

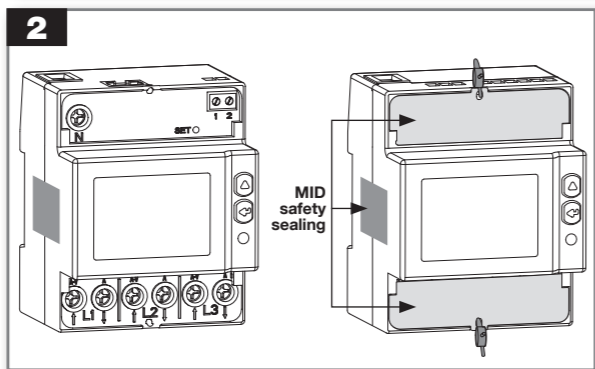
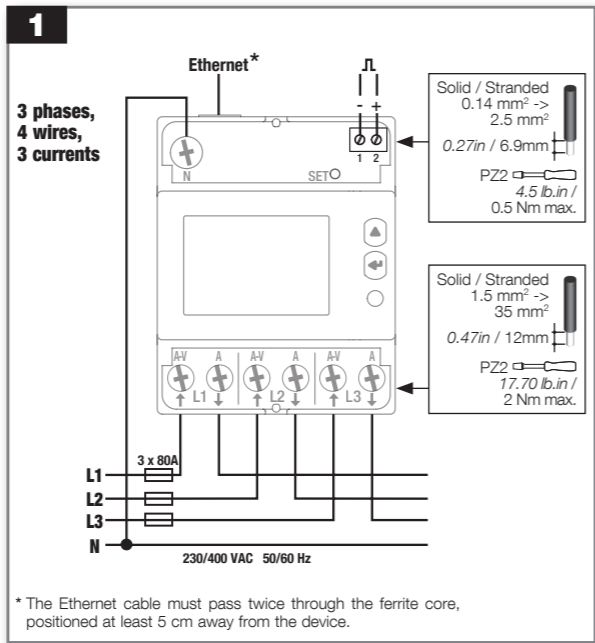
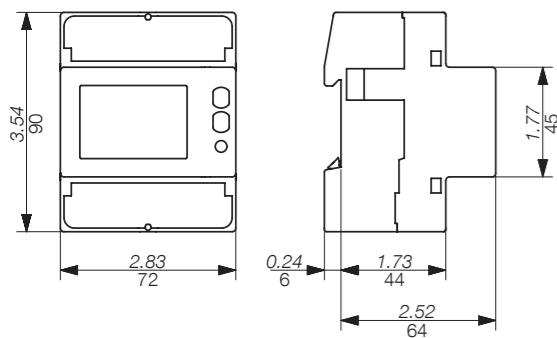
Measurements
The parameters are available according to the device model.

Instantaneous values	Symbol	Measure unit	Display	Com.
Phase to Neutral voltages	$\sum V$	V	●	●
	V1, V2, V3			
Phase to Phase voltages	$\sum U$	●	●	
	U12, U23, U31			
Current	$\sum I$	A	●	●
	I1, I2, I3, IN			
Power factor	$\sum PF$	●	●	
	PF1, PF2, PF3			
Apparent power	$\sum S, S1, S2, S3$	kVA	●	●
Active power	$\sum P, P1, P2, P3$	kW	●	●
Reactive power	$\sum Q, Q1, Q2, Q3$	kvar	●	●
Frequency	f	Hz	●	●
Phase sequence	CW / CCW	●	●	
Power direction	\rightleftarrows	●		
Recorded data				
Total energy counters	Ea, Er (\sum & per phase)	kWh, kvarh	●	●
	Eap (\sum)	kVAh	●	●
Eap (per phase)	●		●	
Total ind. and cap. reactive energy	Er (\sum)	kvarh	●	●
	Er (per phase)		●	●
T1/T2 tariff energy counters	Ea, Er (\sum)	kWh, kvarh	●	●
	Ea, Er, Eap (\sum & per phase)	kWh, kvarh, kVAh	●	●
T1/T2 tariff ind. and cap. reactive energy	Er (\sum)	kvarh	●	●
	Er (per phase)		●	●
T1/T2 tariff resettable partial energy counters	Ea (\sum)	kWh	●	●
	Ea, Er, Eap (\sum)		kWh, kvarh, kVAh	●
Energy balance	\sum	kWh, kvarh	●	●
Other information	Symbol	Value/status	Display	Com.
Present tariff	T	1/2	●	●
Partial counters	PAR	START/STOP	●	
S0 output status	\square	Active/Not active	●	

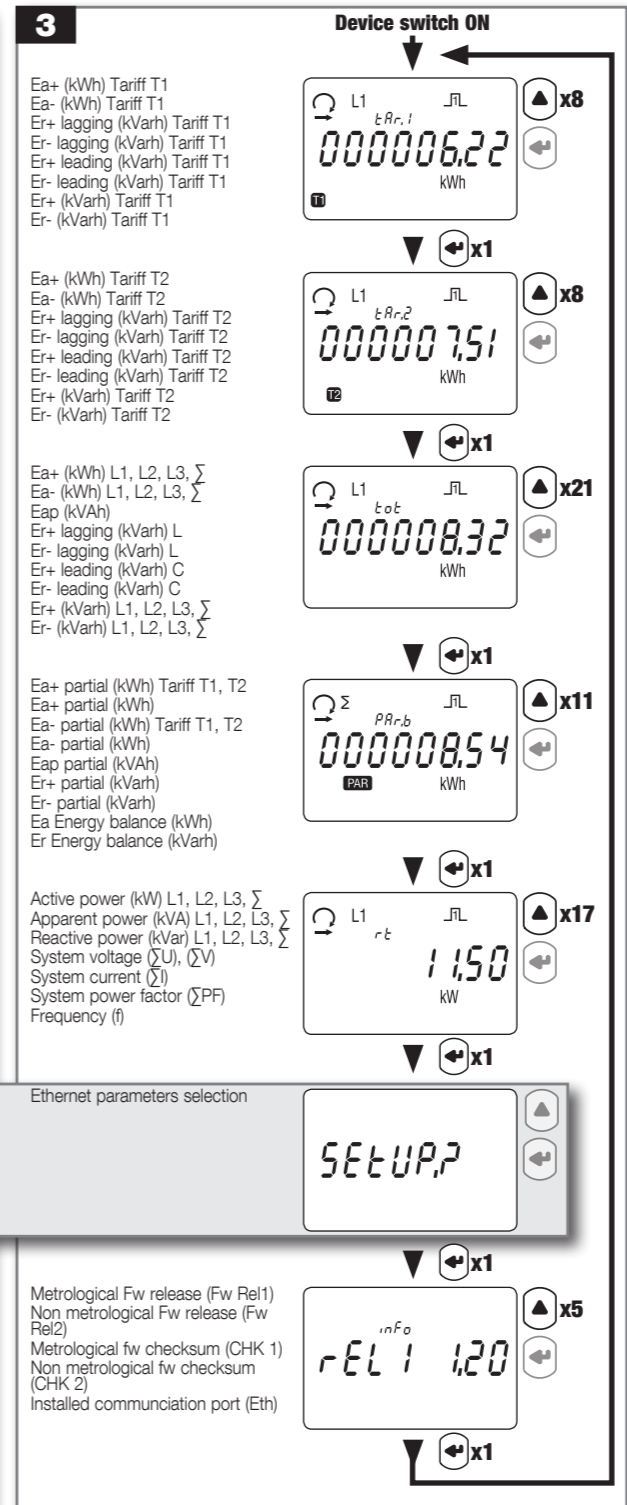
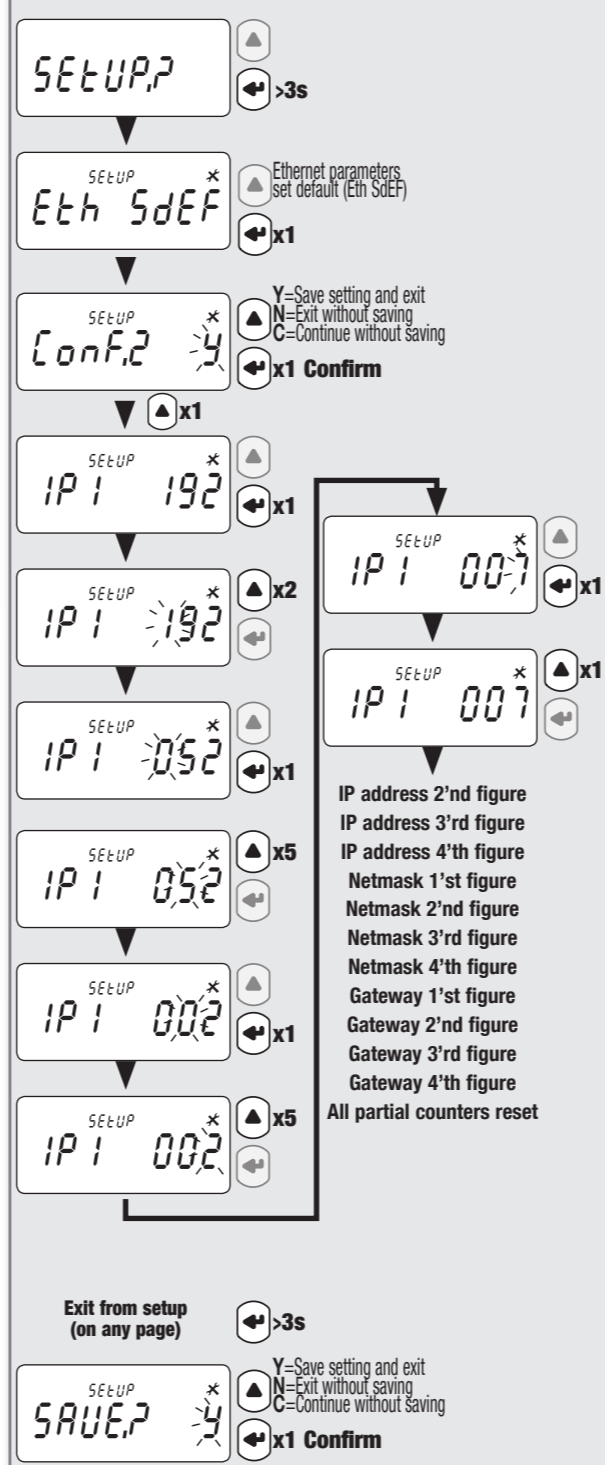
Energy balance values calculation

Energy balance	Formula
kWh	(+kWh T1) - (-kWh T1) + (+kWh T2) - (-kWh T2)
kvarh	(+kvarh T1) - (-kvarh T1) + (+kvarh T2) - (-kvarh T2)

Dual dimensions : in/mm



Ethernet parameters selection



Technical characteristics
Data in compliance with EN 50470-1, EN 50470-3

General	Housing: 4 modules DIN 43880 Mounting: DIN rail EN 60715
Operating features	Connectivity: 4 wires 3x 230/400V to 3x 240/415V Storage of energy values and configuration: FRAM Display tariffs identifier: T1 and T2
Supply	Autosupplied Operating voltage range: 184 ... 288 VAC Operating frequency range: 45 ... 65 Hz Rated power dissipation (max.) Pv: 3.5VA - 1W
Overload capability	Voltage Un continuous: 288 VAC Voltage Un momentary (1 s): 300 VAC Current Imax continuous / momentary: 80 A / 30 Imax for 1/2c
Display	Display type: LCD 8 digits with backlight Active energy: 1 display, 8-digit: 000000.00 ... 999999.99 kWh Reactive energy: 1 display, 8-digit: 000000.00 ... 999999.99 kvarh Apparent energy: 1 display, 8-digit: 000000.00 ... 999999.99 kVAh Instantaneous active power: 1 display, 4-digit: 00.00 ... 99.99 kW Instantaneous reactive power: 1 display, 4-digit: 00.00 ... 99.99 kvar Instantaneous apparent power: 1 display, 4-digit: 00.00 ... 99.99 kVA Instantaneous voltage: 1 display, 4-digit: 000.0 ... 999.9 V Instantaneous current: 1 display, 4-digit: 00.00 ... 99.99 A Power Factor: 1 display, 4-digit: 0.000 ... 1.000 Frequency: 1 display, 4-digit: 45.00 ... 65.00 Hz Display period refresh: 1 s
Measuring accuracy	Active energy: class B acc. to EN 50470-3 Active energy: class 1 acc. to EN 62053-21 Reactive energy: class 2 acc. to EN 62053-23
Measuring input	Type of connection: direct phase/N Certified voltage Un: 230/240 VAC Current Iref / Imin: 5 A / 0.25A Operating range current (Ist ... Imax): 0.020 ... 80 A Certified frequency fn: 50/60 Hz \pm 1 Hz Starting current for energy measurement (Ist): 20 mA
Optical interfaces (LED)	Meter constant: 1 Wh/imp
S0 Output	Type: Optoisolated - 5 to 27VDC 27mA acc. to EN 62053-31
Safety	Indoor meter: yes Degree of pollution: 2 Operational voltage: 300 VAC AC voltage test (EN 50470-3, 7.2): 4 kV Impulse voltage test: 6 kV 1.2/50 μ s Protection class (EN 50470): class II Housing material flame resistance: UL 94 class V0
Embedded communication	Ethernet Modbus TCP: 10/100 Mbps Webserver login: Username: admin/Password: Admin Default IP address: 192.168.0.4 Default Gateway IP address: 192.168.0.1 Default Netmask: 255.255.255.000 Isolation class: SELV Circuit
Environmental conditions	Mechanical environment: M1 Electromagnetic environment: E2 Operating temperature: -25 ... +55 °C Limit temperature of transportation and storage: -25 ... +75 °C Relative humidity (not condensation): \leq 80 % Vibrations: \pm 0.075 mm Degree protection: IP51(*)/IP20

(*) For the installation in a cabinet at least with IP51 protection.