

Installation Instructions

Original Instructions



Allen-Bradley
by ROCKWELL AUTOMATION



59RF RFID 30 mm Cylindrical Transceiver

Catalog Number 59RF-TR-M30

Features

- IO-Link V1.1 communication
- 13.56 MHz high-frequency RFID solution
- ICODE ISO 15693 compliant
- Built-in indicators for diagnostics
- Reliable performance in harsh environments

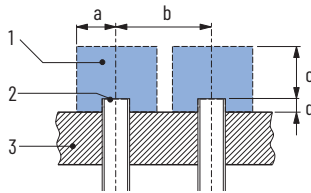


Typical Applications

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

Minimum Distance Between Transceivers

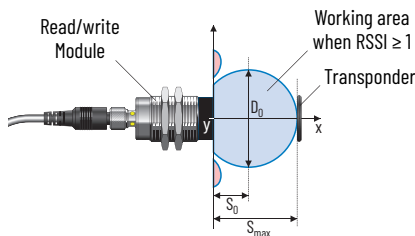
Read/write modules must not mutually influence each other. For this reason, a minimum distance (b) between the devices must be observed.



Item	Description
1	Unique transponder zone
2	Sensing face
3	Support

Item	Description [mm (in.)]
a	45 (1.77)
b	90 (3.54)
c	90 (3.54)
d	10 (0.39)

Transceiver/Transponder Recommended Distances



Transponder Type	S _{max} [mm (in.)]	S ₀ [mm (in.)]	D ₀ [mm (in.)]
Ø50 mm (1.97 in.) diameter	50 (1.97)	23 (0.91)	54 (2.13)

Specifications

Attribute	59RF-TR-M30
Supply voltage	11...32V DC
Current consumption, max	50 mA
Tag compatibility	ISO 15693
Connector	M12 4-pin male
Communication systems	IO-Link V1.1
Communication rate (host)	230,400 bps
Frequency	13.56 MHz
Process data width IN	32 bytes
Process data width OUT	32 bytes
Operating temperature	-25...+80 °C (-13...+176 °F)
Storage temperature	-25...+80 °C (-13...+176 °F)
Enclosure rating	IP67
Material (face/body)	PBTP/chrome-plated brass
Recommended sensing distance ⁽¹⁾	23 mm (0.91 in.)
Sensing distance ⁽¹⁾ , max	50 mm (1.97 in.)
Distance from IO-Link master, max	20 m (65.6 ft)
Compliance	CE, FCC, IC, cULus

(1) Range reference for 50 mm (1.97 in.) diameter tag.

Indicator Illumination Pattern

Item	Description
1	Tag receive signal strength indication (RSSI) level = RSSI threshold. Transponder is in read/write mode (RWM) recommended working area.
2	RWM RSSI threshold limit set in the RWM configuration parameter menu.
3	Tag RSSI level < RSSI threshold. Transponder is in RWM maximal sensing range.
4	Tag is out of RWM sensing range.

This status indicator is yellow or green. Yellow condition dominates green.

	Yellow		Green
	IO-Link	SIO	
ON	Area 2	Q1 is ON	RWM is ON and standalone mode (SIO) is used
OFF	Area 4	Q1 is OFF	RWM is OFF
Blinking (1 Hz)	—	—	RWM is ON and IO-Link mode is used
Blinking (5 Hz)	Area 3	Q1 compares Data and Area 3	Q1 is TAG presence and Area 3

Connector Pinout

Pin	Signal
1	24V DC
2	Data (SIO Q2)
3	GND
4	Data (SIO Q1) IO-Link

IMPORTANT Installation 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.

Mounting Brackets

Description	Cat. No.
Swivel/tilt style	60-2649
Right angle style	871A-BRN18

Replacement Nuts and Washers

Description	Cat. No.
Nut	871C-N3
Washer	871A-LWN18

FCC Notice (For U.S. Customers)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions: (1) This device may not cause harmful interference; and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

Changes and modifications not expressly approved by Rockwell Automation can void your authority to operate this equipment under Federal Communications Commissions rules.

IC Information

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference; and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Waste Electrical and Electronic Equipment (WEEE)







At the end of life, this equipment should be collected separately from any unsorted municipal waste.

Rockwell Automation maintains current product environmental compliance information on its website at rok.auto/pec.

Your comments help us serve your documentation needs better. If you have any suggestions on how to improve our content, complete the form at rok.auto/docfeedback.

For technical support, visit rok.auto/support.

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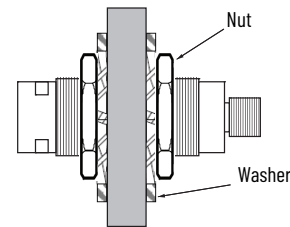
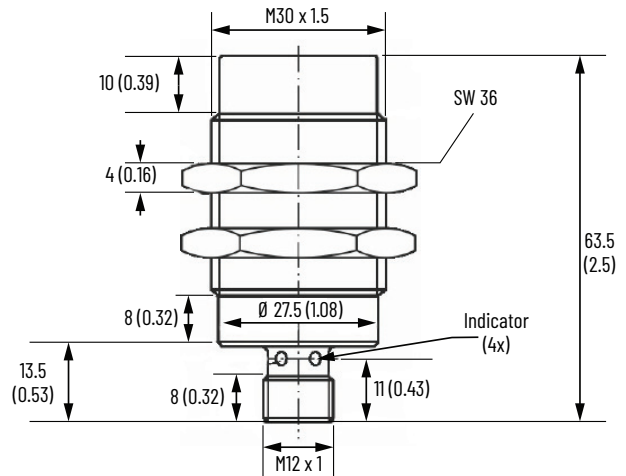
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Approximate Dimensions

Dimensions are shown in mm (in.) and are not intended to be used for installation purposes.



Torque mounting nuts to 70 N•m (51.6 ft•lb).
Nuts and washers included (on M12 connector).

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