

BRI-A19-4X20 Temperature Controls with NEMA 4X Raintight Enclosures

Installation Instructions

Application Requirements

IMPORTANT: The BRI-A19-4X20 Temperature Controls are intended to control equipment under normal operating conditions. Where failure or malfunction of a BRI-A19-4X20 control could lead to an abnormal operating condition that could cause personal injury or damage to the equipment or other property, other devices (limit or safety controls) or systems (alarm or supervisory) intended to warn of or protect against failure or malfunction of an BRI-A19-4X20 control must be incorporated into and maintained as part of the control system.

The BRI-A19-4X20 electromechanical temperature controls are designed for use in many agricultural applications. The BRI-A19-4X20 controls have rugged Noryl plastic enclosures and are UL Listed as Type 4X. See Figure 1 and the *Technical Specifications* section for additional information. The adjustable BRI-A19-4X20 temperature controls have internal setpoint adjustment dials and range scales.

IMPORTANT: Do not dent, bend, or otherwise alter the sensing element bulb of the BRI-A19-4X20 controls. Damaging the sensing element bulb may change the control calibration and voids any warranties on the control.

Dimensions

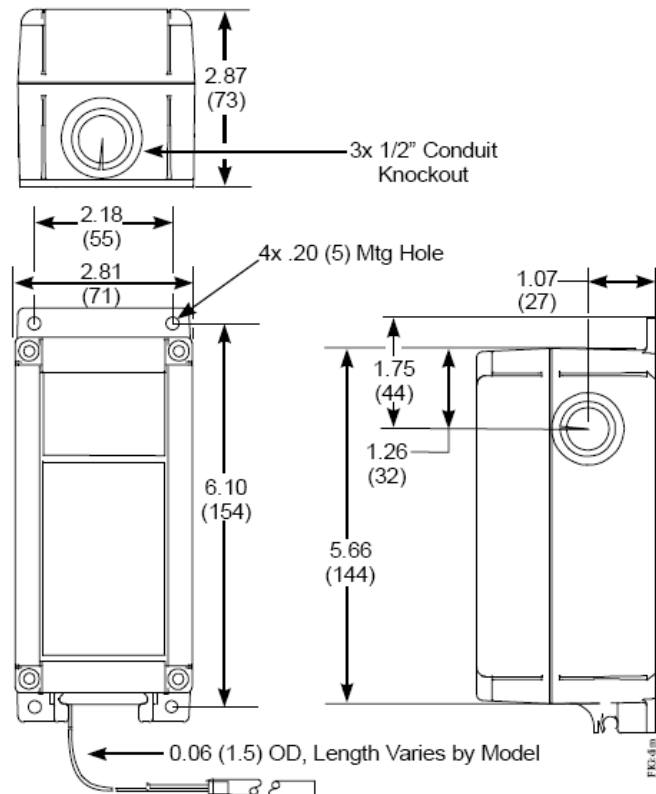


Figure 1: Dimensions for BRI-A19-4X20 Temperature Controls with NEMA 4X Enclosures, in. (mm)

Mounting

Mount the temperature control to a flat surface with screws through the holes in the mounting ears on the back of the case. See Figure 1.

Do not mount on an outside wall or where the temperature at the enclosure exceeds 140°F (60°C).

Wiring



WARNING: Risk of Electric Shock.

Disconnect each of multiple power supplies before making electrical connections. More than one disconnect may be required to completely de-energize equipment. Contact with components carrying hazardous voltage can cause electric shock and may result in personal injury or death.

IMPORTANT: All wiring must conform to all local, national, and regional regulations. Use copper conductors only for all wire connections.

IMPORTANT: Do not use A19 temperature controls on applications where the electrical load across the control's switch may exceed the electrical ratings shown on the temperature control's label.

IMPORTANT: Use only the terminal screws furnished with the switch. Using other screws in the switch voids the warranty, may damage the switch, and can cause problems with making secure connections.

There are three 1/2 in. (trade-size) conduit knockouts on the BRI-A19-4X20 NEMA 4X enclosure. To make wiring connections, proceed as follows:

1. Loosen the four cover screws and remove the cover. Do not damage the O-ring seal.
2. Select the knockout to be removed. Place a screwdriver blade on the knockout near the edge. Apply a sharp blow to the screwdriver handle to loosen the knockout.
3. For watertight connection to rigid conduit, connect an approved watertight conduit fitting to the conduit first, and then connect the fitting to the BRI-A19-4X20 control enclosure.
4. Insert wire through conduit opening.
5. Make wiring connections to the screw terminals. See Figure 2, Figure 3, and Figure 4.
6. Verify the O-ring seal is properly seated.
7. Replace the cover.

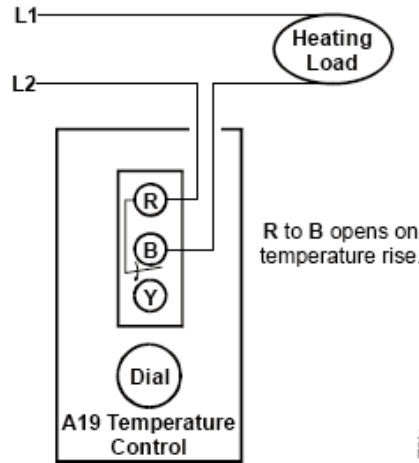


Figure 2: Typical Wiring for Heating Applications

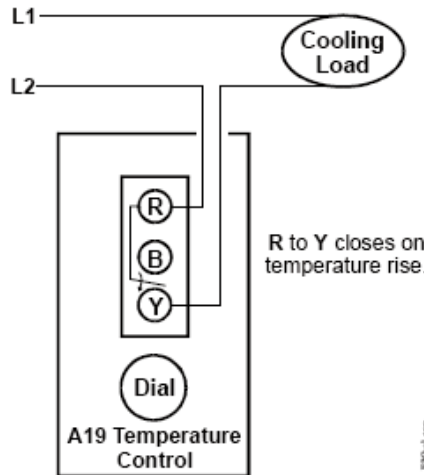


Figure 3: Typical Wiring for Cooling Applications

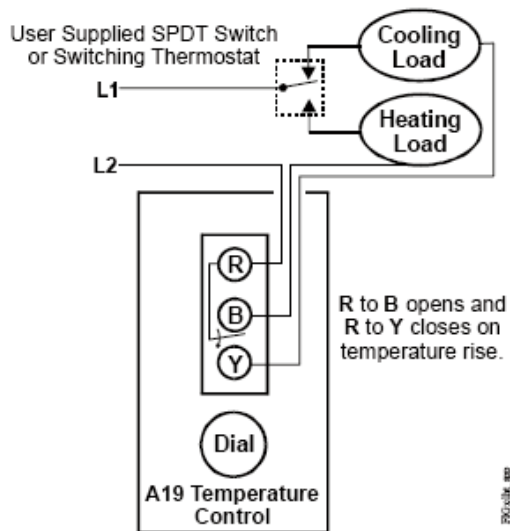


Figure 4: Typical Wiring for Combination Heating and Cooling Applications



Setup and Adjustments

Turn the knob inside the temperature control to change the control temperature setpoint.

Before leaving the installation, observe at least three complete operating cycles of the controlled equipment to ensure that all components are functioning correctly.

Follow the *Operation* guidelines to check for proper BRI-A19-4X20 temperature control operation.

For heating applications:

1. Turn the dial clockwise to a setpoint greater than the sensed temperature. The heating system should cycle on.
2. Turn the dial counterclockwise to a setpoint less than the sensed temperature and the heating system should cycle off.

For cooling or ventilating applications:

1. Turn the dial clockwise to a setpoint greater than the sensed temperature and the ventilating or cooling system should cycle off.
2. Turn the dial counterclockwise to a setpoint less than the sensed temperature and the ventilating or cooling system should cycle on. If the temperature does not operate in the manner described previously, check the wiring and tightness of wiring connections.

Operation

When the temperature at the sensing element rises to the setpoint (dial setting), the switch between R and Y closes and the switch between R and B opens on SPDT models. See Figure 2, Figure 3, and Figure 4.

Repair Information

If the BRI-A19-4X20 electromechanical temperature control fails to operate within its specifications, replace the unit. For a replacement BRI-A19-4X20 control, contact Britech @ 1-877-335-7790.

Technical Specifications

BRI-A19-4X20 Temperature Controls with NEMA 4X Raintight Enclosures

Switch Contact Ratings	Applied VAC	24	120	208	240	277	600
	Motor, Full Load Amperes	-	16	9.2	12	-	-
Motor, Locked Rotor Amperes	-	96	55.2	72	-	-	
Non-inductive, Single-Pole, Single-Throw (SPST) Amperes	-	22	22	22	22	-	
Non-inductive, Single-Pole, Double-Throw (SPDT) Amperes	-	16	16	16	16	-	
Pilot Duty Volt-Amperes	125	125	125	125	125	125	
Ambient Operating Conditions	-26 to 140°F (-32 to 60°C)						
Ambient Storage Conditions	-40 to 140°F (-40 to 60°C)						
Shipping Weight	1.2 lb (0.54 kg)						
Compliance	UL Listed; File E6688, CCN XAPX (US) and XAPX7 (Canada) UL Listed as Type 4X						

The performance specifications are nominal and conform to acceptable industry standards Britech shall not be liable for damage resulting from misapplication or misuse of its products.