

A319 Series

Electronic Temperature Control

Description

The A319 Series is a line voltage single-stage electronic temperature control with single-pole, double-throw relay output and LED indication. The A319 is designed with heating or cooling modes of operation, 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.

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
- boiler control
- pump control (cooling towers)
- space and return-air temperature control
- immersion sensing for actuation of hot water and steam valves in heating applications

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 application; maintains a tighter differential than typical electro-mechanical controls
- field-selectable mode jumpers work to control either heating or cooling equipment with LED indication of relay energization status



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Selection Chart

Code Number	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)

Technical Specifications

A319 Electronic Temperature Control				
Set Point Range	A319ABC-12-01	100 to 220°F (38 to 105°C)		
	A319ABC-24-01	-20 to 100°F (-30 to 38°C)		
Differential Range	1 to 30°F (0.5 to 17°C)			
Input Voltage	120 or 208/240 VAC, 50/60 Hz			
Current Draw	1.8 VA			
Relay Electrical Ratings	SPDT	120 V N.O. (N.C.)	208 V N.O. (N.C.)	240 V N.O. (N.C.)
	Horsepower	1 (0.25) hp	1 (0.33) hp	1 (0.5) hp
	Full Load Amps	16 (5.8) A	9.2 (4.0) A	8.0 (4.9) A
	Locked Rotor Amps	96 (34.8) A	55 (24) A	48 (29) A
	Non-Inductive Amps	15 (10) A	10 (10) A	10 (10) A
	Pilot Duty	125 VA @ 24 VAC (N.O.), 120/240 VAC (N.O. / N.C.); 50 VA @ 24 VAC (N.C.)		
Control Ambient Temperature	Operating	-30 to 140°F (-34 to 60°C)		
	Shipping	-40 to 185°F (-40 to 85°C)		
Ambient Humidity	0 to 95% RH Non-condensing; Max. Dew Point: 85°F (29°C)			
Control Material, Case and Cover	NEMA 1 High Impact LEXAN 950® Plastic			
Agency Listings	UL Listed: File E27734, Guide XAPX (Temperature Indicating and Regulating Equipment) CSA Certified: File LR948, Class 4813 02			

Accessories

Code Number	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
TE-6341P-1	Thermistor Sensor with Duct Insertion Mounting Hardware
TE-6343P-1	Thermistor Sensor with Outdoor Air Mounting Hardware
TE-6344P-1	Thermistor Sensor with Wall Mounting Hardware
WEL11A-601R	Immersion Well for use with TE-6300-608, use with thermal compound
BOX10A-600R	PVC Enclosure for Outdoor Mounting of TE-6300-608
SHL10A-603R	Sun Shield for use with TE-6300-608 and BOX10A-600R
ADP11A-600R	1/2 in. dia. EMT Conduit Adapter (box of 10) for use with BOX10A-600R
BKT287-1R	35 x 7.5 mm, 0.305 m (12 in.) long DIN rail for use with A319
BKT287-2R	35 x 7.5 mm, 0.914 m (36 in.) long Din rail for use with A319
PLT344-1R	End clamps, (2) for DIN rail mounting of A319 controls

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