



FG-BD100 Beam Detector Product Introduction

شركت صنعت حفاظ الكترونيك برنا (صحاب)

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FG-BD100 Technical Specification



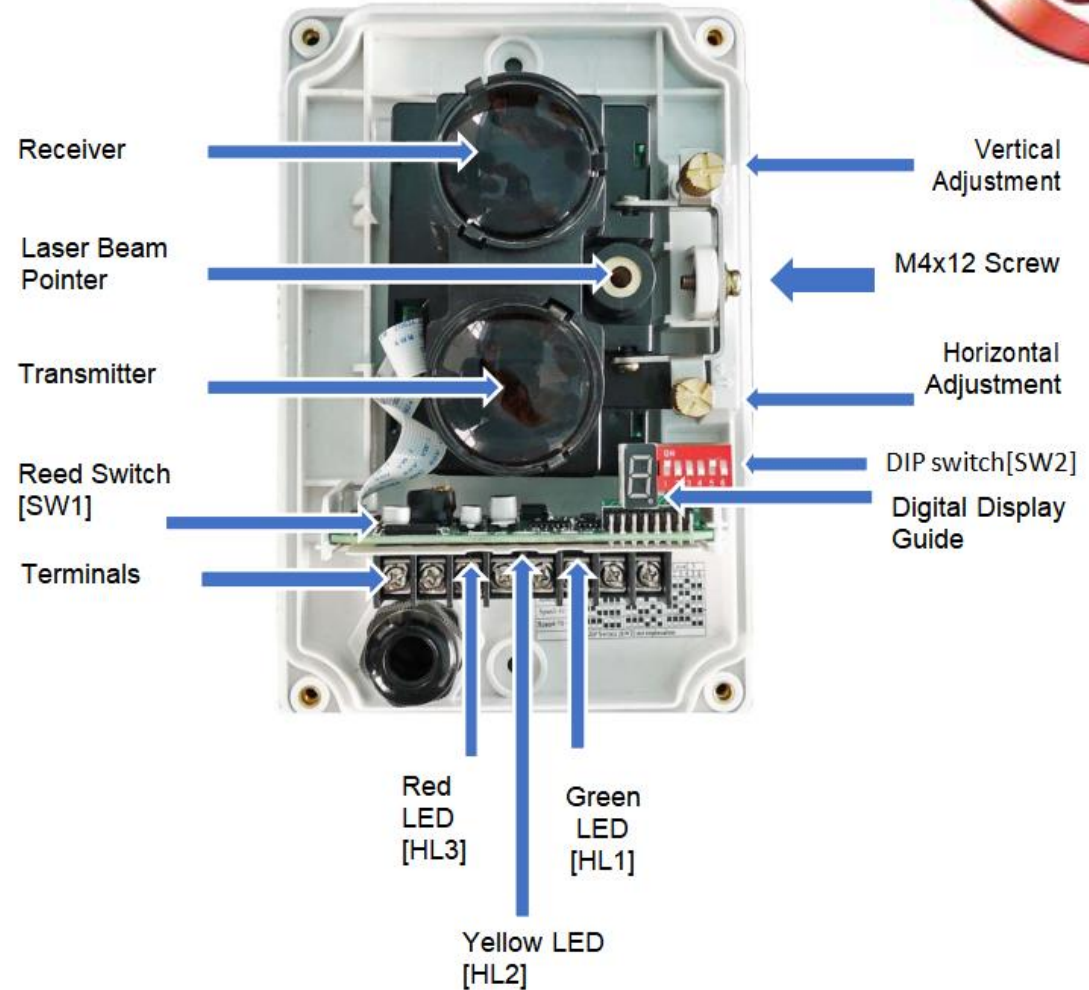
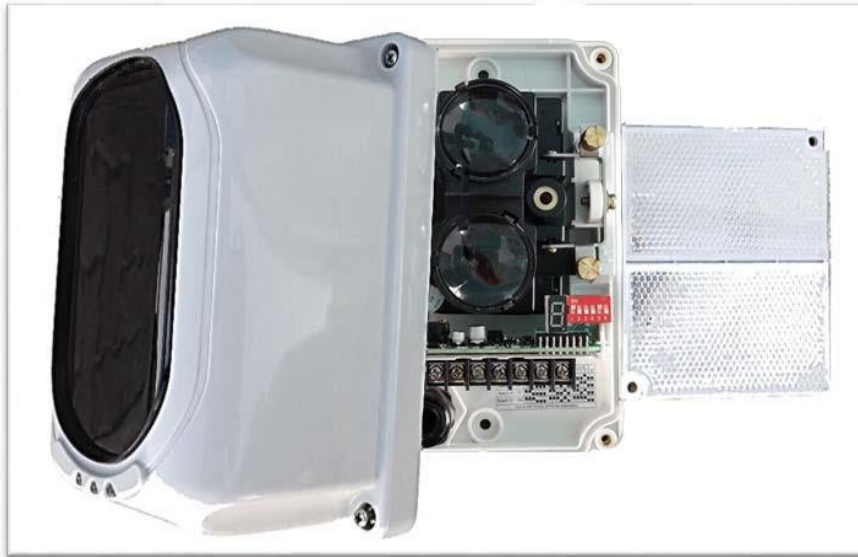
Part Number	FG-BD100
Standard	LPCB/CE-CPR
Listed	EN 54-12:2015
Compliance	BS 5839 Part 1:2017
Fire Detection and Alarm Systems	
Specification	
Operating Voltage	20 V to 28 V DC
Current Parameters	Standby: 23mA Commission: 56mA Alarm: 33mA
Beam Sensor Sensitivity [via Encoder]	Level 1: 2.6 dB High Sensitivity Level 2: 3.8 dB Medium Sensitivity Level 3: 5.8 dB Low Sensitivity
Beam Pathway Length [via Encoder]	Span 1: 8 to 20 meters Limited Path Span 2: 20 to 40 meters Short Path Span 3: 40 to 70 meters Normal Path Span 4: 70 to 100 meters Long Path
Beam Path Angle	±0.4° Directional (This data takes the average of the left and right deflection angles.)
Alignment Guide	Laser Beam Pointer
Digital Display Guide	Nixie Tube
LED Indicator Guide	Red: Fire ; Yellow: Fault ; Green: Alignment
Reset Time	Less than 2 Second
Relay Capacity [Fire & Fault]	Normally Open & Close/ 2.0 A; 30 VDC
Physical	
Material / Colour	ABS / White
Dimension / Weight	L:190.87 x W:126.87 x H:91.96 mm / 440 gm
Weight	0.130 Kg with base
Environmental	
Operating Temperature	-10°C to +50°C
Ingress Protection Rating	IP30 [IP66 glue seal-For permanent fixing, Not EN54-12 approved]
Humidity	0 to 95% Relative Humidity, Non condensing



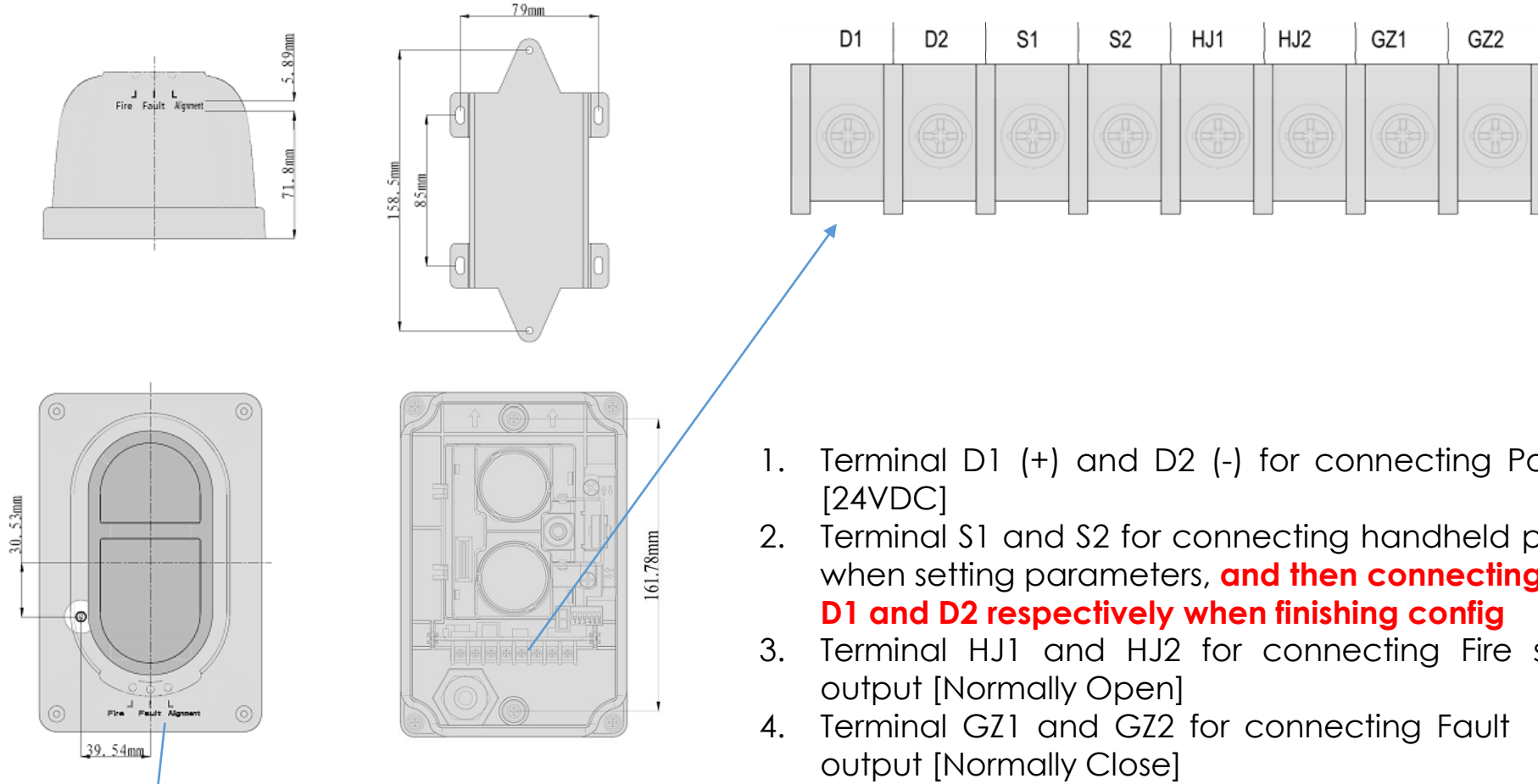
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Product Image (Exterior and Interior)



FG-BD100 Connection Details

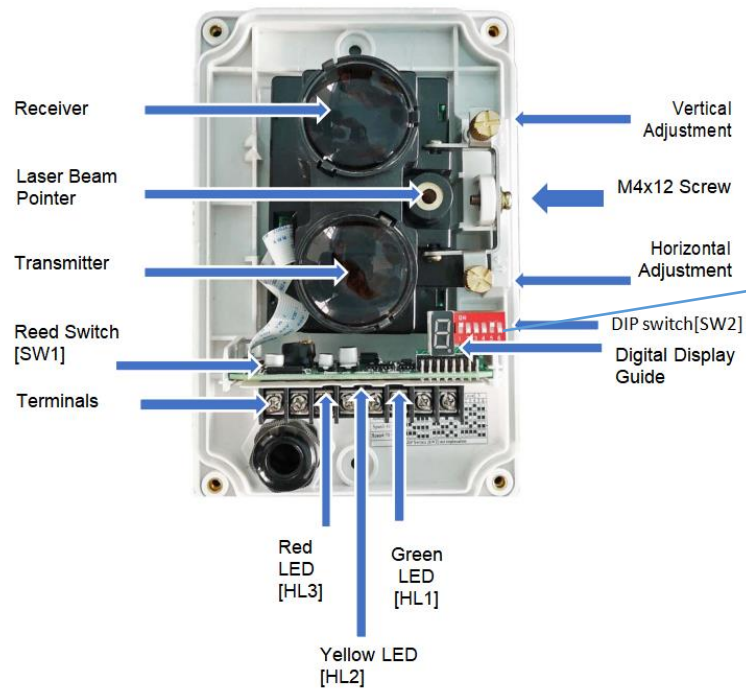


1. Terminal D1 (+) and D2 (-) for connecting Power supply [24VDC]
2. Terminal S1 and S2 for connecting handheld programmer when setting parameters, **and then connecting to terminal D1 and D2 respectively when finishing config**
3. Terminal HJ1 and HJ2 for connecting Fire signal relay output [Normally Open]
4. Terminal GZ1 and GZ2 for connecting Fault signal relay output [Normally Close]

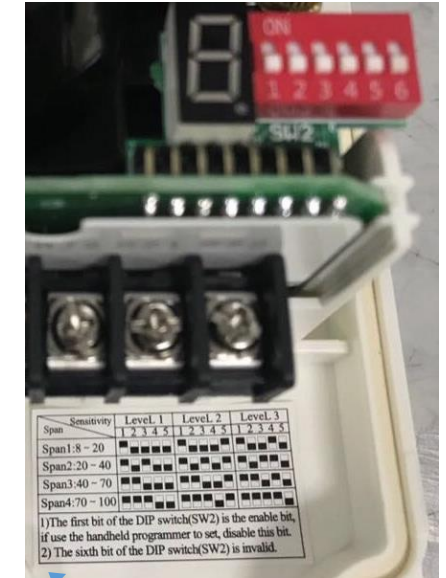
LED Indicators	Colour	Function
Fire	Red	Illuminates when at least one fire alarm event occur
Fault	Yellow	Illuminates when at least one fault alarm event occur in the Detector
Alignment	Green	Illuminates during the commissioning



FG-BD100 Programming Devices (By DIP Switch)

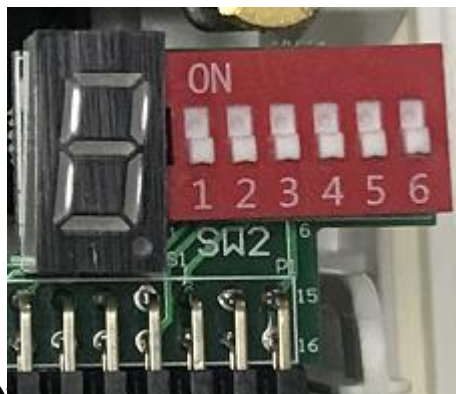


Sensitivity \ Span	Level 1	Level 2	Level 3
Span 1: 8~20m	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6
Span 2: 20~40m	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6
Span 3: 40~70m	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6
Span 4: 70~100m	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6



As shown in the figure of the shell base. Use DIP switch (SW2) to set the parameter set you want (see table on the right).

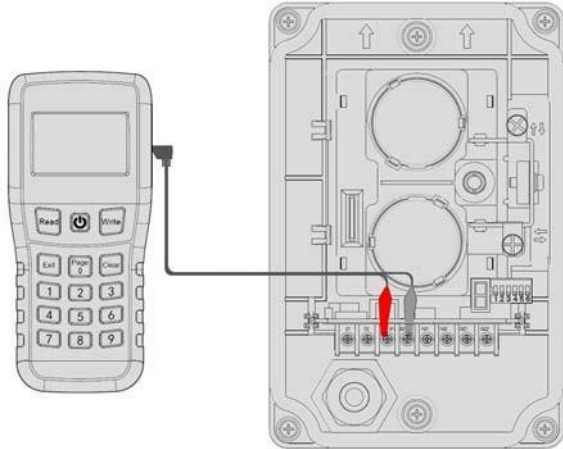
- Note :**
- ① "1" means to Enable/Disable ; if you want adjust parameter by DIP Switch, you should turn "1" to ON state first ;
 - ② The DIP switch has a higher priority than the handheld encoding, which means that if the DIP SWITCH "1" is "ON", TX7932 connection to S1 and S2 cannot be used at this time.
 - ③ "2" and "3" used to adjust span parameter;
 - ④ "4" and "5" used to adjust sensitivity parameter;
 - ⑤ "6" Reserved for future use.



FG-BD100 Programming Devices (By Handheld)

Connect the programming cable to S1 and S2 terminals

Note: The "1" of the DIP switch must not be in the "ON" state, otherwise it will not code properly.



TX7932		
1. Read	View Program	✓
2. Write	Write Address	✓
3. R/W Config	Sensitivity	✓
	Span	✓
4. Set	-	X

READ

Address: 001
Sensitivity: 001
ID: 123456789012
Span m: 70-100

R/W Config

Sensitivity Parameter

Level 1 Sensitivity: 2.6 dB
[Default]
Level 2 Sensitivity: 3.8 dB
Level 3 Sensitivity: 5.8 dB

R/W Config

Span Parameter

Span 1: 8 to 20 meter [Limited Path]
Span 2: 20 to 40 meter [Short Path]
Span 3: 40 to 70 meter [Normal Path-Default]
Span 4: 70 to 100 meter [Long Path]



FG-BD100 Troubleshooting Guide



Trouble	Comment	Troubleshooting Advice
Indicates Faults after wire connection	Wrong connection;	Check wiring, make sure that S1 and S2 are connected to D1 and D2 respectively.
Indicates Faults after commissioning	The detector is Dirty ; The line of sight between detector and mirror was moved ; Not properly commission at the start	Conduct maintenance Re-Commission the detector
Unable to commission	Transmit/Receive diode is not working ; The reed switch is damaged ;	Replace the component
Fire signal can't be cleared	There is obscuration on the optical pathway between the detector and the reflector ; The angle of optical pathway has changed and need to be aligned again	Re-Commission the detector



FG-BD100 Supplied Accessories



The following accessories are included in the package:

- 1.Four Mirrors;
- 2.Twelve screws with plastic wall plugs;
- 3.Two screws with washers;
- 4.Mounting Bracket;
- 5.Opaque/Translucent Material(Test board);
- 6.Magnetic Tool;
- 7.Operation Manual.



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Question and Answer



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