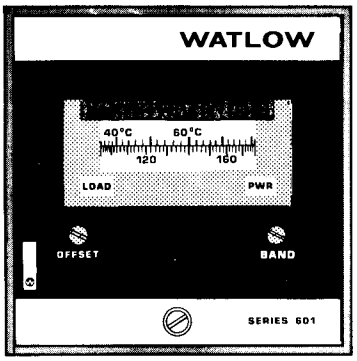
Temperature Controller

DATA SHEET
601 SERIES



FEATURES

Plug-in Design

Time Proportioning

Manual Reset

115/230V Operation (Field Selectable)

RTD, Thermistor, or Thermocouple Sensor

Relay Output

Power Indication

Load Power Indication

Heating or Cooling Mode Available

GENERAL

The Series 601 is a plug-in Din size temperature controller. The control mode is time proportioning with adjustable manual reset. Proportional band and manual reset are front panel adjustable. The control mode can be converted to on-off by installing an external jumper wire.

The controller is available with thermistor, thermocouple, or RTD sensor inputs. The output is a 10-ampere S.P.D.T. plug-in relay.

Front panel mounted L.E.D.'s indicate when power has been applied to the controller and when power is being applied to the load. The plug-in design of the unit allows for easy access to make relay replacement or controller replacement a simple task.

SPECIFICATIONS:

CONTROL MODE:
Time proportioning with adjustable manual reset. Note: The control mode may be converted to on-off by installing a jumper wire between terminals one and two on the barrier strip.

PROPORTIONAL BAND:
Front panel adjustable. Typically covers the range of 5 to 50°F.

MANUAL RESET:
Front panel adjustable. Corrects for control offsets over the full 50°F proportional band.

CYCLE RATE:
Varies automatically when control is within proportional band. Typically 10 seconds minimum.

SENSOR: RTD, thermistor, or thermocouple.

OUTPUT:
Plug-in S.P.D.T. relay. Rated at 10A/120V, 5A/240V resistive; 50 V.A. inductive.

INDICATOR LIGHTS: Long life L.E.D.'s.
1) Power: Indicates line voltage is applied to the controller.
2) Load: Indicates output relay is energized.

LINE VOLTAGE: 115/230 VAC, +10%, −20%, 50/60 Hz.

POWER CONSUMPTION: Less than 4 V.A.

OPERATING AMBIENT: 30 to 130°F.

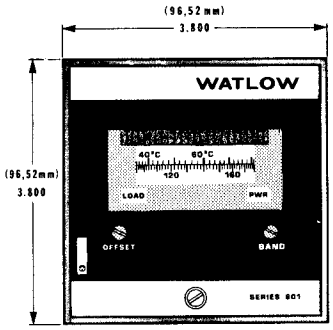
SENSOR PROTECTION:
RTD and Thermocouple Models — In the event of an open sensor, load power will be removed.
Thermistor Sensor — In the event of a shorted sensor, load power will be removed.

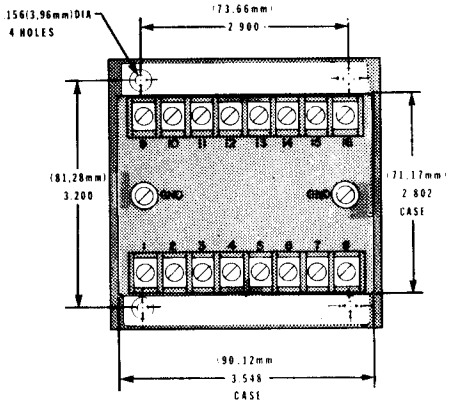
ISOLATION:
Thermocouple Models — T.C. input to line and load.
D.C. resistance: 10^{11} ohms. Capacitance: 50 pf.
RTD and Thermistor Models — Sensor and control circuitry are isolated from the line and the load.

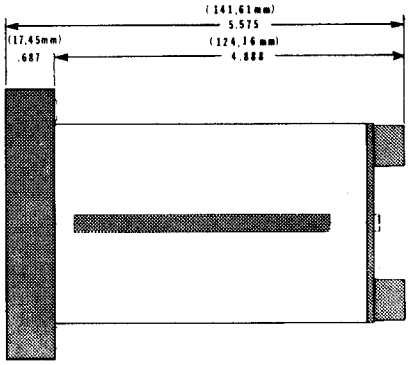
SET POINT SHIFT W/LINE VOLTAGE:
Typically ± 0.1% of span for a ± 10% change in line voltage.

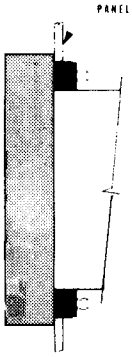
SET POINT SHIFT W/AMBIENT:
Thermocouple Models — Typically 10 microvolts/°F referred to the input.
RTD and Thermistor Models — Typically ± 1°F.

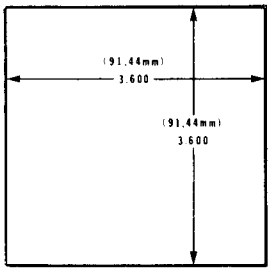
WATLOW WINONA, INC.
WINONA, MINNESOTA 55987 • 1265 EAST SANBORN STREET • PHONE 507 454-5300



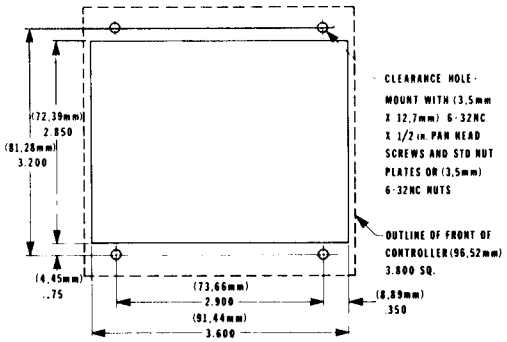




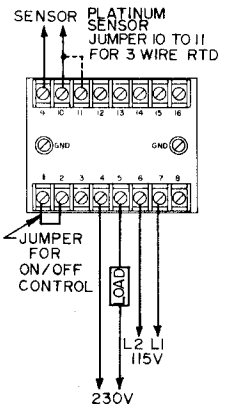




PANEL CUTOUT



ALTERNATE PANEL CUTOUT



SERIES 601
TEMPERATURE CONTROL

TERMINAL DESIGNATIONS

1.] JUMPER FOR
2.] ON - OFF
3. N.C.] CONTACT RATED
4. N.O.] 240V MAX., 5AMP. R.M.S.
5. C.]
6. A.C. LINE COMMON, L2
7. 120V LINE, L1
8. 240V LINE, L1
9. S1] SENSOR
10. S2]
11.
12. NOT USED
13. NOT USED
14. NOT USED
15. NOT USED
16. NOT USED

MODEL:_____

RANGE:_____

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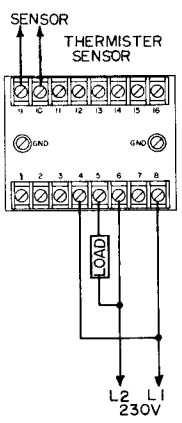

SERIES 601
TEMPERATURE CONTROL

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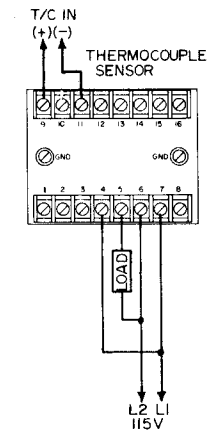
5. C.]
6. A.C. LINE COMMON, L2
7. 120V LINE, L1
8. 240V LINE, L1
9. S1]
10. S2] SENSOR
11. S3]
12. NOT USED
13. NOT USED
14. NOT USED
15. NOT USED
16. NOT USED

MODEL:_____

RANGE:_____

WATLOW WINONA
WINONA, MINN.



SERIES 601
TEMPERATURE CONTROL

TERMINAL DESIGNATIONS

1.] JUMPER FOR
2.] ON - OFF
3. N.C.] CONTACT RATED
4. N.O.] 240V MAX., 5AMP. R.M.S.
5. C.]
6. A.C. LINE COMMON, L2
7. 120V LINE, L1
8. 240V LINE, L1
9. T.C. +]
10. NOT USED] SENSOR
11. T.C.-, RED]
12. NOT USED
13. NOT USED
14. NOT USED
15. NOT USED
16. NOT USED

MODEL:_____

RANGE:_____

T.C. TYPE:_____

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ORDERING INFORMATION

1	2	3	4		5	6	7		8	9	10
6	A	1	0	-	8		B	-			

6. OUTPUT MODE
   0 - COOLING
   1 - HEATING

RANGE CODE
SEE RANGE CHART 3.