

1. Description

Accessories

Mounting template

User Manual

Cable 2.5m

Mounting screws

4. Mounting Precautions

Mounting height of 3m (9.8 ft) or lower.

Mount within 50mm of the bottom of the door engine cover.

Ensure that there are no moving objects in the detection area.

Ensure that no condensation gets onto the sensor.

Make sure that the sensor is not directly exposed to heavy rainfall.

If possible, ensure there is no accumulation of snow or water on the floor.

Ensure the minimum of reflected sunlight from the floor.

Use different frequency settings for sensors in close proximity.

Infrared detection area setting to maximise pedestrian safety.

The Radar sensor unit may be negatively affected by metal close to or in the detection area.

6. Mounting & Wiring Information

① Attach the mounting template so that it is placed within a 50mm distance from the bottom edge of the door engine cover.

② Drill mounting (Ø3.5mm) and wiring (Ø10mm) holes.

③ Use a flathead screwdriver to remove the sensor cover.

⑤ Attach the sensor to the door

⑥ Connect the power connector.

⑦ Attach the cover.

⑧ How to remove the cover after installation

Red: Power (AC/DC 12V~24V)

Black: Activation Output

White: Safety output

Green: Test Input + (DC 12~24V)

Yellow: Test Input -

Blue: Cable Length(Min) 80mm

WARNING

DO NOT use any flat head screws.

2. Exterior Dimensions

Unit : mm

3. LED Indicators

Green	Standby
Blue	Radar detection
Red	Infrared or Infrared + Radar detection
Green + Red	Infrared reflectivity is too low

5. Technical Specifications

Model	MIR60-UNI
Detection method	Infrared & Radar sensor detection
Installed height	Maximum 3m
Supply voltage	AC(~/), DC(=) 12~24V ± 10 [%] @ 50/60[Hz]
Power consumption	AC12V: 300[mA] (Max) / AC24V: 200[mA] (Max) DC12V: 160[mA] (Max) / DC24V: 80[mA] (Max)
Output	Relay: 1A / 24VDC Photo Mos: Maximum voltage: 400V, maximum current: 120mA Maximum output internal resistant: max. 35Ω
Test input	6[mA] @ 24[VDC]
Weight	250[g]
Color	Black
Accessories	Cable, mounting template, User Manual, mounting screws
Operating temperature	-20 ~ 50[°C]
Operating humidity	0 ~ 90%

Specifications of IR sensor

Detection method	Active infrared reflective
Detection output time	0.5 seconds
Response time	Within 0.2 seconds
Retention time	2 seconds, 30 seconds, 60 seconds, Infinite

Specifications of Radar sensor

Detection method	moving detection
Transmit frequency	24.125 GHz
Response time	Within 0.1 second
Retention time	0.2 second

7. Settings

Function	Menu	Description	Default	Explanation
Infrared presence timer setting	011~014	The infrared portion of the sensor will detect a stationary object/person for the preset presence timer setting. To comply with EN16005 set to 30sec or more.	012	011: 2 sec, 012: 30 sec, 013: 60 sec, 014: ∞
Snow mode setting	030~031	Set to snow mode when false door activations can result from falling snow or snow accumulations.	030	030: [Diagram], 031: [Diagram]
Frequency Setting	041~044	If multiple sensors are installed in close proximity, set different frequency settings to minimize sensor crosstalk	041	041: [Diagram], 042: [Diagram]
Safety Relay Output	071~072	Set to NO or NC	072	071: NO, 072: NC
Radar unit direction detection	081~082	Set to Uni-direction detection or Bi-direction detection	081	081: Uni, 082: Bi
Activation Relay Output	091~092	Set to NO or NC	091	091: NO, 092: NC
Infrared / Radar activation setting	111~113	The Infrared and Radar sensor can be set to function independently or together.	111	111: [Diagram], 112: [Diagram], 113: [Diagram]
TEST Input	130~131	Setting the sensor response to a test signal generated by the automatic door controller in compliance with European standard EN16005.	130	130: [Diagram], 131: [Diagram]
Low reflection setting	140~141	A low reflected infrared signal is indicated by a slow flashing Red/Green LED. To ignore this low reflection error state, set low reflection state to ON 141	140	
Factory reset	151	Reset the sensor to default factory settings		

8. Detection

Infrared detection area depth adjustment

Infrared detection area width adjustment

Radar detection area adjustment (Installed height: 2.2 m) (Default Sensitivity)

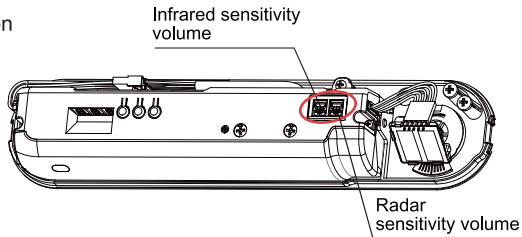
P.1

P.2

9. Operation check

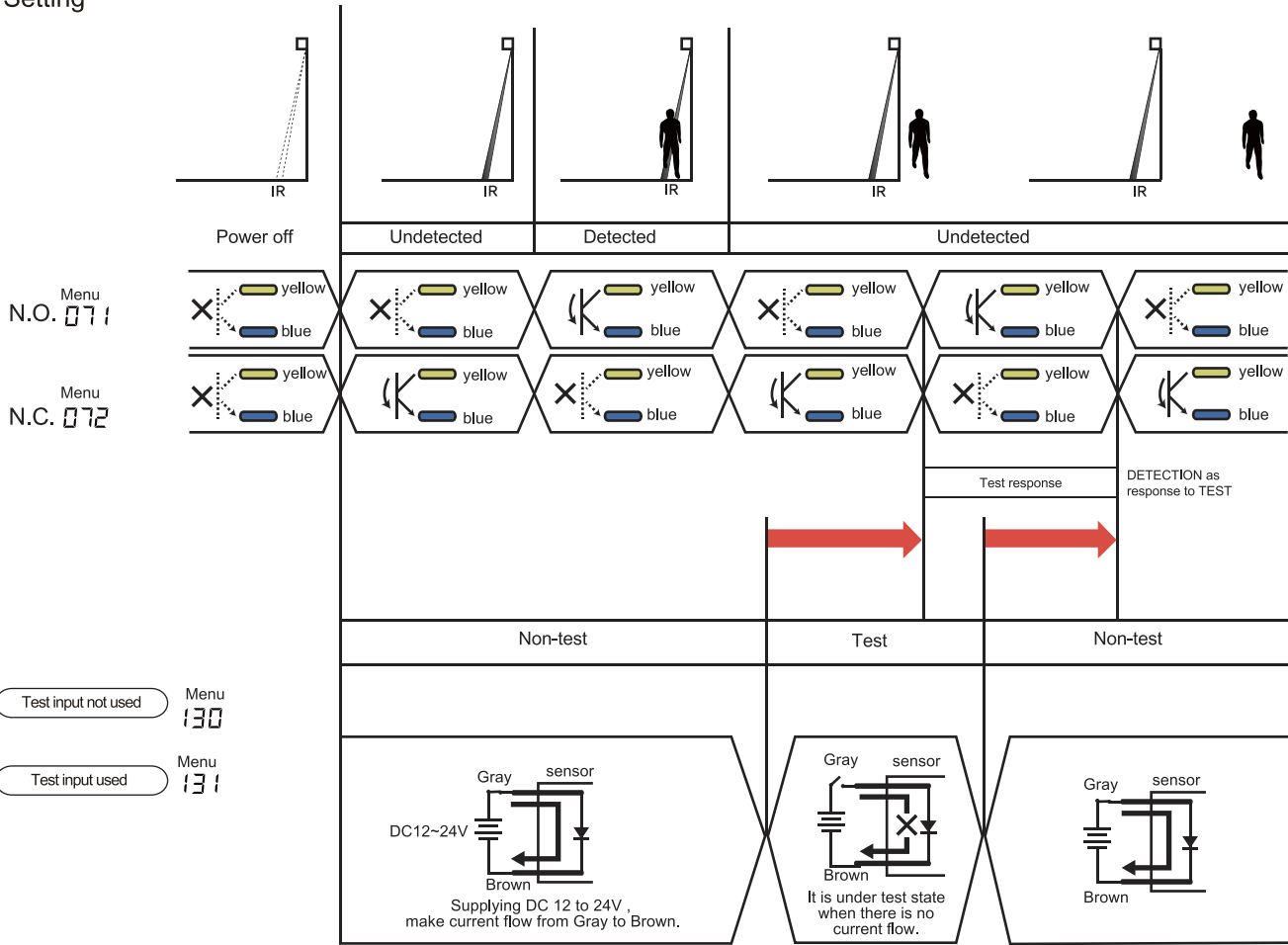
After completing installation, walk into the detection area of the sensor. If you feel that the detection area is incorrect, then adjust it as per section 8. The infrared spot finder BF-2 is recommended to accurately set the infrared detection area. The infrared sensitivity volume can also be increased/ decreased if detection problems persist.

If the device detects when there is nothing in the infrared detection area, turn the sensitivity volume counter-clockwise.

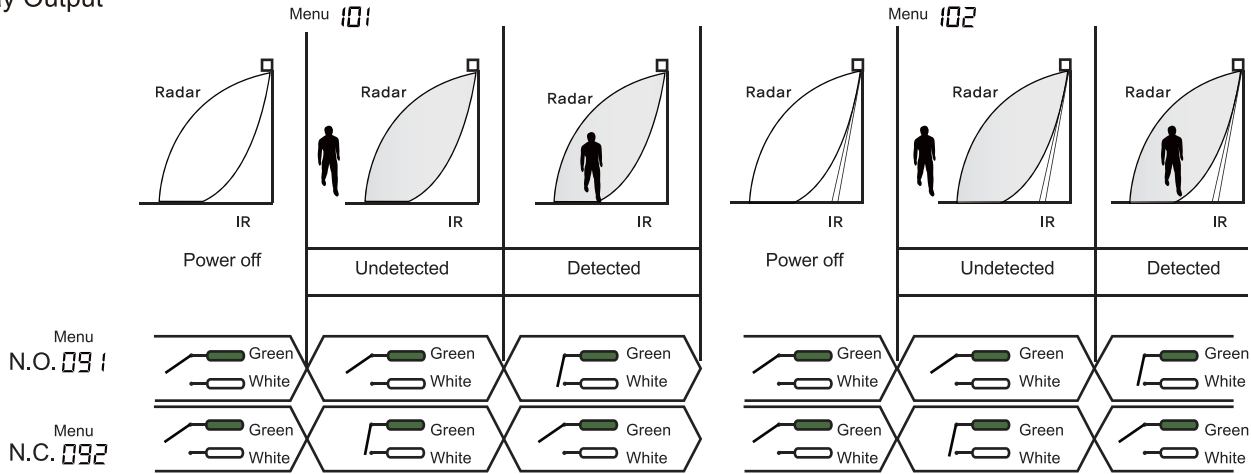


10. Timing of safety output signal

Safety Relay Output / Test Input Setting



Activation Relay Output



11. Troubleshooting

Problem	LED Status	Possible Causes	Troubleshooting Measures
Door will not open even when a person approaches it.	Off	Loose connector	Insert the connector correctly until you hear it click into place
		Voltage failure	Supply the correct voltage to the sensor. (12~24V AC/DC)
		Defective wiring	Recheck wiring
For no reason, the door opens and closes (ghosting)	Green	Sensitivity value is too low	Increase the radar sensitivity volume to an appropriate value.
		There is a moving object in the detection area	Remove the moving object from the detection area.
		The radar sensitivity volume has been set too high relative to the installation environment.	Reduce the radar sensitivity volume to an appropriate value according to the manual.
		Dust, frost or water droplets are on the lens	Clean the sensor lens
		The detection area overlaps with that of another sensor	Set the frequency setting of both sensors to be different values (Menu:041)
		Fallen leaves or Snowfall	Activate the snow mode setting
The automatic door stays in the open position	Red	Infinity presence timer setting used	Set the presence timer setting to 30 or 60 seconds.
		Defective wiring	Recheck wiring
		Excessive reflections in the infrared detection area	Remove the highly reflective object from the detection area or lower the Infrared sensitivity volume.
	Blue	There is a moving object in the radar detection area.	Remove the moving object from the detection area
	Green + Red	Infrared reflections levels are too low	Adjust the mounting height or Infrared sensitivity. If necessary, deactivate low reflection setting(Menu:141)

12. Rain Cover (sold separately)

A rain cover (sold separately) protects the sensor from snow and rain when installed outside.

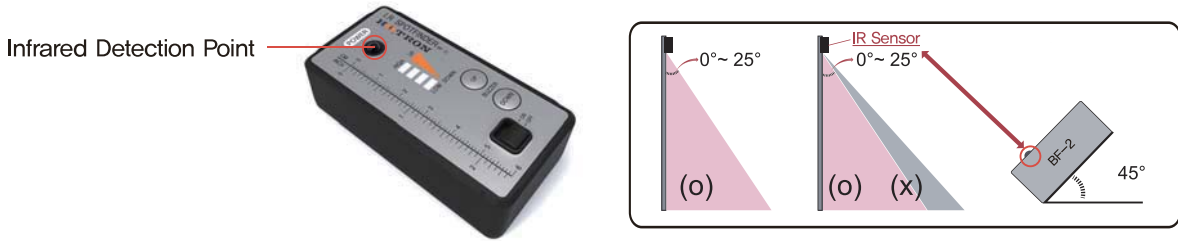


MODEL : WC-IR/BL



13. Spot Finder (sold separately)

A spot finder can be used to accurately locate the position of the infrared detection area and is a useful tool during the commissioning of this sensor.



<Disclaimer> The manufacturer shall not be held responsible for below

- Misinterpretation of the installation instructions, poor connection, random disassembly and inappropriate installation.
- Damage caused by inappropriate transportation.
- Accidents or damages caused by fire, pollution, abnormal voltage, and natural disasters(Earthquake, lightning, wind, floods etc.)
- Loss of business profits, business interruptions, business information losses and other financial losses caused by malfunction or use of the sensor.
- Total compensation beyond the selling price in all cases.