Energy Meter [EZ-03xx.01]

To save energy, it must first be measured. The MDT Energy Meters measure both energy consumption and energy generation, for example by a photovoltaic system. The determined data are the basis for optimising the consumption and increasing the energy efficiency. The energy meters are extensively equipped. In addition to simple current and active power measurement, they count the consumption costs and yields of the generated energy via main and intermediate meters. Numerous application possibilities, such as intermediate measurement and interim billing of rooms and flats, or the efficient use of self-generated energy, are only made possible by this. The MDT Energy Meter is available in two variants:

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EZ-0320.01 Energy Meter EZ with direct measurement
Direct measurement by connecting the current-carrying lines to the actuator, up to 20 A per channel.

EZ-0363.01 Energy Meter EZ with transformer measurement
Measurement by current transformer with practical folding assembly, up to 63 A per channel.
(Included in delivery)

3-phase bidirectional meter

The Energy Meter EZ determines the energy consumed from the grid and the energy supplied to the grid by means of main and intermediate meters. In addition, consumption and supply can be registered separately for each phase.

Measure

Power measurement

The active power can be recorded in watts or kilowatts per channel and total and can be output via object. The measured active power is the basis for monitoring load exceedances and load undercuts, which can be further processed as 1-bit status objects. In addition to the active power, the output of the reactive power, apparent power and the power factor cos Phi can be activated.

Current measurement

The current value can be output per channel in milliamperes or amperes. Current exceedances and undercuts can be monitored. The thresholds, hysteresis and minimum duration of the exceedances/undercuts are adjustable.

Voltage measurement

The voltage is output per channel as a 4-byte object. Exceedances and undercuts of a voltage value can be monitored. The thresholds, hysteresis and minimum duration of the exceedances/undercuts are adjustable.

Count

Energy and cost/yield meter

The balancing main and intermediate meters can be activated by channel - separately for consumption and generation - and can be set extensively. To determine costs and yields, the electricity and feed-in rates can either be entered as fixed values in euros or cents or transmitted as variable values via object (day and night rates). Switching between the day and night rates can be done via object or by time.

Events

Up to two events can be activated in each meter. An event is triggered as soon as a selected condition is met. The condition can be a reached value of a (main) meter, certain costs of a (main) meter, a time or an interval. The triggered event then performs functions such as sending and/or resetting a counter reading.

General

Applications

The measured values of the energy meter can be displayed via the KNX bus or further processed in logics and actuators. The load exceedance and load undercut functions can be used to monitor the status of connected loads. For example, the finished washing machine, the dryer or the status of a submersible pump with float switch can be displayed. If your own photovoltaic system generates a high surplus, loads can be added in a targeted manner to use the self-generated electricity sensibly. The electricity costs of an electric car can be determined with the integrated cost meters.

Long Frame Support

The MDT Energy Meter supports "Long Frames" (longer telegrams). These contain more user data per telegram, which significantly reduces the programming time with the ETS.

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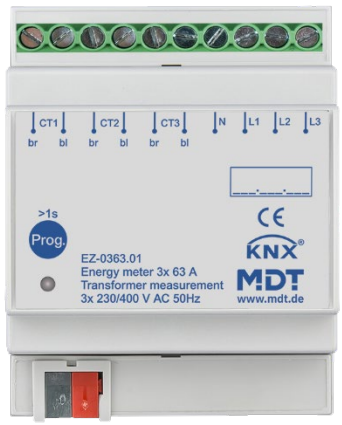

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Transformer