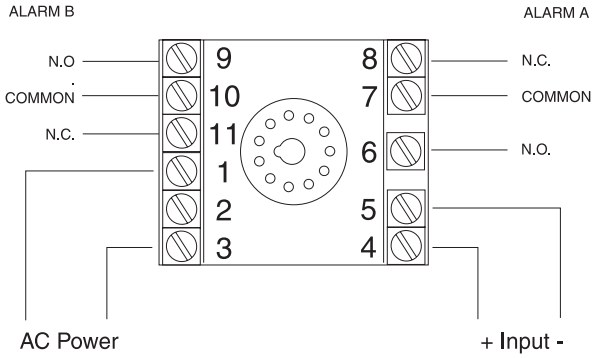
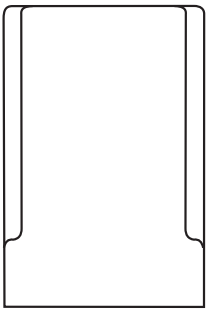
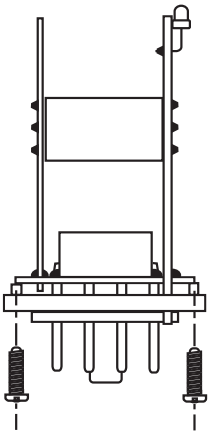
Model 1290
INSTALLATION INSTRUCTIONS

WIRING

Mount socket and wire per diagram.







RANGE SETUP

Carefully remove the four screws from the bottom of the plug end. Slide the cover off.



WARNING: Do not plug in or power this device with the cover removed. Potentially lethal voltage is present on some of the internal components. Make sure that the cover is firmly in place before plugging into the socket.

ALARM PROGRAMMING

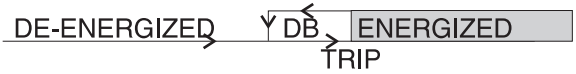
Setup of the alarms is fairly simple once a few concepts are understood. Since the alarms can be set for reverse or direct action, high or low function, and has normally open and normally closed contacts; the number of combinations of actual output behavior is quite large.

First, decide how you want the outputs to behave. Will the relay energize or de-energize at the trip point? Will the relay trip on an increasing or decreasing signal? Is the dead band above or below the trip point?

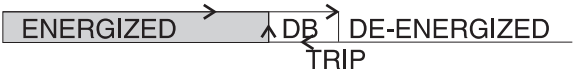
It is important to answer these questions before setting up the module. The following chart illustrates the most likely combinations of settings.

FUNCTION CHART

RELAY STATE WITH SWITCHES SET FOR HI AND DIR



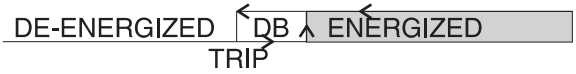
RELAY STATE WITH SWITCHES SET FOR HI AND REV



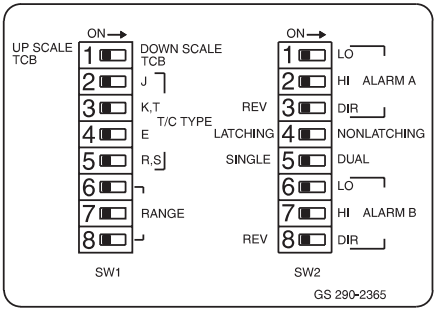
RELAY STATE WITH SWITCHES SET FOR LO AND DIR



RELAY STATE WITH SWITCHES SET FOR LO AND REV



Using the figure adjacent, set up the switches on SW2 for Alarm A and Alarm B. For dual alarm relays triggered by Alarm A, set switch 5 to DUAL. When switch 5 is set to DUAL, switches 6 and 7 have no effect.



RANGE SELECTION

Move switch one on SW1 to select upscale or downscale thermocouple break. Upscale is standard and will trip a high alarm if the thermocouple breaks. Downscale will trip a low alarm.

Use the following chart to select the thermocouple type and thermocouple range for your process. Select the column for the type of thermocouple you are using and turn on the appropriate switch (as indicated) on SW1. Next find the row which has the range desired, and turn on (or off) the appropriate switches as indicated at the right end of that row.

RANGE SELECTION CHART

THERMOCOUPLE TYPE						SW1 SWITCH SETUP
E	J	K	R	S	T	
4 2 3 5	2 3 4 5	3 2 4 5	5 2 3 4	5 2 3 4	3 2 4 5	ON OFF
-270 TO 150°C	-210 TO 190°C	-270 TO 250°C			-270 TO 210°C	7 8 6
-270 TO 290°C	-210 TO 360°C	-270 TO 480°C			-270 TO 390°C	6 8 7
0 TO 150°C	0 TO 190°C	0 TO 250°C	0 TO 970°C	0 TO 1050°C	0 TO 210°C	8 6 7
0 TO 290°C	0 TO 360°C	0 TO 480°C	0 TO 1760°C	0 TO 1760°C	0 TO 390°C	6 7 8
0 TO 660°C	0 TO 760°C	0 TO 1372°C				6 7 8
0 TO 1000°C						6 7 8

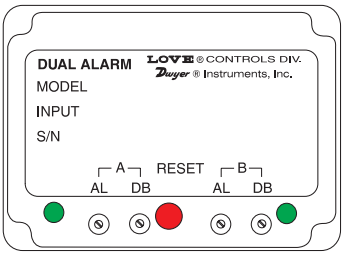
Replace cover. Make sure that the two LED indicators, the reset switch and the adjustment screws fit properly through the holes in the top of the cover. Carefully replace the four screws. **DO NOT OVER TIGHTEN.**

ALARM CALIBRATION



CAUTION: Allow the module and socket to come to stable temperature before proceeding. For best results, allow the module to be powered in the socket for at least 20 minutes.

1. Apply the appropriate input for the desired alarm trip point.
2. Adjust the alarm AL screw for relay trip (LED changes color).
3. Adjust the alarm DB screw to the full clockwise position. Change the input to the desired reset point. Slowly turn the alarm DB screw counter-clockwise until the relay re-sets (Alarm LED changes back to original color).
4. Move the input back to the desired trip point to confirm correct setting.



5. Move the input to the reset point to confirm correct setting.
6. Repeat as necessary.

OPERATION

On power up the module will automatically reset the alarms provided that no alarm condition exists. It may be necessary to reset a low alarm after the temperature has reached normal conditions.

When the input temperature is within set limits, both LED indicators will be green and the relay contacts will be in the state programmed for normal operation. If the temperature reaches either of the trip points, the relay connected to that trip point will change state and the LED connected to that point will indicate red.

When the temperature returns to normal (trip point plus dead band for low alarm settings, trip point less dead band for high alarm settings) and switch 4 of SW 2 is set to NON-LATCHING, the relay and LED will automatically return to the non-alarm condition. If switch 4 of SW 2 is set to latching, the red RESET button on the top of the module must be pressed to return the relay and LED to the non-alarm condition.

SPECIFICATIONS

Power Supply: 85 to 265 VDC / VAC 50 to 400 Hz.
Isolation: 1500 V rms between outputs, input, and power.
Set Points: Adjustable 0 to 100% of span.
Deadband: Adjustable 0.25% to 100% of span.
Drift: ±0.02% / °C typical, ±0.05% / °C maximum.
Ambient Temperature Range (operating): 0° to 55° C (32° to 131° F)
Input impedance: 3 megohms.
Relay output: SPDT, one per set point, 5A @ 250 VAC, resistive.
Latch circuit reset: Automatic at power up. Manual with reset switch on top of module.
Indicators: One dual color LED per set point. Red = relay on, green = relay off.
Sensor burnout protection: Selectable upscale or downscale.

LOVE CONTROLS DIVISION
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