

## JOHNSON CONTROLS - A319 ELECTRONIC TEMPERATURE CONTROL

### ELECTRONIC TEMPERATURE CONTROL

#### SELECTION CHART



A319 Electronic Temperature Control

#### DESCRIPTION

The A319 Series is a line voltage, single-stage electronic temperature control with Single-Pole, Double-Throw (SPDT) relay output and LED indication. The A319 features heating or cooling modes of operation, adjustable cut-in, adjustable differential, and an interchangeable temperature sensor. The A319 couples electronic accuracy with remote sensing capability in a NEMA 1 high-impact plastic enclosure suitable for surface or DIN rail mounting.

#### FEATURES

- Operates on 120 or 208/240 volts, which eliminates need for a separate transformer, saving installation time and cost.
- Electronic circuitry improves accuracy and provides higher reliability than equivalent electromechanical controls.
- Solid-state sensor handles remote sensing applications without the need for ambient compensation or other limitations of electromechanical temperature controls.
- Interchangeable temperature sensors and mounting accessories allow flexibility in application; increasing versatility and serviceability.
- Two models cover temperature ranges from -20 to 220°F (-30 to 105°C), reducing inventory by encompassing the temperature ranges required to support the majority of refrigeration and HVAC applications.
- Wide adjustable differential of 1 to 30°F (0.5 to 17°C) enables the user to match equipment cycle rate for a given applications; maintains a tighter differential than typical electromechanical controls.
- Field selectable mode jumpers work to control either heating or cooling equipment with LED indication of relay energization status.

#### APPLICATIONS

The A319 can be used to control a wide variety of single stage refrigeration or HVAC equipment.

Typical applications include:

- Frozen/refrigerated food cases.
- Compressor lockout.
- Beverage/milk coolers.
- Condenser fan cycling.
- Pump control (cooling lowers).
- Boiler control.
- Space and return-air temperature control
- Immersion sensing for actuation of hot water and steam valves in heating applications.

#### SELECTION CHART

PART NO	DESCRIPTION
A319ABC-12-01	A319 Temperature Control with Sensor(100 to 200 F range)
A319ABC-24-01	A319 Temperature Control With Sensor(20 to 100 F range)

#### ACCESSORIES

PART NO	DESCRIPTION
TE-6300-608	NTC Thermistor sensor with 8 ft (2.4 m) leads
TE-6300-610	NTC Thermistor sensor with 12 ft (3.7 m) leads
SHL10A- 603R	Sun shield for use with TE- 6300-608 And BOX10A-600R
APD11A-600R	1/2 in,dia, EMT conduit Adapter (box of 10)for use with BOX10A-600R
BKT287-1R	35 X 7.5 MM,0.305m(12 in)long D/N rail for use with A319
BKT287-2R	35 X 7.5 MM,0.914m(36 in)long D/N rail for use with A319
PLT344-1R	End clamps,(2) for DIN rail mounting of A319 controls

## JOHNSON CONTROLS - A419 ELECTRONIC TEMPERATURE CONTROL

### SELECTION CHART



A419 Control and Sensor

#### DESCRIPTION

The A419 series controls are line voltage, single-stage, electrical temperature controls with a SPDT output relay. They feature a lockable front-panel touched for setup and adjustment, and a Liquid Crystal Display for viewing the temperature and status of other functions.

The A419 controls have heating and cooling modes, adjustable set point and differential, an adjustable anti-short cycle delay, and a temperature offset (setback) function.

#### APPLICATIONS

The A419 is used to control a wide variety of single-stage refrigeration or HVAC equipment.

Typical applications include:

- Freezer control in convenience stores
- Reach-in coolers
- Supermarket display cases for produce or meats
- Restaurant or convenience store walk-in coolers
- Boiler control
- Compressor lockout (display exceeds limits)
- Condenser fan cycling
- Pump control for cooling towers
- Space and return air temperature

### SELECTION CHART

PART NO	ITEM	DESCRIPTION
A419ABC-1C	Line Voltage,NEMA 1 Enclosure A419 Series Electronic Temperature Control with Display, A99 Sensor included	Supply Voltage:120 or 240 VAC RANGE :-30 to 212 F(-34 TO 100 C ) Differential:1 to 3CF(1 to 30 C)
A419ACE-1C	Line Voltage,NEMA 4X Enclosure A419 Series Electronic Temperature Control with Display, A99 Sensor included	Supply Voltage:120 or 240 VAC RANGE :-30 to 212 F(-34 TO 100 C ) Differential:1 to 3CF(1 to 30 C)
A419GBF-1C	24 VAC,NEMA 1 Enclosure A419 Series Electronic Temperature Control with Display, A99 Sensor included	Supply Voltage:24 VAC,Class 2 RANGE :-30 to 212 F(-34 TO 100 C ) Differential:1 to 3CF(1 to 30 C)
A419GEF-1C	24 VAC,NEMA 4X Enclosure A419 Series Electronic Temperature Control with Display, A99 Sensor included	Supply Voltage:24 VAC,Class 2 RANGE :-30 to 212 F(-34 TO 100 C ) Differential:1 to 3CF(1 to 30 C)

### ACCESSORIES

PART NO	ITEM	DESCRIPTION
BKT287-1R	Accessory Mounting Hardware	12 in (305 mm)long DIN Rail
BKT287-2R	Accessory Mounting Hardware	36 in (914 mm)long DIN Rail
PLT344-1R	Accessory Mounting Hardware	Two End Clams for DIN Rail Mounting
CLK350-2C	Digital Clock	7 Days Programmable Digital Clock for controlling Temperature Offset