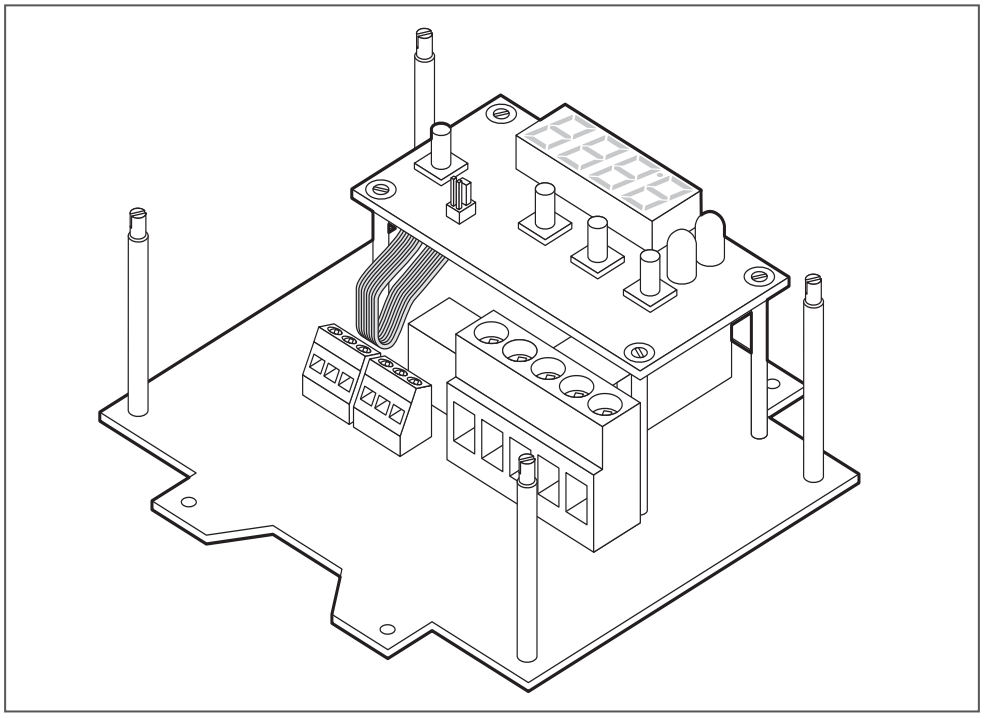
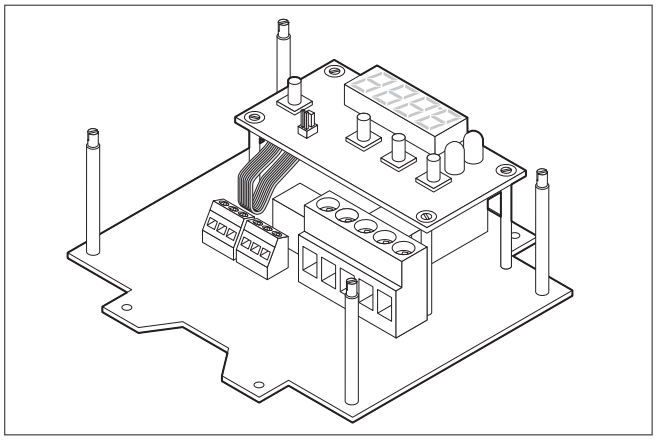
Raychem

JBS-100-EC

Electronic Controller Replacement kit for JBS-100-ECP-A and JBS-100-ECW-A Installation Instructions



chemelex



APPROVALS

Nonhazardous locations

C SA US

KIT CONTENTS

Item	Qty	Description
A	1	JBS-100-EC board

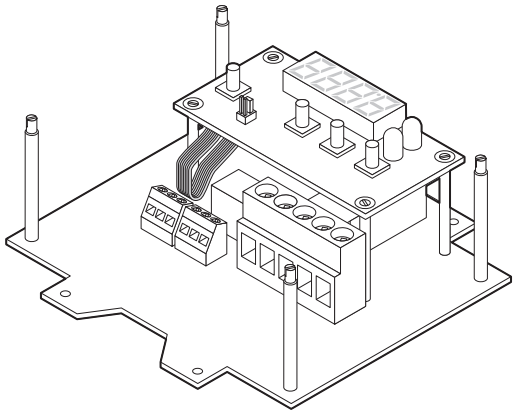
DESCRIPTION

The Raychem JBS-100-EC is a replacement kit that can be used to replace the electronic controller used in the JBS-100-ECP-A and the JBS-100-ECW-A.

For technical support call Chemelex at (800) 545-6258.

TOOLS REQUIRED

- Large slotted screwdriver
- Small slotted screwdriver



⚠ WARNING:

This component is an electrical device that must be installed correctly to ensure proper operation and to prevent shock or fire. Read these important warnings and carefully follow all of the installation instructions.

- To minimize the danger of fire from sustained electrical arcing if the heating cable is damaged or improperly installed, and to comply with the requirements of Chemelex, agency certifications, and the National Electrical Code, ground-fault equipment protection must be used. Arcing may not be stopped by conventional circuit breakers.
- Component approvals and performance are based on the use of Chemelex-specified parts only. Do not use substitute parts or vinyl electrical tape.
- The black heating cable core and fibers are conductive and can short. They must be properly insulated and kept dry.
- Damaged bus wires can overheat or short. Do not break bus wire strands when scoring the jacket or core.
- Keep components and heating cable ends dry before and during installation.

⚠ CAUTION:

- Use only fire resistant insulation materials, such as fiberglass wrap or flame-retardant foam.

HEALTH HAZARD: Prolonged or repeated contact with the sealant in the core sealer may cause skin irritation. Wash hands thoroughly. Overheating or burning the sealant will produce fumes that may cause polymer fume fever. Avoid contamination of cigarettes or tobacco.

Consult MSDS RAY5510 for further information.

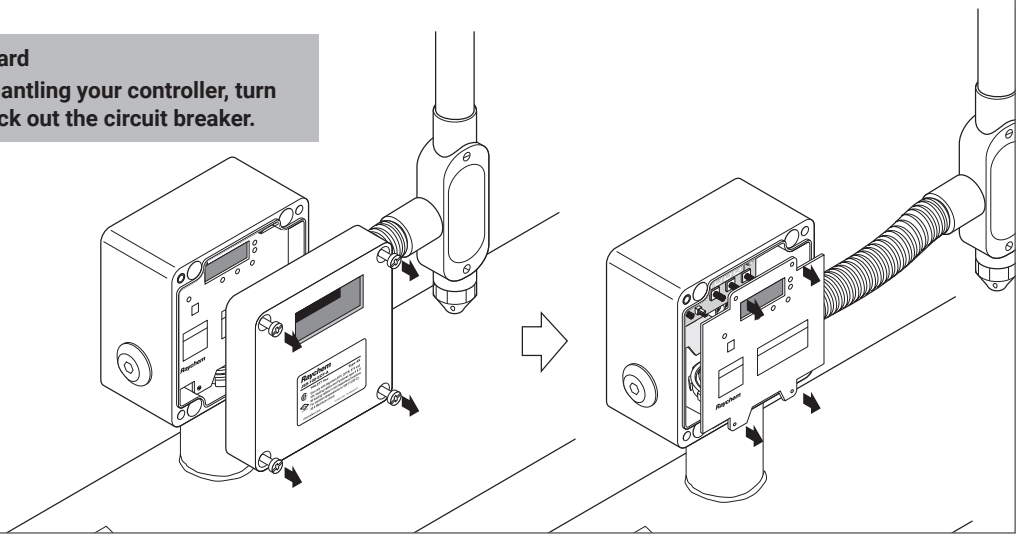
CHEMTREC 24-hour emergency telephone:
(800) 424-9300

Non-emergency health and safety information:
(800) 545-6258.

1

⚠ **WARNING: Shock Hazard**
Before you begin dismantling your controller, turn OFF THE power and lock out the circuit breaker.

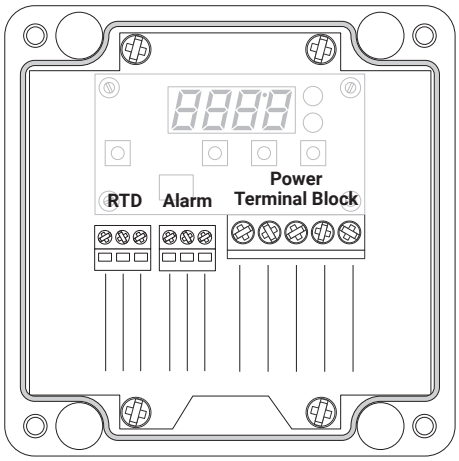
- Remove the outer lid and the safety cover.

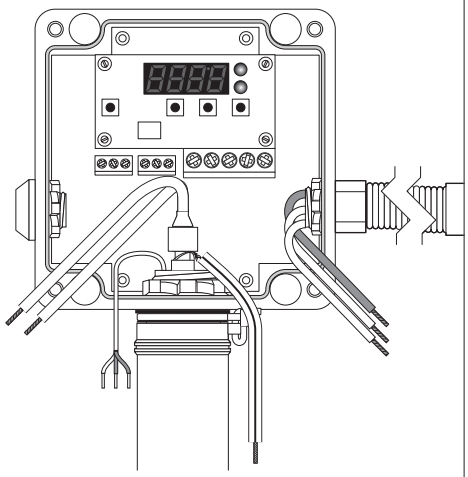


2

- Before disconnecting the wires, note their position on this template. You can then use this diagram for reference when rewiring.
- Disconnect all wires.

Wiring template

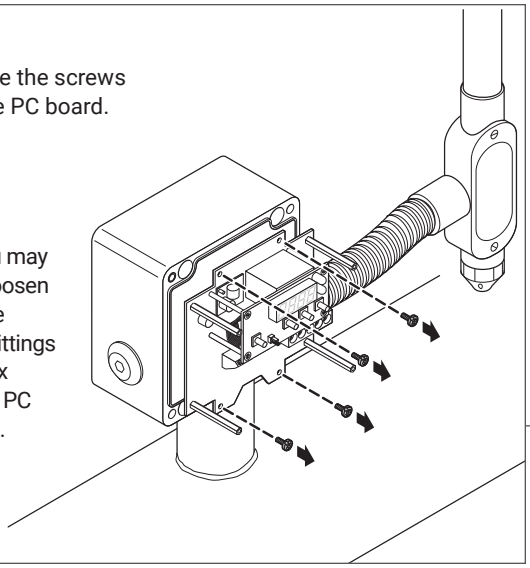




3

- Remove the screws and the PC board.

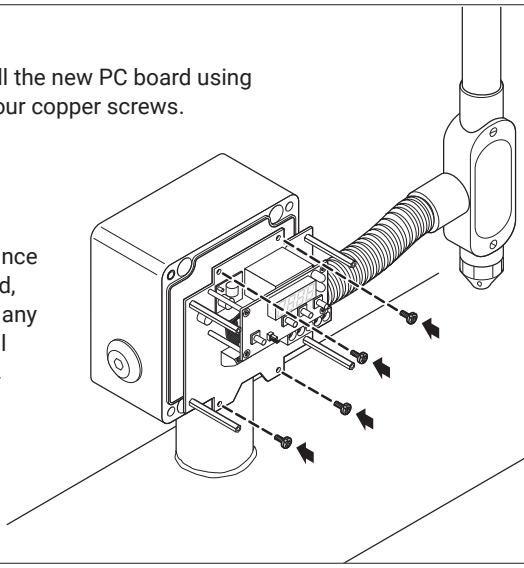
Note: You may need to loosen or remove external fittings on the box to get the PC board out.



4

- Install the new PC board using the four copper screws.

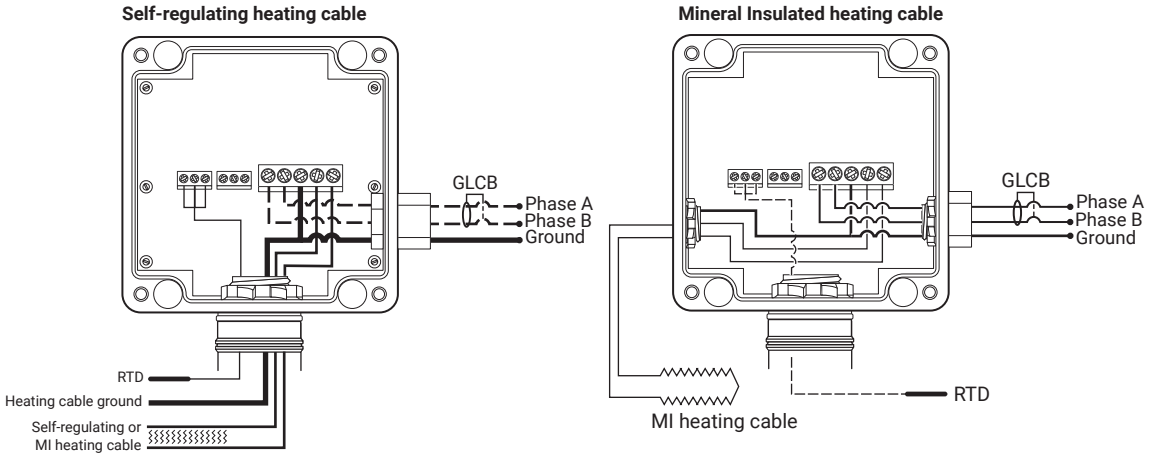
Note: Once installed, tighten any external fittings.



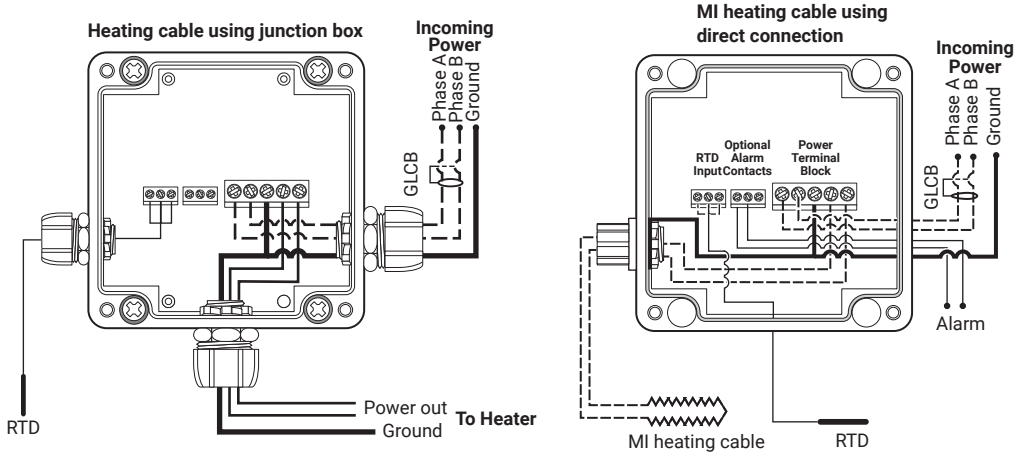
5

- Reconnect all wiring. Use the wiring diagrams below for reference.

Pipe Mounted Enclosures – JBS-100-ECP-A

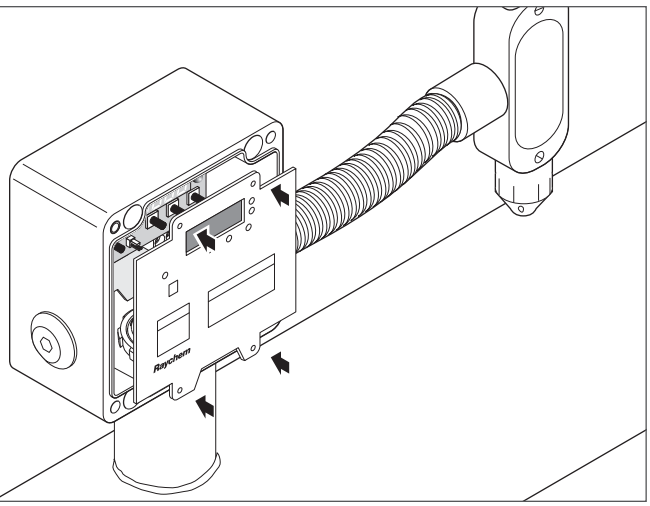


Wall Mounted Enclosures – JBS-100-ECW-A



6

- Replace wire cover.
- Turn on power from ground-fault circuit breaker.



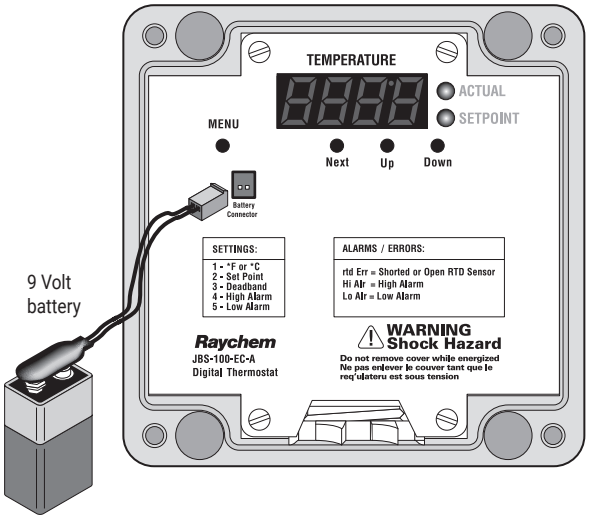
PROGRAMMING THE CONTROLLER

Reprogram controller using battery connection or turning power onto the unit.

7A

Powering Controller via Battery

- Connect 9 VDC battery (not provided) to the supplied battery connector.
- Plug the battery connector onto the two pins on the controller marked “Battery Connector.”

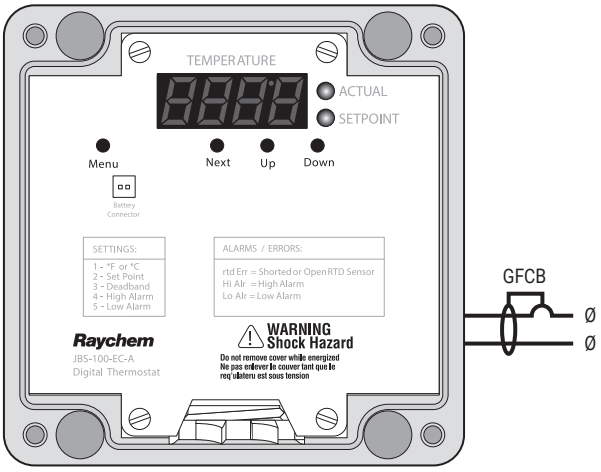


7B

Powering Controller via Line Power

⚠ WARNING: Shock Hazard.
Secure the wire cover in place with the four screws before proceeding.

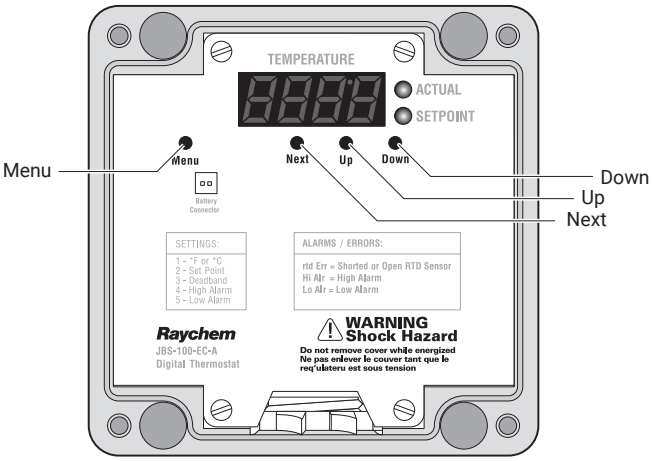
- Turn on branch circuit breaker that supplies power to the controller and heating cable.



8

Activating and Navigating the Menu in Set-up Mode

- To activate set-up mode, press **Menu** button for approximately 5 seconds.
- The display will change to the default mode for units.
- Use the **Up** and **Down** buttons to change values. Use the **Next** button to change to next display code/parameter.
- When completed, secure the enclosure cover.



Parameters

The first parameter displayed during set-up mode is units (°F or °C). Other parameters, their default values, and minimum and maximum values are shown in the following table.

Display Code	Parameter	Default	Min.	Max.
1	Units °F or °C	°F	—	—
2	Maintain set point	40°F	32°F (0°C)	425°F (218°C)
3	Deadband	5°F	1°F (1°C)	10°F (10°C)
4	High Alarm [1]	Off	38°F (3°C)	482°F (250°C)
5	Low Alarm [2]	Off	20°F (–6°C)	420°F (216°C)

Note:
1. The minimum high temperature alarm set point must always be larger than the maintain set point plus the deadband plus 5°F (3°C).
2. The maximum low temperature alarm set point must always be smaller than the maintain set point minus the deadband.

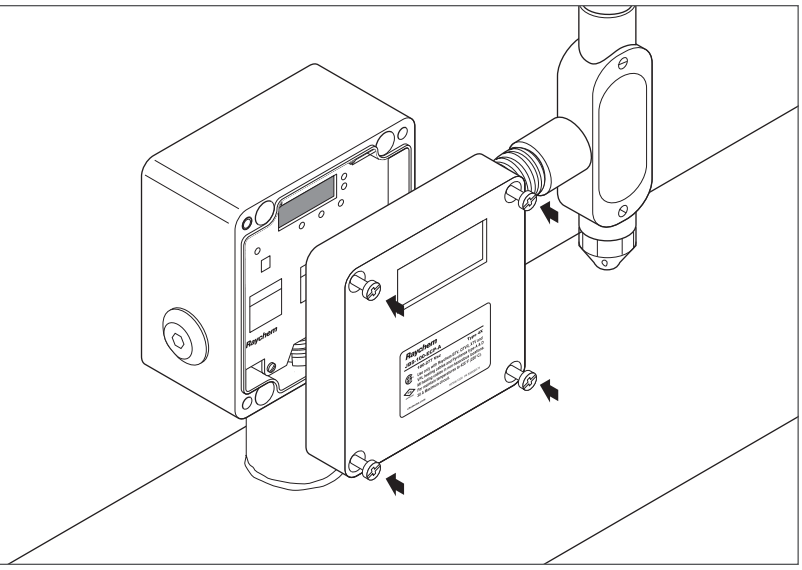
Alarms

The following table lists the error or alarm codes and their respective faults:

Alarm / Error Codes	Fault
rtd Err	Shorted or open RTD sensor
Hi Alr	High Temperature Alarm
Lo Alr	Low Temperature Alarm

9

- Replace lid.





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chemelex
excellence is everything

Raychem Tracer Pyrotenax Nuheat

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