 5.7.4

Database File

The current ETS database file as well as the current product description can be found at https://www.enertex.de/d-downloads.html.

Parameters

Where the parameters are not self-explanatory, their description is integrated into the ETS context help.

Communication Objects

Note: Depending on the parameterization, some objects may not be available. Since all devices undergo an output test, the operating time and energy counters may differ from zero on delivery.

CO	Name	Function	Description	Length	Flags	Datatype
1	General - Output	Request date / time	Requests transmission of the current date and time values.	1 Bit	C—T-	1.017
2	General - Input	Date	Receives the current date to synchronize time-dependent functions.	3 Bytes	C-W-U	11.001
3	General - Input	Time	Receives the current time to synchronize time-dependent functions.	3 Bytes	C-W-U	10.001

CO	Name	Function	Description	Length	Flags	Datatype
4	General - Input	Date / time	Receives the current date and time to synchronize time-dependent functions.	8 Bytes	C-W-U	19.001
10	General - Input	Wake up device display	Wakes up the device display.	1 Bit	C-W--	1.017
11	General - Input	Switch off device LEDs	Controls switching off the device LEDs.	1 Bit	C-W--	1.001
20	Measurements - Input	Request measured values	Triggers transmission of the currently available measured values.	1 Bit	C-W--	1.017
21	Measurements - Output	Voltage L1	Sends the measured voltage of phase L1.	2 Bytes	CR-T-	9.020
		Voltage L1	Sends the measured voltage of phase L1.	4 Bytes	CR-T-	14.027
22	Measurements - Output	Current L1	Sends the measured current of phase L1.	2 Bytes	CR-T-	9.021
		Current L1	Sends the measured current of phase L1.	4 Bytes	CR-T-	14.019
23	Measurements - Output	Mains frequency	Sends the measured mains frequency.	4 Bytes	CR-T-	14.033
24	Measurements - Output	Apparent power L1	Sends the measured apparent power of phase L1.	4 Bytes	CR-T-	14.080
25	Measurements - Output	Active power generation L1	Sends the currently measured active power during feed-in on phase L1.	4 Bytes	CR-T-	14.056
26	Measurements - Output	Active power consumption L1	Sends the currently measured active power drawn from the grid on phase L1.	4 Bytes	CR-T-	14.056
27	Measurements - Output	Active power L1	Sends the currently measured active power of phase L1.	4 Bytes	CR-T-	14.056
28	Measurements - Output	Reactive power L1	Sends the measured reactive power of phase L1.	4 Bytes	CR-T-	14.081
29	Measurements - Output	Power factor L1	Sends the measured power factor of phase L1.	4 Bytes	CR-T-	14.057
30	Measurements - Output	THDU L1	Sends the total harmonic distortion of the voltage (THDU) of phase L1.	2 Bytes	CR-T-	8.010
31	Measurements - Output	THDI L1	Sends the total harmonic distortion of the current (THDI) of phase L1.	2 Bytes	CR-T-	8.010
32	Measurements - Output	Voltage L2	Sends the measured voltage of phase L2.	2 Bytes	CR-T-	9.020
		Voltage L2	Sends the measured voltage of phase L2.	4 Bytes	CR-T-	14.027
33	Measurements - Output	Current L2	Sends the measured current of phase L2.	2 Bytes	CR-T-	9.021
		Current L2	Sends the measured current of phase L2.	4 Bytes	CR-T-	14.019
34	Measurements - Output	Apparent power L2	Sends the measured apparent power of phase L2.	4 Bytes	CR-T-	14.080
35	Measurements - Output	Active power generation L2	Sends the currently measured active power during feed-in on phase L2.	4 Bytes	CR-T-	14.056
36	Measurements - Output	Active power consumption L2	Sends the currently measured active power drawn from the grid on phase L2.	4 Bytes	CR-T-	14.056
37	Measurements - Output	Active power L2	Sends the currently measured active power of phase L2.	4 Bytes	CR-T-	14.056
38	Measurements - Output	Reactive power L2	Sends the measured reactive power of phase L2.	4 Bytes	CR-T-	14.081
39	Measurements - Output	Power factor L2	Sends the measured power factor of phase L2.	4 Bytes	CR-T-	14.057
40	Measurements - Output	THDU L2	Sends the total harmonic distortion of the voltage (THDU) of phase L2.	2 Bytes	CR-T-	8.010
41	Measurements - Output	THDI L2	Sends the total harmonic distortion of the current (THDI) of phase L2.	2 Bytes	CR-T-	8.010
42	Measurements - Output	Voltage L3	Sends the measured voltage of phase L3.	2 Bytes	CR-T-	9.020
		Voltage L3	Sends the measured voltage of phase L3.	4 Bytes	CR-T-	14.027
43	Measurements - Output	Current L3	Sends the measured current of phase L3.	2 Bytes	CR-T-	9.021
		Current L3	Sends the measured current of phase L3.	4 Bytes	CR-T-	14.019
44	Measurements - Output	Apparent power L3	Sends the measured apparent power of phase L3.	4 Bytes	CR-T-	14.080
45	Measurements - Output	Active power generation L3	Sends the currently measured active power during feed-in on phase L3.	4 Bytes	CR-T-	14.056

CO	Name	Function	Description	Length	Flags	Datatype
46	Measurements - Output	Active power consumption L3	Sends the currently measured active power drawn from the grid on phase L3.	4 Bytes	CR-T-	14.056
47	Measurements - Output	Active power L3	Sends the currently measured active power of phase L3.	4 Bytes	CR-T-	14.056
48	Measurements - Output	Reactive power L3	Sends the measured reactive power of phase L3.	4 Bytes	CR-T-	14.081
49	Measurements - Output	Power factor L3	Sends the measured power factor of phase L3.	4 Bytes	CR-T-	14.057
50	Measurements - Output	THDU L3	Sends the total harmonic distortion of the voltage (THDU) of phase L3.	2 Bytes	CR-T-	8.010
51	Measurements - Output	THDI L3	Sends the total harmonic distortion of the current (THDI) of phase L3.	2 Bytes	CR-T-	8.010
52	Measurements - Output	neutral current	Sends the measured current in the neutral conductor.	2 Bytes	CR-T-	9.021
		neutral current	Sends the measured current in the neutral conductor.	4 Bytes	CR-T-	14.019
53	Measurements - Output	Apparent power 3-phase	Sends the measured apparent power of the three-phase system.	4 Bytes	CR-T-	14.080
54	Measurements - Output	Active power generation 3-phase	Sends the currently measured active power during feed-in of the three-phase system.	4 Bytes	CR-T-	14.056
55	Measurements - Output	Active power consumption 3-phase	Sends the currently measured active power drawn from the grid by the three-phase system.	4 Bytes	CR-T-	14.056
56	Measurements - Output	Active power 3-phase	Sends the currently measured active power of the three-phase system.	4 Bytes	CR-T-	14.056
57	Measurements - Output	Reactive power 3-phase	Sends the measured reactive power of the three-phase system.	4 Bytes	CR-T-	14.081
58	Measurements - Output	Power factor 3-phase	Sends the measured power factor of the three-phase system.	4 Bytes	CR-T-	14.057
59	Measurements - Output	Load imbalance 3-phase	Sends the measured unbalance of the three-phase system.	2 Bytes	CR-T-	8.010
60	Measurements - Output	Right-hand phase sequence	Sends whether a clockwise phase sequence has been detected.	1 Bit	CR-T-	1.002
61	Measurements - Output	Voltage failure L1	Sends whether a voltage failure has been detected on phase L1.	1 Bit	CR-T-	1.005
62	Measurements - Output	Voltage failure L2	Sends whether a voltage failure has been detected on phase L2.	1 Bit	CR-T-	1.005
63	Measurements - Output	Voltage failure L3	Sends whether a voltage failure has been detected on phase L3.	1 Bit	CR-T-	1.005
70	Counter - Input	Request counter values	Triggers transmission of the current energy and reactive energy counter readings.	1 Bit	C-W--	1.017
71	Counter - Output	Energy consumption L1 (Wh)	Sends the accumulated energy consumption for L1 in Wh.	4 Bytes	CR-T-	13.010
72	Counter - Output	Energy consumption L1 (kWh)	Sends the accumulated energy consumption for L1 in kWh.	4 Bytes	CR-T-	13.013
73	Counter - Output	Energy generation L1 (Wh)	Sends the accumulated energy generation for L1 in Wh.	4 Bytes	CR-T-	13.010
74	Counter - Output	Energy generation L1 (kWh)	Sends the accumulated energy generation for L1 in kWh.	4 Bytes	CR-T-	13.013
75	Counter - Output	Energy balance L1 (Wh)	Sends the accumulated energy balance for L1 in Wh.	4 Bytes	CR-T-	13.010
76	Counter - Output	Energy balance L1 (kWh)	Sends the accumulated energy balance for L1 in kWh.	4 Bytes	CR-T-	13.013
77	Counter - Output	Reactive energy L1 (varh)	Sends the accumulated reactive energy for L1 in varh.	4 Bytes	CR-T-	13.012
78	Counter - Output	Reactive energy L1 (kvarh)	Sends the accumulated reactive energy for L1 in kvarh.	4 Bytes	CR-T-	13.015
79	Counter - Input	Reset counter L1	Resets the energy and reactive energy counters for L1.	1 Bit	C-W--	1.015

CO	Name	Function	Description	Length	Flags	Datatype
80	Counter - Output	Energy consumption L2 (Wh)	Sends the accumulated energy consumption for L2 in Wh.	4 Bytes	CR-T-	13.010
81	Counter - Output	Energy consumption L2 (kWh)	Sends the accumulated energy consumption for L2 in kWh.	4 Bytes	CR-T-	13.013
82	Counter - Output	Energy generation L2 (Wh)	Sends the accumulated energy generation for L2 in Wh.	4 Bytes	CR-T-	13.010
83	Counter - Output	Energy generation L2 (kWh)	Sends the accumulated energy generation for L2 in kWh.	4 Bytes	CR-T-	13.013
84	Counter - Output	Energy balance L2 (Wh)	Sends the accumulated energy balance for L2 in Wh.	4 Bytes	CR-T-	13.010
85	Counter - Output	Energy balance L2 (kWh)	Sends the accumulated energy balance for L2 in kWh.	4 Bytes	CR-T-	13.013
86	Counter - Output	Reactive energy L2 (varh)	Sends the accumulated reactive energy for L2 in varh.	4 Bytes	CR-T-	13.012
87	Counter - Output	Reactive energy L2 (kvarh)	Sends the accumulated reactive energy for L2 in kvarh.	4 Bytes	CR-T-	13.015
88	Counter - Input	Reset counter L2	Resets the energy and reactive energy counters for L2.	1 Bit	C-W--	1.015
89	Counter - Output	Energy consumption L3 (Wh)	Sends the accumulated energy consumption for L3 in Wh.	4 Bytes	CR-T-	13.010
90	Counter - Output	Energy consumption L3 (kWh)	Sends the accumulated energy consumption for L3 in kWh.	4 Bytes	CR-T-	13.013
91	Counter - Output	Energy generation L3 (Wh)	Sends the accumulated energy generation for L3 in Wh.	4 Bytes	CR-T-	13.010
92	Counter - Output	Energy generation L3 (kWh)	Sends the accumulated energy generation for L3 in kWh.	4 Bytes	CR-T-	13.013
93	Counter - Output	Energy balance L3 (Wh)	Sends the accumulated energy balance for L3 in Wh.	4 Bytes	CR-T-	13.010
94	Counter - Output	Energy balance L3 (kWh)	Sends the accumulated energy balance for L3 in kWh.	4 Bytes	CR-T-	13.013
95	Counter - Output	Reactive energy L3 (varh)	Sends the accumulated reactive energy for L3 in varh.	4 Bytes	CR-T-	13.012
96	Counter - Output	Reactive energy L3 (kvarh)	Sends the accumulated reactive energy for L3 in kvarh.	4 Bytes	CR-T-	13.015
97	Counter - Input	Reset counter L3	Resets the energy and reactive energy counters for L3.	1 Bit	C-W--	1.015
98	Counter - Output	Energy consumption 3-phase (Wh)	Sends the accumulated energy consumption for the three-phase system in Wh.	4 Bytes	CR-T-	13.010
99	Counter - Output	Energy consumption 3-phase (kWh)	Sends the accumulated energy consumption for the three-phase system in kWh.	4 Bytes	CR-T-	13.013
100	Counter - Output	Energy generation 3-phase (Wh)	Sends the accumulated energy generation for the three-phase system in Wh.	4 Bytes	CR-T-	13.010
101	Counter - Output	Energy generation 3-phase (kWh)	Sends the accumulated energy generation for the three-phase system in kWh.	4 Bytes	CR-T-	13.013
102	Counter - Output	Energy balance 3-phase (Wh)	Sends the accumulated energy balance for the three-phase system in Wh.	4 Bytes	CR-T-	13.010
103	Counter - Output	Energy balance 3-phase (kWh)	Sends the accumulated energy balance for the three-phase system in kWh.	4 Bytes	CR-T-	13.013
104	Counter - Output	Reactive energy 3-phase (varh)	Sends the accumulated reactive energy for the three-phase system in varh.	4 Bytes	CR-T-	13.012
105	Counter - Output	Reactive energy 3-phase (kvarh)	Sends the accumulated reactive energy for the three-phase system in kvarh.	4 Bytes	CR-T-	13.015
106	Counter - Input	Reset 3-phase counter	Resets the energy and reactive energy counters for the three-phase system.	1 Bit	C-W--	1.015
110	Costs - Input	Request cost values	Triggers transmission of the currently calculated cost values.	1 Bit	C-W--	1.017
111	Costs - Output	Energy consumption costs L1	Sends the calculated energy consumption costs for L1.	4 Bytes	CR-T-	

CO	Name	Function	Description	Length	Flags	Datatype
112	Costs - Output	Energy generation costs L1	Sends the calculated costs or credits for energy generation for L1.	4 Bytes	CR-T-	
113	Costs - Output	Reactive energy costs L1	Sends the calculated reactive energy costs for L1.	4 Bytes	CR-T-	
114	Costs - Input	Reset costs L1	Resets the cost counters for L1.	1 Bit	C-W--	1.015
115	Costs - Output	Energy consumption costs L2	Sends the calculated energy consumption costs for L2.	4 Bytes	CR-T-	
116	Costs - Output	Energy generation costs L2	Sends the calculated costs or credits for energy generation for L2.	4 Bytes	CR-T-	
117	Costs - Output	Reactive energy costs L2	Sends the calculated reactive energy costs for L2.	4 Bytes	CR-T-	
118	Costs - Input	Reset costs L2	Resets the cost counters for L2.	1 Bit	C-W--	1.015
119	Costs - Output	Energy consumption costs L3	Sends the calculated energy consumption costs for L3.	4 Bytes	CR-T-	
120	Costs - Output	Energy generation costs L3	Sends the calculated costs or credits for energy generation for L3.	4 Bytes	CR-T-	
121	Costs - Output	Reactive energy costs L3	Sends the calculated reactive energy costs for L3.	4 Bytes	CR-T-	
122	Costs - Input	Reset costs L3	Resets the cost counters for L3.	1 Bit	C-W--	1.015
123	Costs - Output	Energy consumption costs 3-phase	Sends the calculated energy consumption costs for the three-phase system.	4 Bytes	CR-T-	
124	Costs - Output	Energy generation costs 3-phase	Sends the calculated costs or credits for energy generation for the three-phase system.	4 Bytes	CR-T-	
125	Costs - Output	Reactive energy costs 3-phase	Sends the calculated reactive energy costs for the three-phase system.	4 Bytes	CR-T-	
126	Costs - Input	Reset 3-phase costs	Resets the cost counters for the three-phase system.	1 Bit	C-W--	1.015
127	Costs - Input	Price energy consumption (0.01 cent/kWh)	Receives the tariff for consumed energy in 0.01 cent/kWh.	2 Bytes	C-W--	
128	Costs - Input	Price energy generation (0.01 cent/kWh)	Receives the tariff for generated energy in 0.01 cent/kWh.	2 Bytes	C-W--	
129	Costs - Input	Price reactive energy (0.01 cent/kWh)	Receives the tariff for calculating reactive energy costs.	2 Bytes	C-W--	
135	Submeter - Output	Value submeter 1	Sends the current value of intermediate counter 1.	4 Bytes	CR-T-	13.001
		Value submeter 1	Sends the current value of intermediate counter 1.	4 Bytes	CR-T-	13.010
		Value submeter 1	Sends the current value of intermediate counter 1.	4 Bytes	CR-T-	13.012
		Value submeter 1	Sends the current value of intermediate counter 1.	4 Bytes	CR-T-	13.013
		Value submeter 1	Sends the current value of intermediate counter 1.	4 Bytes	CR-T-	13.015
136	Submeter - Input	Reset submeter 1	Resets intermediate counter 1.	1 Bit	C-W--	1.015
137	Submeter - Output	Value submeter 2	Sends the current value of intermediate counter 2.	4 Bytes	CR-T-	13.001
		Value submeter 2	Sends the current value of intermediate counter 2.	4 Bytes	CR-T-	13.010
		Value submeter 2	Sends the current value of intermediate counter 2.	4 Bytes	CR-T-	13.012
		Value submeter 2	Sends the current value of intermediate counter 2.	4 Bytes	CR-T-	13.013
		Value submeter 2	Sends the current value of intermediate counter 2.	4 Bytes	CR-T-	13.015
138	Submeter - Input	Reset submeter 2	Resets intermediate counter 2.	1 Bit	C-W--	1.015
139	Submeter - Output	Value submeter 3	Sends the current value of intermediate counter 3.	4 Bytes	CR-T-	13.001

CO	Name	Function	Description	Length	Flags	Datatype
		Value submeter 3	Sends the current value of intermediate counter 3.	4 Bytes	CR-T-	13.010
		Value submeter 3	Sends the current value of intermediate counter 3.	4 Bytes	CR-T-	13.012
		Value submeter 3	Sends the current value of intermediate counter 3.	4 Bytes	CR-T-	13.013
		Value submeter 3	Sends the current value of intermediate counter 3.	4 Bytes	CR-T-	13.015
140	Submeter - Input	Reset submeter 3	Resets intermediate counter 3.	1 Bit	C-W--	1.015
141	Submeter - Output	Value submeter 4	Sends the current value of intermediate counter 4.	4 Bytes	CR-T-	13.001
		Value submeter 4	Sends the current value of intermediate counter 4.	4 Bytes	CR-T-	13.010
		Value submeter 4	Sends the current value of intermediate counter 4.	4 Bytes	CR-T-	13.012
		Value submeter 4	Sends the current value of intermediate counter 4.	4 Bytes	CR-T-	13.013
		Value submeter 4	Sends the current value of intermediate counter 4.	4 Bytes	CR-T-	13.015
142	Submeter - Input	Reset submeter 4	Resets intermediate counter 4.	1 Bit	C-W--	1.015
143	Submeter - Output	Value submeter 5	Sends the current value of intermediate counter 5.	4 Bytes	CR-T-	13.001
		Value submeter 5	Sends the current value of intermediate counter 5.	4 Bytes	CR-T-	13.010
		Value submeter 5	Sends the current value of intermediate counter 5.	4 Bytes	CR-T-	13.012
		Value submeter 5	Sends the current value of intermediate counter 5.	4 Bytes	CR-T-	13.013
		Value submeter 5	Sends the current value of intermediate counter 5.	4 Bytes	CR-T-	13.015
144	Submeter - Input	Reset submeter 5	Resets intermediate counter 5.	1 Bit	C-W--	1.015
145	Submeter - Output	Value submeter 6	Sends the current value of intermediate counter 6.	4 Bytes	CR-T-	13.001
		Value submeter 6	Sends the current value of intermediate counter 6.	4 Bytes	CR-T-	13.010
		Value submeter 6	Sends the current value of intermediate counter 6.	4 Bytes	CR-T-	13.012
		Value submeter 6	Sends the current value of intermediate counter 6.	4 Bytes	CR-T-	13.013
		Value submeter 6	Sends the current value of intermediate counter 6.	4 Bytes	CR-T-	13.015
146	Submeter - Input	Reset submeter 6	Resets intermediate counter 6.	1 Bit	C-W--	1.015
150	Logic 1 (...) - Input	Logic gate input 1	Receives the value for input 1 of the parameterized logic gate.	1 Bit	C-W-U	1.002
		Converter lock function	Receives the converter lock signal; the lock polarity is parameterized.	1 Bit	C-W-U	1.003
		Lock module lock function	Receives the lock signal of the lock function; the lock polarity is parameterized.	1 Bit	C-W-U	1.003
		Comparator input	Receives the input value to be compared.	4 Bit	C-W-U	3.007
		Threshold switch input	Receives the input value to be monitored.	4 Bit	C-W-U	3.007
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	5.001
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	5.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	5.010
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	5.010
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	7.001
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	7.001

CO	Name	Function	Description	Length	Flags	Datatype
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	8.001
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	8.001
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	9.000
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	9.000
		Comparator input	Receives the input value to be compared.	4 Bytes	C-W-U	13.001
		Threshold switch input	Receives the input value to be monitored.	4 Bytes	C-W-U	13.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	18.001
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	18.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	20.102
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	20.102
151	Logic 1 (...) - Input	Logic gate input 2	Receives the value for input 2 of the parameterized logic gate.	1 Bit	C-W-U	1.002
		Converter input	Receives the input value to be processed by the converter.	1 Bit	C-W-U	1.002
		Lock module input	Receives the input value of the lock function.	1 Bit	C-W-U	1.002
152	Logic 1 (...) - Input	Logic gate input 3	Receives the value for input 3 of the parameterized logic gate.	1 Bit	C-W-U	1.002
153	Logic 1 (...) - Input	Logic gate input 4	Receives the value for input 4 of the parameterized logic gate.	1 Bit	C-W-U	1.002
154	Logic 1 (...) - Output	Logic gate output	Sends the result of the parameterized logic gate.	1 Bit	CR-TU	1.002
		Lock module output	Sends the output value of the lock function according to its lock status.	1 Bit	CR-TU	1.002
		Comparator output	Sends the comparison result according to the parameterized comparison conditions.	1 Bit	CR-TU	1.002
		Threshold switch output	Sends the switching state according to the parameterized thresholds.	1 Bit	CR-TU	1.002
		Converter output	Sends the output value generated by the converter according to its parameterization.	1 Byte	CR-TU	5.001
155	Logic 2 (...) - Input	Logic gate input 1	Receives the value for input 1 of the parameterized logic gate.	1 Bit	C-W-U	1.002
		Converter lock function	Receives the converter lock signal; the lock polarity is parameterized.	1 Bit	C-W-U	1.003
		Lock module lock function	Receives the lock signal of the lock function; the lock polarity is parameterized.	1 Bit	C-W-U	1.003
		Comparator input	Receives the input value to be compared.	4 Bit	C-W-U	3.007
		Threshold switch input	Receives the input value to be monitored.	4 Bit	C-W-U	3.007
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	5.001
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	5.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	5.010
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	5.010
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	7.001
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	7.001
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	8.001
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	8.001
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	9.000
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	9.000
		Comparator input	Receives the input value to be compared.	4 Bytes	C-W-U	13.001
		Threshold switch input	Receives the input value to be monitored.	4 Bytes	C-W-U	13.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	18.001
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	18.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	20.102

CO	Name	Function	Description	Length	Flags	Datatype
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	20.102
156	Logic 2 (...) - Input	Logic gate input 2	Receives the value for input 2 of the parameterized logic gate.	1 Bit	C-W-U	1.002
		Converter input	Receives the input value to be processed by the converter.	1 Bit	C-W-U	1.002
		Lock module input	Receives the input value of the lock function.	1 Bit	C-W-U	1.002
157	Logic 2 (...) - Input	Logic gate input 3	Receives the value for input 3 of the parameterized logic gate.	1 Bit	C-W-U	1.002
158	Logic 2 (...) - Input	Logic gate input 4	Receives the value for input 4 of the parameterized logic gate.	1 Bit	C-W-U	1.002
159	Logic 2 (...) - Output	Logic gate output	Sends the result of the parameterized logic gate.	1 Bit	CR-TU	1.002
		Lock module output	Sends the output value of the lock function according to its lock status.	1 Bit	CR-TU	1.002
		Comparator output	Sends the comparison result according to the parameterized comparison conditions.	1 Bit	CR-TU	1.002
		Threshold switch output	Sends the switching state according to the parameterized thresholds.	1 Bit	CR-TU	1.002
		Converter output	Sends the output value generated by the converter according to its parameterization.	1 Byte	CR-TU	5.001
160	Logic 3 (...) - Input	Logic gate input 1	Receives the value for input 1 of the parameterized logic gate.	1 Bit	C-W-U	1.002
		Converter lock function	Receives the converter lock signal; the lock polarity is parameterized.	1 Bit	C-W-U	1.003
		Lock module lock function	Receives the lock signal of the lock function; the lock polarity is parameterized.	1 Bit	C-W-U	1.003
		Comparator input	Receives the input value to be compared.	4 Bit	C-W-U	3.007
		Threshold switch input	Receives the input value to be monitored.	4 Bit	C-W-U	3.007
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	5.001
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	5.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	5.010
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	5.010
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	7.001
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	7.001
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	8.001
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	8.001
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	9.000
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	9.000
		Comparator input	Receives the input value to be compared.	4 Bytes	C-W-U	13.001
		Threshold switch input	Receives the input value to be monitored.	4 Bytes	C-W-U	13.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	18.001
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	18.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	20.102
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	20.102
161	Logic 3 (...) - Input	Logic gate input 2	Receives the value for input 2 of the parameterized logic gate.	1 Bit	C-W-U	1.002
		Converter input	Receives the input value to be processed by the converter.	1 Bit	C-W-U	1.002
		Lock module input	Receives the input value of the lock function.	1 Bit	C-W-U	1.002
162	Logic 3 (...) - Input	Logic gate input 3	Receives the value for input 3 of the parameterized logic gate.	1 Bit	C-W-U	1.002
163	Logic 3 (...) - Input	Logic gate input 4	Receives the value for input 4 of the parameterized logic gate.	1 Bit	C-W-U	1.002

CO	Name	Function	Description	Length	Flags	Datatype
164	Logic 3 (...) - Output	Logic gate output	Sends the result of the parameterized logic gate.	1 Bit	CR-TU	1.002
		Lock module output	Sends the output value of the lock function according to its lock status.	1 Bit	CR-TU	1.002
		Comparator output	Sends the comparison result according to the parameterized comparison conditions.	1 Bit	CR-TU	1.002
		Threshold switch output	Sends the switching state according to the parameterized thresholds.	1 Bit	CR-TU	1.002
		Converter output	Sends the output value generated by the converter according to its parameterization.	1 Byte	CR-TU	5.001
165	Logic 4 (...) - Input	Logic gate input 1	Receives the value for input 1 of the parameterized logic gate.	1 Bit	C-W-U	1.002
		Converter lock function	Receives the converter lock signal; the lock polarity is parameterized.	1 Bit	C-W-U	1.003
		Lock module lock function	Receives the lock signal of the lock function; the lock polarity is parameterized.	1 Bit	C-W-U	1.003
		Comparator input	Receives the input value to be compared.	4 Bit	C-W-U	3.007
		Threshold switch input	Receives the input value to be monitored.	4 Bit	C-W-U	3.007
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	5.001
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	5.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	5.010
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	5.010
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	7.001
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	7.001
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	8.001
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	8.001
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	9.000
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	9.000
		Comparator input	Receives the input value to be compared.	4 Bytes	C-W-U	13.001
		Threshold switch input	Receives the input value to be monitored.	4 Bytes	C-W-U	13.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	18.001
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	18.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	20.102
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	20.102
166	Logic 4 (...) - Input	Logic gate input 2	Receives the value for input 2 of the parameterized logic gate.	1 Bit	C-W-U	1.002
		Converter input	Receives the input value to be processed by the converter.	1 Bit	C-W-U	1.002
		Lock module input	Receives the input value of the lock function.	1 Bit	C-W-U	1.002
167	Logic 4 (...) - Input	Logic gate input 3	Receives the value for input 3 of the parameterized logic gate.	1 Bit	C-W-U	1.002
168	Logic 4 (...) - Input	Logic gate input 4	Receives the value for input 4 of the parameterized logic gate.	1 Bit	C-W-U	1.002
169	Logic 4 (...) - Output	Logic gate output	Sends the result of the parameterized logic gate.	1 Bit	CR-TU	1.002
		Lock module output	Sends the output value of the lock function according to its lock status.	1 Bit	CR-TU	1.002
		Comparator output	Sends the comparison result according to the parameterized comparison conditions.	1 Bit	CR-TU	1.002
		Threshold switch output	Sends the switching state according to the parameterized thresholds.	1 Bit	CR-TU	1.002
		Converter output	Sends the output value generated by the converter according to its parameterization.	1 Byte	CR-TU	5.001

CO	Name	Function	Description	Length	Flags	Datatype
170	Logic 5 (...) - Input	Logic gate input 1	Receives the value for input 1 of the parameterized logic gate.	1 Bit	C-W-U	1.002
		Converter lock function	Receives the converter lock signal; the lock polarity is parameterized.	1 Bit	C-W-U	1.003
		Lock module lock function	Receives the lock signal of the lock function; the lock polarity is parameterized.	1 Bit	C-W-U	1.003
		Comparator input	Receives the input value to be compared.	4 Bit	C-W-U	3.007
		Threshold switch input	Receives the input value to be monitored.	4 Bit	C-W-U	3.007
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	5.001
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	5.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	5.010
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	5.010
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	7.001
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	7.001
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	8.001
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	8.001
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	9.000
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	9.000
		Comparator input	Receives the input value to be compared.	4 Bytes	C-W-U	13.001
		Threshold switch input	Receives the input value to be monitored.	4 Bytes	C-W-U	13.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	18.001
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	18.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	20.102
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	20.102
171	Logic 5 (...) - Input	Logic gate input 2	Receives the value for input 2 of the parameterized logic gate.	1 Bit	C-W-U	1.002
		Converter input	Receives the input value to be processed by the converter.	1 Bit	C-W-U	1.002
		Lock module input	Receives the input value of the lock function.	1 Bit	C-W-U	1.002
172	Logic 5 (...) - Input	Logic gate input 3	Receives the value for input 3 of the parameterized logic gate.	1 Bit	C-W-U	1.002
173	Logic 5 (...) - Input	Logic gate input 4	Receives the value for input 4 of the parameterized logic gate.	1 Bit	C-W-U	1.002
174	Logic 5 (...) - Output	Logic gate output	Sends the result of the parameterized logic gate.	1 Bit	CR-TU	1.002
		Lock module output	Sends the output value of the lock function according to its lock status.	1 Bit	CR-TU	1.002
		Comparator output	Sends the comparison result according to the parameterized comparison conditions.	1 Bit	CR-TU	1.002
		Threshold switch output	Sends the switching state according to the parameterized thresholds.	1 Bit	CR-TU	1.002
		Converter output	Sends the output value generated by the converter according to its parameterization.	1 Byte	CR-TU	5.001
175	Logic 6 (...) - Input	Logic gate input 1	Receives the value for input 1 of the parameterized logic gate.	1 Bit	C-W-U	1.002
		Converter lock function	Receives the converter lock signal; the lock polarity is parameterized.	1 Bit	C-W-U	1.003
		Lock module lock function	Receives the lock signal of the lock function; the lock polarity is parameterized.	1 Bit	C-W-U	1.003
		Comparator input	Receives the input value to be compared.	4 Bit	C-W-U	3.007
		Threshold switch input	Receives the input value to be monitored.	4 Bit	C-W-U	3.007
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	5.001
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	5.001

CO	Name	Function	Description	Length	Flags	Datatype
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	5.010
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	5.010
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	7.001
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	7.001
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	8.001
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	8.001
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	9.000
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	9.000
		Comparator input	Receives the input value to be compared.	4 Bytes	C-W-U	13.001
		Threshold switch input	Receives the input value to be monitored.	4 Bytes	C-W-U	13.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	18.001
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	18.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	20.102
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	20.102
176	Logic 6 (...) - Input	Logic gate input 2	Receives the value for input 2 of the parameterized logic gate.	1 Bit	C-W-U	1.002
		Converter input	Receives the input value to be processed by the converter.	1 Bit	C-W-U	1.002
		Lock module input	Receives the input value of the lock function.	1 Bit	C-W-U	1.002
177	Logic 6 (...) - Input	Logic gate input 3	Receives the value for input 3 of the parameterized logic gate.	1 Bit	C-W-U	1.002
178	Logic 6 (...) - Input	Logic gate input 4	Receives the value for input 4 of the parameterized logic gate.	1 Bit	C-W-U	1.002
179	Logic 6 (...) - Output	Logic gate output	Sends the result of the parameterized logic gate.	1 Bit	CR-TU	1.002
		Lock module output	Sends the output value of the lock function according to its lock status.	1 Bit	CR-TU	1.002
		Comparator output	Sends the comparison result according to the parameterized comparison conditions.	1 Bit	CR-TU	1.002
		Threshold switch output	Sends the switching state according to the parameterized thresholds.	1 Bit	CR-TU	1.002
		Converter output	Sends the output value generated by the converter according to its parameterization.	1 Byte	CR-TU	5.001
180	Logic 7 (...) - Input	Logic gate input 1	Receives the value for input 1 of the parameterized logic gate.	1 Bit	C-W-U	1.002
		Converter lock function	Receives the converter lock signal; the lock polarity is parameterized.	1 Bit	C-W-U	1.003
		Lock module lock function	Receives the lock signal of the lock function; the lock polarity is parameterized.	1 Bit	C-W-U	1.003
		Comparator input	Receives the input value to be compared.	4 Bit	C-W-U	3.007
		Threshold switch input	Receives the input value to be monitored.	4 Bit	C-W-U	3.007
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	5.001
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	5.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	5.010
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	5.010
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	7.001
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	7.001
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	8.001
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	8.001
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	9.000
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	9.000
		Comparator input	Receives the input value to be compared.	4 Bytes	C-W-U	13.001

CO	Name	Function	Description	Length	Flags	Datatype
		Threshold switch input	Receives the input value to be monitored.	4 Bytes	C-W-U	13.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	18.001
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	18.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	20.102
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	20.102
181	Logic 7 (...) - Input	Logic gate input 2	Receives the value for input 2 of the parameterized logic gate.	1 Bit	C-W-U	1.002
		Converter input	Receives the input value to be processed by the converter.	1 Bit	C-W-U	1.002
		Lock module input	Receives the input value of the lock function.	1 Bit	C-W-U	1.002
182	Logic 7 (...) - Input	Logic gate input 3	Receives the value for input 3 of the parameterized logic gate.	1 Bit	C-W-U	1.002
183	Logic 7 (...) - Input	Logic gate input 4	Receives the value for input 4 of the parameterized logic gate.	1 Bit	C-W-U	1.002
184	Logic 7 (...) - Output	Logic gate output	Sends the result of the parameterized logic gate.	1 Bit	CR-TU	1.002
		Lock module output	Sends the output value of the lock function according to its lock status.	1 Bit	CR-TU	1.002
		Comparator output	Sends the comparison result according to the parameterized comparison conditions.	1 Bit	CR-TU	1.002
		Threshold switch output	Sends the switching state according to the parameterized thresholds.	1 Bit	CR-TU	1.002
		Converter output	Sends the output value generated by the converter according to its parameterization.	1 Byte	CR-TU	5.001
185	Logic 8 (...) - Input	Logic gate input 1	Receives the value for input 1 of the parameterized logic gate.	1 Bit	C-W-U	1.002
		Converter lock function	Receives the converter lock signal; the lock polarity is parameterized.	1 Bit	C-W-U	1.003
		Lock module lock function	Receives the lock signal of the lock function; the lock polarity is parameterized.	1 Bit	C-W-U	1.003
		Comparator input	Receives the input value to be compared.	4 Bit	C-W-U	3.007
		Threshold switch input	Receives the input value to be monitored.	4 Bit	C-W-U	3.007
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	5.001
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	5.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	5.010
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	5.010
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	7.001
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	7.001
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	8.001
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	8.001
		Comparator input	Receives the input value to be compared.	2 Bytes	C-W-U	9.000
		Threshold switch input	Receives the input value to be monitored.	2 Bytes	C-W-U	9.000
		Comparator input	Receives the input value to be compared.	4 Bytes	C-W-U	13.001
		Threshold switch input	Receives the input value to be monitored.	4 Bytes	C-W-U	13.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	18.001
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	18.001
		Comparator input	Receives the input value to be compared.	1 Byte	C-W-U	20.102
		Threshold switch input	Receives the input value to be monitored.	1 Byte	C-W-U	20.102
186	Logic 8 (...) - Input	Logic gate input 2	Receives the value for input 2 of the parameterized logic gate.	1 Bit	C-W-U	1.002
		Converter input	Receives the input value to be processed by the converter.	1 Bit	C-W-U	1.002
		Lock module input	Receives the input value of the lock function.	1 Bit	C-W-U	1.002

CO	Name	Function	Description	Length	Flags	Datatype
187	Logic 8 (...) - Input	Logic gate input 3	Receives the value for input 3 of the parameterized logic gate.	1 Bit	C-W-U	1.002
188	Logic 8 (...) - Input	Logic gate input 4	Receives the value for input 4 of the parameterized logic gate.	1 Bit	C-W-U	1.002
189	Logic 8 (...) - Output	Logic gate output	Sends the result of the parameterized logic gate.	1 Bit	CR-TU	1.002
		Lock module output	Sends the output value of the lock function according to its lock status.	1 Bit	CR-TU	1.002
		Comparator output	Sends the comparison result according to the parameterized comparison conditions.	1 Bit	CR-TU	1.002
		Threshold switch output	Sends the switching state according to the parameterized thresholds.	1 Bit	CR-TU	1.002
		Converter output	Sends the output value generated by the converter according to its parameterization.	1 Byte	CR-TU	5.001
198	EM 1 - Input	Energy management 1 upper threshold	Receives the upper threshold for energy management block 1.	1 Byte	C-W--	5.001
		Energy management 1 upper threshold	Receives the upper threshold for energy management block 1.	1 Byte	C-W--	5.003
		Energy management 1 upper threshold	Receives the upper threshold for energy management block 1.	1 Byte	C-W--	5.010
		Energy management 1 upper threshold	Receives the upper threshold for energy management block 1.	1 Byte	C-W--	6.010
		Energy management 1 upper threshold	Receives the upper threshold for energy management block 1.	2 Bytes	C-W--	7.001
		Energy management 1 upper threshold	Receives the upper threshold for energy management block 1.	2 Bytes	C-W--	8.001
		Energy management 1 upper threshold	Receives the upper threshold for energy management block 1.	2 Bytes	C-W--	9.000
		Energy management 1 upper threshold	Receives the upper threshold for energy management block 1.	4 Bytes	C-W--	12.000
		Energy management 1 upper threshold	Receives the upper threshold for energy management block 1.	4 Bytes	C-W--	13.000
		Energy management 1 upper threshold	Receives the upper threshold for energy management block 1.	4 Bytes	C-W--	14.000
		Energy management 1 upper threshold	Receives the upper threshold for energy management block 1.	2 Bytes	C-W--	14.000
		Energy management 1 upper threshold	Receives the upper threshold for energy management block 1.	4 Bytes	C-W--	14.056
199	EM 1 - Input	Energy management 1 lower threshold	Receives the lower threshold for energy management block 1.	1 Byte	C-W--	5.001
		Energy management 1 lower threshold	Receives the lower threshold for energy management block 1.	1 Byte	C-W--	5.003
		Energy management 1 lower threshold	Receives the lower threshold for energy management block 1.	1 Byte	C-W--	5.010
		Energy management 1 lower threshold	Receives the lower threshold for energy management block 1.	1 Byte	C-W--	6.010
		Energy management 1 lower threshold	Receives the lower threshold for energy management block 1.	2 Bytes	C-W--	7.001
		Energy management 1 lower threshold	Receives the lower threshold for energy management block 1.	2 Bytes	C-W--	8.001
		Energy management 1 lower threshold	Receives the lower threshold for energy management block 1.	2 Bytes	C-W--	9.000
		Energy management 1 lower threshold	Receives the lower threshold for energy management block 1.	4 Bytes	C-W--	12.000
		Energy management 1 lower threshold	Receives the lower threshold for energy management block 1.	4 Bytes	C-W--	13.000
		Energy management 1 lower threshold	Receives the lower threshold for energy management block 1.	4 Bytes	C-W--	14.000

CO	Name	Function	Description	Length	Flags	Datatype
		Energy management 1 lower threshold	Receives the lower threshold for energy management block 1.	2 Bytes	C-W--	14.000
		Energy management 1 threshold	Receives the threshold for energy management block 1.	2 Bytes	C-W--	14.000
		Energy management 1 lower threshold	Receives the lower threshold for energy management block 1.	4 Bytes	C-W--	14.056
200	EM 1 - Input	Energy management 1 trigger	Receives the trigger value for energy management block 1 and evaluates it against the parameterized threshold.	1 Byte	C-W--	5.001
		Energy management 1 trigger	Receives the trigger value for energy management block 1 and evaluates it against the parameterized threshold.	1 Byte	C-W--	5.003
		Energy management 1 trigger	Receives the trigger value for energy management block 1 and evaluates it against the parameterized threshold.	1 Byte	C-W--	5.010
		Energy management 1 trigger	Receives the trigger value for energy management block 1 and evaluates it against the parameterized threshold.	1 Byte	C-W--	6.010
		Energy management 1 trigger	Receives the trigger value for energy management block 1 and evaluates it against the parameterized threshold.	2 Bytes	C-W--	7.001
		Energy management 1 trigger	Receives the trigger value for energy management block 1 and evaluates it against the parameterized threshold.	2 Bytes	C-W--	8.001
		Energy management 1 trigger	Receives the trigger value for energy management block 1 and evaluates it against the parameterized threshold.	2 Bytes	C-W--	9.000
		Energy management 1 trigger	Receives the trigger value for energy management block 1 and evaluates it against the parameterized threshold.	4 Bytes	C-W--	12.000
		Energy management 1 trigger	Receives the trigger value for energy management block 1 and evaluates it against the parameterized threshold.	4 Bytes	C-W--	13.000
		Energy management 1 trigger	Receives the trigger value for energy management block 1 and evaluates it against the parameterized threshold.	4 Bytes	C-W--	14.000
201	EM 1 - Output	Time to next stage switching	Sends the remaining waiting time between two stage switching operations.	4 Bytes	CR-T-	12.100
202	EM 1 - Input	Reset operating hours counter	Resets the daily and total operating hour counters of all stages in the associated energy management block.	1 Bit	C-W--	1.015
203	EM 1 - Input	Lock	Locks the associated stage according to the parameterized lock polarity and prevents its activation.	1 Bit	C-W--	1.003
205	EM 1 - Stage 1 - Output	Operating hours counter total	Sends the accumulated total operating hours of the associated stage.	4 Bytes	CR-T-	13.100
206	EM 1 - Stage 1 - Output	Operating hours counter day	Sends the operating hours accumulated since the last day change of the associated stage.	4 Bytes	CR-T-	13.100
207	EM 1 - Stage 1 - Input	Priority	Specifies the priority of the associated stage; activation considers the highest available priority, while deactivation considers the lowest active priority.	1 Byte	C-W--	6.010
208	EM 1 - Stage 1 - Output	Minimum remaining runtime	Sends the remaining minimum runtime of the associated active stage.	4 Bytes	CR-T-	12.100
209	EM 1 - Stage 1 - Output	Remaining cycles	Sends the remaining number of permitted activations of the associated stage on the current day.	1 Byte	CR-T-	5.010
210	EM 1 - Stage 1 - Output	Dead time	Sends the remaining dead time until the associated stage can be activated again.	4 Bytes	CR-T-	12.100
211	EM 1 - Stage 1 - Input	Lock	Locks the associated stage according to the parameterized lock polarity and prevents its activation.	1 Bit	C-W--	1.003

CO	Name	Function	Description	Length	Flags	Datatype
212	EM 1 - Stage 1 - Output	Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.103
213	EM 1 - Stage 1 - Output	Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.103
214	EM 1 - Stage 1 - Output	Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.103
215	EM 1 - Stage 1 - Output	Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.019

CO	Name	Function	Description	Length	Flags	Datatype
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.103
218	EM 1 - Stage 2 - Output	Operating hours counter total	Sends the accumulated total operating hours of the associated stage.	4 Bytes	CR-T-	13.100
219	EM 1 - Stage 2 - Output	Operating hours counter day	Sends the operating hours accumulated since the last day change of the associated stage.	4 Bytes	CR-T-	13.100
220	EM 1 - Stage 2 - Input	Priority	Specifies the priority of the associated stage; activation considers the highest available priority, while deactivation considers the lowest active priority.	1 Byte	C-W--	6.010
221	EM 1 - Stage 2 - Output	Minimum remaining run-time	Sends the remaining minimum runtime of the associated active stage.	4 Bytes	CR-T-	12.100
222	EM 1 - Stage 2 - Output	Remaining cycles	Sends the remaining number of permitted activations of the associated stage on the current day.	1 Byte	CR-T-	5.010
223	EM 1 - Stage 2 - Output	Dead time	Sends the remaining dead time until the associated stage can be activated again.	4 Bytes	CR-T-	12.100
224	EM 1 - Stage 2 - Input	Lock	Locks the associated stage according to the parameterized lock polarity and prevents its activation.	1 Bit	C-W--	1.003
225	EM 1 - Stage 2 - Output	Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.103
226	EM 1 - Stage 2 - Output	Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.103
227	EM 1 - Stage 2 - Output	Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.001

CO	Name	Function	Description	Length	Flags	Datatype
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.103
228	EM 1 - Stage 2 - Output	Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.103
231	EM 1 - Stage 3 - Output	Operating hours counter total	Sends the accumulated total operating hours of the associated stage.	4 Bytes	CR-T-	13.100
232	EM 1 - Stage 3 - Output	Operating hours counter day	Sends the operating hours accumulated since the last day change of the associated stage.	4 Bytes	CR-T-	13.100
233	EM 1 - Stage 3 - Input	Priority	Specifies the priority of the associated stage; activation considers the highest available priority, while deactivation considers the lowest active priority.	1 Byte	C-W--	6.010
234	EM 1 - Stage 3 - Output	Minimum remaining run-time	Sends the remaining minimum runtime of the associated active stage.	4 Bytes	CR-T-	12.100
235	EM 1 - Stage 3 - Output	Remaining cycles	Sends the remaining number of permitted activations of the associated stage on the current day.	1 Byte	CR-T-	5.010
236	EM 1 - Stage 3 - Output	Dead time	Sends the remaining dead time until the associated stage can be activated again.	4 Bytes	CR-T-	12.100
237	EM 1 - Stage 3 - Input	Lock	Locks the associated stage according to the parameterized lock polarity and prevents its activation.	1 Bit	C-W--	1.003
238	EM 1 - Stage 3 - Output	Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.019

CO	Name	Function	Description	Length	Flags	Datatype
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.103
239	EM 1 - Stage 3 - Output	Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.103
240	EM 1 - Stage 3 - Output	Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.103
241	EM 1 - Stage 3 - Output	Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.103
244	EM 1 - Stage 4 - Output	Operating hours counter total	Sends the accumulated total operating hours of the associated stage.	4 Bytes	CR-T-	13.100
245	EM 1 - Stage 4 - Output	Operating hours counter day	Sends the operating hours accumulated since the last day change of the associated stage.	4 Bytes	CR-T-	13.100

CO	Name	Function	Description	Length	Flags	Datatype
246	EM 1 - Stage 4 - Input	Priority	Specifies the priority of the associated stage; activation considers the highest available priority, while deactivation considers the lowest active priority.	1 Byte	C-W--	6.010
247	EM 1 - Stage 4 - Output	Minimum remaining run-time	Sends the remaining minimum runtime of the associated active stage.	4 Bytes	CR-T-	12.100
248	EM 1 - Stage 4 - Output	Remaining cycles	Sends the remaining number of permitted activations of the associated stage on the current day.	1 Byte	CR-T-	5.010
249	EM 1 - Stage 4 - Output	Dead time	Sends the remaining dead time until the associated stage can be activated again.	4 Bytes	CR-T-	12.100
250	EM 1 - Stage 4 - Input	Lock	Locks the associated stage according to the parameterized lock polarity and prevents its activation.	1 Bit	C-W--	1.003
251	EM 1 - Stage 4 - Output	Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.103
252	EM 1 - Stage 4 - Output	Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.103
253	EM 1 - Stage 4 - Output	Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.000

CO	Name	Function	Description	Length	Flags	Datatype
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.103
254	EM 1 - Stage 4 - Output	Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.103
257	EM 1 - Stage 5 - Output	Operating hours counter total	Sends the accumulated total operating hours of the associated stage.	4 Bytes	CR-T-	13.100
258	EM 1 - Stage 5 - Output	Operating hours counter day	Sends the operating hours accumulated since the last day change of the associated stage.	4 Bytes	CR-T-	13.100
259	EM 1 - Stage 5 - Input	Priority	Specifies the priority of the associated stage; activation considers the highest available priority, while deactivation considers the lowest active priority.	1 Byte	C-W--	6.010
260	EM 1 - Stage 5 - Output	Minimum remaining run-time	Sends the remaining minimum runtime of the associated active stage.	4 Bytes	CR-T-	12.100
261	EM 1 - Stage 5 - Output	Remaining cycles	Sends the remaining number of permitted activations of the associated stage on the current day.	1 Byte	CR-T-	5.010
262	EM 1 - Stage 5 - Output	Dead time	Sends the remaining dead time until the associated stage can be activated again.	4 Bytes	CR-T-	12.100
263	EM 1 - Stage 5 - Input	Lock	Locks the associated stage according to the parameterized lock polarity and prevents its activation.	1 Bit	C-W--	1.003
264	EM 1 - Stage 5 - Output	Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.103
265	EM 1 - Stage 5 - Output	Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	5.001

CO	Name	Function	Description	Length	Flags	Datatype
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.103
266	EM 1 - Stage 5 - Output	Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.103
267	EM 1 - Stage 5 - Output	Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.103
270	EM 1 - Stage 6 - Output	Operating hours counter total	Sends the accumulated total operating hours of the associated stage.	4 Bytes	CR-T-	13.100
271	EM 1 - Stage 6 - Output	Operating hours counter day	Sends the operating hours accumulated since the last day change of the associated stage.	4 Bytes	CR-T-	13.100
272	EM 1 - Stage 6 - Input	Priority	Specifies the priority of the associated stage; activation considers the highest available priority, while deactivation considers the lowest active priority.	1 Byte	C-W--	6.010
273	EM 1 - Stage 6 - Output	Minimum remaining run-time	Sends the remaining minimum runtime of the associated active stage.	4 Bytes	CR-T-	12.100
274	EM 1 - Stage 6 - Output	Remaining cycles	Sends the remaining number of permitted activations of the associated stage on the current day.	1 Byte	CR-T-	5.010
275	EM 1 - Stage 6 - Output	Dead time	Sends the remaining dead time until the associated stage can be activated again.	4 Bytes	CR-T-	12.100

CO	Name	Function	Description	Length	Flags	Datatype
276	EM 1 - Stage 6 - Input	Lock	Locks the associated stage according to the parameterized lock polarity and prevents its activation.	1 Bit	C-W--	1.003
277	EM 1 - Stage 6 - Output	Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.103
278	EM 1 - Stage 6 - Output	Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.103
279	EM 1 - Stage 6 - Output	Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.103
280	EM 1 - Stage 6 - Output	Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	2 Bytes	C—T-	9.001

CO	Name	Function	Description	Length	Flags	Datatype
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.103
284	EM 2 - Input	Energy management 2 upper threshold	Receives the upper threshold for energy management block 2.	1 Byte	C-W--	5.001
		Energy management 2 upper threshold	Receives the upper threshold for energy management block 2.	1 Byte	C-W--	5.003
		Energy management 2 upper threshold	Receives the upper threshold for energy management block 2.	1 Byte	C-W--	5.010
		Energy management 2 upper threshold	Receives the upper threshold for energy management block 2.	1 Byte	C-W--	6.010
		Energy management 2 upper threshold	Receives the upper threshold for energy management block 2.	2 Bytes	C-W--	7.001
		Energy management 2 upper threshold	Receives the upper threshold for energy management block 2.	2 Bytes	C-W--	8.001
		Energy management 2 upper threshold	Receives the upper threshold for energy management block 2.	2 Bytes	C-W--	9.000
		Energy management 2 upper threshold	Receives the upper threshold for energy management block 2.	4 Bytes	C-W--	12.000
		Energy management 2 upper threshold	Receives the upper threshold for energy management block 2.	4 Bytes	C-W--	13.000
		Energy management 2 upper threshold	Receives the upper threshold for energy management block 2.	4 Bytes	C-W--	14.000
		Energy management 2 upper threshold	Receives the upper threshold for energy management block 2.	2 Bytes	C-W--	14.000
		Energy management 2 upper threshold	Receives the upper threshold for energy management block 2.	4 Bytes	C-W--	14.056
285	EM 2 - Input	Energy management 2 lower threshold	Receives the lower threshold for energy management block 2.	1 Byte	C-W--	5.001
		Energy management 2 lower threshold	Receives the lower threshold for energy management block 2.	1 Byte	C-W--	5.003
		Energy management 2 lower threshold	Receives the lower threshold for energy management block 2.	1 Byte	C-W--	5.010
		Energy management 2 lower threshold	Receives the lower threshold for energy management block 2.	1 Byte	C-W--	6.010
		Energy management 2 lower threshold	Receives the lower threshold for energy management block 2.	2 Bytes	C-W--	7.001
		Energy management 2 lower threshold	Receives the lower threshold for energy management block 2.	2 Bytes	C-W--	8.001
		Energy management 2 lower threshold	Receives the lower threshold for energy management block 2.	2 Bytes	C-W--	9.000
		Energy management 2 lower threshold	Receives the lower threshold for energy management block 2.	4 Bytes	C-W--	12.000
		Energy management 2 lower threshold	Receives the lower threshold for energy management block 2.	4 Bytes	C-W--	13.000
		Energy management 2 lower threshold	Receives the lower threshold for energy management block 2.	4 Bytes	C-W--	14.000
		Energy management 2 lower threshold	Receives the lower threshold for energy management block 2.	2 Bytes	C-W--	14.000
		Energy management 1 threshold	Receives the threshold for energy management block 1.	2 Bytes	C-W--	14.000
		Energy management 2 lower threshold	Receives the lower threshold for energy management block 2.	4 Bytes	C-W--	14.056

CO	Name	Function	Description	Length	Flags	Datatype
286	EM 2 - Input	Energy management 2 trigger	Receives the trigger value for energy management block 2 and evaluates it against the parameterized threshold.	1 Byte	C-W--	5.001
		Energy management 2 trigger	Receives the trigger value for energy management block 2 and evaluates it against the parameterized threshold.	1 Byte	C-W--	5.003
		Energy management 2 trigger	Receives the trigger value for energy management block 2 and evaluates it against the parameterized threshold.	1 Byte	C-W--	5.010
		Energy management 2 trigger	Receives the trigger value for energy management block 2 and evaluates it against the parameterized threshold.	1 Byte	C-W--	6.010
		Energy management 2 trigger	Receives the trigger value for energy management block 2 and evaluates it against the parameterized threshold.	2 Bytes	C-W--	7.001
		Energy management 2 trigger	Receives the trigger value for energy management block 2 and evaluates it against the parameterized threshold.	2 Bytes	C-W--	8.001
		Energy management 2 trigger	Receives the trigger value for energy management block 2 and evaluates it against the parameterized threshold.	2 Bytes	C-W--	9.000
		Energy management 2 trigger	Receives the trigger value for energy management block 2 and evaluates it against the parameterized threshold.	4 Bytes	C-W--	12.000
		Energy management 2 trigger	Receives the trigger value for energy management block 2 and evaluates it against the parameterized threshold.	4 Bytes	C-W--	13.000
		Energy management 2 trigger	Receives the trigger value for energy management block 2 and evaluates it against the parameterized threshold.	4 Bytes	C-W--	14.000
287	EM 2 - Output	Time to next stage switching	Sends the remaining waiting time between two stage switching operations.	4 Bytes	CR-T-	12.100
288	EM 2 - Input	Reset operating hours counter	Resets the daily and total operating hour counters of all stages in the associated energy management block.	1 Bit	C-W--	1.015
289	EM 2 - Input	Lock	Locks the associated stage according to the parameterized lock polarity and prevents its activation.	1 Bit	C-W--	1.003
291	EM 2 - Stage 1 - Output	Operating hours counter total	Sends the accumulated total operating hours of the associated stage.	4 Bytes	CR-T-	13.100
292	EM 2 - Stage 1 - Output	Operating hours counter day	Sends the operating hours accumulated since the last day change of the associated stage.	4 Bytes	CR-T-	13.100
293	EM 2 - Stage 1 - Input	Priority	Specifies the priority of the associated stage; activation considers the highest available priority, while deactivation considers the lowest active priority.	1 Byte	C-W--	6.010
294	EM 2 - Stage 1 - Output	Minimum remaining runtime	Sends the remaining minimum runtime of the associated active stage.	4 Bytes	CR-T-	12.100
295	EM 2 - Stage 1 - Output	Remaining cycles	Sends the remaining number of permitted activations of the associated stage on the current day.	1 Byte	CR-T-	5.010
296	EM 2 - Stage 1 - Output	Dead time	Sends the remaining dead time until the associated stage can be activated again.	4 Bytes	CR-T-	12.100
297	EM 2 - Stage 1 - Input	Lock	Locks the associated stage according to the parameterized lock polarity and prevents its activation.	1 Bit	C-W--	1.003
298	EM 2 - Stage 1 - Output	Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	5.001

CO	Name	Function	Description	Length	Flags	Datatype
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.103
299	EM 2 - Stage 1 - Output	Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.103
300	EM 2 - Stage 1 - Output	Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.103
301	EM 2 - Stage 1 - Output	Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.103

CO	Name	Function	Description	Length	Flags	Datatype
304	EM 2 - Stage 2 - Output	Operating hours counter total	Sends the accumulated total operating hours of the associated stage.	4 Bytes	CR-T-	13.100
305	EM 2 - Stage 2 - Output	Operating hours counter day	Sends the operating hours accumulated since the last day change of the associated stage.	4 Bytes	CR-T-	13.100
306	EM 2 - Stage 2 - Input	Priority	Specifies the priority of the associated stage; activation considers the highest available priority, while deactivation considers the lowest active priority.	1 Byte	C-W--	6.010
307	EM 2 - Stage 2 - Output	Minimum remaining run-time	Sends the remaining minimum runtime of the associated active stage.	4 Bytes	CR-T-	12.100
308	EM 2 - Stage 2 - Output	Remaining cycles	Sends the remaining number of permitted activations of the associated stage on the current day.	1 Byte	CR-T-	5.010
309	EM 2 - Stage 2 - Output	Dead time	Sends the remaining dead time until the associated stage can be activated again.	4 Bytes	CR-T-	12.100
310	EM 2 - Stage 2 - Input	Lock	Locks the associated stage according to the parameterized lock polarity and prevents its activation.	1 Bit	C-W--	1.003
311	EM 2 - Stage 2 - Output	Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.103
312	EM 2 - Stage 2 - Output	Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.103
313	EM 2 - Stage 2 - Output	Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	2 Bytes	C—T-	9.001

CO	Name	Function	Description	Length	Flags	Datatype
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.103
314	EM 2 - Stage 2 - Output	Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.103
317	EM 2 - Stage 3 - Output	Operating hours counter total	Sends the accumulated total operating hours of the associated stage.	4 Bytes	CR-T-	13.100
318	EM 2 - Stage 3 - Output	Operating hours counter day	Sends the operating hours accumulated since the last day change of the associated stage.	4 Bytes	CR-T-	13.100
319	EM 2 - Stage 3 - Input	Priority	Specifies the priority of the associated stage; activation considers the highest available priority, while deactivation considers the lowest active priority.	1 Byte	C-W--	6.010
320	EM 2 - Stage 3 - Output	Minimum remaining run-time	Sends the remaining minimum runtime of the associated active stage.	4 Bytes	CR-T-	12.100
321	EM 2 - Stage 3 - Output	Remaining cycles	Sends the remaining number of permitted activations of the associated stage on the current day.	1 Byte	CR-T-	5.010
322	EM 2 - Stage 3 - Output	Dead time	Sends the remaining dead time until the associated stage can be activated again.	4 Bytes	CR-T-	12.100
323	EM 2 - Stage 3 - Input	Lock	Locks the associated stage according to the parameterized lock polarity and prevents its activation.	1 Bit	C-W--	1.003
324	EM 2 - Stage 3 - Output	Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.103

CO	Name	Function	Description	Length	Flags	Datatype
325	EM 2 - Stage 3 - Output	Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.103
326	EM 2 - Stage 3 - Output	Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.103
327	EM 2 - Stage 3 - Output	Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.103
330	EM 2 - Stage 4 - Output	Operating hours counter total	Sends the accumulated total operating hours of the associated stage.	4 Bytes	CR-T-	13.100
331	EM 2 - Stage 4 - Output	Operating hours counter day	Sends the operating hours accumulated since the last day change of the associated stage.	4 Bytes	CR-T-	13.100
332	EM 2 - Stage 4 - Input	Priority	Specifies the priority of the associated stage; activation considers the highest available priority, while deactivation considers the lowest active priority.	1 Byte	C-W--	6.010
333	EM 2 - Stage 4 - Output	Minimum remaining run-time	Sends the remaining minimum runtime of the associated active stage.	4 Bytes	CR-T-	12.100

CO	Name	Function	Description	Length	Flags	Datatype
334	EM 2 - Stage 4 - Output	Remaining cycles	Sends the remaining number of permitted activations of the associated stage on the current day.	1 Byte	CR-T-	5.010
335	EM 2 - Stage 4 - Output	Dead time	Sends the remaining dead time until the associated stage can be activated again.	4 Bytes	CR-T-	12.100
336	EM 2 - Stage 4 - Input	Lock	Locks the associated stage according to the parameterized lock polarity and prevents its activation.	1 Bit	C-W--	1.003
337	EM 2 - Stage 4 - Output	Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.103
338	EM 2 - Stage 4 - Output	Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.103
339	EM 2 - Stage 4 - Output	Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.103
340	EM 2 - Stage 4 - Output	Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.001

CO	Name	Function	Description	Length	Flags	Datatype
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.103
343	EM 2 - Stage 5 - Output	Operating hours counter total	Sends the accumulated total operating hours of the associated stage.	4 Bytes	CR-T-	13.100
344	EM 2 - Stage 5 - Output	Operating hours counter day	Sends the operating hours accumulated since the last day change of the associated stage.	4 Bytes	CR-T-	13.100
345	EM 2 - Stage 5 - Input	Priority	Specifies the priority of the associated stage; activation considers the highest available priority, while deactivation considers the lowest active priority.	1 Byte	C-W--	6.010
346	EM 2 - Stage 5 - Output	Minimum remaining run-time	Sends the remaining minimum runtime of the associated active stage.	4 Bytes	CR-T-	12.100
347	EM 2 - Stage 5 - Output	Remaining cycles	Sends the remaining number of permitted activations of the associated stage on the current day.	1 Byte	CR-T-	5.010
348	EM 2 - Stage 5 - Output	Dead time	Sends the remaining dead time until the associated stage can be activated again.	4 Bytes	CR-T-	12.100
349	EM 2 - Stage 5 - Input	Lock	Locks the associated stage according to the parameterized lock polarity and prevents its activation.	1 Bit	C-W--	1.003
350	EM 2 - Stage 5 - Output	Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.103
351	EM 2 - Stage 5 - Output	Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.019

CO	Name	Function	Description	Length	Flags	Datatype
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.103
352	EM 2 - Stage 5 - Output	Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.103
353	EM 2 - Stage 5 - Output	Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.103
356	EM 2 - Stage 6 - Output	Operating hours counter total	Sends the accumulated total operating hours of the associated stage.	4 Bytes	CR-T-	13.100
357	EM 2 - Stage 6 - Output	Operating hours counter day	Sends the operating hours accumulated since the last day change of the associated stage.	4 Bytes	CR-T-	13.100
358	EM 2 - Stage 6 - Input	Priority	Specifies the priority of the associated stage; activation considers the highest available priority, while deactivation considers the lowest active priority.	1 Byte	C-W--	6.010
359	EM 2 - Stage 6 - Output	Minimum remaining run-time	Sends the remaining minimum runtime of the associated active stage.	4 Bytes	CR-T-	12.100
360	EM 2 - Stage 6 - Output	Remaining cycles	Sends the remaining number of permitted activations of the associated stage on the current day.	1 Byte	CR-T-	5.010
361	EM 2 - Stage 6 - Output	Dead time	Sends the remaining dead time until the associated stage can be activated again.	4 Bytes	CR-T-	12.100
362	EM 2 - Stage 6 - Input	Lock	Locks the associated stage according to the parameterized lock polarity and prevents its activation.	1 Bit	C-W--	1.003
363	EM 2 - Stage 6 - Output	Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.001

CO	Name	Function	Description	Length	Flags	Datatype
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 1	Sends the parameterized output telegram 1 of the associated stage.	1 Byte	C—T-	20.103
364	EM 2 - Stage 6 - Output	Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 2	Sends the parameterized output telegram 2 of the associated stage.	1 Byte	C—T-	20.103
365	EM 2 - Stage 6 - Output	Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	4 Bytes	C—T-	14.056
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 3	Sends the parameterized output telegram 3 of the associated stage.	1 Byte	C—T-	20.103
366	EM 2 - Stage 6 - Output	Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Bit	C—T-	1.002
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	5.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	2 Bytes	C—T-	9.001
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.019
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	4 Bytes	C—T-	14.056

CO	Name	Function	Description	Length	Flags	Datatype
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.000
		Telegram 4	Sends the parameterized output telegram 4 of the associated stage.	1 Byte	C—T-	20.103

Technical Data

Category	Characteristic	Value
Accuracy	Accuracy class active energy	Class 1 (1 %)
	Current measurement range 85 A variant	5 mA to 85 A
	Current measurement range 800 A variant	100 mA to 800 A
Voltage inputs	Input voltage	90 .. 240 V AC
	Grid frequency	50 / 60 Hz
	Maximum fuse protection	max. 63 A
	Input power	< 0.05 W per channel
	Connection type	Screw terminal, tightening torque: 0.5 Nm
	Conductor cross-section rigid	0.5 to 4.0 mm²
	Conductor cross-section flexible without ferrule	0.5 to 4.0 mm²
	Conductor cross-section flexible with ferrule	0.5 to 2.5 mm²
Current transformer inputs	Maximum input current (secondary current of the current transformers)	max. 58 mA AC
	Connection type	Screw terminal, tightening torque: 0.5 Nm
	Conductor cross-section rigid	0.5 to 4.0 mm²
	Conductor cross-section flexible without ferrule	0.5 to 4.0 mm²
	Conductor cross-section flexible with ferrule	0.5 to 2.5 mm²
KNX	Voltage	21 to 32 V DC
	Current consumption	< 20 mA, typically 17 mA
	Connection type	KNX terminal type 5.1
	Conductor diameter	0.8 mm solid conductor

Category	Characteristic	Value
Housing	Design	DIN rail housing for 35 mm mounting rail
	Width	4 SU
	Dimensions	70 × 89.6 × 62.9 mm (L × W × H)
	Degree of protection	IP20
Additional data	Area of application	For indoor use only
	Installation location	Only for operation inside a distribution board
	Protection class	II
	Overvoltage category	III
	Maximum ambient temperature	t_a = 45 °C
	Minimum ambient temperature	$t_{a,min}$ = -5 °C
	Certification	KNX-certified
	Safety	Tested according to DIN EN 61010-1 and IEC 63044-3
	EMC and environment	Tested according to DIN EN 50491-5-2 (residential area), DIN EN 50491-5-3 (industrial area), and DIN EN 50491-2