

Installation and Operating Instructions

Bulletin 56RF RFID Rectangular 80 x 90 mm Transceiver

IMPORTANT: SAVE THESE INSTRUCTIONS FOR FUTURE USE.

This publication does not include all specifications, dimensions, or any special installation considerations.
Refer to the product catalog pages for additional information.

Description

The rectangular transceiver is the largest transceiver in the Allen Bradley high frequency 13.56 MHz RFID family and measures 80 x 90 mm. This transceiver is ISO 15693 compliant and can read/write ICODE tags SLI and SL2, allowing infinite tag configuration options from various manufacturers. Built-in LEDs allow for quick visual diagnosis of module status and read/write status.

Rectangular transceivers are recommended for high speed/high performance applications because of their large sensing range. Transceivers can be mounted up to 300 ft (91.4 m) away from the interface module, and tags are readable from distances up to 6.6 in. (168 mm). This transceiver has an enclosure rating of IP67 and is designed to withstand harsh industrial environments.

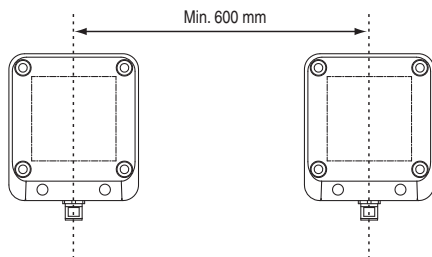
Features

- 13.56 MHz high frequency RFID solution
- ICODE ISO 15693/ISO 18000-3 M1 Compliant
- Read/write speeds up to 625 B/s
- Transceivers can be mounted up to 300 ft (91.4 m) away from interface modules
- Built-in LEDs for diagnostics
- Universal mounting
- Reliable performance in harsh environments

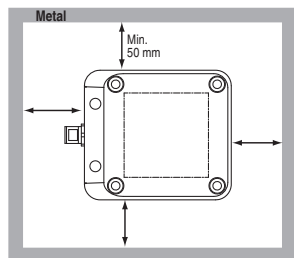
Typical Applications

- Asset tracking
- Data acquisition
- Product handling
- Tool management
- Automotive
- Food and pharmaceutical
- Security and entrance

Minimum Distance Between Transceivers



Minimum Distance from Surrounding Metal



Specifications

General

Enclosure Rating	IP67
Operating Temperature	-25...+70 °C (-13...+158 °F)
Storage Temperature	-40...+85 °C (-40...+185 °F)
Operating Humidity ①	35...95% RH
Storage Humidity ①	25...85% RH
Vibration	10 g at 10...500 Hz
Shock Resistance	50 g
Recommended Sensing Distance ②	4 in. (102 mm)
Max. Sensing Distance ②	6.6 in. (168 mm)
Max. Distance from Interface Module	300 ft (91.4 m)
Compliance	CE, cULus, C-Tick
Type of Equipment	Industrial control

Electrical

Supply Voltage	24V DC (-20...+10%)
Max. Current Consumption	100 mA
Tag Compatibility	ICODE tags SLI, SL2 ISO 15693 / ISO 18000-3 M1
Connector	M12 4-pin male
Communication Systems	Half duplex communication system (RS-485)
Baud Rate (Host)	9600 / 19200 / 38400 / 115200 bps
Frequency	13.56 MHz
Baud Rate (Tag)	26.48 kbit/s
Data Length	8-bit

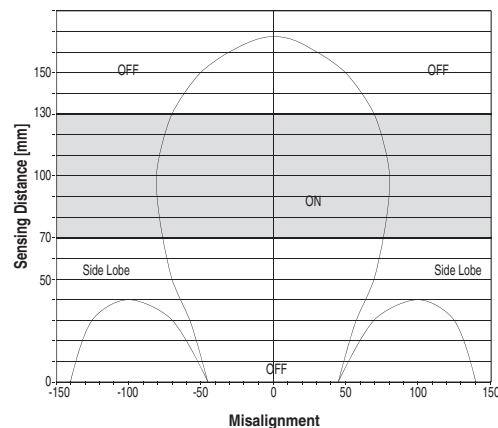
① No condensation

② Range reference for a 50 mm diameter tag

Product Selection

Description	Cat. No.
Rectangular 80 x 90 Transceiver	56RF-TR-8090

Scanning Area ③



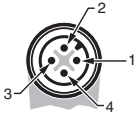
Note: Ideal tag distance for maximum performance is 70...130 mm.

③ Referenced for a 50 mm disc tag.

LED Illumination Pattern

	LED Display	Content
Module Status LED	Green light	Power ON
	No illumination	No power
Read/Write LED	Green light	Normal operation
	Flashing green (short interval)	Communicating
	Flashing amber (short interval)	Sensing tag
	Flashing red (long interval)	Communication error
	Flashing green (long interval)	No tag

Connector Pinout

	Pin	Signal
	1	24V DC
	2	Data +
	3	GND
	4	Data -

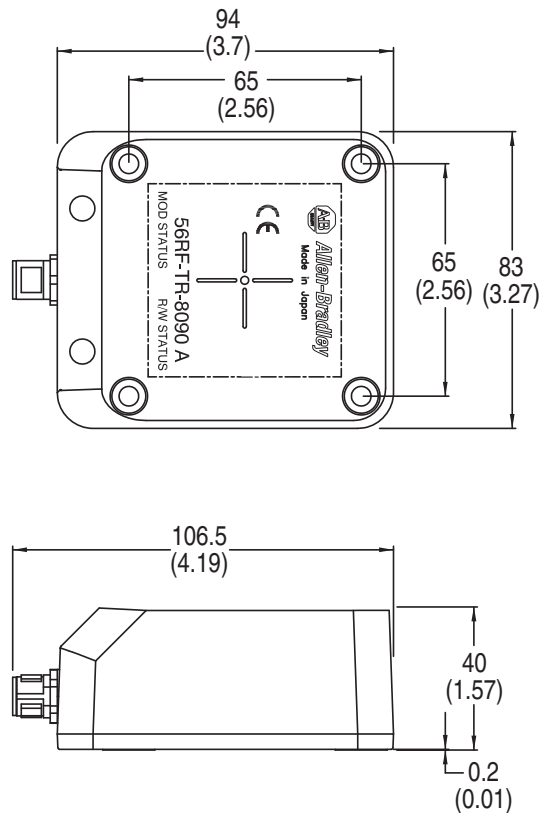
IMPORTANT: Installation of Allen-Bradley products should be in accordance with local and/or national codes. Servicing energized industrial control equipment can be hazardous if not in accordance to recommended safety procedures.

Frequently Asked Questions

Reference the product manuals for more specific installation and configuration information. Manuals are available at www.ab.com/rfid.

Approximate Dimensions – mm (in.)

Dimensions are not intended to be used for installation purposes.



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