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ZT-2015

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

Features

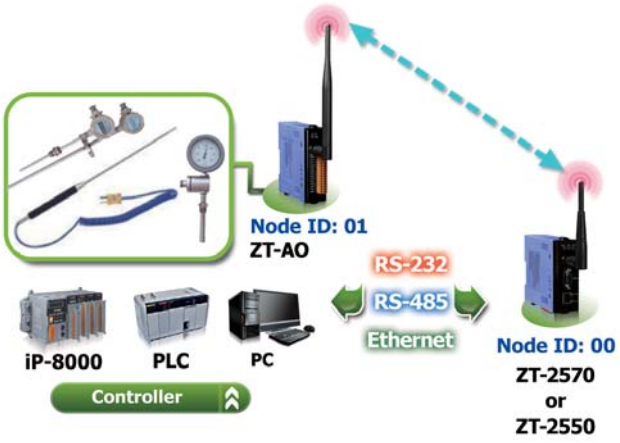
- ISM 2.4 GHz Operating Frequency
- Fully Compliant with 2.4G /ZigBee Specifications
- Wireless Transmission Range up to 700 m
- GUI Configuration Software (Windows Version)
- 3-wire RTD Input with Lead Resistance Elimination
- Individual Channel Configuration
- Open Wire Detection
- Overvoltage Protection
- DIN-Rail Mounting

Introduction

The ZT-2015 offers 6 wireless input channels, each of which can be connected to different kinds of RTD sensors. It features automatic compensation for 3-wire RTD, with long-distance measurement capabilities so that it can measure accurately regardless of the length of the wires. Also the ZT-2015 is fully RoHS-compliant and has qualification for 4 kV ESD protection as well as 3000 VDC intra-module isolation. Users can easily configure the module address, protocol, checksum, ZB-PID, ZB-channel and type code settings using a combination of rotary and DIP switches.

Applications

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



System Specifications

Communication Interface	
Wireless Standards	ZigBee 2007 Pro
Transmission Power	11 dBm (FCC Certificated)
2.4 GHz Antenna	5 dBi Omni directional
Transmission range (LOS)	700 m(Typical)
Certification	CE/FCC, FCC ID
Max. Slaves in a ZigBee Network	255
ZB-100R/ZB-100T Support	Yes
Protocols	Supports DCON and Modbus RTU Protocols
Hot Swap	Rotary and DIP switch
LED Indicators	
Power	1 LED, red
ZigBee Communication	1 LED, green
Isolation	
Intra-module Isolated, Field-to-Logic	3000 VDC
EMS Protection	
ESD (IEC 61000-4-2)	±4 kV Contact for Power Line, Communication Line and each Channel, ±8 kV Air for Random Point
EFT (IEC 61000-4-4)	±4 kV for Power Line
Surge (IEC 61000-4-5)	±3 kV for Power Line
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 110 mm
Installation	DIN-Rail
Environment	
Operating Temperature	-25 °C ~ +75 °C
Storage Temperature	-30 °C ~ +80 °C
Relative Humidity	10 ~ 90% RH, Non-condensing

I/O Specifications

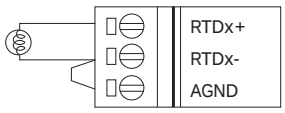
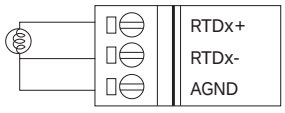
Analog Input	
Input Channels	6
Input Type	2/3-wire RTD
RTD Types	Pt100, Pt1000, Ni120, Cu100, Cu1000
Resolution	16-bit
Sampling Rate	12 Samples/Sec. (Total)
Accuracy	+/-0.05%
Zero Drift	+/-0.5 μV/°C
Span Drift	+/-20 μV/°C
Common Mode Rejection	150 dB
Normal Mode Rejection	100 dB
Open Wire Detection	Yes
Overvoltage Protection	120 VDC/110 VAC
Individual Channel Configuration	Yes
3-wire RTD Lead Resistance Elimination	Yes

RTD Type Setting (TT)

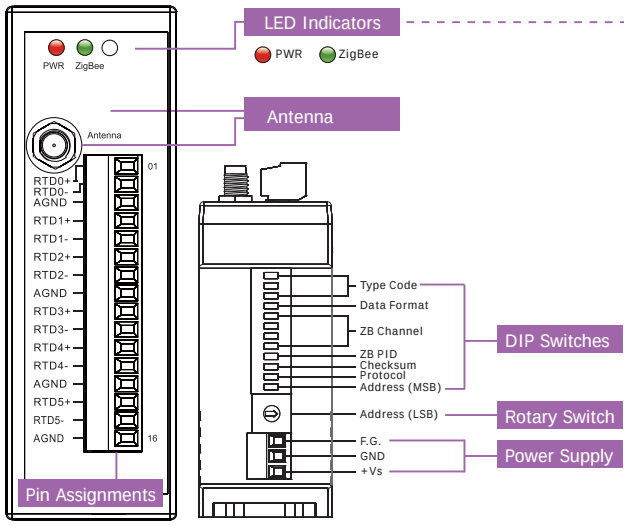
Type Code	RTD Type	Temperature Range
20	Platinum 100, α=0.00385	-100 ~ +100°C
21	Platinum 100, α= 0.00385	0 ~ +100°C
22	Platinum 100, α= 0.00385	0 ~ +200°C
23	Platinum 100, α= 0.00385	0 ~ +600°C
24	Platinum 100, α= 0.003916	-100 ~ +100°C
25	Platinum 100, α= 0.003916	0 ~ +100°C
26	Platinum 100, α= 0.003916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

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

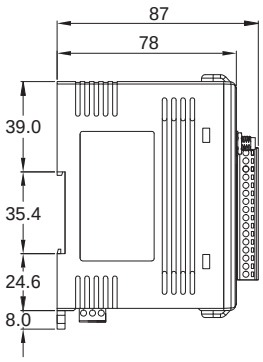
Wiring

	CH0, 1, 2, 5 and 6
2-wire RTD	
3-wire RTD	

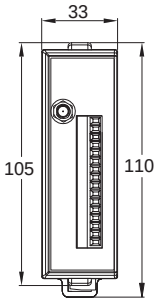
Appearance



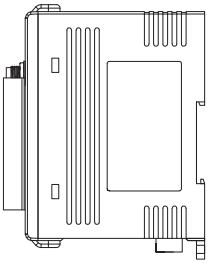
Dimensions (Units: mm)



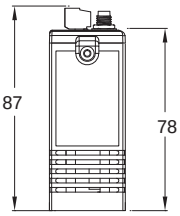
Left Side View



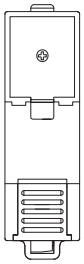
Front View



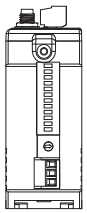
Right Side View



Top View



Rear View



Bottom View

Ordering Information

ZT-2015 CR	Wireless 6-channel RTD Input Module with 3-wire RTD Lead Resistance Elimination (RoHS) (Long Range)

Important Note: Zigbee Data Acquisition modules need a Zigbee host converter to coordinate the data transmission route. Please remember to order a ZT-2550, ZT-2570 ZigBee host converter when you purchase Zigbee Data Acquisition products.

Accessories

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