

## Product Selection

TC24411100



TC484120001



TC964110100



## TC Series

Description	Normally Stocked Item	Catalog Number
Temperature control, 24 x 48 mm, two relay out, 90–250 Vac	Yes	TC24411100
Temperature control, 24 x 48 mm, SSR driver/relay out, 90–250 Vac	Yes	TC24412100
Temperature control, 48 x 48 mm, one relay out, relay alarm, 90–250 Vac	Yes	TC484110101
Temperature control, 48 x 48 mm, SSR driver out, 90–250 Vac	Yes	TC484120001
Temperature control, 48 x 48 mm, SSR driver out, relay alarm, 90–250 Vac	Yes	TC484120101
Temperature control, 48 x 48 mm, analog out, relay alarm, 90–250 Vac	Yes	TC484130101
Temperature control, 96 x 48 mm, one relay out, relay alarm, 90–250 Vac	Yes	TC964110100
Temperature control, 24 x 48 mm, two relay out, 11–26 Vac/Vdc	—	TC24511100
Temperature control, 48 x 48 mm, one relay out, relay alarm, 11–26 Vac/Vdc	—	TC485110101
Process control, 24 x 48 mm, analog/relay out, 90–250 Vac	—	PC24463100
Temperature control, 48 x 48 mm, analog out, relay alarm, 90–250 Vac	—	TC24413100

## Technical Data and Specifications

## General Specifications

Description	Specification
<b>Power</b>	
Power	90–250 Vac, 47–63 Hz, 10 VA (TC24), 12 VA (TC48/TC96), 5W maximum (TCxx4) 11–26 Vac/Vdc, 10 VA (TC24), 12 VA (TC48/TC96), 5W maximum (TCxx5)
<b>Input</b>	
Resolution	18 bits
Sampling rate	5 times/second
Temperature effect	±1.5 $\mu\text{V}/^\circ\text{C}$ for all inputs except mV input ±3.0 $\mu\text{V}/^\circ\text{C}$ for mV input
Sensor lead resistance effect	
T/C	0.2 $\mu\text{V}/\text{ohm}$
Three-wire RTD	2.6 $^\circ\text{C}/\text{ohm}$ of resistance difference of 2 leads
Two-wire RTD	2.6 $^\circ\text{C}/\text{ohm}$ of resistance sum of 2 leads
Burn-out current	200nA
Common mode rejection ratio (CMRR)	120dB
Normal mode rejection ratio (NMRR)	55dB
Sensor break detection	Sensor open for TC, RTD and mV inputs, sensor short for RTD input, below 1 mA for 4–20 mA, below 0.25V for 1–5V input
Sensor break response time	Within 4 seconds for TC, RTD, and mV inputs; 0.1 second for 4–20 mA and 1–5V inputs
<b>Output</b>	
Relay rating	2A/240 Vac; 200,000 life cycles for resistive load
Pulsed voltage	Source voltage 5V, current limiting resistance of 66 ohms
Linear output	
Resolution	15 bits
Output regulation	0.02% for full load change
Output setting time	0.1 sec. (stable to 99.9%)
Isolation breakdown voltage	1000 Vac
Temperature effect	±0.01% of SPAN/ $^\circ\text{C}$

## General Specifications, continued

Description	Specification
<b>Alarm</b>	
Alarm relay	Form C rating; 2A/240 Vac; 200,000 life cycles for resistive load
Alarm functions	Dwell timer, deviation high/low alarm, deviation band high/low alarm, PV high/low alarm
Alarm mode	Normal, latching, hold, latching/hold
Dwell timer	0.1 to 4553.6 minutes
<b>Environmental and Physical</b>	
Operating temperature	14° to 122°F (–10° to 50°C)
Storage temperature	–40° to 140°F (–40° to 60°C)
Humidity	0–90% RH (non-condensing)
Altitude	2000m max.
Pollution	Degree 2
Insulation resistance	20M ohms min. (at 500 Vdc)
Dielectric strength	2000 Vac, 50/60 Hz for 1 minute
Vibration resistance	10–55 Hz, 10 m/s <sup>2</sup> for 1 minute
Moldings	Flame resistant polycarbonate
Dimensions	TC96 = 1.88 in (48 mm) (W) x 3.77 in (96 mm) (H) x 3.15 in (80 mm) (D) TC48 = 1.88 in (48 mm) (W) x 1.88 in (48 mm) (H) x 4.56 in (116 mm) (D) TC24 = 1.96 in (50 mm) (W) x 1.04 in (26.5 mm) (H) x 4.35 (110.5 mm) (D)

## Special Control Function Inputs

## Input Characteristics

Type	Range	Accuracy at 25°C	Input Impedance
J	–120° to 1000°C (–184° to 1832°F)	±2°C	2.2M ohms
K	–200° to 1370°C (–328° to 2498°F)	±2°C	2.2M ohms
T	–250° to 400°C (–418° to 752°F)	±2°C	2.2M ohms
E	–100° to 900°C (–148° to 1652°F)	±2°C	2.2M ohms
B	0° to 1800°C (32° to 3272°F)	±2°C (–200° to 1800°C)	2.2M ohms
R	0° to 1767.8°C (32° to 3214°F)	±2°C	2.2M ohms
S	0° to 1767.8°C (32° to 3214°F)	±2°C	2.2M ohms
N	–250° to 1300°C (–418° to 2372°F)	±2°C	2.2M ohms
L	–200° to 900°C (–328° to 1652°F)	±2°C	2.2M ohms
PT100 (DIN)	–210° to 700°C (–346° to 1292°F)	±0.4°C	1.3k ohms
PT100 (JIS)	–200° to 600°C (–328° to 1112°F)	±0.4°C	1.3k ohms
mV	–8 mV to 70 mV	±0.05%	2.2M ohms
mA	–3 mA to 27 mA	±0.05%	70.5 ohms
V	–1.3V to 11.5V	±0.05%	650k ohms