Energy meter for direct current

for direct and indirect current measurement
voltage ranges 0 - 1500 VDC

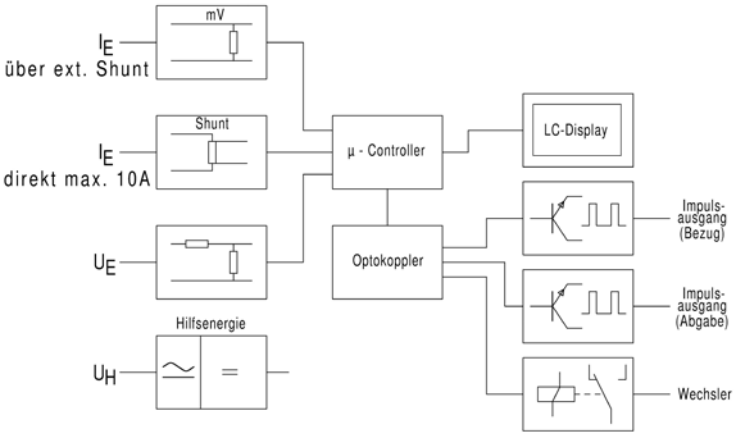
Type:
EZG-S0

Application

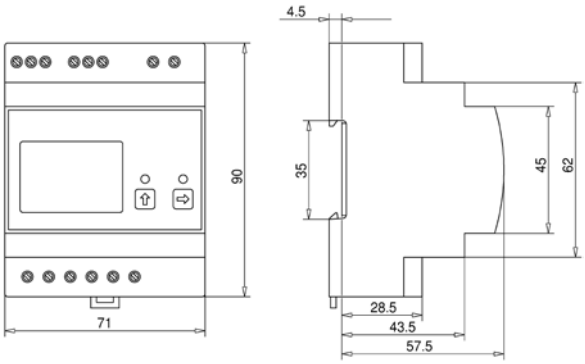
The electronic direct current meter EZG-S0 is used for measuring the active energy for import and export currents in direct current installations. It is applied in photovoltaic installations, battery systems, charging stations, direct current machines etc. Measurements can also be made in installations with pulsed direct current controls (PWM controls). The energy meter may directly measure up to 10 A DC or be connected to a shunt. The energy values are indicated in a display, stored and provided as pulses for further processing. Furthermore, the values for current, voltage and instantaneous active power can be displayed. A programmable relay contact may be used for monitoring the instantaneous active power, current or voltage.

Function

The parameters to be measured are supplied to an integrated module via an external or internal shunt as well as via a voltage divider. There, the instantaneous values of current and voltage are multiplied and converted into active power and active energy. A microcontroller accepts the assessments, the output of the pulses as well as the storage of the measured values. The results are displayed on LCD display. The pulse output of import and export active energy is realized via two open-collector transistor outputs. An auxiliary supply voltage is required. The meter readings are stored in case of power failure.



Dimensions

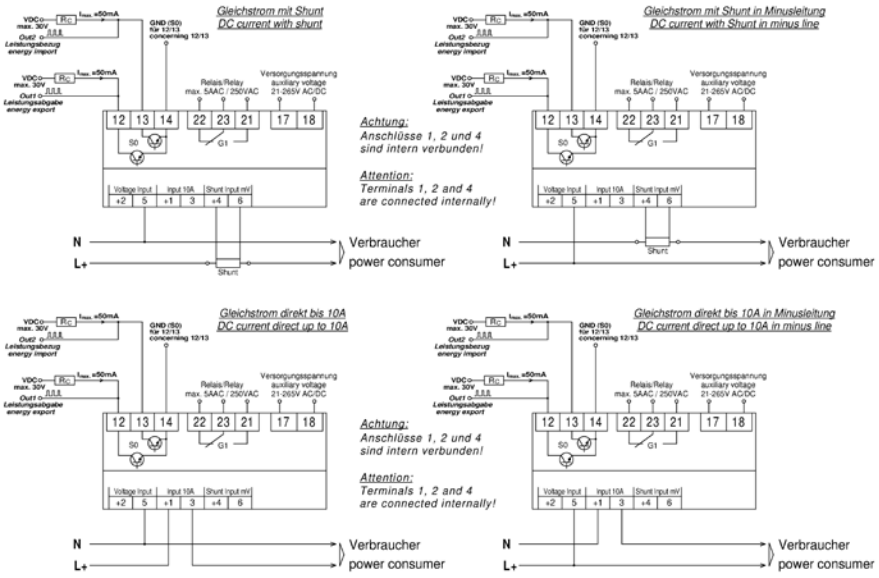


Types and variants

	EZG-S0

Price ghroup C

Connection



Technical data

Input	Accuracy	± 1% class B acc. DIN EN 50470-3
	Rated voltages	0-10 VDC, 0-25 VDC, 0-50 VDC, 0-100 VDC, 0-500 VDC, 0-1000 VDC 0-1500 VDC or by choice (please specify by ordering), Ri ≥ 2 MΩ
	Rated current direct	direct measurement 0-10 A (voltage drop 60 mV)
	Rated current external	measuring via external shunt 1-20.000 A/ 60 mV, 100 mV or 150 mV, selectable via button on front panel
	Pulsed direct current (PWM)	20 Hz - 30 kHz
	Overload permanent	current and voltage 1,2-fold
	High surge load	voltage 2-fold 1 s, max. 2000 V, current 20-fold 0,5 s
Indicators	Display	LCD display active energy import 9 999 999,99 kWh/MWh (with return stop) active energy export 9 999 999,99 kWh/MWh (with return stop) ampere hours import 9 999 999,99 kAh (with return stop) ampere hours export 9 999 999,99 kAh (with return stop) instantaneous active power +9 999 999,99 kW with (-) in case of power, voltage, current
	Function indicators	LED for active energy (pulses/kWh equal to set pulses) LED for limit value G1 exceeded
	Update display	1 x per second
	Update registers	1 x per second
Pulse and relay outputs	Pulse output	npn-transistor, 24V DC (max. 30 V/50 mA), ON (activ) 10-27 mA OFF (inactiv) < 1 mA, switching state „open“ or „closed“ selectable
	Number of pulses	1-80.000 pulses/kWh, selectable via button on front panel, max. value depends on set current and voltage range
	Pulse length	adjustable from 10-120 ms
	Accuracy	± 1% class B acc. DIN EN 50470-3
	Standards	DIN EN 50470-1
	Limit range	0-(±) 120% of full scale
	Switching accuracy	± 1 % of full scale
	Hysteresis	adjustable from 0-10 % of full scale
	Min. current time circuit	< 200 ms for 10% limit value exceedance
	Switching delay	adjustable from 0-99 s
	Switching state	closed circuit or open circuit principle, min- or max-contact selectable
	Relay contact	1 changeover contact, 10 mA-5 A, 5-250 VDC / VAC, 1250 W(VA)
	Min. switching capacity	60 mW
Auxiliary voltage	Standard	21-265 VAC+DC, 2 VA, (EMC DIN EN 61326 class A)