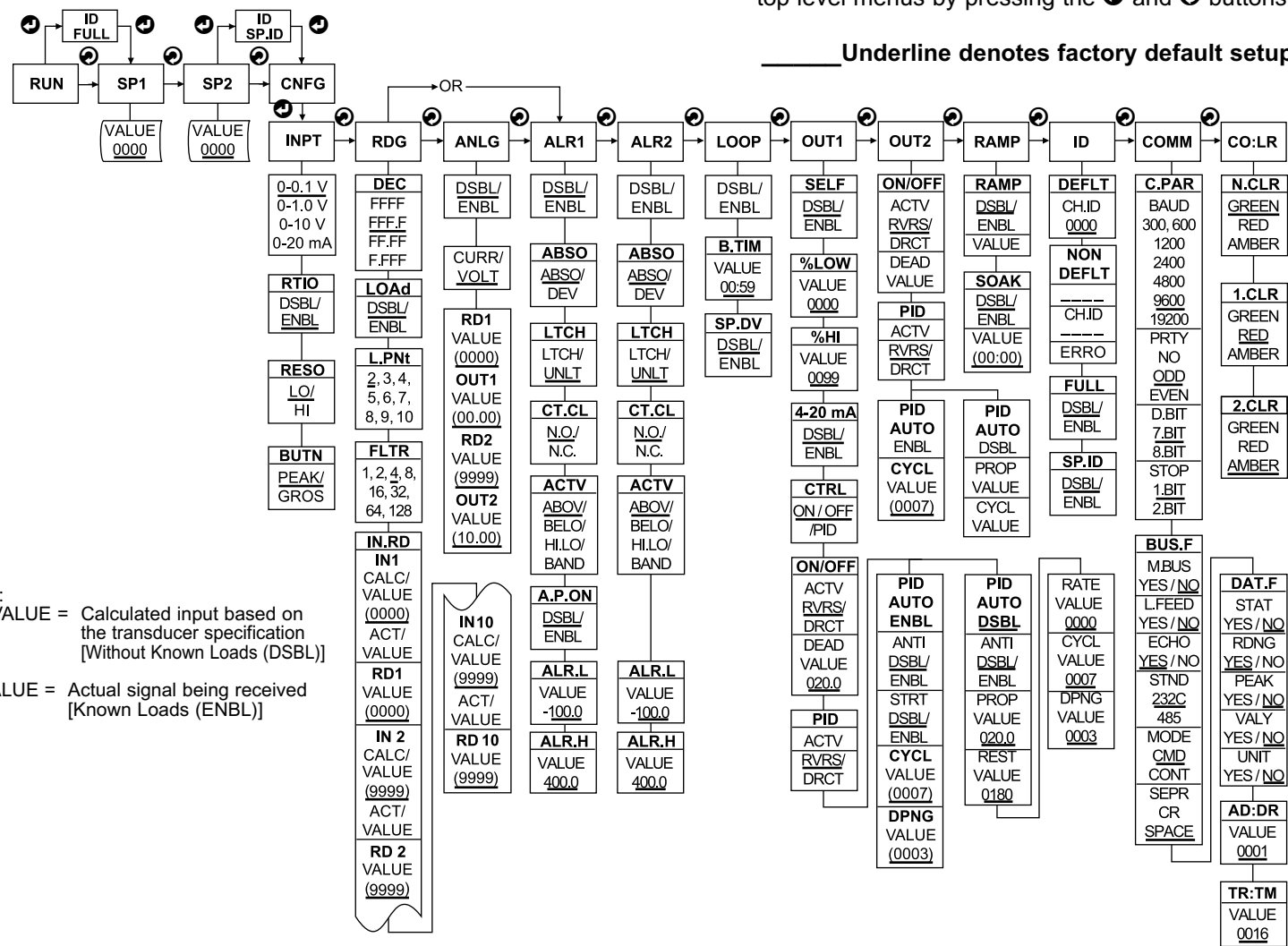


**FLOW CHART**

Below is a flowchart showing how to navigate through all top level menus by pressing the **↶** and **↷** buttons.

Underline denotes factory default setup



\*Where:  
CALC/VALUE = Calculated input based on the transducer specification [Without Known Loads (DSBL)]  
ACT/VALUE = Actual signal being received [Known Loads (ENBL)]

**SPECIFICATION**

- Accuracy:** 0.03% rdg.
- Resolution:** 10 / 1  $\mu$ V process
- Linearization Points:** 10 points
- Temperature Stability:** 50 ppm/ $^{\circ}$ C process
- Display:** 4-digit, 7-segment LED, 57.2mm (2.25") with red, green and amber programmable colors.
- Input Types:** Analog Voltage and Current
- Voltage:** 0 to 100 mV, 0 to 1 V ( $\pm$ 100 mV), 0 to 10 Vdc
- Input Impedance:** 10 M $\Omega$  for 100 mV, 1 M $\Omega$  for 1 or 10 Vdc
- Current:** 0 to 20 mA (5  $\Omega$  load)
- Output 1:** Relay 250 Vac @ 3 A Resistive Load, SSR, Pulse, Analog Voltage & Current
- Output 2:** Relay 250 Vac @ 3 A Resistive Load, SSR, Pulse
- Options: Communication** RS-232 / RS-485 or
- Excitation** 5Vdc @40mA, 10Vdc @60mA
- Power Supply:** 100-240 Vac  $\pm$ 10%, 50/60 Hz, 22.5 W
- Operating Temperature:** 0 to 40 $^{\circ}$ C
- Storage Temperature:** -20 to 60 $^{\circ}$ C
- Relative Humidity:** 0 to 85%
- Protection:** NEMA-4x (IP65)
- Dimensions:** 289 L x 137 W x 73 D mm (11.75" L x 5.375" W x 2.875" D)
- Panel Cutout:** 279.4 L x 116.8 W mm (11.00" L x 4.60" W)
- Weight:** 1,360 g (3 lbs)
- Approvals:** per EN50081-1, EN50082-2, EN61010-1



**WARRANTY/DISCLAIMER**

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product. If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

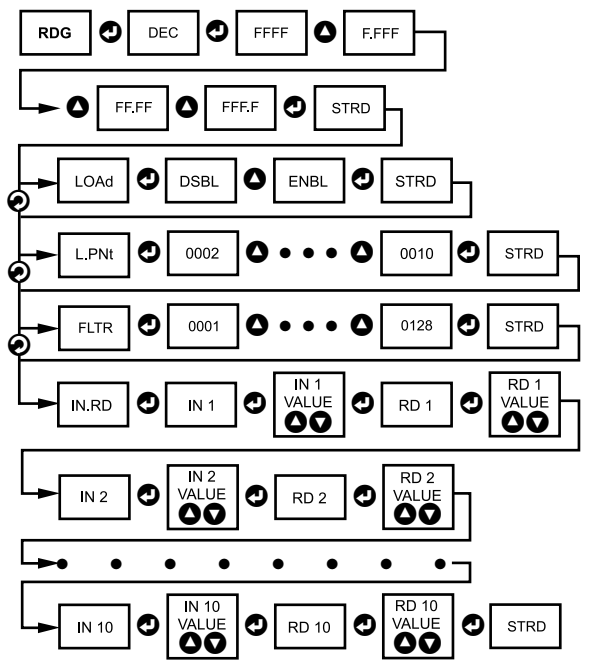
**iSeries**



**iLD24 Big Display Universal Strain & Process Controller**

**READING CONFIGURATION SETUP (operation example)**

Below is a flowchart showing how to navigate through the submenus of the Reading Configuration menu item by pressing the front buttons.

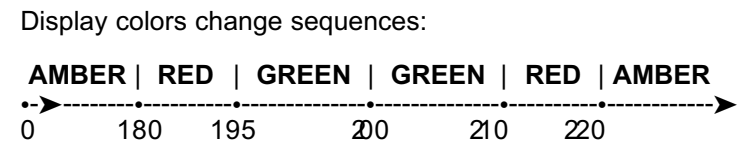


**DISPLAY COLOR SETUP (examples)**

**Example 1:**  
Output 1 & Output 2: SSR  
Alarm setup: Absolute, Above, Alarm 2 HI Value "ALR.H" =200, Alarm 1 HI Value "ALR.H"=400  
Color Display setup: Normal Color "N.CLR"=Green, Alarm 1 Color "1.CLR"=Amber, Alarm 2 Color "2.CLR"=Red



**Example 2:**  
Output 1: Relay, Set Point 1 = 200, Output 2: Relay, Set Point 2 = 200  
Alarm 1 setup: Deviation, Band, "ALR.H" = 20  
Alarm 2 setup: Deviation, Hi/Low, "ALR.H" = 10", "ALR.L" = 5"  
Color Display setup: "N.CLR"=Green, "1.CLR"=Amber, "2.CLR"=Red



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

**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](http://www.omega.com) 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 Class II of EN61010-1. 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.

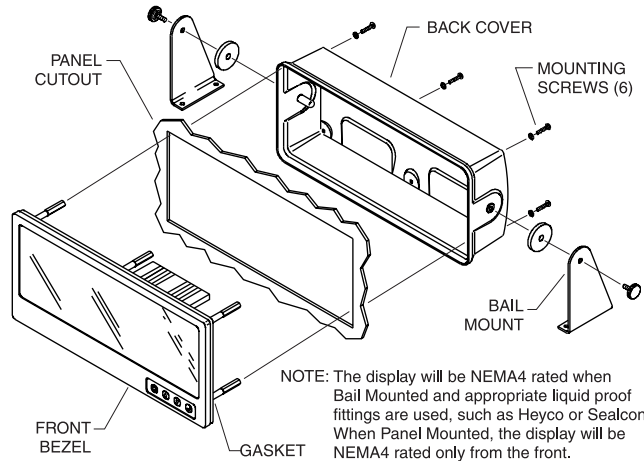
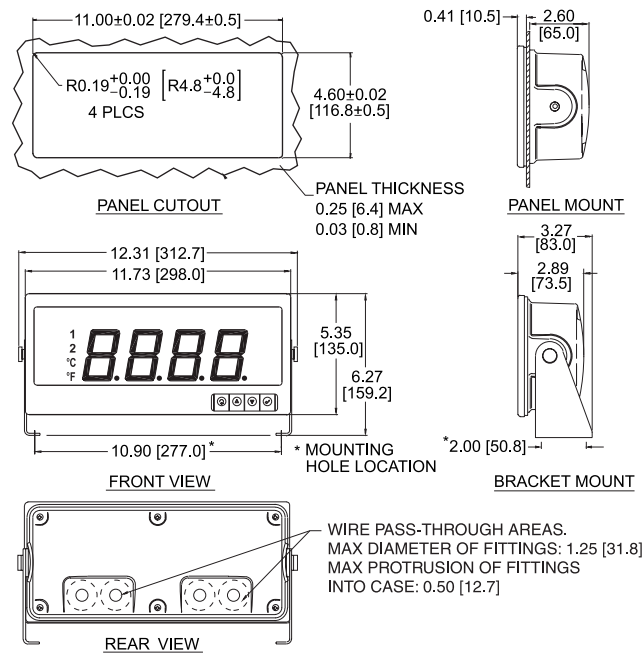
**SAFETY:**

- Do not exceed voltage rating on the label located on the back 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.

**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**



**Mounting Big Display Through Panel:**

1. Using the panel cutout diagram shown above, cut an opening in the panel.
2. Remove six screws at the back of Big Display to remove back cover.
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. Align back cover to Big Display and reinstall screws.

**Mounting Big Display on Bail:**

1. Mark the location of mounting screws on the flat surface.
2. Be sure to leave enough room around the bail to allow for removal and rotation of the display.
3. The display can be rotated for the best viewing angle.

**Disassembly Instruction:**

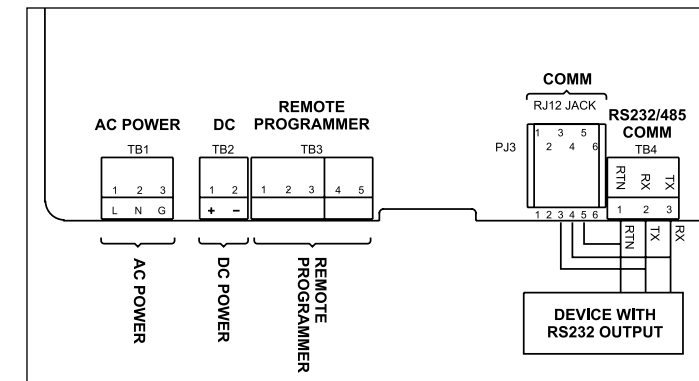
**⚠ Warning: Disconnect all ac power from the unit before proceeding.**

1. Remove all wiring connections from the rear of the instrument, by unscrewing the power and input connectors.
2. Remove six screws at the back of the display and back cover.
3. Remove the Big Display from the panel.
4. To remove the Big Display from the bail, unscrew the two knobs at each end of the mounting brackets.

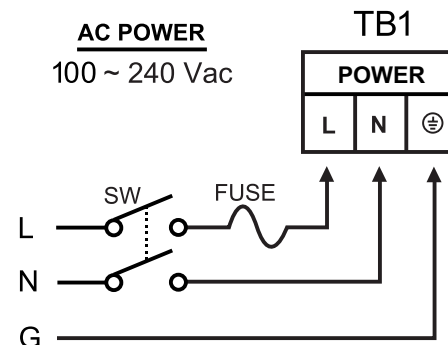
**WIRING**

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!**



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



**CONFIGURATION**

**MENU Mode:**

Flashing display in MENU Mode means you can make your selection by pressing **↻** button. If the flashing display is not a four digit value, pressing **↻** button will always direct the instrument one step backward of the top menu item. The second push on the **↻** button will reset the instrument except after the setpoint and the alarms, that will go to the RUN Mode without resetting the instrument. The **↻** button will always sequence the instrument thru the menu items.

**The **↻** button has two functions:**

1. To save a selected flashing display
2. To direct the instrument to the next submenu level

**RUN Mode:**

- **↻** causes the display to flash the PEAK with the corresponding value. Press again to go back to RUN Mode.
- **↻** causes the display to flash VALLEY with the corresponding value. Press again to go back to RUN Mode.
- **↻** causes flashing PEAK or VALLEY to reset corresponding values. Pressing **↻** twice will cause the display to flash **Stbly** and put the instrument into standby, which disables all outputs and alarms. Press **↻** one more time to go back to RUN Mode.

**Button Functions in Configuration Mode**

<b>↻ MENU</b>	<ul style="list-style-type: none"> <li>• To enter the Menu, the user must first press <b>↻</b> button.</li> <li>• Use this button to advance/navigate to the next menu item. The user can navigate through all the top level menus by pressing <b>↻</b>.</li> <li>• While a parameter is being modified, press <b>↻</b> to escape without saving the parameter.</li> </ul>
<b>↻ PK/GRS (UP)</b>	<ul style="list-style-type: none"> <li>• Press the up <b>↻</b> 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.</li> <li>• Holding the <b>↻</b> button down for approximately 3 seconds will speed up the rate at which the setpoint value is incremented.</li> <li>• In the Run Mode pressing <b>↻</b> causes the display to flash the PEAK or GROSS value – press again to return to the Run Mode.</li> </ul>
<b>↻ TARE (DOWN)</b>	<ul style="list-style-type: none"> <li>• Press the down <b>↻</b> button to go back to a previous Top Level Menu item.</li> <li>• Press this button twice to reset the controller to the Run Mode.</li> <li>• When a numerical value is flashing (except setpoint value) press <b>↻</b> to scroll digits from left to right allowing the user to select the desired digit to modify.</li> <li>• When a setpoint value is displayed press <b>↻</b> to decrease value of a setpoint that is currently being modified. Holding the <b>↻</b> button down for approximately 3 seconds will speed up the rate at which the setpoint value is decremented.</li> <li>• In the Run Mode pressing <b>↻</b> causes the display to flash TARE value to tare your reading (zeroing).</li> </ul>
<b>↻ ENTER</b>	<ul style="list-style-type: none"> <li>• Press the enter <b>↻</b> button to access the submenus from a Top Level Menu item.</li> <li>• Press <b>↻</b> to store a submenu selection or after entering a value — the display will flash a <b>Stbly</b> message to confirm your selection.</li> <li>• To reset flashing PEAK or GROSS press <b>↻</b>.</li> <li>• In the Run Mode, press <b>↻</b> twice to enable Standby Mode with flashing <b>Stbly</b>.</li> </ul>

**Note:**

Reset: Except for Alarms, modifying any settings of the menu configuration will reset the controller prior to resuming Run Mode.

**DISPLAY ABBREVIATIONS**

<b>SP1</b>	Set Point 1 Value	<b>SP2</b>	Set Point 2 Value
<b>CNFG</b>	Configuration Menu	<b>INPt</b>	Input Type (Range)
<b>INPt</b>	Input Type (range)	<b>0 - 0.1</b>	100 mV Input Voltage
<b>0 - 1.0</b>	1 V Input Voltage	<b>0 - 10</b>	10 V Input Voltage
<b>0 - 20</b>	20 mA Input Current		
<b>Rtio</b>	Ratiometric Operation	<b>RESO</b>	Display Resolution
<b>bUtN</b>	Button Peak/Gross	<b>PEAK</b>	Peak Value
<b>GROS</b>	Gross Value		
<b>RdG</b>	Reading Configuration		
<b>dEC</b>	Decimal Point	<b>F.FFF</b>	Decimal Point Position
		<b>..FFF</b>	Decimal Point Position
<b>LOAd</b>	Input Load	<b>EnbL</b>	Scaling with Known Loads (Actual Value)
<b>DSbL</b>	Scaling without Known Loads (Calculated Value)	<b>L.PNt</b>	Linearization Points
<b>0002..</b>	Number of Linearization Points	<b>FLtR</b>	Filter Constant
<b>..0010</b>	Filter Constant Value	<b>IN.Rd</b>	Input/Reading Scale and Offset Menu
<b>IN 1</b>	Input 1	<b>Rd 1</b>	Reading 1
<b>IN 2</b>	Input 2	<b>Rd 2</b>	Reading 2
....	.....	....	.....
<b>IN 10</b>	Input 10	<b>Rd 10</b>	Reading 10
<b>ANLG</b>	Analog Output	<b>CURR</b>	Current Output
<b>VoLt</b>	Voltage Output	<b>Rd 1</b>	Reading 1
<b>Out.1</b>	Output 1	<b>Rd 2</b>	Reading 2
<b>Out.2</b>	Output 2		
<b>ALR1</b>	Alarm 1 Menu	<b>AbSo</b>	Absolute Mode
<b>dEV</b>	Deviation Mode	<b>Ltch</b>	Latched Mode
<b>UNLt</b>	Unlatched Mode	<b>Ct.CL</b>	Contact Closure
<b>N.o.</b>	Normally Open	<b>N.c.</b>	Normally Closed
<b>ActV</b>	Active Type	<b>AboV</b>	Active Above
<b>bELo</b>	Active Below	<b>Hi.Lo</b>	Above High/Below Low
<b>bANd</b>	Above or Below Band	<b>A.P.oN</b>	AlarmEnable/Disable at Power On
<b>ALR.L</b>	Alarm Low Value	<b>ALR.H</b>	Alarm High Value
<b>ALR.2</b>	Alarm 2 Menu		
<b>LOOP</b>	Loop Break Menu	<b>b.tiM</b>	Loop Break Time
<b>R.AdJ</b>	Reading Adjust	<b>SP.dN</b>	Set Point Deviation
<b>OUt1</b>	Output 1 Menu	<b>SELF</b>	Manual Control
<b>o°LO</b>	Percent Low	<b>o°HI</b>	Percent High
<b>CtRL</b>	Control Type	<b>ON.OF</b>	On/Off Control
<b>4 -20</b>	Amplitude Control	<b>PId</b>	PID Control
<b>ActN</b>	Action Type	<b>RVRS</b>	Reverse Action
<b>dRct</b>	Direct Action	<b>ANt1</b>	Anti Integral
<b>AUto</b>	Auto PID	<b>A.tUN</b>	Auto Tune PID
<b>StRt</b>	Start Auto Tune PID	<b>PRoP</b>	Proportional Band
<b>RESt</b>	Reset Setup	<b>RAtE</b>	Rate Setup
<b>CYCL</b>	Cycle Time	<b>dPNG</b>	Damping Factor
<b>dEAd</b>	Dead Band		
<b>OUt2</b>	Output 2 Menu		
<b>RAMP</b>	Ramp Time	<b>SOAk</b>	Soak Time
<b>Id</b>	ID Code Menu	<b>CH.Id</b>	Change ID Code
<b>FULL</b>	Full ID	<b>SP.Id</b>	Set Point ID
<b>COMM</b>	Communication Option*	<b>NONE</b>	Communication is Not Installed
<b>COLR</b>	Display Color Selection	<b>N.CLr</b>	Normal Color Display
<b>1.CLr</b>	Alarm 1 Color Display	<b>2.CLr</b>	Alarm2ColorDisplay
<b>REd</b>	Display Color is Red	<b>AMbR</b>	Display Color is Amber
<b>GRN</b>	Display Color is Green		
<b>dSbL</b>	Disable	<b>ENbL</b>	Enable
<b>ERRO</b>	Error	<b>+ OL</b>	Input (+) Overload

\* For abbreviations of Communication Option see Communication Manual.