1/16 DIN Temperature Controllers

CN370 Series Starts at $199

CN360 Series Starts at $159

CN350 Series Starts at $139

KTSS-316G-6, $19, molded transition joint thermocouple probe.
See page A-74.

Shown larger than actual size.

1 YEAR WARRANTY

- **Economical, Easy-to-Use**
- **1/16 DIN Panel Cutout**
- **Input Types: J, K, R, S Thermocouples and 100 Ω Platinum RTD**
- **Fixed Proportional Band (4%) with Manual Reset**
- **Fixed Cycle Time: 30 s for Mechanical Relay and 3 s for DC Solid State Output**
- **User Convertible for Proportional or On/Off Control**

The CN350, CN360, and CN370 Series controllers are economical and easy to use. Models are available with digital, deviation, or non-indicating display, for J, K, R, and S thermocouples or 100 Ω platinum RTD input. The small 48 mm (1.88") square face, 45 mm (1.77") square cutout (1/16 DIN), and short 90 mm (3.54") depth behind the panel helps conserve space and cut installation costs. All models have a digital thumbwheel for adjusting the setpoint.

The CN370 Series models provide continuous digital display of the process temperature. The CN360 Series models indicate whether the process temperature is within ±1.5% FS of the setpoint or above or below setpoint. The CN350 Series models are non-indicating.

These controllers are time proportional with manual reset, and can be converted to on/off control by changing internal jumpers. The proportional band is fixed at 4%.

Two types of outputs are available. A 2.5 A (SPDT) mechanical relay is for use with systems that can use a 30-second cycle time. With an external solid state relay, loads to 5 A can be accommodated.

For systems that require a faster cycle time, the DC solid state driver output should be used. This has a cycle time of approximately 3 seconds and can control high AC loads by using a DC-controlled solid state relay.

Specifications

Accuracy:

Thermocouple Input: ±1.5% FS + 1 digit

RTD Input: ±1.0% + 1 digit

Resolution: 1°C or °F (P2CX range: 0.1°C)

Output Types: SPDT mechanical relay, 240 Vac, 2.5 A resistive load (1 A inductive load) solid state voltage driver, 12 Vdc, 20 mA max—reverse action (NO) for heating

Power Supply: 115/230 Vac ±10%, 50/60 Hz; optional 24 Vdc (relay models only)

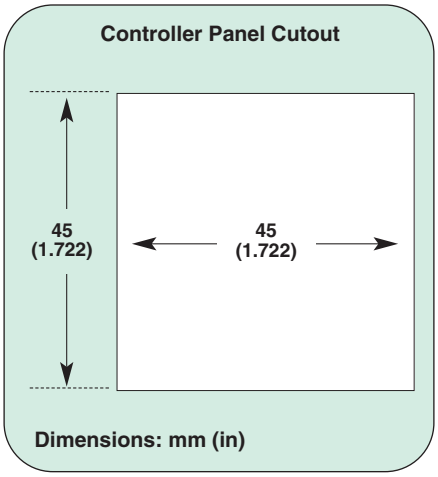
Input:

3-Wire RTD (Pt100): 0.00385 Ω/Ω/°C excitation, 2 mA lead wire resistance, 2 Ω max per wire (approximately 190' of 20-gage copper wire)

Thermocouple J, K, R*, S* (*Non-Indicating Models Only): Input resistance, 200 kΩ; lead wire resistance, 100 Ω max; up-scale protection circuit standard

Control Mode: Proportional band, 4% FS fixed; manual reset, adjustable from front face on/off; deadband/hysteresis, 0.3% FS fixed

Cycle Time:
Mechanical Relay:
Approximately 30 s fixed
DC Solid State Relay Driver:
Approximately 3 s fixed
Power Consumption: Approximately 3 VA
Operating Ambient Range: 5 to 45°C (40 to 112°F), 90% RH
Insulation Resistance: 500 Vdc, 20 MΩ min between input and power supply terminals
Connection: Screw terminals
Installation: Lock-in mounting type (no mounting hardware necessary)
Dimensions (1/16 DIN): 45 mm (1.77") square panel cutout, 48 mm (1.88") square face, 90 mm (3.54") depth behind panel
Panel Thickness: 1 to 3.5 mm (0.04 to 0.14")
Weight: 210 g (0.463 lb)



Shown smaller than actual size.

Transition Joint Probes Sold Separately. See Page A-75

Companion Limit Controllers CN375 and CN355 Available. See Page P-106

MOST POPULAR MODELS HIGHLIGHTED!

To Order *(Specify Model Number)*

Relay Output Models			DC Pulse Output Models			Input	
Indicating $199	Deviation $159	Non-Indicating $139	Indicating $199	Deviation $159	Non-Indicating $139	Sensor	Range
CN371-JC2	CN361-JC2	CN351-JC2	CN372-JC2	CN362-JC2	CN352-JC2	J	0 to 399°C
CN371-JF3	CN361-JF3	CN351-JF3	CN372-JF3	CN362-JF3	CN352-JF3		0 to 499°F
CN371-JF4	CN361-JF4	CN351-JF4	CN372-JF4	CN362-JF4	CN352-JF4		0 to 799°F
CN371-KC2	CN361-KC2	CN351-KC2	CN372-KC2	CN362-KC2	CN352-KC2	K	0 to 399°C
CN371-KC5	CN361-KC5	CN351-KC5	CN372-KC5	CN362-KC5	CN352-KC5		0 to 999°C
—	—	CN351-KC6	—	—	CN352-KC6		0 to1199°C
CN371-KF5	CN361-KF5	CN351-KF5	CN372-KF5	CN362-KF5	CN352-KF5		0 to 999°F
—	—	CN351-KF8	—	—	CN352-KF8		0 to 1999°F
—	—	CN351-RC7	—	—	CN352-RC7	R	0 to 1699°C
—	—	CN351-RF9	—	—	CN352-RF9		0 to 2999°F
—	—	CN351-SC7	—	—	CN352-SC7	S	0 to 1699°C
CN371-P1C1	CN361-P1C1	CN351-P1C1	CN372-P1C1	CN362-P1C1	CN352-P1C1	RTD	-99 to 99°C
CN371-P2CX	CN361-P2CX	CN351-P2CX	CN372-P2CX	CN362-P2CX	CN352-P2CX		0 to 99.9°C
CN371-P1C2	CN361-P1C2	CN351-P1C2	CN372-P1C2	CN362-P1C2	CN352-P1C2		0 to 399°C
CN371-P1F2	CN361-P1F2	CN351-P1F2	CN372-P1F2	CN362-P1F2	CN352-P1F2		0 to 399°F
CN371-P1F4	CN361-P1F4	CN351-P1F4	CN372-P1F4	CN362-P1F4	CN352-P1F4		0 to 799°F

Comes with complete operator's manual.
*For low-voltage, 24 Vdc power, add suffix "**-24VDC**", no extra charge. Low-voltage power is not available on DC pulse series CN372, CN362 or CN352 models.*
Ordering Example: CN371-JC2-24VDC,** digital-indicating, proportional or on/off controller, thermocouple type, range 0 to 399°C, with 24 Vdc power, **$199.

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