Step 11. Enter to the Thermocouple Type Input Submenu
Press 1 to display flashing, previously selected Thermocouple type.

Step 12. Scroll through available selection of TC types
Press 1 to sequence thru flashing Thermocouple types, (select k for "k" CHROMELALUMEL (OMEGA))

Step 13. Store TC type
After you have selected the Thermocouple type press 2 to store your selection, the instrument automatically advances to the next menu item.

Step 14. Enter to the Reading Configuration Menu
The display shows the flashing Configuration, which is the top menu for 4 submenus: Decimal Point, Degree Units, Filter Constant and Input Unit.

Step 15. Enter to Decimal Point Submenu
Press 1 to show Decimal Point.

Step 16. Display the Decimal Point position
Press 1 again to display the flashing Decimal Point position.

Step 17. Select the Decimal point position
Press 1 to select D.P. Decimal point position.

Step 18. Store selected Decimal Point position
By pressing 1 momentarily the Decimal point position will be stored and the instrument will go to the next menu item.

Step 19. Enter to Temperature Unit Submenu
Display shows °C Temperature Unit.

Step 20. Display available Temperature Units Press 1 to display the flashing Temperature Unit.

Step 21. Scroll through Temperature Units selection Press 1 to select °C Degree.

Step 22. Store the Temperature Unit
Press 1 to display momentarily that the Degree Unit has been selected.

Step 23. Enter to the Filter Constant Submenu
Display shows FILTER Filter Constant Submenu.

Step 24. Display the Filter Constant Value Submenu
Press 1 to display the flashing, previously selected Filter Constant.

Step 25. Scroll through available Filter Constants Press 1 to sequence thru flashing Filter Constants.

Step 26. Store the Filter Constant
Press 1 momentarily to store FILTER Filter Constant and the instrument will automatically go to the next menu item.

Step 27. Enter Alarms Menu
The display will show ALRM the top menu for Alarm 1. In the following steps we are going to enable Alarm 1, Deviation, Unlatch, Normally Open, Active Above, Enable at power on and +2°F High Alarm i.e. Process Value > Setpoint 1 Value +2°F will activate Alarm 1.

Step 28. Enter Alarm 1 Enable/Disable Submenu
Press 1 to display flashing ENABLE.

Step 29. Enable Alarm 1 Submenu
If flashing ENABLE is displayed, press 1 is displayed, press 1 until ENABLE is displayed, then press 1 to store and go to the next menu item.

Step 30. Select the Deviation Control Type Submenu
Press 1 to display flashing, previously selected press, otherwise press 2 until flashing ENABLE is shown. Now press 1 to store and go to next menu item.

Step 31. Select the Latched Type Submenu
Press 1 to display flashing, previously selected press, otherwise press 2 until UNL is displayed. Press 1 to store and advance to next menu item.

Step 32. Select the Normally Open Type of Contact Submenu
Press 1 to display flashing, previously selected press, otherwise press 2 until UNLT is displayed. Press 1 to store and advance to next menu item.

Step 33. Select the Type of Active Submenu
Press 1 to display flashing, previously selected press, otherwise press 2 until A.BOV is displayed. Press 1 to store and advance to next menu item.

Step 34. Enable Alarm 1 at Power On
Press 1 if flashing A.ON is displayed, press 1, otherwise press 2 until A.ON is displayed. Press 1 to store and advance to next menu item.

Step 35. Enter Alarm 1 High Submenu
Press 1 to go to the top menu for Alarm 2.

Step 36. Set the Alarm 1 High value
Press 1 or 2 until value to set to the display. Press 1 to save.

Step 37. Enter the Alarm 2 Menu
The display will show ALRM the top menu for Alarm 2. Repeat steps from 28 to 35 to set for Alarm 2 the same conditions as for Alarm 1.

Step 38. Skip the Loop Break Time Menu
Press 1 to go to the top menu Output 1. Menu.

Step 39. Configuration the Output 1 Menu
Press 1 until Set Alarm 1 Disabled (Step 29) to be able to Enable Output 1.

Step 40. Configuration of Display Color Selection
Press 1 until the COLR Display Color Selection Menu appears, press 1, 2, 3, 4, 5 (red), 6, 7, 8 (green), 9 (red), 0 (amber). Please refer to the operator’s manual if needed.

For color change on Setpoints refer to Owners Manual Section 3.

Step 41. Run a Test
Press 1 until reset the controller and return to RUN Mode to display °C (Ambient Temperature). Now you are ready to observe temperature as close and higher than that displayed. Touch the tip of the Thermocouple to raise the temperature above the Alarm 1 High value °C, and Alarm 2 will turn on, and Display Color will change from Green to Amber to Red. Touch the tip of the alarm to raise the temperature above the Alarm 1 High value °C and Display Color will change from Amber to Red. Annunciator “1” is turning on and off displaying output 1.

SPECIFICATION
Accuracy: ±0.5°C, +3°C at Max temp, process typical
Resolution: 0.001°C / 0.005°C / 0.01°C / 0.05°C / 0.1°C / 0.5°C
Display: 4-digit, 8-segment LED,
1.102 mm (0.043") / 1.778 mm (0.070") (Dual Vertical),
21 mm (0.83") / 31 mm (1.22") (Dual Horizontal),
Red, green, and amber programmable colors for process variable, set point and temperature units.
Input Type:
Thermocouple, RTD, Analog Voltage and Current.

Temperature Stability:
0.5°C temp;
0.5 ppm/°C temp;
0.5°C temp, process typical

Dimensions:
Width: 496 mm (19.5")
Depth: 370 mm (14.5")
Height: 169 mm (6.6")

Weight:
48W x 96H x 127D mm

Power Supply Options:
100-240VAC 10A, 0.2W for i28;
200-480VAC 10A, 2.2W for i28;

Alarm Low Power Voltage Option:
20–30 VDC, 0.1 W for all models (Step 29).

Configuration Out 1 Menu
Configure Out 1 as DIG, ANAL, N.CLR, UNLT, CLR,
002.0 AUTO

WARNING: These products are not designed for use, and should not be used for, patient-monitoring purposes.

This device is marked with the international symbol of risk — it is important to read the manual for the device as the guide to safe use and handling to safety and EMI.

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RETURN REQUEST/INQUIRIES
RETURNING ANY PRODUCT(S) TO NEWPORT, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM NEWPORT’S CUSTOMER SERVICE DEPARTMENT. All returns must be sent freight prepaid within 60 days of date of shipment. Service department will not accept C.O.D. returns.
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RETURN REQUEST/INQUIRIES
RETURNING ANY PRODUCT(S) TO NEWPORT, PURCHASER MUST OBTAIN AN AUTHORI...
Disassembly Instruction:
If necessary, the board assembly may be removed from the front of the case housing.

Warning: Disconnect all ac power from the unit before proceeding.

1. Remove the board assembly from the case, by pulling at the sides of the bezel.
2. The bezel along with the board assembly will unlash from the case housing.

Warning: Do not exceed voltage rating on the label located on the top of the instrument housing.
Always disconnect power before changing signal and power connections.
Do not expose this instrument to rain or moisture.
Do not use this instrument on a work bench without its case for safety reasons.
Do not operate this instrument in flammable or explosive atmospheres.

EMC:
Whenever EMC is an issue, always use shielded cables.
Never run signal and power wires in the same conduit.
Use signal wire connections with twisted-pair cables.
Install Ferrite Bead(s) on signal wire close to the instrument if EMC problems persist.

FLOW CHART

Connect the main power connections as shown in the figure below.

Warning: Do not connect ac power to your device until you have completed all input and output connections. This device may only be installed by a specially trained electrician with corresponding qualifications. Failure to follow all instructions and warnings may result in injury!

OPERATION - (For Thermocouple Input)

Step 1. Apply Power to the Instrument
When your device is first powered up it will display the ambient temperature (assume 75°F).

Step 2. Enter Setpoint 1 Menu
Press ON or until desired value is displayed.
Set the Setpoint 1 to 10 degree higher than Process value (SP1 = 85) and press to store.
Repeat steps 3 and 4. Set the Setpoint 2 to 5 degree higher than Process value (SP2 = 80) and press to store.

Step 3. Change the Setpoint 1 Value
Press ON or until desired value is displayed.
Press twice will cause the display to flash PEAK or VALLEY to reset corresponding value.
Pressing twice will cause the display to flash and put the instrument into standby, which disables all outputs and alarms. Press one more time to go back to RUN Mode.

Step 4. Change the Setpoint 2 Value
Press ON or until desired value is displayed.
Press twice will cause the display to flash PEAK or VALLEY to reset corresponding value.
Pressing twice will cause the display to flash and put the instrument into standby, which disables all outputs and alarms. Press one more time to go back to RUN Mode.

Step 5. Store the Setpoint 1 Value
1. Press to store. Display shows the previous selection of Setpoint 1.
2. To direct the instrument to the next submenu level Press.
3. To save a selected flashing display Press again to go back to RUN Mode.
4. Causes the display to flash PEAK with the corresponding value. Press again to go back to RUN Mode.
5. Causes flashing PEAK or VALLEY to reset corresponding value. Pressing twice will cause the display to flash and put the instrument into standby, which disables all outputs and alarms. Press one more time to go back to RUN Mode.

Step 6. Store the Setpoint 2 Value
Repeat steps 3 and 4. Set the Setpoint 2 to 5 degree higher than Process value (SP2 = 80) and press to store.
Repeat steps 4 and 5. Set the Setpoint 2 to 10 degree higher than Process value (SP1 = 85) and press to store.

Step 7. Enter the Input Type Menu
Press to enter.

Step 8. Enter to the submenu items of Input Menu
Press to display Input: Process, RTD or Thermocouple.

Step 9. Scroll through available selection of Input Menu
Press until a flashing message and advances to Configuration Menu.
Repeat steps 3 and 4. Set the Setpoint 2 to 5 degree higher than Process value (SP2 = 80) and press to store.
Repeat steps 4 and 5. Set the Setpoint 2 to 10 degree higher than Process value (SP1 = 85) and press to store.

Step 10. Enter to the Thermocouple Input Submenu
Press to store Thermocouple Input. The display will stop flashing and show the top menu for Thermocouple types.
If you press controller will step to next menu item (Skip to Step 14).

It is required that you put the controller in Standby Mode for any configuration changes other than Setpoints and Alarms.

SAFETY CONSIDERATION
This device is marked with the international Caution symbol.

The instrument is a panel mount device protected in accordance with EN 61010-1:2001, electrical safety requirements for electrical equipment for measurement, control and laboratory. Remember that the unit has no power-on switch. Building installation should include a switch or circuit-breaker that must be compliant to IEC 947-1 and 947-3.

MOUNTING

Panel Mounting Instruction:
1. Using the dimensions from the panel cutout diagram shown above, cut an opening in the panel.
2. Remove sleeve from the rear of the case by removing thumbnuts.
3. Insert the unit into the opening from the front of the panel, so the gasket seals between the bezel and the front of the panel.
4. Slip the sleeve over the rear of the case.
5. Tighten the thumbnuts to hold the unit firmly in the panel.

Underline denotes factory default setup