

iWSN-9603-RCT500P-ME-IP33/ iWSN-9603-RCT1000P-ME-IP33/ iWSN-9603-RCT2000P-ME-IP33

iWSN Wireless 3-phase 2-loop intelligent power meter

Features

- 2-loop 3-phase or 4-loop single-phase AC circuits measurement
- Supports Rogowski current transformers (CT)
- 3P4W, 3P3W, 3P3W 2CT, 1P3W or 1P2W wiring type
- Bi-direction kWh measurement
- True RMS calculations for voltage and current signals
- Powers by the measured voltage cable; no extra power wiring is needed
- Built-in 2A Fuse to keep the main circuit safe
- Timestamp for each measured data by the built-in RTC
- 3-minute history data cache for supplement
- Uses 433MHz radio frequency and provides max. 64 wireless sub-network.
- IP33 protection to prevent from circuit short by fire sprinkler system
- Connector cover to avoid the exposed connector and electric shock

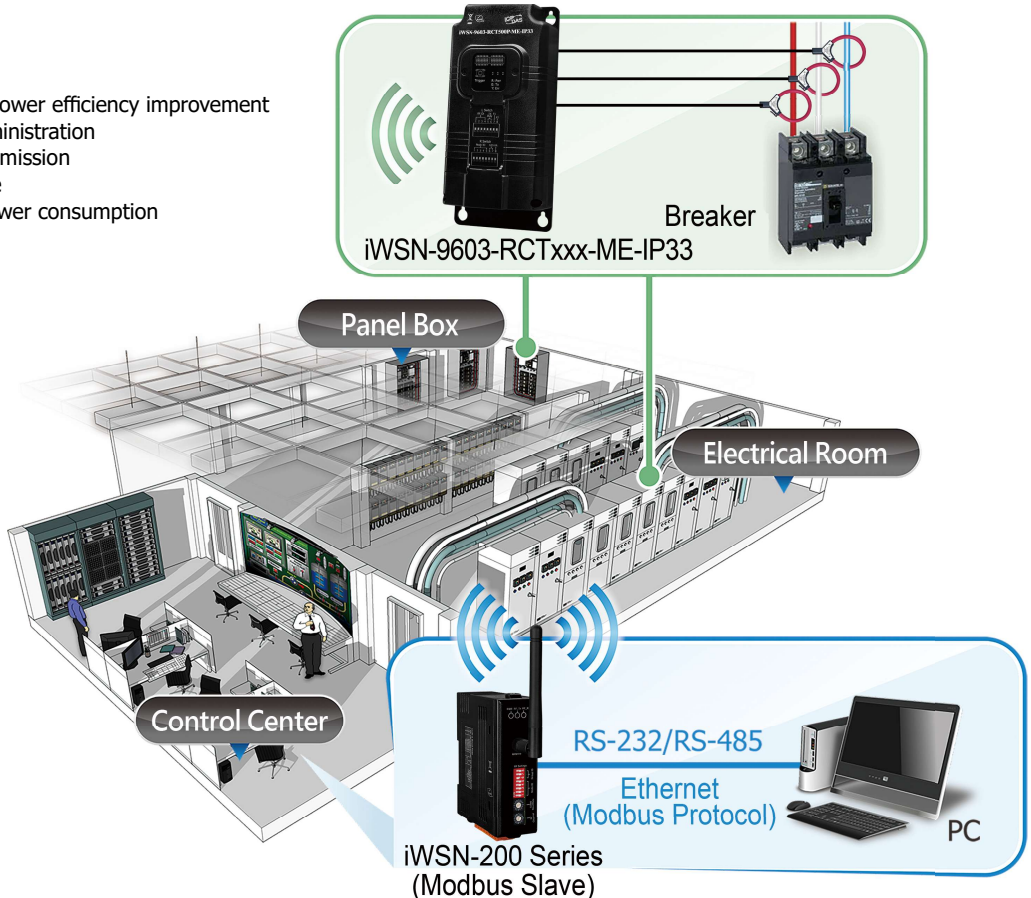
CE RED RoHS

Introduction

The iWSN-9603-RCTxxx-ME-IP33 series modules are the 3-phase AC power meter, which provide one 3-phase voltage input and two 3-phase Max. 2000A (depended on the module name) Rogowski current CT inputs, and suit measuring the power information of different equipment powered by the same AC source. By means of wireless communication and powering from the measured voltage cable, it can greatly reduce the cost and duration of installation, and satisfy to the demand of distributed deployment and quick setup. Moreover, the features of Sub-GHz radio frequency and data supplement mechanism effectively improve the reliability of the wireless communication especially in the crowed or seriously shielded space of the factory environment. Consider the maintenance and installation issues, the modules are configured by the DIP switches, and uses special housing with IP33 protection to avoid the circuit short while the fire sprinkler system is activated if the module is located out of the panel box. Through the design of RTC and data timestamp, The iWSN-9603-RCTxxx-ME-IP series can fit the power saving applications, such as machine and process power efficiency improvement, power information administration, calculation of carbon emission, predictive maintenance, and big data analysis of power consumption.

Applications

- Machine and process power efficiency improvement
- Power information administration
- Calculation of carbon emission
- Predictive maintenance
- Big data analysis of power consumption



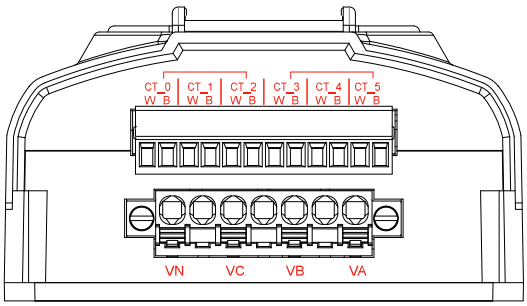
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System Specifications

Model	iWSN-9603-RCT500P-ME-IP33	iWSN-9603-RCT1000P-ME-IP33	iWSN-9603-RCT2000P-ME-IP33
EMS Protection			
EFT (IEC 61000-4-4)	+/- 500 V		
ESD (IEC 61000-4-2)	+/- 4 kV Contact		
LED Indicators			
Status	1 x Power 1 x Tx 1 x Error		
AC Power Measurement			
Wiring	3P4W-3CT, 3P3W-2CT, 3P3W-3CT, 1P2W-1CT, 1P3W-2CT		
Loops	4(Single Phase)/ 2(Three Phase)		
Input Voltage	Three phase 4 wire x1, 100 - 480 VAC (58 - 277 VAC single phase)		
Input Frequency	50/60 Hz		
Wh Accuracy	Better than 2% (PF=1)		
Power Parameter Measurement	True RMS voltage (Vrms), True RMS current (Irms), Active Power (kW), Active Energy (kWh), Power Factor (PF), Frequency		
Data Update Rate	1, 10, 30, or 60 Seconds		
Antenna			
Type	Built-in Omni-directional antenna		
Power			
Consumption	3W		
Input Type	Three phase 100 - 480 VAC (58 - 277 VAC single phase)		

Model	iWSN-9603-RCT500P-ME-IP33	iWSN-9603-RCT1000P-ME-IP33	iWSN-9603-RCT2000P-ME-IP33
CT			
Includes CTs	6		
Type	Rogowski CT		
Input Current	5A~500A	5A~1000A	5A~2000A
Inside Diameter	55mm	80mm	105mm
Leading Cable	4m		
RF			
Channels	0 ~ 15		
Group ID	0 ~ 3		
Radio Frequency	433.1000 ~ 434.6000 MHz		
Transmission Power	9±1dBm (PA Off) / 18±1dBm (PA On)		
Transmission Distance (LoS)	100 m		
Node ID	1 ~ 31		
Working Duty	1, 10, 30, or 60 Seconds		
Mechanical			
Dimensions (mm)	85 x 184 x 47 (W x L x H)		
Installation	Wall-mount		
Ingress Protection Rating	IP33		
Environment			
Operating Temperature	-30 °C ~ +50 °C		
Storage Temperature	-40 °C ~ +55 °C		
Humidity	10 ~ 90% RH, Non-condensing		

Pin Assignments

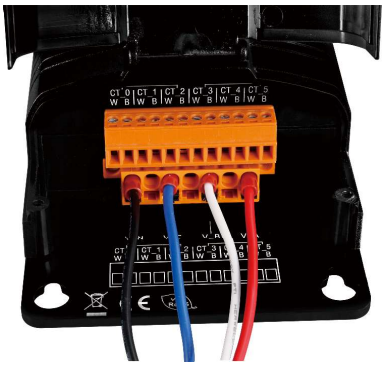


Pin name		Description
Bottom terminal block	VN	N-phase voltage contacts
	VC	C-phase voltage contacts
	VB	B-phase voltage contacts
	VA	A-phase voltage contacts

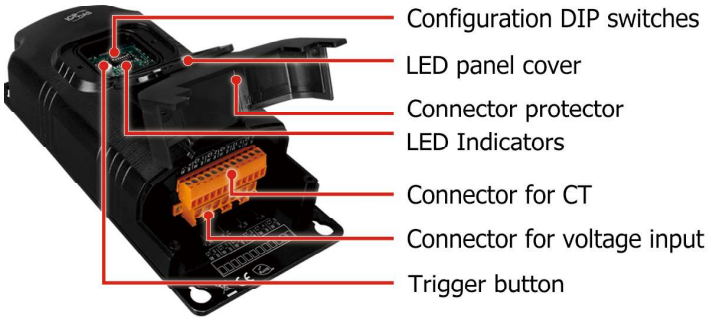
Pin name			Description
Top terminal block	CT_0	W	Channel 0 ratio retainer positive end (red)
	CT_0	B	Channel 0 ratio the negative end of the retainer (black)
	CT_1	W	Channel 1 ratio retainer positive end (red)
	CT_1	B	Channel 1 ratio the negative end of the retainer (black)
	CT_2	W	Channel 2 ratio retainer positive end (red)
	CT_2	B	Channel 2 ratio the negative end of the retainer (black)
	CT_3	W	Channel 3 ratio retainer positive end (red)
	CT_3	B	Channel 3 ratio the negative end of the retainer (black)
	CT_4	W	Channel 4 ratio retainer positive end (red)
	CT_4	B	Channel 4 ratio the negative end of the retainer (black)
	CT_5	W	Channel 5 ratio retainer positive end (red)
	CT_5	B	Channel 5 ratio the negative end of the retainer (black)

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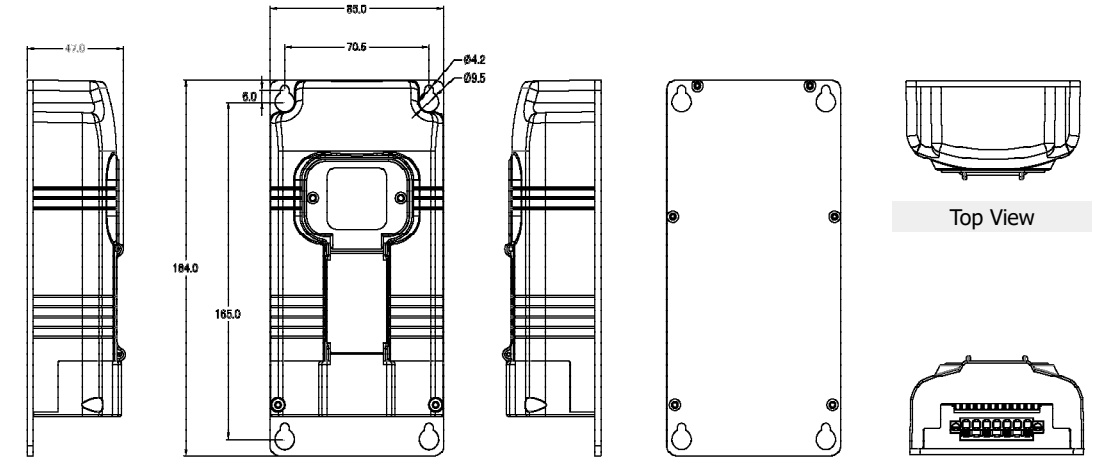
Wire Connections



Appearance



Dimensions (Units: mm)



Ordering Information

iWSN-9603-RCT500P-ME-IP33 CR	iWSN Wireless 3-phase multi-circuit power meter; Includes 500A Rogowski CT (Inside diameter 55 mm; wire lead 4 m) x 6 (RoHS)
iWSN-9603-RCT1000P-ME-IP33 CR	iWSN Wireless 3-phase multi-circuit power meter; Includes 1000A Rogowski CT (Inside diameter 80 mm; wire lead 4 m) x 6 (RoHS)
iWSN-9603-RCT2000P-ME-IP33 CR	iWSN Wireless 3-phase multi-circuit power meter; Includes 2000A Rogowski CT (Inside diameter 105 mm; wire lead 4 m) x 6 (RoHS)

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