

5.4. ZigBee I/O Modules

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ZigBee Products



ZB-2015-T

Wireless 6-ch RTD Input Module
with 3-wire RTD Lead Resistance Elimination

Introduction

The ZB-2015-T offers 6 channels, each of which could be connected with different kinds of RTD. It features automatic compensation for 3-wire RTD with long-distance measurement so that it can measure right regardless of the length of wires. Also, ZB-2015-T is fully RoHS-compliant and has qualification for 4 kV ESD protection as well as 3000 Vdc intra-module isolation. Users can be easy to configure the module address, Protocol, Checksum, ZB-PID, ZB-ch and type code by rotary and DIP switch.

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ZigBee I/O Modules

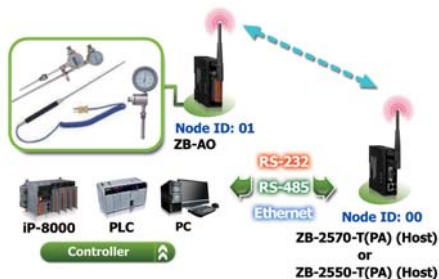
Features

- ISM 2.4 GHz Operating Frequency
- Fully Compliant 2.4 G IEEE802.15.4/ZigBee Specifications
- Wireless Transmission Range up to 700 m (PA-Version)
- Wireless Transmission Range up to 100 m (None/T-Version)
- GUI Configuration Software (Windows Version)
- 3-wire RTD Input with Lead Resistance Elimination
- Individual Channel Configuration
- Open Wire Detection
- Overvoltage Protection
- DIN-Rail Mounting



Applications

Building Automation, Factory Automation, Machine Automation, Remote Maintenance, Remote diagnosis, Testing Equipment.



I/O Specifications

Analog Input	
Input Channel	6
Input Type	2/3-wire RTD
RTD Type	Pt100, Pt1000, Ni120, Cu100, Cu1000
Resolution	16-bit
Sampling Rate	12 Sample/Sec. (Total)
Accuracy	+/-0.05%
Zero Drift	+/-0.5 μ V/ $^{\circ}$ C
Span Drift	+/-20 μ V/ $^{\circ}$ C
Common Mode Rejection	150 dB
Normal Mode Rejection	100 dB
Open Wire Detection	Yes
Overvoltage Protection	120 Vdc/110 Vac
Individual Channel Configurable	Yes
3-wire RTD Lead Resistance Elimination	Yes
ESD Protection	+/-4 kV Contact for Each Channel and +/-8 kV Air for random point
Intra-module Isolated, Field-to-Logic	3000 Vdc

System Specifications

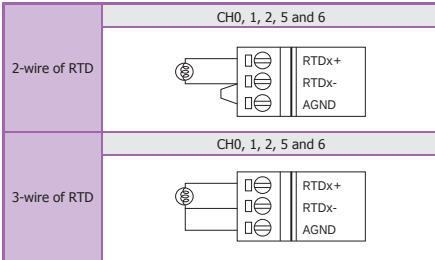
Communication Interface	
Wireless	ZigBee, IEEE 802.15.4 Standard
Antenna	2.4 GHz-3 dBi Omni-Directional antenna
Protocols	Supports DCON and Modbus RTU Protocols
Hot Swap	By Rotary and DIP switch
LED Indicators	
Power	1 LED, red
ZigBee Communication	1 LED, green
Power	
Power Consumption	1.5 W max.
Mechanical	
Flammability	Fire Retardant Materials (UL94-V0 Level)
Dimensions (W x L x H)	33 mm x 87 mm x 107 mm
Installation	DIN-Rail
Environment	
Operating Temperature	-25 $^{\circ}$ C ~ +75 $^{\circ}$ C
Storage Temperature	-30 $^{\circ}$ C ~ +80 $^{\circ}$ C
Humidity	10 ~ 90% RH, Non-condensing

RTD Type Setting (TT)

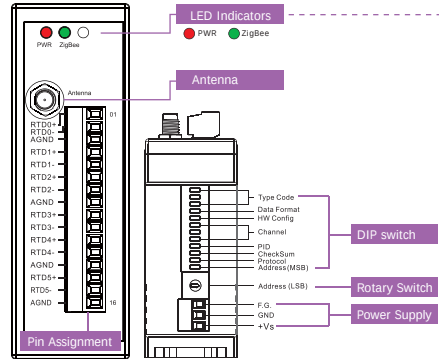
Type Cod	RTD Type	Temperature Range
20	Platinum 100, $\alpha=0.00385$	-100 °C ~ +100 °C
21	Platinum 100, $\alpha=0.00385$	0 °C ~ +100 °C
22	Platinum 100, $\alpha=0.00385$	0 °C ~ +200 °C
23	Platinum 100, $\alpha=0.00385$	0 °C ~ +600 °C
24	Platinum 100, $\alpha=0.003916$	-100 °C ~ +100 °C
25	Platinum 100, $\alpha=0.003916$	0 °C ~ +100 °C
26	Platinum 100, $\alpha=0.003916$	0 °C ~ +200 °C
27	Platinum 100, $\alpha=0.003916$	0 °C ~ +600 °C

Type Cod	RTD Type	Temperature Range
28	Nickel 120	-80 °C ~ +100 °C
29	Nickel 120	0 °C ~ +100 °C
2A	Platinum 1000, $\alpha=0.00385$	-200 °C ~ +600 °C
2E	PT 100, $\alpha=0.00385$	-200 °C ~ +200 °C
2F	PT 100, $\alpha=0.003916$	-200 °C ~ +200 °C
80	PT 100, $\alpha=0.00385$	-200 °C ~ +600 °C
81	PT 100, $\alpha=0.003916$	-200 °C ~ +600 °C

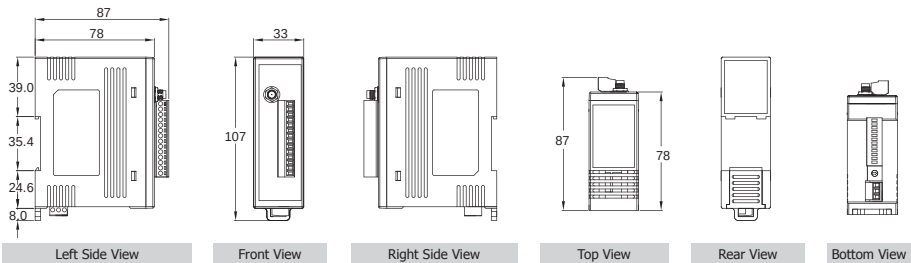
Wiring



Appearance



Dimensions (Units: mm)



Ordering Information

ZB-2015-T CR	Wireless 6-ch RTD Input Module with 3-wire RTD Lead Resistance Elimination (RoHS)
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Important Note: The ZigBee Data Acquisition modules need a ZigBee host converter to coordinate the data transmission route. Please remember to order a ZB-2550, ZB-2550-T, ZB-2550PA, ZB-2570, ZB-2570-T or ZB-2570PA ZigBee host converter when you purchase the ZigBee Data Acquisition products.

Accessories

MDR-20-24	24 Voc/1.0 A, 24 W Power Supply with DIN-Rail Mounting
ZB-2510 CR	ZigBee Repeater (RoHS)
ZB-2510P CR	High Power Amplifier ZigBee Repeater (RoHS)
ZB-2550 CR	RS-485/RS-232 to ZigBee Converter (Host) (RoHS)
ZB-2550P CR	RS-485/RS-232 to High Power Amplifier ZigBee Converter (Host) (RoHS)
ZB-2570 CR	Ethernet/RS-485/RS-232 to ZigBee Converter (Host) (RoHS)
ZB-2570P CR	Ethernet/RS-485/RS-232 to High Power Amplifier ZigBee Converter (Host) (RoHS)