1/16 DIN, Temperature Limit Controller Designed to Meet a Wide Range of Safety Standards

The Watlow Series 145 is a % DIN temperature limit controller with a thermocouple or RTD sensor input. The % DIN case features a front panel that provides the Series 145 with water and corrosion resistance.

The Series 145 is designed to meet the needs of a wide range of safety applications. It is available with a wide variety of thermocouple and RTD ranges.

The compact size of the limit allows more flexibility in applications where space is a problem. The Series 145 has a standard integral setpot and a front panel LED output status indicator.



Features and Benefits

High or Low safety limit

Provides machinery and personal safety

Sealed front panel

Provides water and corrosion resistance

Compact 1/16 DIN size

Readily fits in confined areas

Sensor break protection

De-energizes system for safety

Three-year warranty

Assures Watlow Control Confidence®

Custom temperature ranges available

• Designed to your application's specific criteria



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Specifications—1927

Control Mode

- · High or low limit, factory selectable
- Manual or automatic reset on power loss, factory selectable
- Latching alarm with manual reset on over or under temperature

Operator Interface

- · Sealed membrane front panel
- · Integral set point
 - Dual temperature scale (°C and °F)
- · LED indication of output status
- Dial scale calibrated to compensate for sensor non-linearities
- · Integral reset switch

Input

- Thermocouple or RTD available
- Thermocouple with automatic cold junction compensation
- · Thermocouple may be isolated or grounded
- 2- or 3-wire RTD input, platinum 100 , 500 , or 1000 @ 0°C calibrated for DIN 0.003850 / °C curve
- · Sensor break protection de-energizes output

Output

Electromechanical relay, 3A, Form C, SPDT: 3A @ 240V~,
 3A @ 28V= (dc), resistive, 275VA pilot duty rated

Accuracy

Adjustable Set Point

- Calibration accuracy: ±1% of span, at 25°C ± 3°C (77°F ±5°F) ambient and rated line voltage ± 1%
- Set point accuracy: ±3% of dial scale
- Accuracy span: 540°C (1000°F) minimum

Fixed Set Point

Calibration accuracy: ±6°C/±10°F of setting, at 25°C ±3°C (77°F ±5°F) ambient and rated line voltage ±1%

Temperature Stability

- Thermocouple: Typically 9μV/°C ambient (5μV/°F ambient) input referenced
- RTD: Typically 0.2°C/°C ambient (0.2°F/°F ambient)

Voltage Stability

 ±0.01% of span (min span of 540°C or 1000°F) per % of rated line voltage

Agency Approvals

• CE: EN61010 - Safety

EN61326 - Industrial Immunity, Class B Emissions Installation Category 2, Pollution Degree 2

- **%** 873, File #E43684
- R to C22.2 No. 24, File #E43684
- · Approved for use in commercial cooking applications
- FM Class 3545, File #J.I.3008516

Terminals

• Screw clamp terminal: 12-26 gauge wire

Power

- 120V~, +10%/-15%, 50/60Hz
- 230V~ to 240V~, +10%/-15%, 50/60Hz
- 10VA maximum power

Operating Environment

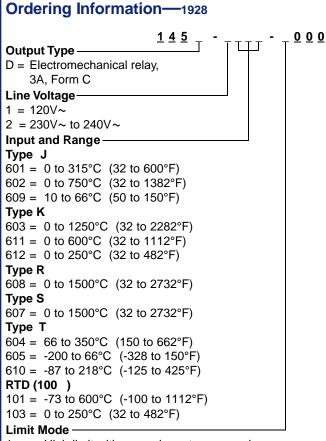
- 0 to 55°C (32 to 131°F)
- 0 to 90% RH, non-condensing
- Storage temperature: -20 to 85°C (-4 to 185°F)

Dimensions

- Height: 55 mm (2.1 in)
- Width: 55 mm (2.1 in)
- Depth: 102 mm (4.0 in)
- Behind panel: 89 mm (3.50 in)
- Front panel: 13 mm (0.5 in)

Weight

• 0.7 lb (0.3 kg)



1 = High limit with manual reset on power loss

2 = Low limit with manual reset on power loss

3 = High limit with automatic reset on power loss

4 = Low limit with automatic reset on power loss

Note: Electromechanical relays are warranted for 100,000 closures only. Solid state switching devices are recommended for applications requiring extended service life.

Note: Conformal coated product is available; consult factory.

Note: This output should be used with inductive loads.

Note: Specifications subject to change without notice.

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