WEIL-McLAIN

EZ-Temp™

Microprocessor
Temperature Controls

Instruction Manual

WARNING **Installer/servicer** — Except where specifically stated otherwise, this manual must be used only by a ***qualified service technician.*** Read and follow all instructions in this manual and in the appliance manual. Failure to comply with this or other requirements in this manual could result in severe personal injury, death or substantial property damage.

WARNING This symbol calls out a hazard that could cause severe personal injury, death or substantial property damage if the instructions given are not followed.

NOTICE **Wiring:** Refer to EZ-Temp data sheet for wiring information.

WARNING

Verify ratings: Verify the ratings of the control meet the requirements of the appliance as specified in the appliance instructions. Refer to the EZ-Temp control data sheet for required electrical supply and load ratings. Verify that the controls, wiring and installation comply with all applicable codes.

Electrical shock hazard: Disconnect power to appliance when wiring or servicing any electrical component.

Scald hazard: Water hotter than 130°F can cause serious burns or death. Follow water heating appliance manufacturer's guidelines when installing temperature limit controls - DO NOT install a control that can be set at a higher temperature than specified. Also verify that the installation includes all water temperature regulating means needed to ensure the safety of building occupants, in compliance with all applicable codes.

Verify operation: Test the controls/appliance to verify the appliance operates as specified in the appliance manual before leaving the installation.

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Install sensor(s)

To install a new immersion well:

1. Turn off power to the appliance and close isolation valves.
2. Follow appliance instructions to drain the appliance so water line is below the insertion tapping.
3. Remove existing well and sensor. Apply a small amount of pipe dope to the new well and secure in tapping.
4. Insert EZ-Temp sensor into well and secure sensor in place as described in the following.
5. Refill appliance with water, following appliance manual procedures.

WARNING When routing sensor wires, avoid sharp edges and use strain relief bushings at penetrations to prevent movement or electrical shorting of the sensor. Sensor wires are not low voltage, and must be routed in conduit.

Configuration A: Sensor and well only

1. Insert the sensor into well (1) until the sensor (2) tip bottoms in the well socket.
2. EZ-Temp well: Slide the rubber retainer (3) over the sensor wires until it firmly contacts the sensor casing. Slide the retainer washer (4) and the jam nut (5) over the wires. Thread the jam nut into the well until snug.
3. Existing well: Press the sensor retainer plug (11) into the well until it securely holds the sensor wires, to prevent movement of the sensor.

Configuration B: Sensor, EZ-Temp well and J-box

1. Insert the sensor into well (1) until the sensor (2) tip bottoms in the well socket.
2. Slide the rubber retainer (3) over the sensor wires until it firmly contacts the sensor casing. Slide the retainer washer (4) over the wires.
3. Slide the lock washer (8), J-box (7), and jam nut (4) over the wires.
4. Thread the jam nut into the well and tighten to secure the J-box and sensor in place.

Configuration C: Sensor, EZ-Temp well and J-box

1. Insert the sensor into well (1) until the sensor (2) tip bottoms in the well socket.
2. Slide the J-box (7) over the wires and secure the J-box in place by snapping the retainer ring (10) onto the well shoulder.
3. Press the sensor retainer plug (11) into the well until it securely holds the sensor wires, to prevent movement of the sensor.

Mount the control

1. Insert sensor wire terminals into the labelled openings on the back of the control. Press into place firmly.
2. Attach the control to the 4x4 J-box or panel mount, as desired.

Wire the control

1. Control wiring (including sensor wires) must be routed through conduit or electrical enclosures. Follow all applicable codes and the appliance manual.
2. Follow the burner and appliance wiring diagrams to connect the control(s) into the appliance limit circuit.
3. For specific applications, contact your Carlin supplier for further information.

Set the control

1. Follow the appliance manual to set the correct limit temperature for the appliance. To adjust the EZ-Temp control:
   - Insert a screwdriver into the setting slot and rotate until the indicator points to the desired temperature.
2. Test the operation of the appliance and the new limit control(s) to verify correct operation.
3. NOTE: EZ-Temp controls have a subtractive differential — control contacts trigger when the temperature setting is reached. Contacts reset after temperature drops below setpoint minus the differential amount.

Configurations

Carlin EZ-Temp components are available in the following configurations, allowing use with existing wells in addition to EZ-Temp wells.

Surface-mount sensors are also available.

- **Control kits**

  EZ-Temp controls mount to a standard 4x4 J-box or can be panel mounted. Control kits include the control and sensor(s) (item 2) plus hardware needed for mounting to an existing well (items 10 and 11). To obtain an EZ-Temp well and hardware, obtain an EZ-Temp well kit, below.

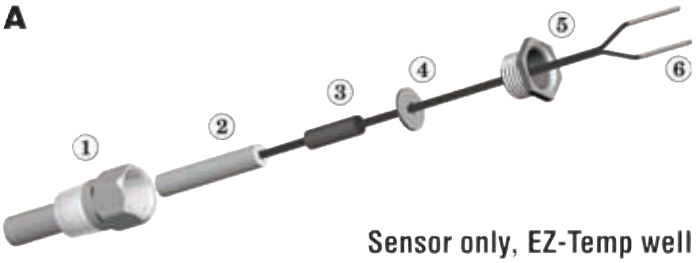
- **Well kits**

  EZ-Temp wells are available in the sizes shown below. Well kits include a well (item 1), rubber sensor retainer (item 3), retainer washer (item 4), jam nut (item 5), and J-box lock washer (item 8).

- **Sensor Kits**

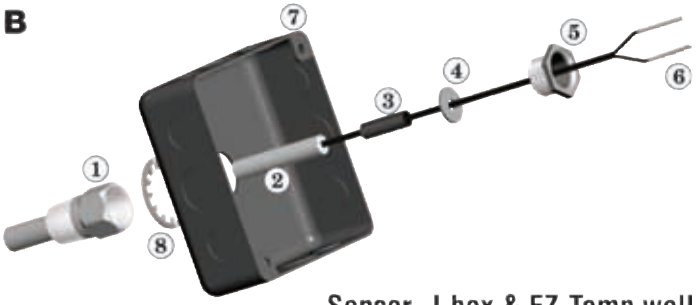
  Sensor kits include only the sensor (item 2). Sensors are available in single and dual configurations (two sensors in the same assembly). For controls that use multiple sensors, obtain separate sensor kits or a sensor kit and a dual sensor.

A



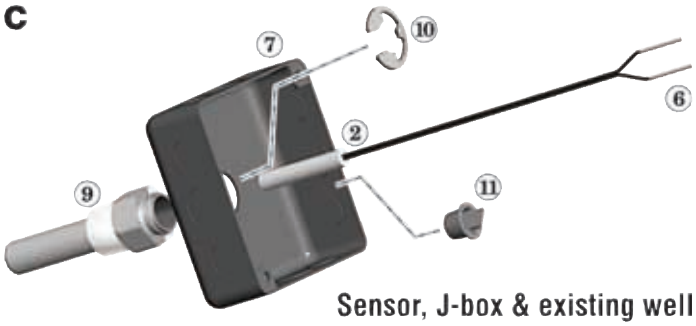
Sensor only, EZ-Temp well

B



Sensor, J-box & EZ-Temp well

C



Sensor, J-box & existing well

1. EZ-Temp well
2. EZ-Temp sensor
3. EPDM rubber retainer
4. Retainer washer
5. Jam nut
6. Sensor leads
7. J-box, 4 x 4
8. Lock washer
9. Existing well
10. Retaining ring
11. Sensor retainer plug

Part number MN90000CEWM Rev. 03/07/08