SCHALT

E9W1RS

Misuratore DIN multifunzione digitale monofase 100A diretto

Direct Digital Single-Phase 100A Multifunction DIN rail Meter

- ☐ Misure: kWh, Kvarh, KW, Kvar, KVA, PF, Hz, dmd, V, A, etc.
- ☐ Misura Bidirezionale: IMP & EXP
- ☐ Uscita Impulsi + RS485
- ☐ 1 Modulo DIN
- ☐ Inserzione Diretta 100A
- ☐ Classe di Precisione Energia : 1

- Measures kWh, Kvarh, KW, Kvar, KVA, PF, Hz, dmd, V, A, etc.
- Bi-directional measurement IMP & EXP
- Two pulse outputs + RS485
- Din rail mounting 17.5mm
- 100A direct connection
- Better than Class 1

Il misuratore E9W1RS è una soluzione di monitoraggio dell'energia attiva e reattiva monofase e di altri parametri come Corrente, Tensione, Frequenza, Fattore di Potenza, Potenza Attiva Reattiva e Apparente.
L'unità è progettata con montaggio su guida Din, grado di protezione IP51. Supporta il collegamento diretto fino a Max.100A Inoltre, è dotato di 2 uscite a impulsi per l'energia attiva e 1 uscita RS485 per il monitoraggio da remoto

The E9W1RS meter is a single-phase active and reactive energy monitoring solution and other parameters such as Current, Voltage, Frequency , Power Factor, Reactive and Apparent Active Power.

The unit is designed with Din rail mounting, protection rating IP51.

Supports direct connection up to Max. 100A. In addition, it is equipped with 2 pulse outputs for active energy and 1 RS485 output for remote monitoring

| Specifiche Generali	General Specifications	
Tensione Nominale	Voltage AC (Un)	230V
Tensione Operativa	Operational Voltage	80%-120% Un
Corrente Base	Base Current (Ib)	10A
Max. Corrente	Max.Current (Imax)	100A
Min. Corrente	Mini Current (Imin)	0.45A
Autoconsumo	Power consumption	<2W/10VA
Frequenza	Frequency	50/60Hz
Resistenza Tensione AC	AC Voltage withstand	4kV for 1 minute
Resistenza Tensione Impulso	Impulse Voltage withstand	6kV - 1,2uS
Resistenza sovracorrente	Overcurrent withstand	30Imax for 0.01s
Impulso in uscita	Pulse output	1000imp/kWh
Display con retroilluminazione	Display with backlight	LCD
Max. Lettura	Max. Reading	999999kWh /kVarh

Precisione	Accuracy	
Tensione	Voltage	0.5% of range maximum
Corrente	Current	0.5% of nominal
Frequenza	Frequency	0.2% of mid-frequency
Fattore Potenza	Power factor	1% of Unity (0,01)
Potenza Attiva	Active power	1% of range maximum
Potenza Reattiva	Reactive power	1% of range maximum
Potenza Apparente	Apparent power	1% of range maximum
Energia Attiva	Active energy	Class 1
Energia Reattiva	Reactive energy	Class 2

Collegamenti
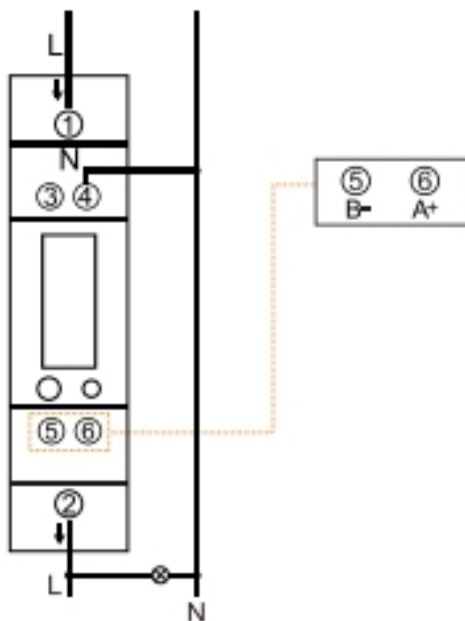
Dimensioni
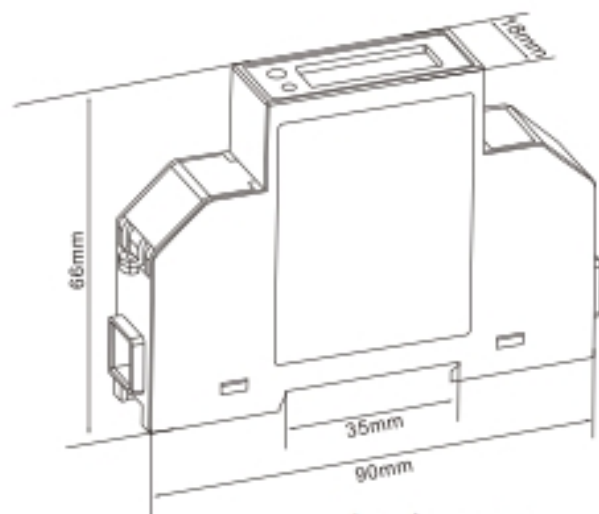
Lunghezza 90mm
Larghezza 18mm
Altezza 66mm

Performance criteria

Operating humidity	≤ 90%
Storage humidity	≤ 95%
Operating temperature	-25℃ - +55℃
Storage temperature	-40℃ - +70℃
Reference temperature	23℃ ± 2℃
International standard	IEC 62053-21 / EN50470-1/3
Accuracy class	Class1/Class B
Installation category	CAT II
Mechanical environment	M1
Electromagnetic environment	E2
Degree of pollution	2
Protection against penetration of dust and water	IP51(indoor)
Insulating encased meter of protective class	II
Aititude	up to 2000m
Electrostatic discharges	8kV contact / 15kV air gap
Electromagnetic HF fields	IEC 61000-4-3
Electrical fast transients	4kV
Surge	4kV
Radiated & conducted emissions	EN 55022

Modbus

Bus type	RS485(semi-duplex)
Protocol	Modbus RTU
Baud rate	1200/2400/4800/9600bps
Address range	1-247
Max. Bus loading	64pcs
Communication distance	1000M
Parity	EVEN/ODD/NONE
Data bit	8
Stop bit	1

Mechanics

Din rail dimensions	17.5x119x62 (WxHxD) DIN 43880
Mounting	DIN rail 35mm
Sealing	IP51 (indoor)
Material	self-extinguishing UL94V-0

Initialization Display

When it is powered on, the meter will initialize and do self-checking.

	Full Screen It will last for 3 seconds.
	Software version It will last for 3 seconds.
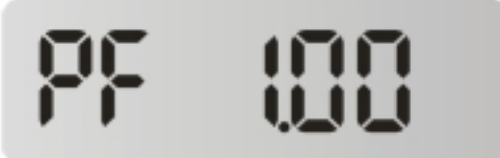
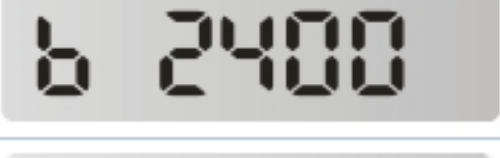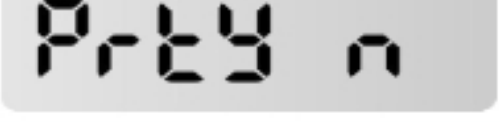After the self-checking program, the meter display will show the total active energy (kWh)

There is a button on the front of the meter. After initialization and self-checking program, the meter display the measured values. The default page is total kWh. If the user wants to check other information, he needs to press the scroll button on the front panel.

	Click the button, the LCD display will scroll the measurements.
	Keep pressing the button for 3 seconds, the meter will get into set-up mode.

1	000478 KWH M	Total active energy （kWh） Display format： 0000.00→9999.99→10000.0→ 99999.9→0000.00
1-1	000245 KWH ↓	Import active energy （kWh） Display format： 0000.00→9999.99→10000.0→ 99999.9→0000.00
1-2	000232 KWH ↑	Export active energy （kWh） Display format： 0000.00→9999.99→10000.0→ 99999.9→0000.00
2	219.8 V	Voltage (V)
3	20.18 A	Current (A)
4	2210.2 W	Active power (W)
5	F 50.00	Frequency (F)

6	PF 1.00	Power factor (PF)
7	Add001	MBUS primary address Example: 001
8-1	Id0000	MBUS Secondary address(high bit) Default : 0000
8-2	0001	MBUS Secondary address(low bit) Default : 0001 Example:It means the integral Secondary address is 00 00 00 01
9	b 2400	Baudrate Default : 2400bps
10	PrtY n	Parity None/even/odd are optional Default: even

Set-up Mode

To get into Set-up Mode, the user need keep pressing the button for 3 seconds, the meter LCD will shows "-SET-".

-SEt-

The user can program the meter parameters by sending correct command via RS485 port.

The protocol is Modbus RTU

Pulse Output is configurable.
The pulse output can be set to generate pulses to represent total / import/ export kWh or kVarh.
The pulse constant can be set to generate 1 pulse per: 0.001 (default) / 0.01 /0.1 /1kWh /kVarh.Pulse width: 200 / 100/ 60ms (default)

RS485 output for Modbus RTU.
the following RS485 communication parameters can be configured from the Set-up menu. Baud rate: 1200, 2400, 4800, 9600
Parity: NONE/EVEN/ODD   Stop bits:1 or 2   Modbus Address: 1 to 247