



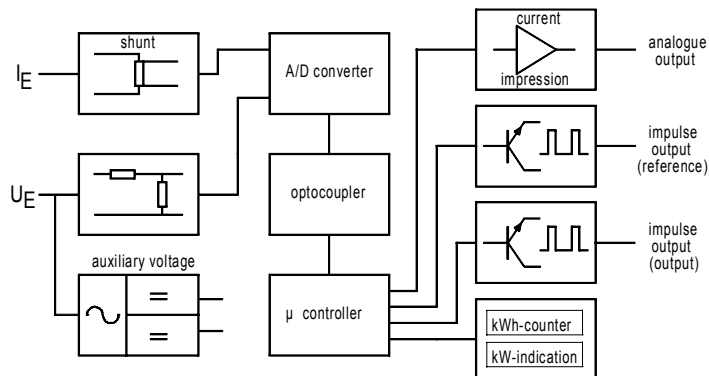
Energy meter for alternating current with current converter or direct coupling

- Pulse outputs for energy consumption (reference and output)
- Analogue output for active power
- Energy consumption display and storage (reference and output)
- Active power display
- Resettable kWh meter with reversal preventing device
- Optional current converter
- Optional weight of pulses/kWh
- LEDs for function display
- Housing width 71 mm, sealable cover

Application

The EZW electronic energy meter is used to detect the energy consumption of AC consumers in industrial plant, workshops, machines, offices, etc. It can be used for metering plant with burst firing controls (intermittent power consumption) and can also measure distorted sine waves. It can display and save the value of the energy consumed, output it in pulse format for further processing and display the instantaneous active power via an analogue output 20 mA or 4-20 mA.

Function



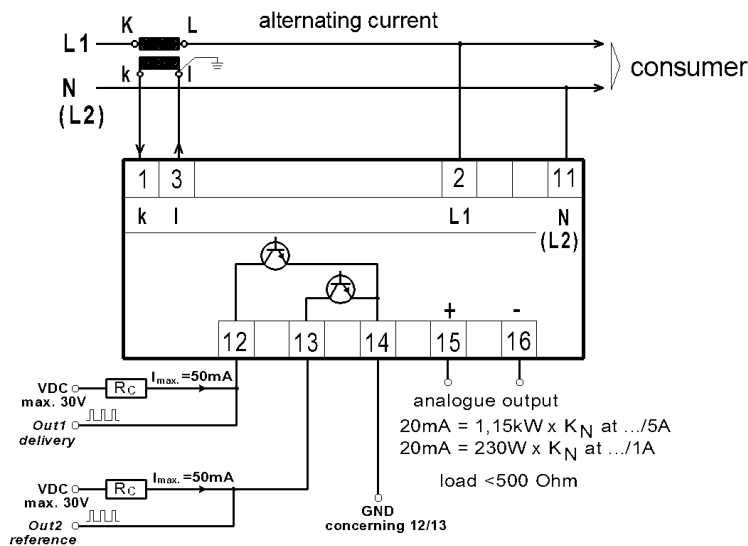
The values to be measured are sent to an IC via an **external** current converter or directly via a push-through opening and voltage divider. The instantaneous current and voltage values are multiplied and converted into a frequency corresponding to the active power. A downstream microcontroller analyses these values, outputs the pulses and saves the measured values. The values are displayed on an LCD. Two open collector outputs enable the active power reference and output to be output in pulse format. A 20 mA analogue output indicates the instantaneous power. An isolated auxiliary voltage is not required (this is generated from the measurement-circuit voltage). The meter readings are stored in the event of a mains failure.

Technical data

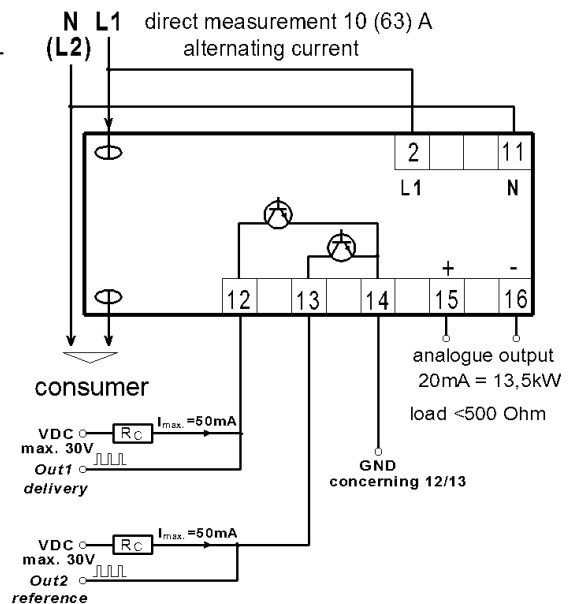
Input	Type	EZW
Rated voltage		230 V ± 20%
Rated current		0-5 A, option 0-1 A, (only via external current converter) Option 0-10 A (63 A) direct coupling via push-through opening
		40 different primary currents, can be selected via pushbuttons on the front panel 5/10/15/20/25/30/40/50/60/75/80/100/150/200/250/300/350/400/450/500/550/600/ 650/700/750/800/850/900/1000/1200/1250/1500/1600/1800/2000/2400/ 2500/3000/3500 or 4000 A
	Rated frequency	50-60 Hz
	Power consumption	Voltage circuit approx. 2.5 VA, current circuit approx. 0.5 VA
	Continuous overload	Current and voltage 1.2x, direct coupling 6.3x
	Impulse overload	Voltage 2x 1 second, current 20x 0.5 seconds current direct coupling 30x 10 ms
	Temperature range	-15 to +20 to +30 to +55°C
Display		Two-line LCD
		Active power, reference, +9 999 999 kWh (with reversal preventing device)
		Instantaneous active power, 9 999.99 kW, with (-) for negative power
		Active power, output -9 999 999 kWh (with reversal preventing device)
	Via key	Selected primary current
	Via key	Selected output pulse weight
	Via key	LED for active power, 5000 pulses/kWh for current converter connection
	Function indicators	500 pulses/kWh for direct coupling
		LED for energy flow direction (-P), lights when negative power

Pulse outputs	Active power, reference and delivery	Transistor, 24 V DC (max. 30 V/50 mA), ON (active) 10-27 mA, OFF (inactive) < 1 mA
	Priority	1/10/100/1000/2000 or 5000 pulses/kWh, can be selected via pushbuttons on the front panel (with the addition of 25,000 pulses/kWh for option 0-1 A)
	Priority, with direct coupling	Attention! The weight of the pulses must be divided by the transformation ratio (K_N) of the current converter used. 1/10/100/200 or 500 pulses/kWh, can be selected via pushbuttons on the front panel
Analogue output	Accuracy	$\pm 1\%$
	Pulse length	60 -100 ms
	Test voltage	4 KV, 50 Hz 10 sec.
	Rated value	0-20 mA or 4-20 mA corresponds to 0-1.15 kW at 5/5 A (230 W at 1/1 A) Attention! The power value 1.15 kW or 230 W must be multiplied by the transformation ratio (K_N) of the current converter used.
	Rated value, with direct coupling	0-20 mA or 4-20 mA corresponds to 0-13,5 kW Analogue value corresponds to + P, - P or + / - P, can be selected via pushbuttons on the front panel
Reset	Accuracy	$\pm 0.5\%$
	Load	0 -500 Ohm
	Test voltage	4 KV, 50 Hz 10 sec.
Regulations	EMC	DIN EN 61326
	Mechanical strength	DIN EN 61 010 Part 1
	Electrical safety	DIN EN 61010 part 1, housing all insulated, protection class II, at a working voltage up to 300V (network to neutral conductor) degree of pollution 2, measuring category CAT III
Weight Installation	Pulse output	DIN S0 43 864
	Accuracy, overload	DIN EN 60 688
	Creepages and clearances	DIN EN 61 010 Part 1
	Degree of protection	DIN EN 60 529, IP 20
	Mounting	220 g
Electrical connection	Mounting	Snap-on mounting on rail to DIN EN 50 022
	Electrical connection	Screw-type terminal max. 4 mm ²

Connection: EZW



Connection: EZW direct



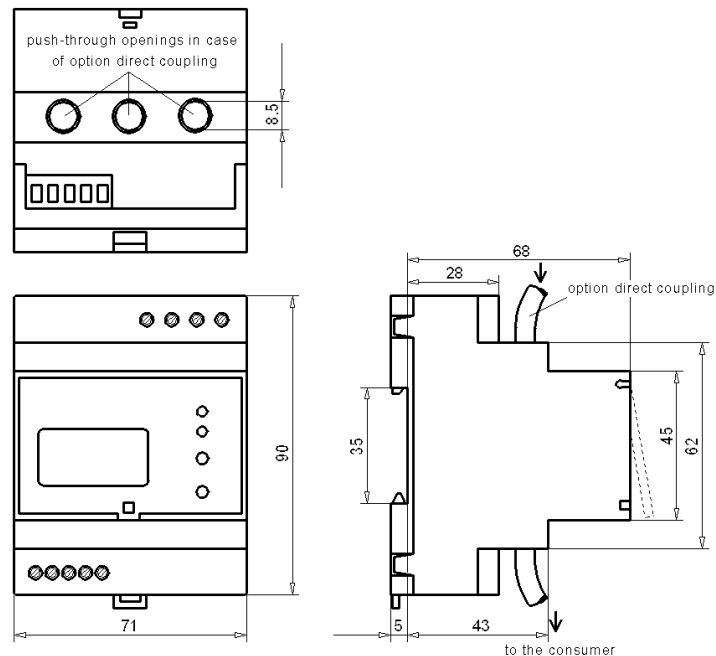
GENERAL DESCRIPTION: ENERGY METERS

EZW/EZD

- Application** Type EZW and EZD energy meters are meters which can be coupled both via converters and directly. The wall-mounting devices can only be used when connected to external current converters. They are used to detect energy consumption and instantaneous active power on AC and DC mains. Both plant with burst firing controls (intermittent power consumption) and distorted sine waves can be metered. The meters are used in industrial plant, workshops, machines, offices, etc., and snap onto 35 mm rails.
- Special features**
- Pulse outputs for energy consumption (reference and output)
 - Analogue output for active power 0-20 mA or 4-20 mA
 - Energy consumption display and storage (reference and output)
 - Active power display
 - Resettable kWh meter with reversal preventing device
 - Optional current converter
 - Direct coupling via push-through openings, max. 63 A
 - Optional weight of pulses/kWh
 - LEDs for function display
 - Slimline design, housing width 71 mm
 - Sealable cover
- Design** EZW and EZD energy meters are manufactured in accordance with DIN EN 60 688 and in compliance with applicable VDE and DIN guidelines. They can measure electrical energy and the active power reference and output on AC and DC mains (identical or non-identical load). The electronic energy meters feature two pulse outputs, one analogue output and a 2-line, resettable LCD. The pulse outputs can be set with a weight of between 1 and 25,000 pulses/kWh. The accuracy is 1% in relation to the upper range value. 40 different primary currents on external current converters with ratings from 5 to 4000 A can be selected. The 20 mA analogue output for the instantaneous active power is isolated and corresponds to a power rating of 1150 W (EZW) or 3450 W (EZD) at 5/5 A, to be multiplied by the current converter transformation ratio (K_N). The 20 mA output is programmable for the instantaneous power reference (+P) or output (-P) or reference and output (+/-P). The accuracy is 0.5% in relation to the upper range value. The electronics are housed in impact-resistant enclosures made from NORYL plastic. The enclosures are dimensioned in accordance with DIN 43 880 for installed equipment.

Dimension drawing

EZW, EZD



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