OPERATION

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 ◉ one time from run mode to get to SP 1 Setpoint 1.

Step 3. Enter the Setpoint 1 Value Submenu
Press ◉. Display shows the previous selection of Setpoint 1.

Step 4. Change the Setpoint 1 Value
Press ▲ or ▼ until desired value is displayed.

Step 5. Store the Setpoint 1 Value
Set the Setpoint 1 to 10 degree higher than Process value (SP1 = 85) and press ◉ to store, display flashes StRd message and advances to SP2 Setpoint 2 Menu.

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, display flashes StRd message and advances to CNFG Configuration Menu.

Step 7. Enter the Reading Config Menu
Press ◉ to enter RdG Reading Config Menu.

Step 8. Enter the submenu items of Rdg Config Menu
Press ◉ to display SNSR Sensor submenu: Sensor selection for Autotune, Loop, or Ramp and Soak °F.C is for temperature and °oRH is for Humidity

Step 9. Enter the submenu items of Rdg Config Menu
Press ◉ to display Temp Unit submenu:

Step 10 Scroll thru selection for Temp Unit submenu
Press ▲ to Scroll though the available selections of the Temperature Unit of your choice: °F or °C.

Step 11. Store the Temperature Unit
Press ◉, display momentarily shows StRd the Unit has been stored and the instrument will go automatically to the next menu item.

Step 12. Enter the Filter Constant Submenu
Display shows FLtR Filter Constant Submenu.

Step 13. Display the Filter Constant Value Submenu
Press ◉ to display the flashing, previously selected Filter Constant.

Step 14. Scroll through available Filter Constants
Press ▲ to sequence thru Filter Constants 0001, 0002, 0004, 0008, 0016, 0032, 0064 and 0128.

Step 15. Store the Filter Constant
Press ◉ momentarily to store 0004 Filter Constant and the instrument will automatically go to the next menu item.

Step 16. Enter Alarm 1 Menu
The display will show ALR1 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.

Note
- If Analog Output Option is installed and enabled, the controller will skip Alarm 1 Menu item to Analog Output.
- Alarm must be DISABLED if Ramp is ENABLED.
- Alarm1 will only work for Humidity, not Temperature.

Alarm 1 is designed to monitor the humidity value around Setpoint 1 and Alarm 2 is designed to monitor the temperature value around Setpoint 2.

Step 17. Enter Alarm 1 Enable/Disable Submenu
Press ◉ to display flashing dSbL/ EnbL.

Step 18. Enable Alarm 1 Submenu
If flashing EnbL is displayed, press ◉, if dSbL is displayed, press ▲ until EnbL is displayed, then press ◉ to store and go to the next menu item.

Step 19. Select the Deviation Control Type Submenu
Press ◉. If flashing _dEV Deviation is displayed press ◉, otherwise press ▲ until flashing _dEV is shown. Now press ◉ to store and go to next menu item.

Step 20. Select the Latched Type Submenu
Press ◉. If flashing UnLt Unlatched is displayed press ◉, otherwise press ▲ until UnLt is displayed.
Press ◉ to store and advance to next menu item.

Step 21. Select the Normally Open Type of Contact Closure Submenu
Press ◉. If flashing n.o. Normally Open is displayed, press ◉, otherwise press ▲ until n.o. is displayed. Press ◉ to store and advance to next menu item.

Step 22. Select the Above Type of Active Submenu
Press ◉. If flashing AboV Above is displayed, press ◉, otherwise press ▲ until AboV is displayed. Press ◉ to store and advance to next menu item.

Step 23. Enable Alarm 1 at Power On (A.P.on)
Press ◉. If flashing EnbL is displayed, press ◉, otherwise press ▲ until EnbL is displayed. Press ◉ to store and advance to next menu item.

Step 24. Enter Alarm 1 High Submenu
Press ◉ twice to skip ALR.L Alarm 1 Low value. ALR.L is for below & ALR.H for above.

Step 25. Set the Alarm 1 High value (ALR.H)
Press ◉. Press ▲ or ▼ until value to set the display to 002.0. Press ◉ to save.

Step 26. Enter the Alarm 2 Menu
The display will show ALR2 the top menu for Alarm 2. Repeat steps from 17 to 25 to set for Alarm 2 the same conditions as for Alarm 1.

Step 27. Skip the Loop Break Time Menu (LOOP)
Press ◉ to go to the Out 1 Output 1 Menu item.

Step 28. Configuration the Output 1 Menu

Note Set Alarm 1 Disabled (Step 18) to be able to Enable Output 1.

Configure Out 1 as CtRL / PId, ACtN / rVrS, AUtO / dSbL, AnEL / EnbL, PRoP / 005.0, rESt / 0180, rAtE / 018.0, CyCL / 0010 and dPnG / 0003. Please refer to the operator's manual if needed. Press ◉ to save and go to the next menu item.

Step 29. Configuration of Display Color Selection
Press ◉ until the COLR Display Color Selection Menu appears on the Display. Configure COLR as n.CLR / GrN (green), 1.CLR / rEd (red), 2.CLR / AmbR (amber). Please refer to the operator's manual if needed.

Note For color change on Setpoints refer to Owners Manual Section 2.

SPECIFICATION

SENSOR SPECIFICATIONS
Relative Humidity Accuracy/Range:
±2% for 10 to 90%
±3% for 5 to 10% and 90 to 95%
±4% for 0 to 5% and 95 to 100%
Non-linearity: ±3%
Hysteresis: ±1% RH
Response Time:
8 sec, tau 63%
Repeatability: ±0.1%
Resolution: 0.1%, 12bit

Temperature Accuracy/Range*:
±0.5°C for 5 to 45°C (±1°F for 41 to 113°F);
up to ±1.5°C for -40 to 5°C and 45 to 124°C
(up to ±2.7°F for -40 to 41°F and 113 to 257°F)
***NOTE:** extended temp range is for Probe only, the Controller's operating temp is 0-50°C
Response Time:
5 to 30 sec, tau 63%
Repeatability: ±0.1°C
Resolution: 0.1°C, 14 bit

METER SPECIFICATIONS
Display:
4-digit, 9-segment LED,
• 10.2 mm (0.40")
Red, green, and amber programmable colors for setpoint and temperature units.

Output 1:
Relay 250 Vac @ 3 A Resistive Load, SSR, Pulse, Analog Voltage and Current
Output 2:
Relay 250 Vac @ 3 A Resistive Load, SSR, Pulse
Options: Communication
RS-232 / RS-485
or Excitation: 24 Vdc @ 25 mA
Exc. not available for Low Power Option
Line Voltage/Power:
90 - 240 Vac ±10%, 50 - 400 Hz*,
or 110 - 375 Vdc, **4 W**
** No compliance above 60 Hz* **Low Voltage Power Option:**
12 - 36 Vdc, **3 W****
*** Units can be powered safely with 24 Vac but No Certification for UL are claimed.*
Dimensions:
25.4 H x 48 W x 126.3 D mm
(1.0 x 1.89 x 5")
Weight:
127 g (0.28 lb)
Approvals:
per EN61010-1:2001

WARNING: These products are not designed for use in, and should not be used for, patient-connected applications.

⚠ This device is marked with the international caution symbol. It is important to read the Setup Guide before installing or commissioning this device, as the guide contains important information relating to safety and EMC.

It is the policy of OMEGA to comply with all worldwide safety and EMC/EMI regulations that apply. OEMGA is constantly pursuing certification of its products to the European New Approach Directives. OMEGA will add the mark to every appropriate device upon certification.

The information contained in this document is believed to be correct, but OMEGA Engineering, Inc. accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

MQS4006/0511

QUICK START

RoHS 2 Compliant

iSeries

CNiTH-i32
Humidity + Temperature Controller

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START HERE This Quick Start Reference provides information on setting up your instrument for basic operation. The latest complete Communication and Operational Manual as well as free Software and ActiveX Controls are available at ***www.omega.com/specs/iseries*** or on the **CD-ROM enclosed with your shipment**.

SAFETY CONSIDERATION

This device is marked with the international Caution symbol.

The instrument is a panel mount device protected in accordance with EN61010-1:2001. 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.

SAFETY:

- 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 use this instrument on a work bench without its case for safety reasons.
- Do not operate this instrument in flammable or explosive atmospheres.
- Do not expose this instrument to rain or moisture.

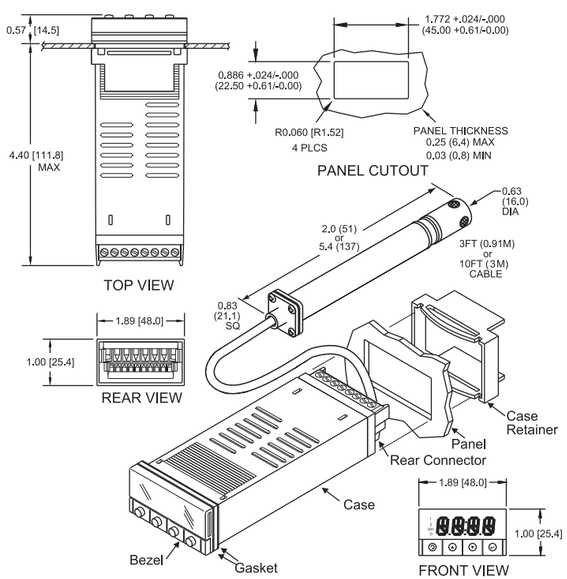
EMC:

- 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.

MOUNTING

Panel Mounting Instruction:

1. Using the dimensions from the panel cutout diagram shown above, cut an opening in the panel.
2. 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.
3. Slide the retainer over the rear of the case and tighten against the backside of the mounting panel.



Disassembly Instruction:

If necessary, the unit may be removed from the panel and opened.

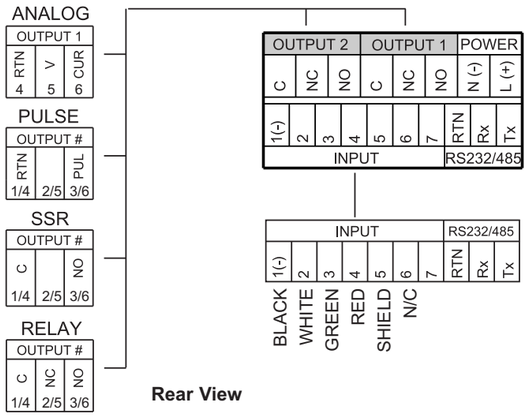
Warning: Disconnect all ac power from the unit before proceeding.

1. Make sure the AC power is disconnected.
2. Remove all wiring connections from the rear of the meter. To remove power and input connectors bend the side panel detents on the case outward to release the connectors, then pull connectors from the meter.
3. To remove meter from the case, squeeze left and right sides of the bezel to release, then pull from case.

WIRING

Wire the instrument according to the figure shown below.

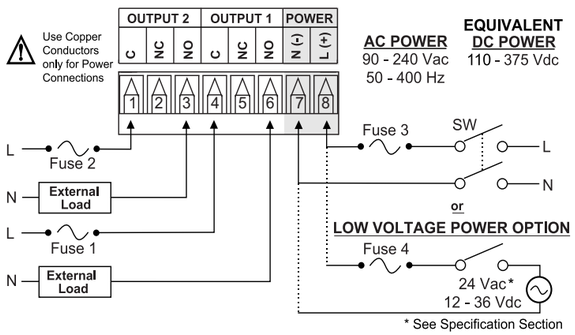
Warning: Do not connect ac power to your device until you have completed all input and output connections. This device must only be installed by a specially trained electrician with corresponding qualifications. Failure to follow all instructions and warnings may result in injury!



Rear View

Refer to Operator's Manual for important Input Probe Shield wiring notes

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



FUSE	Connector	Output Type	For 115Vac	For 230Vac	DC
FUSE 1	Output 1	Relay	3 A(T)	3 A(T)	-
FUSE 2	Output 2	Relay	3 A(T)	3 A(T)	-
FUSE 3	Power	N/A	100 mA(T)	100 mA(T)	100 mA(T)
FUSE 4	Power	N/A	N/A	N/A	400 mA(T)

DESCRIPTION OF FRONT PANEL

The display may be RH, Temperature or Dewpoint readings depending on your Reading Configuration selections. Factory defaults are shown. Note: a Dual Display unit allows the user to observe the Relative Humidity or Dewpoint (upper display) and Temperature Value (lower display), at the same time.

1	Output 1/Setpoint 1/ Alarm 1 indicator
2	Output 2/Setpoint 2/ Alarm 2 indicator
°C	°C unit indicator for Temperature or Dewpoint
°F	°F unit indicator for Temperature or Dewpoint
%RH	Display shows the Percent Relative Humidity
D	Display shows the Dewpoint
◉	Changes display to Configuration Mode and advances through menu items*
▲	Used in Program Mode:
▼	Used in Program Mode:
◉	Accesses submenus in Configuration Mode and stores selected values*

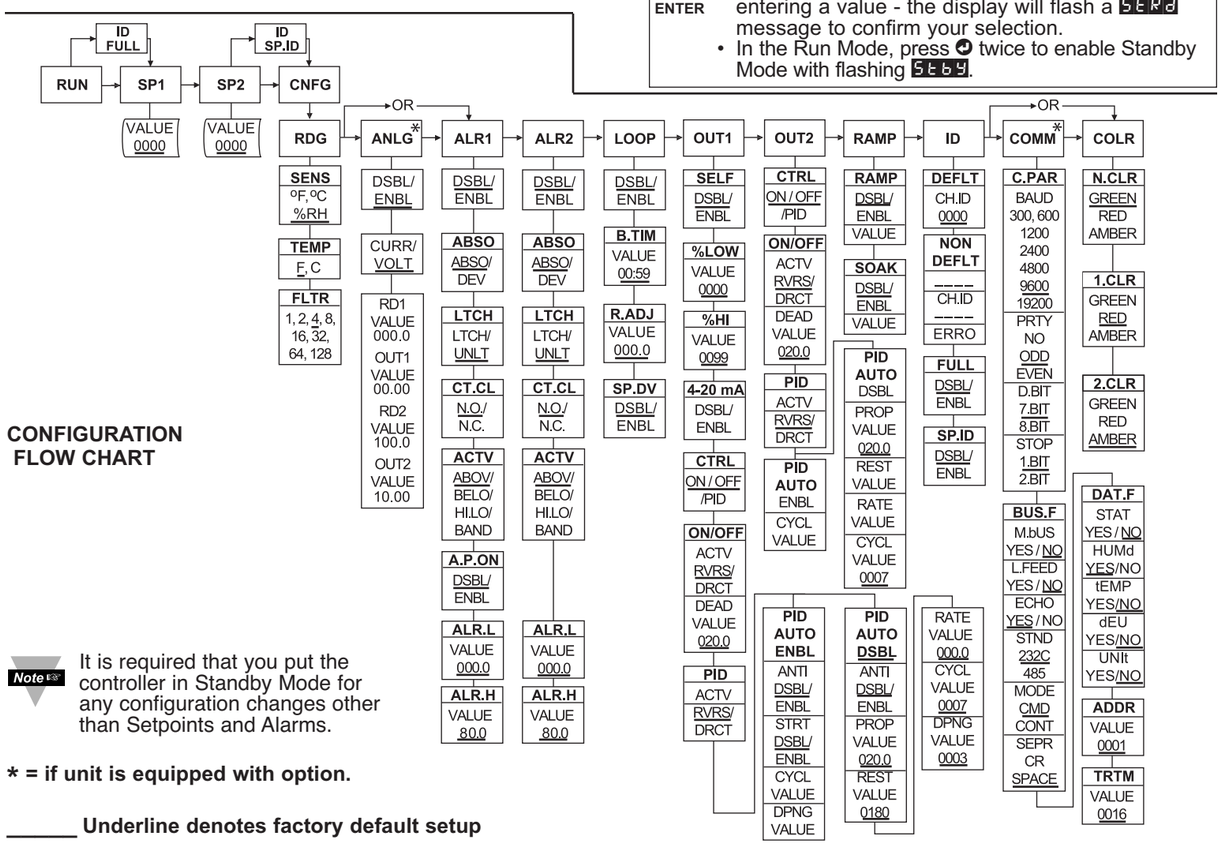
CONFIGURATION

The instrument has two different modes of operation. Run Mode: used to display Temperature and Relative Humidity. Menu Configuration Mode: used to navigate through the menu options and configure the controller.

Button Function in Configuration Mode

◉ MENU	• To enter the Menu, the user must first press ◉ button. • Use this button to advance/navigate to the next menu item. The user can navigate through all the top level menus by pressing ◉. • While a parameter is being modified, press ◉ to escape without saving the parameter.
▲ (UP)	• Press the up ▲ button to scroll through "flashing" selections. When a numerical value is displayed press this key to increase value of a parameter that is currently being modified. • Pressing the ▲ button for approximately 3 seconds will speed up the rate at which the set point value increments. • In the Run Mode, pressing the ▲ button changes display from RH readings to Temperature readings.
▼ (DOWN)	• Press the down ▼ button to go back to a previous Top Level Menu item. • Press this button twice to reset the controller to the Run Mode. • When a numerical value is flashing (except set point value) press ▼ to scroll digits from left to right allowing the user to select the desired digit to modify. • When a setpoint value is displayed press ▼ to decrease value of a setpoint that is currently being modified. Pressing the ▼ button for approximately 3 seconds will speed up the rate at which the setpoint value is decremented. • In the Run Mode, pressing the ▼ button changes from RH readings to Dewpoint readings.
◉ ENTER	• Press the enter ◉ button to access the submenus from a Top Level Menu item. • Press ◉ to store a submenu selection or after entering a value - the display will flash a StRd message to confirm your selection. • In the Run Mode, press ◉ twice to enable Standby Mode with flashing Stby.

CONFIGURATION FLOW CHART



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

*** = if unit is equipped with option.**

_____ Underline denotes factory default setup