

WON-H2-R

WON-H2-R Multifunction Energy Meter+ Power Quality with Rogowski Coil is an advanced device designed to measure and monitor various electrical parameters in an energy distribution system.

It provides real-time data on the consumption and quality of electrical power, enabling businesses, industries, and households to better understand their energy usage, improve efficiency, and reduce operational costs.

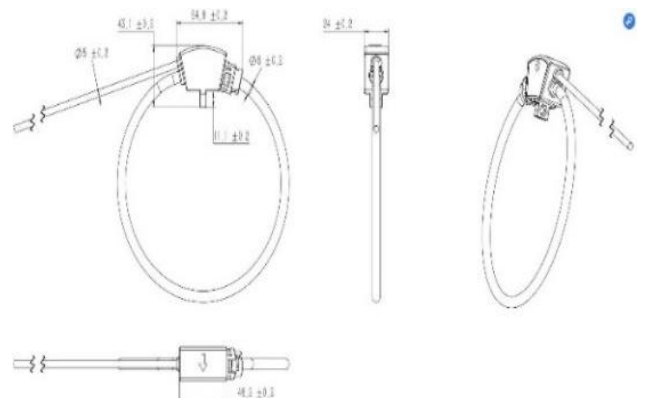
Multi-Functional Usage: Suitable for energy measurement in industrial, commercial, and residential applications, including power analysis, tariff metering, and maximum demand monitoring.



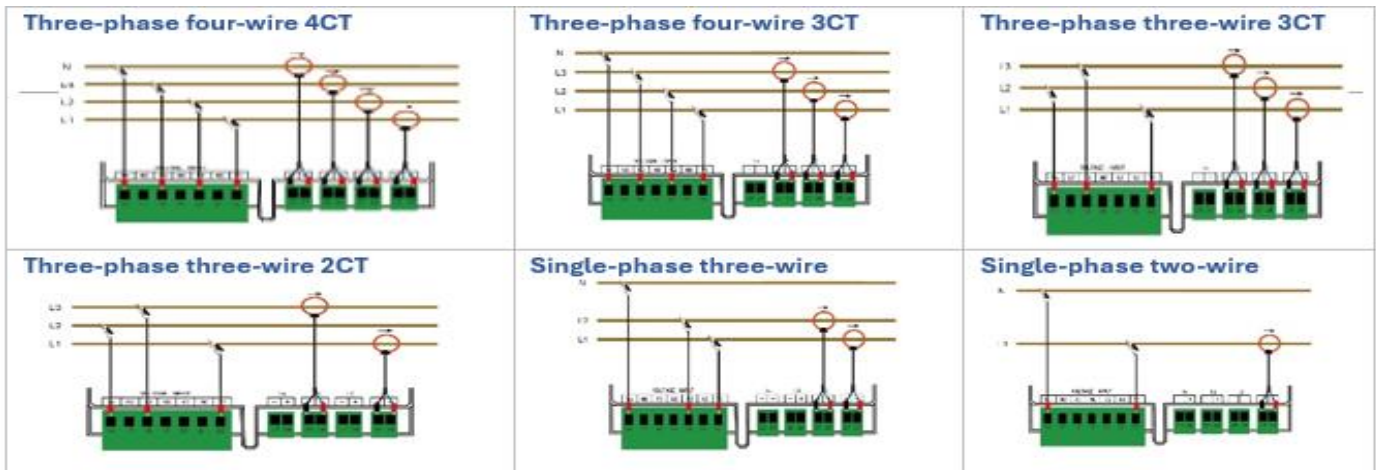
Product Features

- Fast installation with Rogowski CT, no shut Down required
- 4 Line High Resolution LCD Display with Backlight
- KWH Energy value in all pages Always in Display
- Product size is standard 96x96 panel type
- Installation method is a snap-on type, without screws
- Three-phase four wire, Three-phase three wire and single-phase systems
- Voltage, current, fractional harmonics, up to 50th order
- Voltage and current THD measurement
- 6 rate tariff energy, RTC switching or manual switching
- Maximum demand measurement
- Alarm setting and High precision measurement
- Modbus RTU communication over RS485

Dimension



Wiring Diagram



Technical Specifications

Display	Digital LCD Display
Installation	Panel Mounting
Usage	Multi-Functional Energy Meter, Watt-Hour Meter, Power Analyzer, Maximum Demand Meter, Reactive Energy Meter, Multi-Rate Watt-Hour Meters
Measurements	External CTs and Rogowski Coil Rated current:10A,100A,500A,1000A,3000A,6000A (Widely adapted to a variety of Rogowski Rated coil ratio:50mV/kA, 85mV/kA or 333mV/kA (0-634mV AC
Certification	RoHS, ISO, CE
Input Type	External CTs, External Rogowski Coil
Power Supply	95~265VAC/DC
Wiring	3pH4w, 3pH3w, 1pH2w (L-N), 1pH2w (L-L), 1pH3w (L-L-N)
Sampling Rate	8K Samples Per Second
V&I Harmonic Analysis	Up to 50th Harmonic
Communication Baud Rate	2400 bps to 115200 bps
Accuracy	Class 0.5s
Communication	Modbus RTU, RS485 Port
Primary Current Range	Adjustable from 0.1A to 9999A
Voltage Range	0-600VAC
Frequency Range	50/60Hz
Dimensions	96 × 96 × 45mm
Accuracy	
Current	0.1%+Accuracy of current sensor
Voltage	±0.2% (60V~600V AC)
Frequency	±0.01%(45~65Hz)
Power factor	±0.005
Active and Apparent power	IEC62053-22 level 0.5S
Reactive power	IEC62053-21 level 1S
Active energy	IEC62053-22 level 0.5S
Reactive energy	IEC62053-21 level 1S

Environmental Condition	
Operating temperature	-20°C~+70°C
Storage temperature	-40°C~+85°C
Humidity range	5~95% RH, 50°C(non-condensing)
Over voltage capability	CAT III 1000V, It is suitable for distribution system below 277 / 480VAC
Insulation strength	IEC61010-1
Altitude	3000m Max
Antipollution level	IP20(Meet the standard of IEC 60629)
Displacement Power factor DPF	DPF1, DPF2, DPF3, Σ (Total)
Active power	P1, P2, P3, Σ (Total)
Reactive power	Q1, Q2, Q3, Σ (Total)
Apparent power	S1, S2, S3, Σ (Total)
Max-Demand	
Total Active power	Maximum demand and time
Total Reactive power	Maximum demand and time
Total Apparent power	Maximum demand and time
Energy	
Active Energy Import	EP1, EP2, EP3, Σ (Total)When the total Energy reaches 1.0×10^9 kWh, the energy of each phase will automatically clear to zero
Active Energy Export	EP1, EP2, EP3, Σ (Total)When the total Energy reaches 1.0×10^9 kWh, the energy of each phase will automatically clear to zero
Reactive Energy Import	EQ1, EQ2, EQ3, Σ (Total)When the total Energy reaches 1.0×10^9 kVArh, the energy of each phase will automatically clear to zero
Reactive Energy Export	EQ1, EQ2, EQ3, Σ (Total)When the total Energy reaches 1.0×10^9 kVArh, the energy of each phase will automatically clear to zero
Apparent Energy	ES1, ES2, ES3, Σ (Total)When the total Energy reaches 1.0×10^9 kVArh, the energy of each phase will automatically clear to zero
Tariff Energy	ET1, ET2, ET3, ET4, ET5, ET6When Energy reaches 1.0×10^9 kWh, Energy automatically clears to zero
Unbalance	
Voltage unbalance	Negative order, zero order
Current unbalance	Negative order, zero order
Max and Min	
Phase voltage	Each Phase and average
Line voltage	Each Phase and average
Current	Each Phase and average
Active power	Each Phase and average
Reactive power	Each Phase and average
Apparent power	Each Phase and average
Instantaneous Value	
Phase voltage	U1, U2, U3, AVG
Line voltage	U12, U23, U31, AVG
Current	I1, I2, I3, AVG, In
Grid frequency	F1, F2, F3, Σ (Total)
Power factor PF	PF1, PF2, PF3, Σ (Total)
Phase Diagram	
Phase sequence	Voltage, current
Voltage angle	U1, U2, U3

Current angle	I1, I2, I3
Voltage and current angle	UI1, UI2, UI3
Harmonics	
Voltage harmonic percentage	Total harmonics (U1, U2, U3), odd total harmonics (U1, U2, U3), even total harmonics (U1, U2, U3) Fractional harmonics of order 1-50 (U1, U2, U3)
Current harmonic percentage	Total harmonics (I1, I2, I3), odd total harmonics (I1, I2, I3), even total harmonics (I1, I2, I3), K factor (I1, I2, I3) Fractional harmonics of order 1-50 (I1, I2, I3)
Voltage harmonic value	Total harmonics (U1, U2, U3) Fractional harmonics of order 1-50 (U1, U2, U3)
Current harmonic value	Total harmonics (U1, U2, U3) Fractional harmonics of order 1-50 (U1, U2, U3)
Electromagnetic Compatibility (EMC) & Measurements Standards	
Electrostatic Discharge	Level IV (IEC 61000-4-2)
Radiated Immunity	Level III (IEC 61000-4-3)
EFT Electrical Fast Burst Immunity	Level IV (IEC 61000-4-4)
Surge Immunity	Level IV (IEC 61000-4-5)
Conducted Disturbance Immunity	Level III (IEC 61000-4-6)
Power Frequency Magnetic Field Immunity	0.5mT (IEC 61000-4-8)
Conduction and Radiation	Class B (EN 55022)
Measurement Standards	EN 62052-11, EN 61557-12, EN 62053-21, EN 62053-22, EN 62053-23, EN 50470-1, EN 50470-3, EN 61010-1, EN 61010-2, EN 61010-031
Rogowski Coils	
Reference Rated Current	100A, 600A, 3000A, 6000A... (Unlimited)
Ratio @50Hz (Calibrated, Manufacturing tolerance<0.5%)	22.5mV/kA, 50mV/kA, 85mV/kA, 100mV/kA...
Ratio @50Hz (Uncalibrated, Manufacturing tolerance <5%)	56mV/kA, 95mV/kA, 108mV/kA...
Sensitivity Temperature Drift Coefficient	Uncalibrated: <50ppm/°C, Calibrated: <100ppm/°C
Internal Resistance Temperature Drift Coefficient	Uncalibrated: <3800ppm/°C
Accuracy	0.5% class (Vertically centred position)
Internal Resistance	50~250 Ω
Position Error	<1%
Output on 0A (Zero Drift)	<0.05mV
Phase Error	<0.5° (45Hz~65Hz)
Linearity	±0.1% (1%~100%)

Bandwidth (3dB)	1Hz~20kHz
Operating Temperature	-40°C~85°C
Coil Section	8mm
Lead Length (Default)	2 meters
Materials	
Coil & cable	Thermoplastic rubber flame retardant UL 94 V-0 rated
Couplings	PC, ABS, UL 94 V-0 rated
Insulation coordination	
Applicable voltage range	1000V CATIII, 600V CATIV
Dielectric strength	7400Vac @ 50/60Hz 1 minute
Certifications	CE, IP68, Rohs 2.0

Rogowski Coil-Ordering Code

Ordering Code	Dia	Secondary	Cable length
Rogo-HRC-60	60 mm Dia	22.5mV/kA	0.5 Meter
Rogo-HRC-100	100mm Dia	50mV/kA	1 Meter
Rogo-HRC-150	150mm Dia	56mV/kA	1.5 Meter
Rogo-HRC-200	200mm Dia	85mV/kA	2 Meter
Rogo-HRC-300	300mm Dia	95mV/kA	3 Meter

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