

Indicators

SERIES TM

The SERIES TM temperature indicator from Watlow provides an economical solution for applications requiring temperature monitoring and display. Square 1/8 DIN panel mount and DIN-rail mount packaging options are available. A red, four-character, seven-segment LED display indicates the process value. The microprocessor-based design provides significant improvements in performance, repeatability and accuracy over analog indicators.

The indicators are UL® approved and include CE approvals. Panel mount indicators include NEMA 4X/IP65 seal protection. Watlow's SERIES TM temperature indicators include industry leading service and support and are backed by a three-year warranty.

Features and Benefits

Four character LED display

- Improves accuracy

Multiple mounting options

- Minimizes installation time

Fahrenheit or Celsius operation with indication

- Offers application flexibility

Agency approvals

- Meets certification requirements/compliance

Microprocessor-based technology

- Ensures accurate repeatable indication

Typical Applications

- Food preparation
- Industrial machinery
- Packaging
- Plastics processing



Specifications

Operator Interface

- Four-digit, seven-segment LED displays, 7 mm (0.28 in.) high
- °F or °C indicator

Standard Conditions For Specifications

- Rated line voltage, 50 to 60Hz, 0 to 90% RH non-condensing, 15-minute warm-up
- Calibration ambient range: 77°F (25°C) ±3°C

Thermocouple Input

- Grounded or ungrounded
- Type E, J, K, T thermocouple types
- >10 MΩ input impedance
- 250 nV input referenced error per 1Ω source resistance

RTD Input

- 2-wire platinum, 100Ω
- DIN curve (0.00385 curve)
- 125 μA nominal RTD excitation current

Input Accuracy Span Range

Type E:	-328	to	1470°F	or	-200	to	800°C
Type J:	32	to	1382°F	or	0	to	750°C
Type K:	-328	to	2282°F	or	-200	to	1250°C
Type T:	-328	to	662°F	or	-200	to	350°C
RTD (DIN)	-328	to	1472°F	or	-200	to	800°C

Thermocouple Input Accuracy

- Calibration accuracy: ±1% of input accuracy span, ±1° at standard conditions and actual calibration ambient. Exception: Type T, ±2.4% of input accuracy span for -328 to 32°F (-200 to 0°C)
- Temperature stability: ±0.3° per degree change in ambient

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Specifications (Continued)

RTD Input Accuracy

- Calibration accuracy $\pm 1\%$ of input accuracy span $\pm 1^\circ$ at standard conditions and actual calibration ambient
- Temperature stability: $\pm 0.2^\circ$ per degree change in ambient

Indication Ranges

Type E:	-328 to 1470°F	or	-200 to 800°C
Type J:	-346 to 1900°F	or	-210 to 1038°C
Type K:	-454 to 2500°F	or	-270 to 1370°C
Type T:	-454 to 750°F	or	-270 to 400°C
RTD (DIN)	-328 to 1472°F	or	-200 to 800°C

Agency Approvals

- CE[®], W.E.E.E., RoHS EU Directive (2002-95-EC)
- UL[®] 873 recognized temperature indicator, File # E43684
- UL[®] 197 reviewed for use in foodservice appliances
- Temperature indicator CSA 22.2 No. 24, File # 30586
- Front panel mount models with gasket
 - UL[®] 50 Type 4X indoor use only
 - NEMA 4X/IP65 approved

Terminals

- 0.25 in. (6.3 mm) quick connect, push on terminal or removable screw style terminal block

Power

- 24VAC +10%; -15%; 50/60Hz, $\pm 5\%$
- 120VAC +10%; -15%; 50/60Hz, $\pm 5\%$
- 230 to 240VAC +10%; -15%; 50/60Hz, $\pm 5\%$
- 10VA max. power consumption

Operating Environment

- 32 to 158°F (0 to 70°C)
- 0 to 90% RH, non-condensing
- Storage temperature: -40 to 185°F (-40 to 85°C)

Dimensions

- DIN-rail model can be DIN-rail or chassis mount
DIN-rail spec DIN 50022, 1.38 x 0.30 in. (35 x 7.5 mm)

Style	Width	Height	Depth
DIN-rail	3.08 in. (78.1 mm)	4.42 in. (112.3 mm)	3.57 in. (90.7 mm)
Square 1/8 DIN Panel	2.85 in. (72.4 mm)	2.85 in. (72.4 mm)	Behind panel 2.04 in. (51.7 mm)

^① See declaration of conformity.

Ordering Information

Indicator only, 4-character, 7-segment display

Part Number

① ②	③	④	⑤	⑥	⑦ ⑧ ⑨ ⑩	⑪ ⑫ ⑬ ⑭	⑮
TM	Power Supply	Package	Sensor Type & Scale	A	AAAA	AAAA	Overlay/Custom Options

③ Power Supply	
B =	120VAC
D =	230 to 240VAC
F =	24VAC

④ Package	
1 =	Panel mount, 1/8 in. DIN square - spade terminals
2 =	DIN-rail mount - spade terminals
5 =	Panel mount, 1/8 in. DIN square - screw terminals
6 =	DIN-rail mount - screw terminals
A =	NEMA 4X panel mount, - spade terminals
C =	NEMA 4X panel mount, - screw terminals

⑤ Sensor Type & Scale	
H =	T/C Type J °F (-346 to 1900°F)
J =	T/C Type J °C (-210 to 1038°C)
K =	T/C Type K °F (-454 to 2500°F)
L =	T/C Type K °C (-270 to 1370°C)
M =	T/C Type T °F (-454 to 750°F)
N =	T/C Type T °C (-270 to 400°C)
P =	RTD °F (-328 to 1472°F)
R =	RTD °C (-200 to 800°C)
S =	T/C Type E °F (-328 to 1470°F)
T =	T/C Type E °C (-200 to 800°C)

⑮ Overlay/Custom Options	
A =	Standard with Watlow logo
1 =	Standard without Watlow logo