



## ZB-2018-T/ZB-2018-PA

Wireless 8-channel Analog Input Module with High Voltage Protection

### Features

- ISM 2.4 GHz Operating Frequency
- Fully Compliant with 2.4G IEEE 802.15.4/ZigBee Specifications
- Wireless Transmission Range up to 700 m (PA-Version)
- Wireless Transmission Range up to 100 m (T-Version)
- GUI Configuration Software (Windows Version)
- 8 Differential Analog Input Channels (TC, mV, V)
- Individual Channel Configuration
- Open Thermocouple Detection
- Overvoltage Protection up to 240 Vrms
- DIN-Rail Mounting



### Introduction

The ZB-2018-T/ZB-2018-PA is a wireless 16-bit, 8-channel differential analog input module with an extremely high quality protection mechanism where overvoltage protection is up to 240 Vrms. Input type includes current, voltage as well as thermocouple, and is more suitable for harsh environments. Moreover, a newly-added feature that enables open thermocouple detection makes the ZB-2018-T/ZB-2018-PA more attractive than ever. The ZB-2018-T/ZB-2018-PA is also qualified for 4 kV ESD protection and 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.

### System Specifications

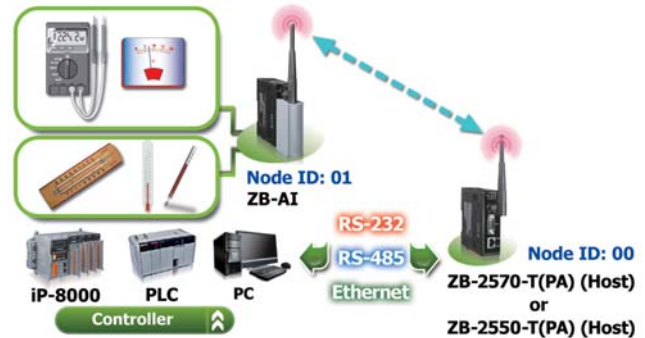
Model	ZB-2018-T	ZB-2018-PA
<b>Communication Interface</b>		
Wireless Standards	ZigBee, IEEE 802.15.4 Standard	
Transmission power	4 dBm	22 dBm
2.4 GHz Antenna	3 dBi Omni directional	5 dBi Omni directional
Transmission Range (LoS)	100 m	700 m (Typical) 1 km (Max.)
Certification	CE/FCC,FCC ID	-
Max. Slaves in a zigbee network	254	
ZB-100R/ZB-100T Supported	Yes	
Protocols	Supports DCON and Modbus RTU Protocols	
Hot Swap	Rotary and DIP switch	
<b>LED Indicators</b>		
Power	1 LED, red	
ZigBee Communication	1 LED, green	
<b>Power</b>		
Power Consumption	0.88 W Max.	
<b>Mechanical</b>		
Flammability	Fire Retardant Materials (UL94-V0 Level)	
Dimensions (W x L x H)	33 mm x 87 mm x 107 mm	
Installation	DIN-Rail	
<b>Environment</b>		
Operating Temperature	-25 °C ~ +75 °C	
Storage Temperature	-30 °C ~ +80 °C	
Relative Humidity	10 ~ 90% RH, Non-condensing	

### Thermocouple Type

Type Code	Temperature Range	Type Code	Temperature Range
J	-210 ~ +760°C	B	0 ~ +1820°C
K	-270 ~ +1372°C	N	-270 ~ +1300°C
T	-270 ~ +400°C	C	0 ~ +2320°C
E	-270 ~ +1000°C	L	-200 ~ +800°C
R	0 ~ +1768°C	M	-200 ~ +100°C
S	0 ~ +1768°C	L2 (DIN43710)	-200 ~ +900°C

### Applications

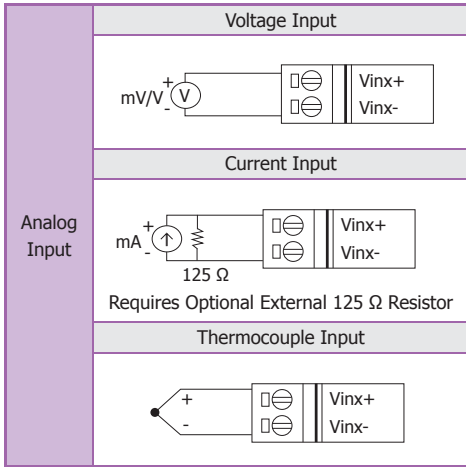
Building Automation, Factory Automation, Machine Automation, Remote Maintenance, Remote Diagnosis, Testing Equipment.



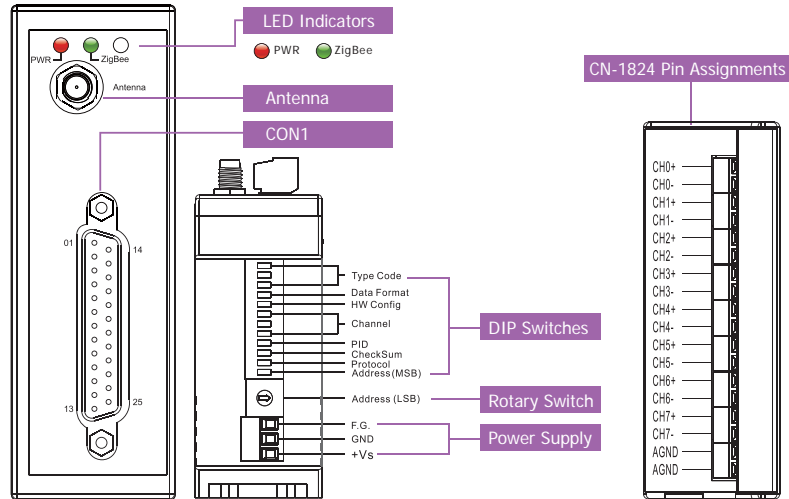
### I/O Specifications

Model	ZB-2018-T	ZB-2018-PA
<b>Analog Input</b>		
Input Channels	8 Differential	
Input Types	+/-15 mV, +/-50 mV, +/-100 mV, +/-500 mV, +/-1V, +/-2.5V, +/-20 mA, 0 ~ 20 mA or 4 ~ 20 mA Thermocouple (J, K, T, E, R, S, B, N, C, L, M, L <sub>DIN43710</sub> ) (Requires Optional External 125 Ω Resistor for current input).	
Resolution	16-bit	
Sampling Rate	10 Samples/Sec. (Total)	
Accuracy	+/-0.1% of FSR	
-3dB Bandwidth	15.7 Hz	
Zero Drift	+/-10 μV/°C	
Span Drift	+/-25 ppm/°C	
Common Mode Rejection	86 dB min.	
Normal Mode Rejection	100 dB	
Input Impedance	>400 kΩ	
Open Thermocouple Detection	Yes	
Overvoltage Protection	240 Vrms	
Intra-module Isolation, Field-to-Logic	3000 Vdc	
ESD Protection	+/-4 kV contact for each channel	

### Wiring

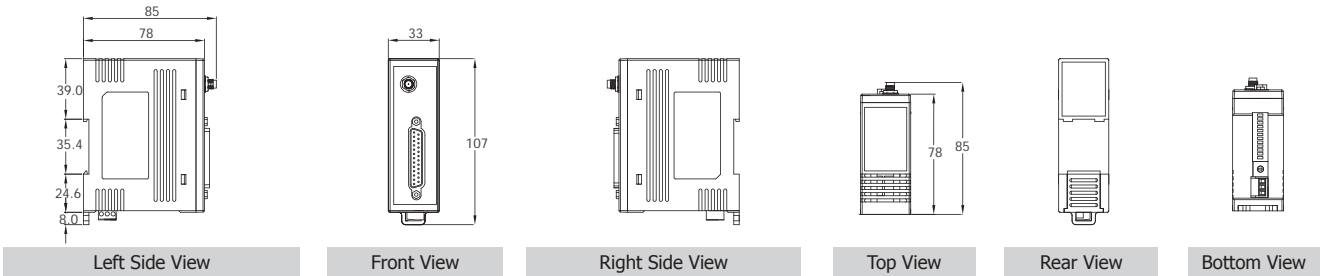


### Appearance

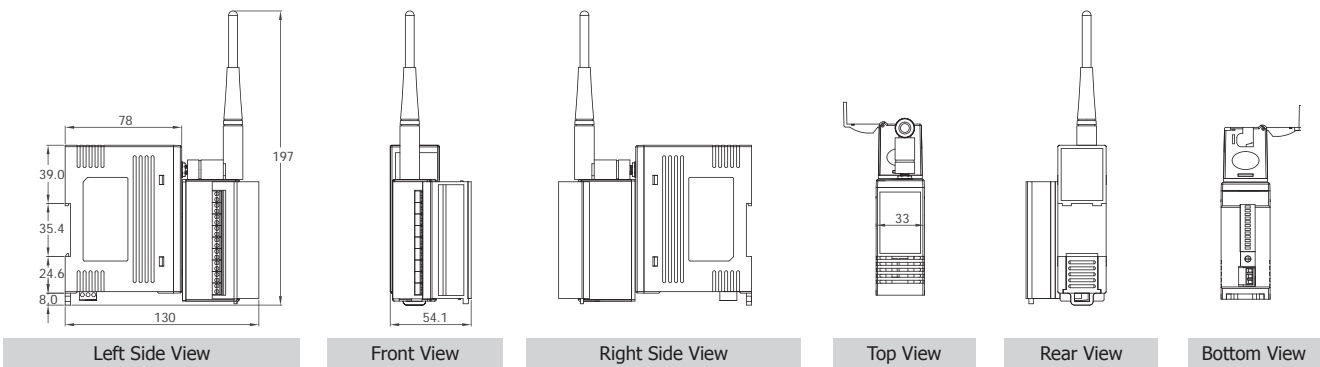


### Dimensions (Units: mm)

ZB-2018-T/ZB-2018-PA



ZB-2018-T/ZB-2018-PA + CN1824



### Ordering Information

ZB-2018-T/S CR	Wireless 8-channel Analog Input Module with High Voltage Protection (RoHS), include CN-1824
ZB-2018-PA/S CR	Wireless 8-channel Analog Input Module with High Voltage Protection (RoHS)(Long Range), include CN-1824
<b>Important Note:</b> ZigBee Data Acquisition modules need a ZigBee host converter to coordinate the data transmission route. Please remember to order a ZB-2550-T, ZB-2550-PA, ZB-2570-T or ZB-2570-PA 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
ZB-2510-T CR	ZigBee Repeater (RoHS)
ZB-2510-PA CR	ZigBee Repeater (RoHS)
ZB-2550-T CR	RS-485/RS-232 to ZigBee Converter (Host)
ZB-2550-PA CR	RS-485/RS-232 to High Power Amplifier ZigBee Converter (Host) (RoHS)
ZB-2570-T CR	Ethernet/RS-485/RS-232 to ZigBee Converter (Host) (RoHS)
ZB-2570-PA CR	Ethernet/RS-485/RS-232 to High Power Amplifier ZigBee Converter (Host) (RoHS)