



## ZB-2042-T/ZB-2042-PA

Wireless 4-channel PhotoMOS Relay Output and 4-channel Open Collector Output Module

### Introduction

The ZB-2042-T/ZB-2042-PA offers 4 PhotoMOS relay output channels and 4 sink-type digital output channels with short circuit protection. Each channel features photo couple isolation. The ZB-2042-T/ZB-2042-PA has 8 LED indicators to display the DO channel status. 4kV ESD protection and 3750 VDC intra-module isolation are the standard. Users can easily configure the module address, protocol, checksum, ZB-PID and ZB-channel settings using a combination of rotary and DIP switches.

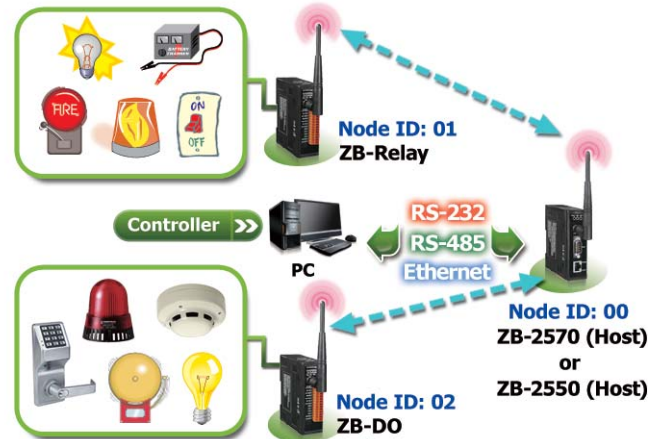
### Features

- 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)
- 4 PhotoMOS Relay Output Channels and 4 Open Collector Digital Output Channels
- Short Circuit Protection
- Surge and ESD Protection
- DIN-Rail Mountable



### Applications

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



### System Specifications

Model	ZB-2042-T	ZB-2042-PA
<b>Communication Interface</b>		
Wireless Standards	ZigBee, IEEE 802.15.4	
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 Support	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	
Digital Output	8 LEDs, red	
<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 ~ +75°C	
Storage Temperature	-30 ~ +80°C	
Relative Humidity	10 ~ 90% RH, Non-condensing	

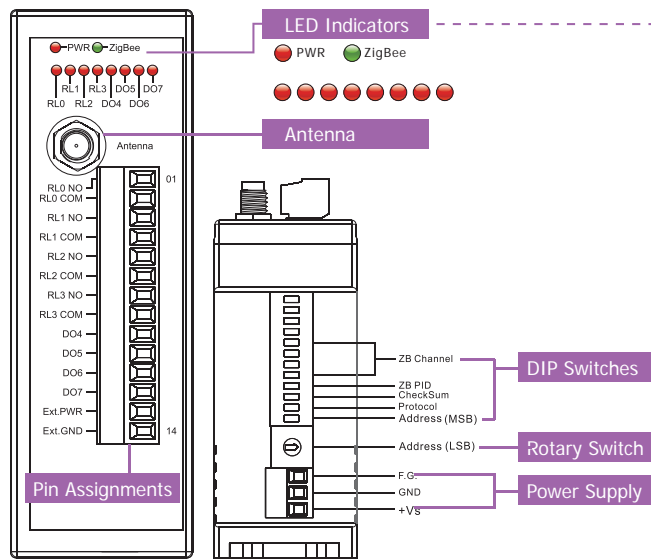
### I/O Specifications

Model	ZB-2042-T	ZB-2042-PA
<b>Relay Output</b>		
Output Channels	4	
Output Types	PhotoMOS Relay, Form A	
Load Voltage	60 VDC/VAC	
Max. Load Current	60 V/1.0 A Operating Temperature: -25 °C ~ +40 °C 60 V/0.8 A Operating Temperature: +40 °C ~ +60 °C 60 V/0.7 A Operating Temperature: +60 °C ~ +75 °C	
Power-on Time	5.0 ms	
Power-off Time	0.5 ms	
<b>Digital Output</b>		
Output Channels	4 (Sink)	
Output Types	Isolated Open Collector	
Max. Load Current	700 mA/channel	
Load Voltage	+5 VDC ~ +50 VDC	
Power-off Time	0.5 ms	
External Power Reversed Protection and Short Circuit Protection	Yes	
Current Limited Protection	1.1 A	
Intra-module Isolation, Field to Logic	3000 VDC	
ESD Protection	+/-4 kV contact for each channel	

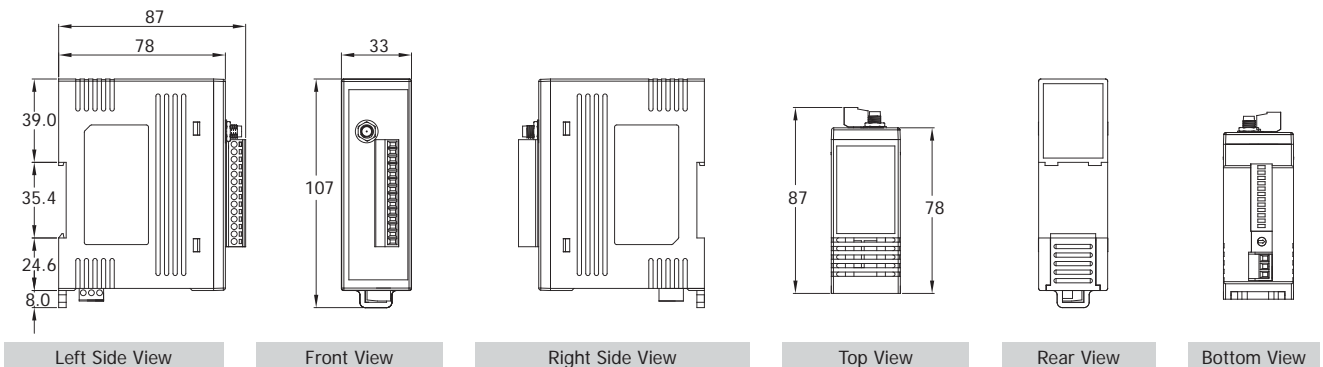
### Wiring

Relay Output	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
	Relay ON	Relay OFF
From A Relay Contact		
Digital Output	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
	Relay ON	Relay OFF
Drive Relay		
Resistance Load	Relay ON	Relay OFF

### Appearance



### Dimensions (Units: mm)



### Ordering Information

ZB-2042-T CR	Wireless 4-channel PhotoMOS Relay Output and 4-channel Open Collector Output Module (RoHS)
ZB-2042-PA CR	Wireless 4-channel PhotoMOS Relay Output and 4-channel Open Collector Output Module (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 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)