

Installation and Operating Instructions

Bulletin 56RF RFID 30 mm Cylindrical Transceiver

IMPORTANT: SAVE THESE INSTRUCTIONS FOR FUTURE USE.

Description

The cylindrical M30 transceiver is designed for use with the Allen-Bradley high frequency 13.56 MHz RFID system. This transceiver is ISO 15693 compliant and can read/write ICODE tags SL1 and SL2, allowing infinite tag configuration options from various manufacturers. Local LEDs allow for quick visual diagnosis of module status and read/write status.

Cylindrical M30 transceivers are recommended for panel mounting and for use with tags with a diameter of 10...50 mm. Transceivers can be mounted up to 91.4 m (300 ft) away from the interface module, and tags are readable from distances up to 75 mm (3.0 in.) This transceiver has an enclosure rating of IP67 and is designed to withstand harsh industrial environments.

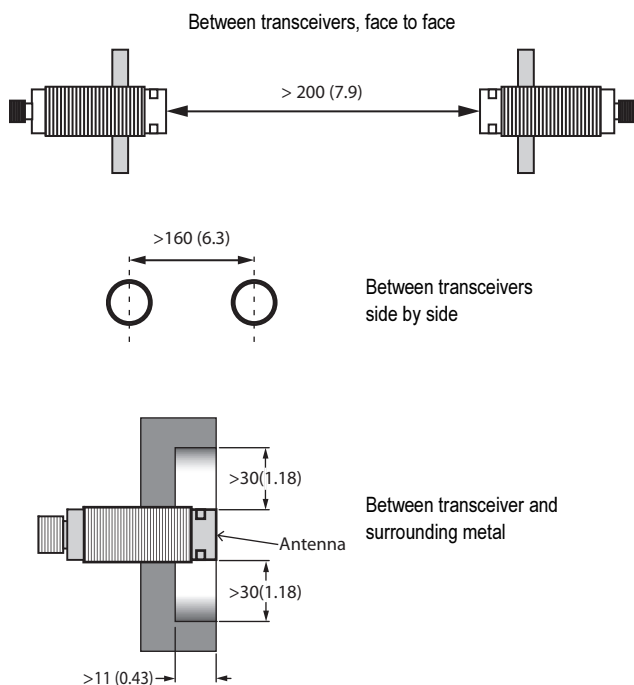
Features

- 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 91.4 m (300 ft) away from interface modules
- Built-in LEDs for diagnostics
- Reliable performance in harsh environments

Typical Applications

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

Minimum Distances [mm (in.)]



Specifications

Supply Voltage	24V DC
Max. Current Consumption	100 mA
Tag Compatibility	ICODE tags SL1, 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, and 115200 bps
Frequency	13.56 MHz
Baud Rate (Tag)	26.48 Kbps
Data Length	8-bit
Operating Temperature [°C (°F)]	-25...+70 (-13...+158)
Storage Temperature [°C (°F)]	-40...+85 (-40...+185)
Operating Humidity*	35...95% RH
Storage Humidity*	25...85% RH
Vibration	10 g at 10...500 Hz
Shock Resistance	50 g
Enclosure Rating	IP67
Material	PBT and nickel-plated steel
Recommended Sensing Distance‡ [mm (in.)]	45 (1.77)
Max. Sensing Distance‡ [mm (in.)]	75 (3)
Max. Distance from Interface Module [m (ft)]	91.4 (300)
Compliance	CE

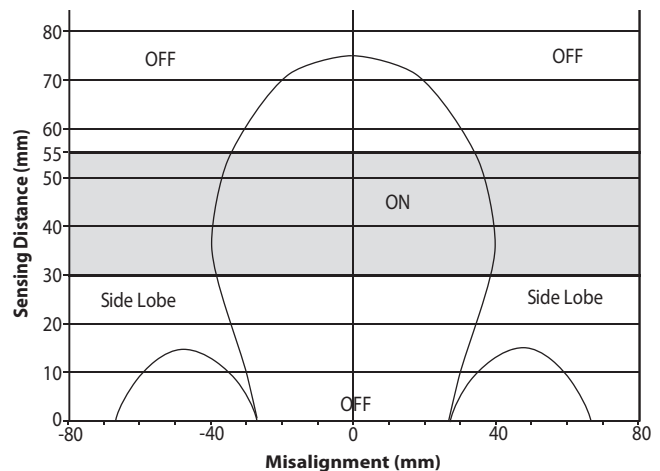
* Non-condensing

‡ Range reference for a 50 mm diameter tag

Product Selection

Description	Cat. No.
M30 cylindrical transceiver	56RF-TR-M30

Scanning Area

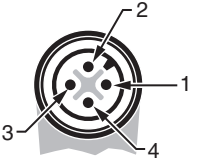


Note: Ideal tag distance for maximum performance is 30...55 mm (1.2...2.2 in.). Referenced for a 50 mm disc tag.

LED Illumination Pattern

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

Connector Pinout

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

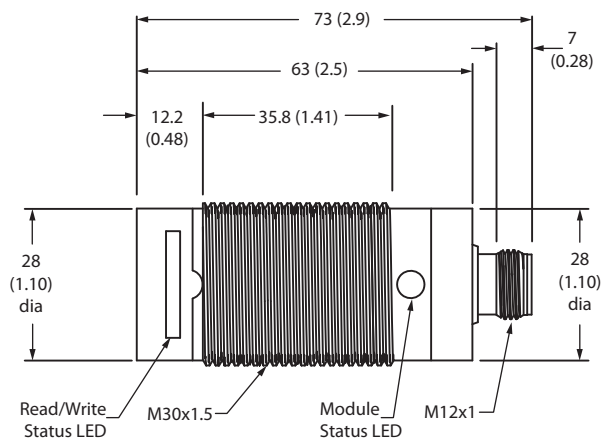
IMPORTANT Installation of Allen-Bradley products should be in accordance with local and/or national codes. Servicing energized industrial control equipment can be hazardous if not in accordance to recommended safety procedures.

Frequently Asked Questions

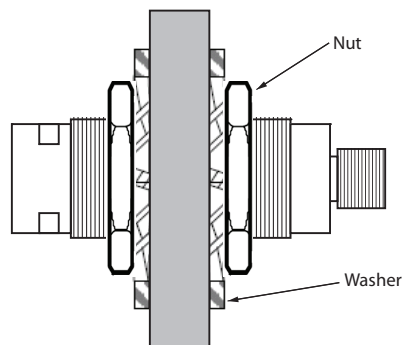
Reference the product manuals for more specific installation and configuration information. Manuals are available at www.ab.com/rfid.

Approximate Dimensions [mm (in.)]

Dimensions are not intended to be used for installation purposes.



Tightening Torque



Torque mounting nuts to 33.9N-m (25 ft-lb).
Nuts and washers included

Mounting Brackets

Description	Cat. No.
Swivel/tilt style	60-2439
Right angle style	871A-BRN30

Replacement Nuts and Washers

Description	Cat. No.
Nut	871C-N4
Washer	871A-LWN30

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Power, Control and Information Solutions Headquarters

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444
 Europe/Middle East/Africa: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640
 Asia Pacific: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846