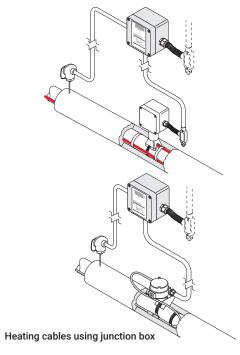
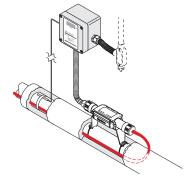
JBS-100-ECW-A

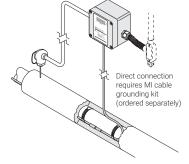


WALL-MOUNTED DIGITAL ELECTRONIC CONTROLLER FOR NONHAZARDOUS LOCATIONS





Heating cables using RayClic connection kit



MI heating cable using direct connection

PRODUCT OVERVIEW

The nVent RAYCHEM JBS-100-ECW-A is an electronic temperature controller that provides accurate control for all heating cables.

Housed in a TYPE 4X enclosure and designed to be wall mounted, the unit includes a window and a digital display that shows the monitored actual/set point temperatures and alarm conditions (RTD failure, high or low temperature) if detected. Alarm conditions can be remotely indicated via a form C dry contact. Status LEDs indicate whether the digital display is showing the set point or actual temperature.

Programming the set point temperature, deadband, and high and low alarm thresholds on the JBS-100-ECW-A is accomplished using the built-in digital display and push buttons.

The JBS-100-ECW-A is programmable to maintain temperatures of 425°F (218°C), can be used with voltages from 100 to 277 Vac, and is capable of switching current up to 30 Amps.

Temperature data is provided by a customer supplied 100ohm platinum RTD, which can provide feedback for either temperature maintenance or ambient sensing for freeze protection.

The kit contains all the necessary materials for a complete installation. For a direct connection to a RAYCHEM MI cable, eliminating the need for a field power connection device, a grounding kit is required (ordered separately).

Raychem-DS-H57475-JBS100ECWA-EN-1805 nVent.com | 1

GENERAL

Approvals Nonhazardous locations

C US

Supply voltage 100-277 Vac ±10% 50-60Hz

Common supply for controller and heat tracing circuit

ENCLOSURE

Protection TYPE 4X

Material Fiberglass reinforced polyester plastic

Entries 2 x 3/4 in (19 mm) conduit entries for power and heater

1 x 1/2 in (13 mm) conduit entry for RTD sensor

Relative humidity 0% to 90%, noncondensing

Ambient installation and usage temperature -40°F to 140°F (-40°C to 60°C)

CONTROL

Relay type Double-pole, mechanical

Control range 32°F to 425°F (0°C to 218°C)

Deadband Adjustable 2°F to 10°F (2°C to 10°C)

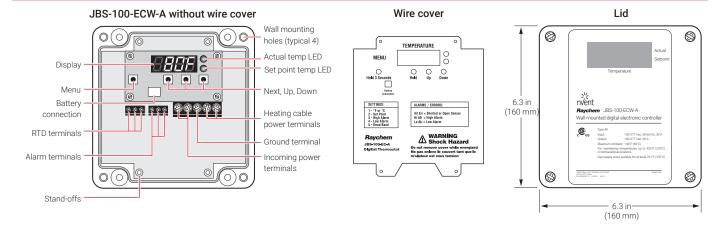
Accuracy $\pm 3^{\circ}F$ (1.7°C) of set point

INPUT POWER

Voltage 277 Vac nominal, 50/60 Hz maximum

Current 30 A maximum
Circuit breaker rating 40 A maximum

ENCLOSURE



MONITORING AND ALARM OUTPUT

Temperature Low alarm range: 20°F-420°F (-6°C-216°C) from set point, or OFF

High alarm range: 38°F-482°F (3°C-250°C) from set point, or OFF

RTD failure Shorted or open RTD sensor

Alarm relay Form C: 2 A at 277 Vac, 2 A at 48 Vdc

Normally energized; changes state upon an alarm

Voltage Alarm relay changes state upon loss of voltage to the controller

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TEMPERATURE SENSOR (NOT INCLUDED)

Input type 100 Ω platinum RTD, 3 wire α = 0.00385 $\Omega/\Omega/^{\circ}$ C

PROGRAMMING AND SETTING

Method Programmable at controller – Set/Up/Down push buttons on front panel

Units °F or °C

Digital display Four numeric display digits for parameter and error/alarm indication

LEDs Indicate actual and set point from display

Memory Nonvolatile, restored after power loss

Stored parameters Parameters can be programmed without power supply (external battery) and

parameters are stored in nonvolatile memory.

Alarm conditions Low/high temperature and RTD failure (open or shorted)

CONNECTION TERMINALS

Power supply input
Screw rising cage clamp, 18–6 AWG
Heating cable output
Screw rising cage clamp, 18–6 AWG
Ground
Screw rising cage clamp, 18–6 AWG
RTD
Screw rising cage clamp, 22–14 AWG
Alarm
Screw rising cage clamp, 22–14 AWG

ORDERING DETAILS

JBS-100-ECW-A

| Description | Catalog number | Part number | Weight/lbs |
|--|----------------|-------------|------------|
| Wall mounted digital electronic controller | JBS-100-ECW-A | P000000181 | 4.0 |
| Spare Parts and Accessories | | | |
| MI cable grounding kit (required if installing MI heating cable) | MI-GROUND-KIT | P000000279 | 0.2 |
| Replacement controller unit | JBS-100-EC | P000000217 | 1.0 |

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