

iWSN-9603-160-ME-IP33/iWSN-9603-240-ME-IP33/iWSN-9603-360-ME-IP33/ iWSN-9603-PCT-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 split 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

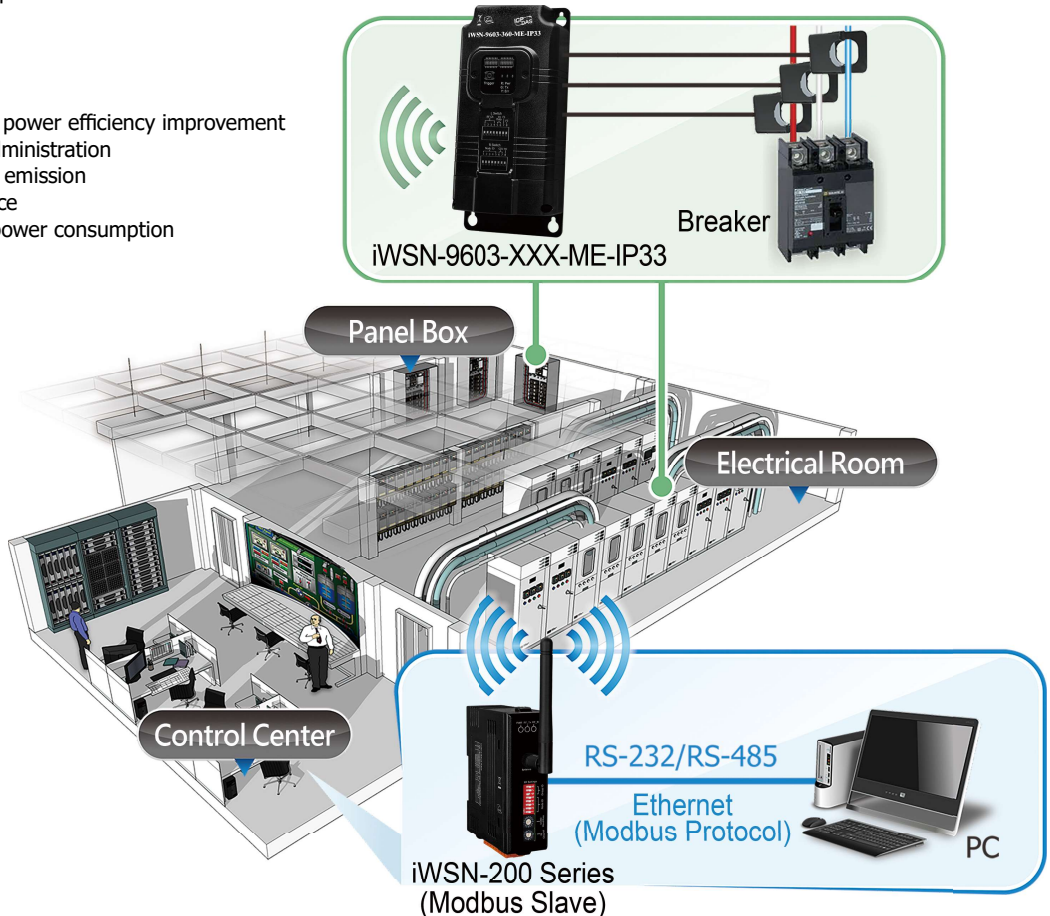
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Introduction

The iWSN-9603 series module is a 3-phase AC power meter, which provides one 3-phase voltage input and two 3-phase current CT inputs, and suits 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 iWSN-9603 series module is 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 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



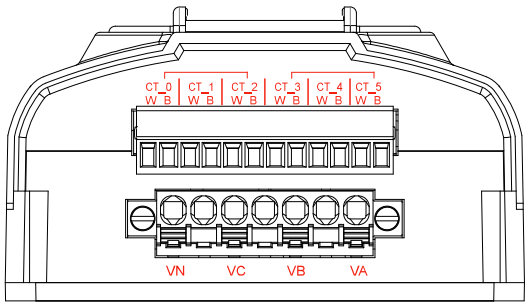
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System Specifications

Model	iWSN-9603-160-ME-IP33	iWSN-9603-240-ME-IP33	iWSN-9603-360-ME-IP33	iWSN-9603-PCT-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 1% (PF=1)			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)			
CT				
Includes CTs	6			0 (refer to order information for purchase)

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CT				
Type	Split core CT			
Max. Current	100A	200A	400A	Max. 400A, depended on the connected CTs
Inside Diameter	16mm	24mm	36mm	Max. 36mm, depended on the connected CTs
Leading Cable	8m			
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

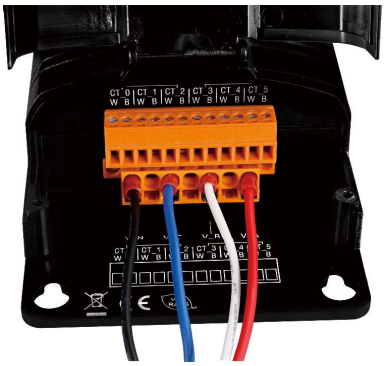


Pin name		Description
Bottom terminal block	VN	N-phase voltage contacts
	VC	C-phase voltage contacts
	VB	B-phase voltage contacts
	VA	A-phase voltage contacts

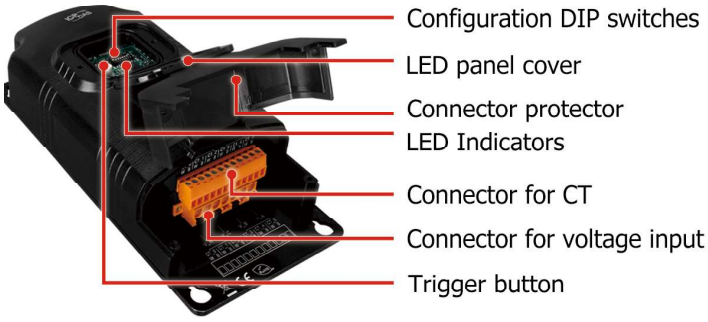
Pin name			Description
Top terminal block	CT_0	W	Channel 0 ratio retainer positive end (white)
	CT_0	B	Channel 0 ratio the negative end of the retainer (black)
	CT_1	W	Channel 1 ratio retainer positive end (white)
	CT_1	B	Channel 1 ratio the negative end of the retainer (black)
	CT_2	W	Channel 2 ratio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

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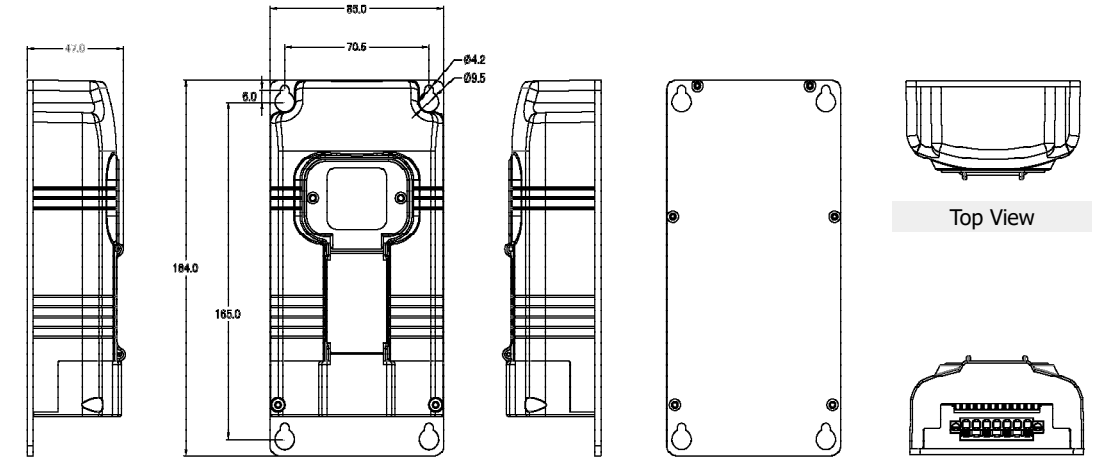
Wire Connections



Appearance



Dimensions (Units: mm)



Ordering Information

iWSN-9603-160-ME-IP33 CR	iWSN Wireless 3-phase 2-loop intelligent power meter; Includes 100A CT (Inside diameter 16 mm; wire lead 8 m) x 6 (RoHS)
iWSN-9603-240-ME-IP33 CR	iWSN Wireless 3-phase 2-loop intelligent power meter; Includes 200A CT (Inside diameter 24 mm; wire lead 8 m) x 6 (RoHS)
iWSN-9603-360-ME-IP33 CR	iWSN Wireless 3-phase 2-loop intelligent power meter; Includes 400A CT (Inside diameter 36 mm; wire lead 8 m) x 6 (RoHS)
iWSN-9603-PCT-ME-IP33 CR	iWSN Wireless 3-phase 2-loop intelligent power meter without CTs (RoHS)

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