


# iWSN-9601-160-ME-IP33/iWSN-9601-240-ME-IP33/iWSN-9601-360-ME-IP33/ iWSN-9601-PCT-ME-IP33

iWSN Wireless single-phase 6-loop intelligent power meter

## Features

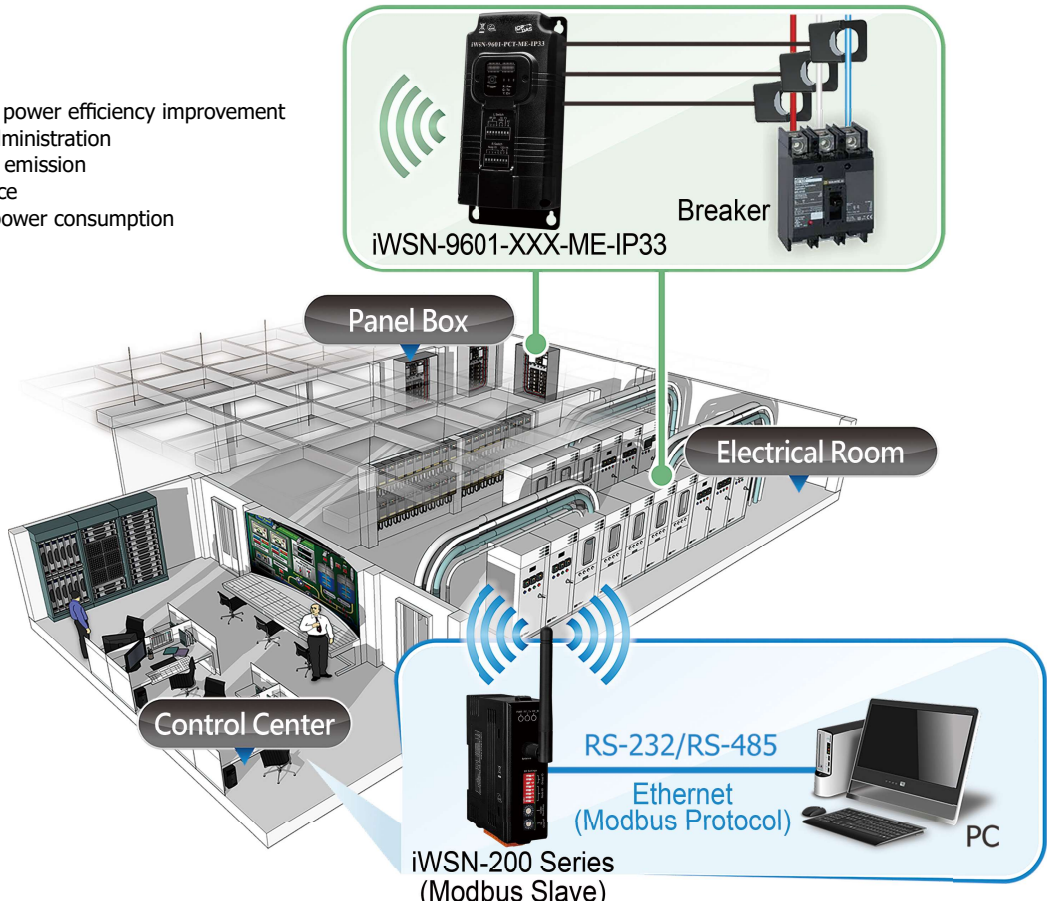
- Single-phase 6-loop AC circuit measurement
- Supports split current transformers (CT)
- Bi-direction kWh measurement
- True RMS calculations for voltage and current signals
- Powers by the measured voltage cable; no extra power wiring is needed
- Built-in 2A Fuse to keep the main circuit safe
- Timestamp 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

## Introduction

The iWSN-9601 series module is a single-phase AC power meter, which provides one single-phase voltage input and 6 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-9601 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-9601 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



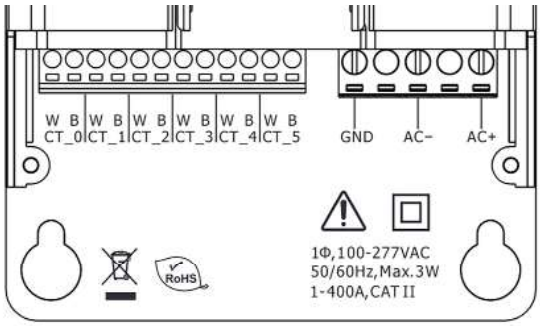

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## System Specifications

| Model | iWSN-9601-160-ME-IP33 | iWSN-9601-240-ME-IP33 | iWSN-9601-360-ME-IP33 | iWSN-9601-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<br>1 x Tx<br>1 x Error | | | |
| **AC Power Measurement** | | | | |
| Wiring | 1P2W-1CT | | | |
| Loops | 6 | | | |
| Input Voltage | Single phase 2 wire x 1, 58 - 277 VAC | | | |
| 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 | Single phase 58 - 277 VAC | | | |
| **CT** | | | | |
| Includes CTs | 6 | | | 0 (refer to order information for purchase) |
| **CT** | | | | |
| Type | Split core CT | | | |

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|---|---|---|---|---|
| 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 |
|---|---|---|
| Right | GND | N-phase voltage contacts |
| | AC- | N-phase voltage contacts |
| | AC+ | L-phase voltage contacts |

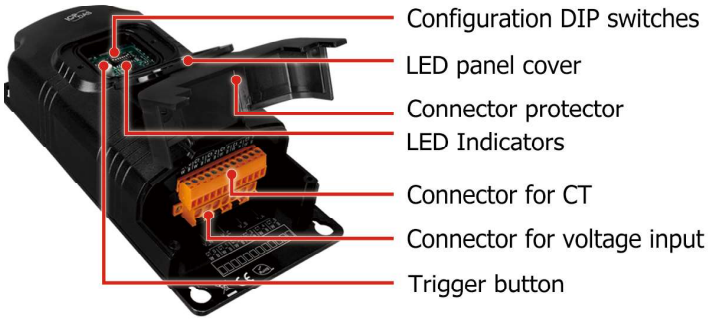
| Pin name | | | Description |
|---|---|---|---|
| Left | CT_0 | W | Channel 0 ratio retainer positive end (white) |
| | CT_0 | B | Channel 0 ratio the negative end of the retainer (black) |
| | CT_1 | W | Channel 1 ratio retainer positive end (white) |
| | CT_1 | B | Channel 1 ratio the negative end 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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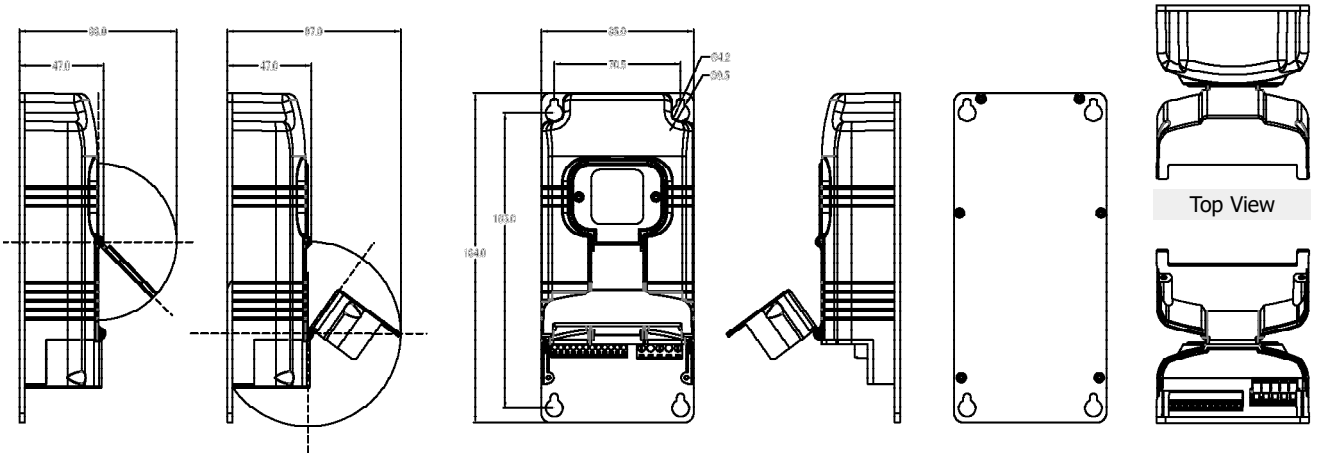
## Wire Connections



## Appearance




## Dimensions (Units: mm)




## Ordering Information

| | |
|---|---|
| **iWSN-9601-160-ME-IP33 CR** | iWSN Wireless single-phase 6-loop intelligent power meter; Includes 100A CT (Inside diameter 16 mm; wire lead 8 m) x 6 (RoHS) |
| **iWSN-9601-240-ME-IP33 CR** | iWSN Wireless single-phase 6-loop intelligent power meter; Includes 200A CT (Inside diameter 24 mm; wire lead 8 m) x 6 (RoHS) |
| **iWSN-9601-360-ME-IP33 CR** | iWSN Wireless single-phase 6-loop intelligent power meter; Includes 400A CT (Inside diameter 36 mm; wire lead 8 m) x 6 (RoHS) |
| **iWSN-9601-PCT-ME-IP33 CR** | iWSN Wireless single-phase 6-loop intelligent power meter without CTs (RoHS) |

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