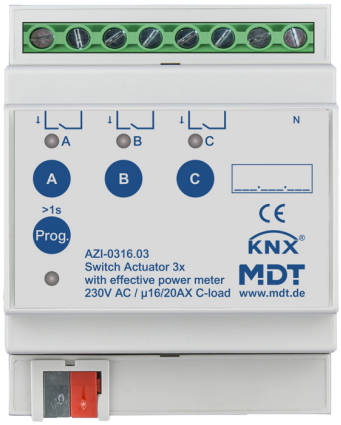
Switch Actuator AZI active power measurement [AZI-0x16.03]

MDT switch actuators with active power meter in industrial version. The AZI switch actuator is particularly suitable where high inrush currents and C loads up to 200 µF are expected. Currents of up to 20 amperes per channel can be reliably measured and current monitoring can be set up. By means of a separate neutral conductor connection, the switch actuator measures the active power per channel and in total.



AZI-0316.03

Active power measurement

The active power can be output per channel and as the sum of all channels in watts or kilowatts. Load exceedances and load undercuts can be evaluated and (delayed) execute a switch function or a scene. The extended power measurement offers an additional object per channel, selectable from apparent power (VA/kVA), reactive power (Var/kVar) or the power factor (cos φ). The measured values can be sent cyclically and at an adjustable minimum change.

Current measurement

The current value can be output per channel and as a total current in milliamperes or amperes. Exceeding and undercut of the current value can be monitored per channel and in total and actions can be triggered as a result. The output object of the monitoring can be “Switch” or “Scene”. Actions can be delayed on activation and on withdrawal. Cyclical sending of the monitoring can be activated.

Voltage measurement

The voltage is output per channel as a 4 byte object. Exceeding and undercut of the voltage can be monitored and actions can be triggered as a result. The output object of the monitoring can be “Switch” or “Scene”. Actions can be delayed on activation and on withdrawal. Cyclical sending of the monitoring can be activated.

Energy and cost meter

The electricity prices for day and night required for cost calculation can be entered either fixed via the ETS or variable via objects. The currently valid electricity price is output per object. The meter readings can be output separately for day and night. The energy meters of the channels can be written to via their object. Intermediate meters with selectable datapoint types (Wh or kWh) can be activated for each channel and for the total meter.

MDT technologies GmbH · Papiermühle 1 · 51766 Engelskirchen · Germany
Phone +49 (0) 2263 880 · knx@mdt.de · www.mdt.de

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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.

Error messages

If a load failure occurs when the contact is closed, or if a fault current occurs when the contact is open, this can be signalled by means of a 1 bit object.

Switch function

Separate settings for each channel allow, for example, operation as a normally closed or normally open contact, with a switch-on and/or switch-off delay. The status of each channel can be sent cyclically if required. An additional - inverted - status object can be activated.

Threshold function

With the threshold function, for example, the channel can be switched when a temperature or brightness is reached. Various actions can be set for exceeding/underrun of the threshold value.

Impulse function

Short switching pulses are used, for example, to open or close garage doors. The pulse duration is adjustable and pulses can be repeated once for certain applications.

Extended staircase light function

By pressing the push-button several times, the time in the switch actuator can be added up and the staircase lighting can remain switched on longer as required. Staircase lighting times can be set differently per floor using a 1 byte object. The pre-warning can flash the push-button LEDs via an object, for example. An actuator channel with staircase lighting function can be used in parallel as a switch channel by means of an additionally activatable switch object.

Extended logic and scene function

The extended logic function links the channel with up to two further logic inputs. AND, OR, XOR and gate functions are available for selection. The logic inputs can be inverted as desired and set to a defined value after bus voltage recovery. This prevents undesired behaviour after a restart. The extended scene function can lock or unlock in addition to switching on or off. Furthermore, saved scenes are retained when the application is reprogrammed.

Operating hours meter

The actuator has an operating hours meter for each channel, which can be reset via a 1 bit object. Alternatively, a service count down timer can be activated for each channel, which triggers a 1 bit alarm after previously defined operating hours and sends the remaining time as a 4 byte object.

Central switch function

The central switch function can be activated per channel. This function enables simple programming of central switch functions. If the communication object of the central function is triggered, all channels with activated central function are switched.

Lock function/ priority/ forced guidance

In addition to the usual lock function, the switch actuator also offers priority/forced guidance per channel. Priority/forced guidance can be used to switch a channel permanently ON or OFF. The behaviour in the event of bus voltage failure, bus voltage recovery, locking and unlocking or priority can be set differently. A fallback time can be set for the priority function, after which the channel returns to the normal state.

Status objects

The actuators have a status object for each channel with adjustable sending conditions and cyclical sending. In addition, an inverted status object can be activated. This can be used for visualisations or logics.

Long Frame Support

The AZI switch actuator supports “long frames” (longer telegrams). These contain more user data per telegram, which significantly reduces the programming time.

Variants

- AZI-0316.03 Switch Actuator 3-fold, 4SU, MDRC, 16/20 A, 230 V AC, active power measurement, 200 µF
- AZI-0616.03 Switch Actuator 6-fold, 4SU, MDRC, 16/20 A, 230 V AC, active power measurement, 200 µF