

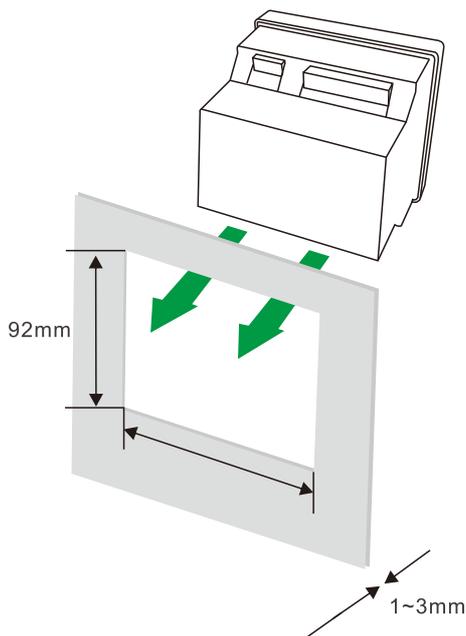
Datasheet

- Multi-parameter measurements
- Up to 63rd THD and IHD
- RS485 Modbus RTU
- No need external integrator
- 3 selectable current scales
- PT operated
- Accuracy class 0.5s
- Bar Graph for power indication
- Backlit LCD display for full viewing angles
- Push-in installation and plug-in connection

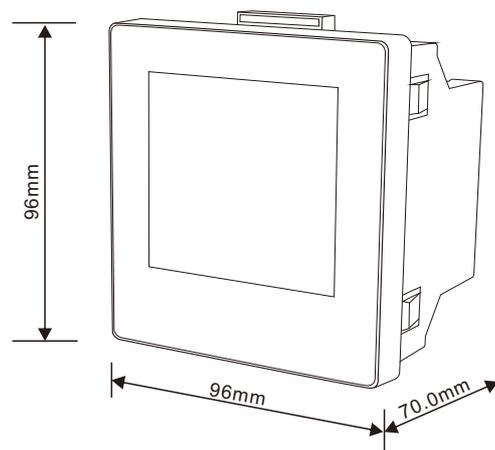


SMART X96-RC is innovative instrument for measurement of electrical parameters. The meters are particularly suitable consumption analysis and control, with an excellent quality and stability. The meters directly connected with Rogowski Coil for current measurement, without external integrator. The connections are very quick and easy, very useful for retrofitting applications on existing switchboards or energy audit. The meters are the ideal instrument to establish the measurement points on the plant. Built-in interfaces provides RS485 Modbus RTU. SMART X96-RC series used not only in the electricity transmission and power distribution system, but also in the power consumption measurement and analysis in high voltage intelligent power grid. The meters measure and display the characteristics of 1p2w, 3p4w and 3p3w supplies, include voltage, frequency, current, power and active and reactive energy, imported or exported, power factor, Max. demand etc.

Mounting



Dimension Drawing



Height 96mm
Width 96mm
Depth 70mm

For more information on these products, please contact our sales team on 86 0573 83698881 or email sales@eastrongroup.com

www.eastrongroup.com

Specification Table

Input Voltage	
VT Primary	100~500000V ac
UN	230 V L-N
Measured voltage with over-range and crest factor	100 to 480Vac L-L 100 to 276Vac L-N
Permanent overload	490V L-L 280V L-N
Impedance	1M Ω
Frequency range	45~66Hz

Input Current	
CT Ratings	Primary - 1kA/5kA/20kA Secondary - 85mV/kA rogowski coil
Withstand	Continuous 8A 120A for 0.5 Seconds
Impedance	<1 mΩ
Frequency range	45~66Hz
Burden	<0.036VA at 6A

Auxiliary Power Supply	
Operating range	85~275V AC / 120~380V DC
Power consumption	< 7VA/3.5W.
Frequency	45 to 65 Hz

Accuracy	
Power	IEC 61557-12 Class 0.5
Active energy	IEC 62053-22 Class 0.5S IEC 61557-12 Class 0.5S
Reactive energy	IEC 62053-23 Class 2 IEC 61557-12 Class 2
Frequency	±0.1%
Current	±0.2%
Voltage	±0.2%
Power factor	±0.01%
Harmonic distortion	2

Environmental	
Operating temperature	-25 to +55°C
Storage temperature	-40 to +70°C
Humidity rating	<95% RH at 50°C (non-condensing)
Pollution degree	2
Altitude	3000m
Vibration	10Hz to 50Hz, IEC 60068-2-6

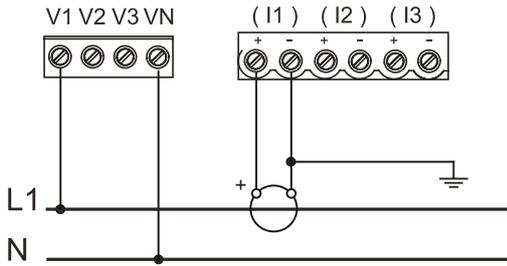
Communications	
Interface standard and protocol	RS485 and MODBUS RTU
Communication address	1~247
Transmission mode	Half duplex
Data type	Floating point
Transmission distance	1000m Maximum
Transmission speed	2400bps~38400bp
Parity	None (default), Odd, Even
Stop bits	1 or 2
Response time	<100 mS

Enclosure	
Weight	420g
IP Degree of protection (IEC 60529)	IP51 front display
Dimensions (WxHxD)	96x96x70
Mounting position	Vertical
panel thickness	1~5mm
Material of meter case	Self-extinguishing UL 94 V-0
Mechanical environment	M1

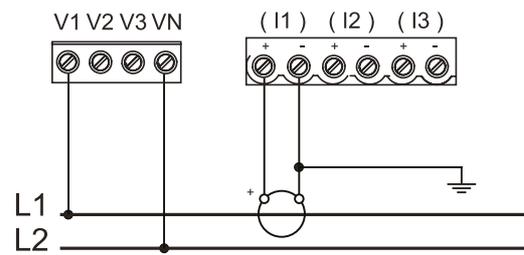
Safety	
Measurement category	Per IEC61010-1 CAT III
Current inputs	Require external Current Transformer for Insulation
Over voltage category	CAT III
Dielectric withstand	As per IEC 61010-1 Double Insulated front panel display
Protective class	II

Electromagnetic Compatibility	
Electrostatic discharge	IEC 61000-4-2
Immunity to radiated fields	IEC 61000-4-3
Immunity to fast transients	IEC 61000-4-4
Immunity to impulse waves	IEC 61000-4-5
Conducted immunity	IEC 61000-4-6
Immunity to magnetic fields	IEC 61000-4-8
Immunity to voltage dips	IEC 61000-4-11
Radiated emissions	EN55011 Class A
Conducted emissions	EN55011 Class A
Harmonics	IEC 61000-3-2

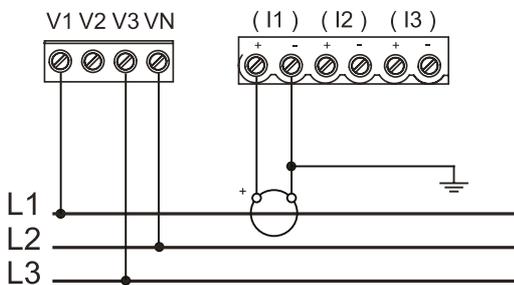
Wiring Configuration



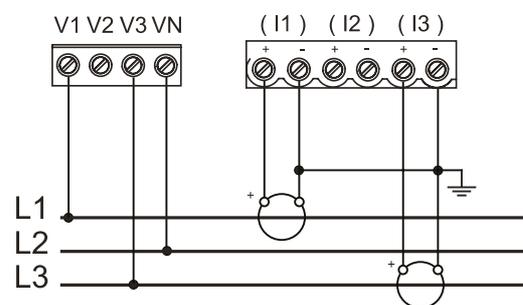
1P2W (L+N) 1CT



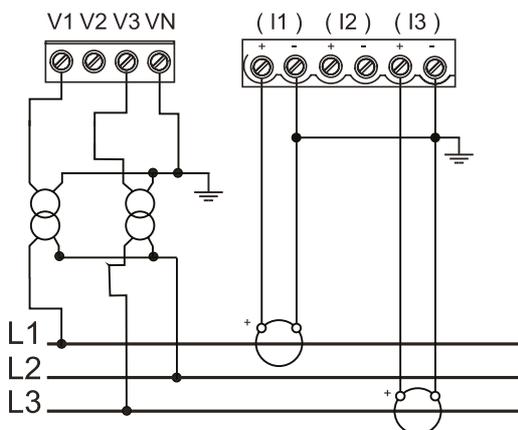
1P2W (L+L) 1CT



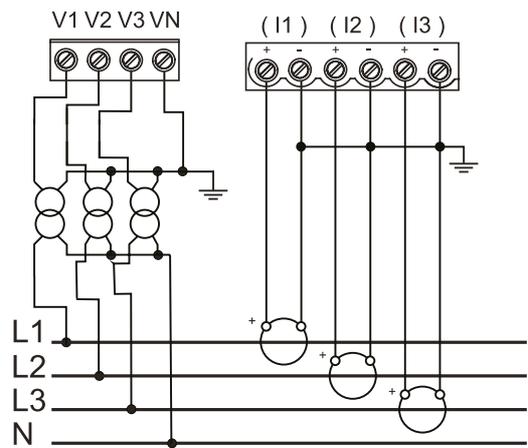
3P3W 1CT BALANCED LOAD



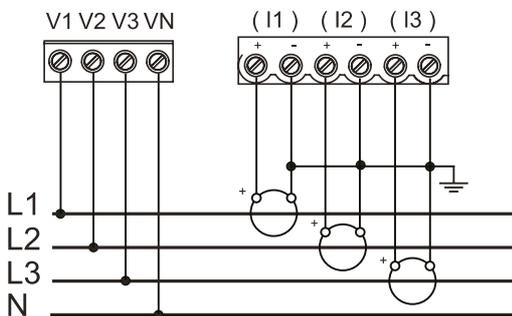
3P3W 2 CTS



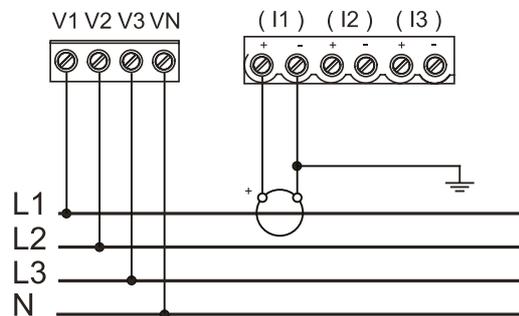
3P3W 2PT & 2CTS



3P3W 3PT 3CTS



3P4W 3CTS



3P4W 1CT BALANCED LOAD

Ordering Options

Meter Type	Description of Meter
SMART X96-3RC	1p2w ,3p4w and 3p3w,3x230(400)V, 85mV/kA rogowski coil input, no need external integrator, Class 1.0 50/60Hz, Backlighted LCD display, RS485 Modbus RTU. Measures kWh, kVarh, W, Var, VA, V, A, PF, THD, Hz, Max.DMD, Imp_kWh, Exp_kWh etc.

Rogowski Coil



Coil Code	Reference Rated Current	Class	Window Size(mm)	Coil Length(mm)
ESCT-RC60	500A	0.5	50	200
ESCT-RC100	1000A	0.5	100	395
ESCT-RC150	5000A	0.5	150	525

Conformity References

Electromagnetic Compatibility: EN61326-1:2013 & EN61326-2-3:2013

Low Voltage Directive: EN 61010_1:2010+A1:2019 & EN 61010-2-30-2010