WRZ-STR0000-2 Series Wireless Refrigerator or Freezer Temperature Transmitter and Probe Assemblies Catalog Page

2023-05-05

LIT-1900630

Description

Use the WRZ-STR0000-2 Series Wireless Refrigerator or Freezer Temperature Transmitter and Probe Assemblies to sense the temperature in either a refrigerator or freezer unit, and transmit wireless temperature data to a receiver or controller.

The new WRZ-STR0000-2 Series Wireless Sensors are compatible with the new WRG1830/ZFR183x Pro Series Wireless Field Bus, but also backwards compatible with the WNC1800/ZFR182x Pro Series Wireless Field bus System, the ZFR181x Series Wireless Field bus System, and the WRZ-7860-0 Receiver.

In a mesh application, the WRZ sensor is compatible with the ZFR18xx Wireless Field Bus Systems (ZFR181x, ZFR182x, ZFR183x). See Table . The transmitter communicates with system controllers through the ZFR18xx Router, the ZFR or the ZFR Pro Series Router. Up to nine WRZ Series Sensors can associate with a single Controller.

You can also use the WRZ-STR0000-2 Series Wireless Refrigerator or Freezer Temperature Transmitter and Probe Assembly in a one-to-one application non-mesh network to communicate with a WRZ-7860-0 Wireless Receiver. The WRZ-7860-0 Receiver transfers data to the controller through the Sensor Actuator (SA) communication bus. In an application, one WRZ-STR0000-2 Series Transmitter reports to one WRZ-7860-0 Receiver, but up to five WRZ-STR0000-2 Series Transmitters can associate with a single WRZ-7860-0 Receiver.

The WRZ-STR0000-2 Series Transmitter can transmit sensed temperature and low battery conditions to an associated router or receiver. Use the WRZ-STR0000-2 Series Wireless Refrigerator or Freezer Temperature Transmitter and Probe Assemblies for indoor, intra-building applications only.

Refer to the *WRZ-STR0000-2 Series Wireless Refrigerator or Freezer Temperature Transmitter and Probe Assemblies Product Bulletin (LIT-12011604)* for important product application information.

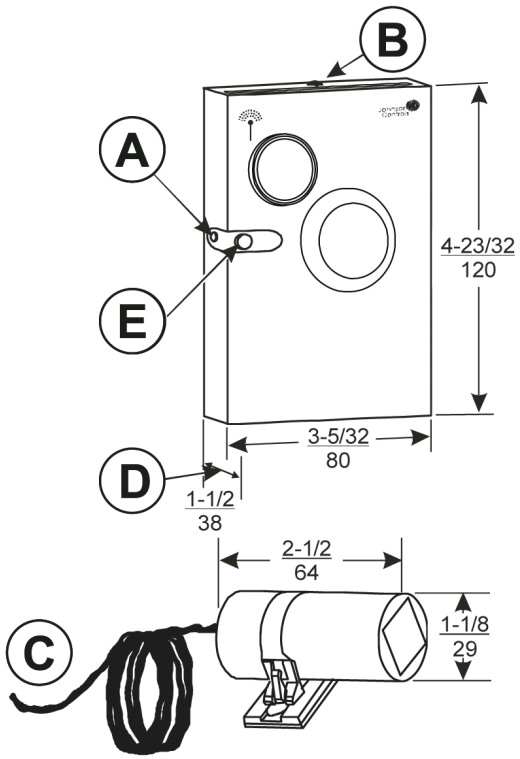
Important: Use the WRZ-STR0000-2 Series Wireless Refrigerator or Freezer Temperature Transmitter and Probe Assemblies to provide an input to equipment under normal operating conditions. Where failure or malfunction of the transmitter and probe assembly could lead to personal injury or property damage to the controlled equipment or other property, you must design additional precautions into the control system. Incorporate and maintain other devices, such as supervisory or alarm systems or safety or limit controls, intended to warn of or protect against failure or malfunction of the transmitter and probe assembly.

Johnson Controls

Dimensions

See the following figure for features and dimensions of the WRZ-STR0000-2 Series Wireless Refrigerator or Freezer Temperature Transmitter and Probe Assemblies.

Figure 1: WRZ-STR0000-2 features and dimensions, in. (mm)



Callout	Description
A	Signal test button
B	Tamper resistant set screw
C	9 ft (2.7 m) wire lead
D	Back of base to front of protrusion
E	°F/°C button

Features and benefits

- System design: leverages the web-based platform to provide wireless temperature data transmission to a field device across the network.
- Application mobility and flexibility: provides a wireless alternative to hard-wired counterparts, and facilitates easy initial location and relocation of the temperature transmitter and probe assembly.
- One-to-one wireless non-mesh network communication: enables quick, economical, and low-maintenance installation, which reduces overall installation costs.
- Wireless mesh network communication: enhances reliability through automatically forming wireless links and redundant wireless data transmission paths.
- Temperature monitoring and temperature range deviation alarm system: replaces manual daily temperature monitoring with continuous electronic temperature monitoring.
- High degree of refrigerator or freezer narrow range accuracy: enables the temperature transmitter and probe assembly to monitor temperature-sensitive contents within the refrigerator or freezer unit.
- LCD: indicates real-time status of the environment.
- Acrylic-encased temperature sensor probe: acts as a buffer to eliminate false temperature spikes when you open the refrigerator or freezer door.
- Fahrenheit/Celsius (°F/°C) button: toggles the display temperature between degrees Celsius and degrees Fahrenheit.
- Temperature sensor probe assembly connects to the temperature transmitter in the field: ensures that you can easily replace the temperature sensor probe assembly.

Version compatibility

See the following table for information on the compatibility of the WRZ Series Sensors with wireless field bus systems.

Table 1: WRZ compatibility

Wireless field bus system	Compatibility	
	-0 models	-2 models
WRZ-7860	x	x
ZFR181x	x	x
ZFR182x	x	x
ZFR183x		x

Johnson Controls

Repair information

If the WRZ-STR0000-2 Series Wireless Refrigerator or Freezer Temperature Transmitter and Probe Assembly fails to operate within its specifications, replace the unit. For a replacement assembly, contact the nearest Johnson Controls® representative.

ⓘ **Note:** You can order the temperature sensor probe separately from the transmitter assembly. See Table 2 for ordering information.

Batteries

The two AA alkaline batteries supplied with the WRZ-STR0000-2 Series Transmitter have a life of 5 to 10 years or more, depending on the model and application. The transmitter reports a low battery condition to the receiver or controller, which relays the low battery condition to the system. The low battery condition is also shown on the LCD on the face of the transmitter.

Replace the transmitter batteries with two high-quality AA alkaline batteries as necessary. Ensure to install the batteries in the correct polarity.

ⓘ **Note:** When you replace the batteries, replace both batteries at the same time. Batteries removed from this device must be recycled or disposed of in accordance with local, regional, and national regulations. Only certified technicians or qualified building maintenance personnel should service Johnson Controls products. Li-ion batteries can be substituted to extend sensor life, depending on the model and application. Do not mix lithium and alkaline batteries in this device.

Ordering information

See the following table for temperature transmitter and probe ordering information, including available accessories.

Table 2: Selection chart

Product code	Description
WRZ-STR0000-2	Wireless Room Temperature Sensor with Remote 3k Refrigerator or Freezer Temperature Probe, display, °F/°C button, and manual occupancy override button, compatible with ZFR183x and WRZ-7860-0
WRZ-SST-110	Wireless Sensing System Tool for use with ZFR wireless systems. Supports all low or high power configurations
ZFR-HPSST-0	Wireless Sensing System Tool for use with ZFR wireless systems. Supports all low or high power configurations.
T-4000-119	Allen-head adjustment tool: 1/16 in. (1.6 mm), 30 tools in each bag

Johnson Controls

Technical specifications

Table 3: WRZ-STRxxxx-0 Series Wireless Refrigerator or Freezer Temperature Transmitter and Probe Assemblies technical specifications

Specification	Description
Power requirements	Two 1.5 VDC AA alkaline batteries included with the sensor supply 3 VDC Battery life: 60 to 120 months, depending on the model and application
Addressing	DIP switches, field-adjustable MS/TP address, network number, and zone address
Transmitter ambient conditions	Operating: 23°F to 111°F (-5°C to 44°C), 5% RH to 95% RH, noncondensing Storage: -4°F to 140°F (-20°C to 60°C), 5% RH to 95% RH, noncondensing.
Temperature sensor probe ambient conditions	Operating: -40°F to 95°F (-40°C to 35°C) Storage: -40°F to 140°F (-40°C to 60°C), 5% RH to 98% RH, noncondensing
RF band	Direct-sequence, spread-spectrum, 2.4 GHz ISM band
Transmission power	10 mW maximum
Transmission range	Mesh network application: 100 ft (30 m) maximum indoor line-of-sight, 50 ft (15 m) practical average indoor. Non-mesh network, one-to-one application: 150 ft (45 m) maximum indoor line-of-sight, 100 ft (30 m) practical average indoor.
Transmissions	Every 120 s ±20 s
Temperature system broad range accuracy	±1.8F°/±1.0C° over the range of -40°F to 95°F (-40°C to 35°C)
Refrigerator or freezer narrow range accuracy	±0.9F°/±0.5C° over the range of -9°F to 41°F ((-23°C to 5°C)
Temperature sensor type	External 3K ohm NTC thermistor
Temperature sensor thermal characteristics	See Table
Materials	Transmitter: NEMA 1 white plastic housing Temperature sensor probe: clear acrylic cylinder
Mounting	Transmitter: surface mounted with factory-installed, double-sided adhesive foam tape Temperature sensor probe: surface mounted with factory-installed probe mounting strap and double-sided adhesive foam tape
Compliance	United States: Transmission complies with FCC Part 15.247 Regulations for Low Power Unlicensed Transmitters; Transmitter FCC Identification: TFB-MATRIXL or OEJ-WRZRADIO.
	Canada: Industry Canada IC: 5969A-MATRIXL or 279A-WRZRADIO.
CE	Europe: CE Mark – Johnson Controls declares that this product is in compliance with the essential requirements and other relevant provisions of the RED, EMC, LVD, and RoHS Directives.
ANATEL	Brasil: Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados. ANATEL: 05194-22-06174.
NOM UL	México: La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada. IFT, Número: RCPJOWR22-4254.
Shipping weight	0.55 lb (0.25 kg)

Johnson Controls

The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls shall not be liable for damages resulting from misapplication or misuse of its products.

Product warranty

This product is covered by a limited warranty, details of which can be found at www.johnsoncontrols.com/buildingswarranty.

Software terms

Use of the software that is in (or constitutes) this product, or access to the cloud, or hosted services applicable to this product, if any, is subject to applicable end-user license, open-source software information, and other terms set forth at www.johnsoncontrols.com/techterms. Your use of this product constitutes an agreement to such terms.

Patents

Patents: https://jcipat.com

Single point of contact

APAC	EU	UK	NA/SA
JOHNSON CONTROLS C/O CONTROLS PRODUCT MANAGEMENT NO. 32 CHANGJIANG RD NEW DISTRICT WUXI JIANGSU PROVINCE 214028 CHINA	JOHNSON CONTROLS VOLTAWEG 20 6101 XK ECHT THE NETHERLANDS	JOHNSON CONTROLS TYCO PARK GRIMSHAW LANE MANCHESTER M40 2WL UNITED KINGDOM	JOHNSON CONTROLS 5757 N GREEN BAY AVE. GLENDALE, WI 53209 USA

Contact information

Contact your local Johnson Controls representative: www.johnsoncontrols.com/locations

Contact Johnson Controls: www.johnsoncontrols.com/contact-us

© 2023 Johnson Controls. All rights reserved. All specifications and other information shown were current as of document revision and are subject to change without notice.
www.johnsoncontrols.com

Johnson Controls