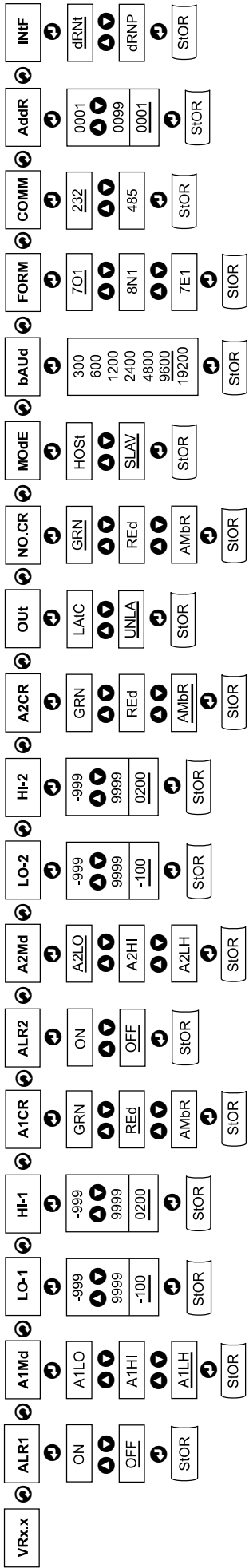


Below is a flowchart showing how to navigate through all menus by pressing front buttons.



DISPLAY ABBREVIATIONS

ALR1	Alarm 1 Status		
OFF	Alarm 1 set Off	ON	Alarm 1 set On
A1Md	Alarm 1 Mode		
A1LO	Alarm 1 Low	A1HI	Alarm 1 High
A1LH	Alarm 1 Low/High		
LO-1	Alarm 1 Low	-999.. ..9999	Alarm 1 Low Value
HI-1	Alarm 1 High	-999.. ..9999	Alarm 1 High Value
A1CR	Display color when Alarm 1 triggered		
GRN	Green Color	REd	Red Color
AMbR	Amber Color		
ALR2	Alarm 2 Status		
OFF	Alarm 2 set Off	ON	Alarm 2 set On
A2Md	Alarm 2 Mode		
A2LO	Alarm 2 Low	A2HI	Alarm 2 High
A2LH	Alarm 2 Low/High		
LO-2	Alarm 2 Low	-999.. ..9999	Alarm 2 Low Value
HI-2	Alarm 2 High	-999.. ..9999	Alarm 2 High Value
A2CR	Display color when Alarm 2 triggered		
GRN	Green Color	REd	Red Color
AMbR	Amber Color		
Out	Alarm Latched/Unlatched selection		
LAIC	Latched	UNLA	Unlatched
NO.CR	Display Color in Normal condition		
GRN	Green Color	REd	Red Color
AMbR	Amber Color		
MOdE	Data Flow Mode		
HOSt	Host Mode	SLAV	Slave Mode
bAUd	Baud Rate	300.. ..19200	Baud Rate Value
FORM	Data Format		
701	7 Bit, Odd, 1 Stop Bit	7E1	7 Bit, Even, 1 Stop Bit
8N1	8 Bit, No parity, 1 Stop Bit		
COMM	Communication Standard		
232	RS-232 Standard	485	RS-485 Standard
AddR	Device Address	0000.. ..0099	Address Value
IntF	Interface Device		
dRNt	DRN with Temperature Input	dRNp	DRN with Process Input
Miscellaneous:			
PEAk	Peak Value	VALL	Valley Value
PROc	Process Value	RUN	Run Mode
OVLd	Input Overload	StOR	Stored Message

Note

- In **Slave Mode** the Big Display will wait for commands and data from the Serial Bus.
- In **Host Mode** the Big Display will send data automatically and continuously into the Serial Bus.
- When used in **RS-485 Mode**, the device must be accessed with an appropriate **Address Value**.
- Latched Mode:** Alarm remains latched until reset. To reset already latched alarm select any menu items and then press “up” or “down” button.

SPECIFICATION

Temperature Stability: 50 ppm/°C	Power Supply: 100-240 Vac ±10%, 50/60 Hz, 22.5 W
Display: 4-digit, 7-segment LED, 57.2mm (2.25") with red, green and amber programmable colors.	Operating Temperature: 0 to 40°C
Alarm: Alarm 1 & 2 programmable, Latch/Unlatch, High, Low, High/Low	Storage Temperature: -20 to 60°C
SERIAL INTERFACE	Relative Humidity: 0 to 85%
Communication Standard: RS-485, RS-422 or RS-232	Protection: NEMA-4x (IP65)
Transfer speed (Baud rate): 300, 600, 1200, 2400, 4800, 9600, 19200 bps	Dimensions: 298 L x 137 W x 73 D mm (11.75" x 5.375" x 2.875")
Data Format: 701-7 bit, Odd, 1 stop bit, 7E1- 7 bit, even, 1 stop bit 8N1 – 8 bit, No parity, 1 stop bit	Panel Cutout: 279.4 L x 116.8 W mm (11.00" L x 4.60" W)
Multi-Point Address (RS-485): 0 to 199	Weight: 1,360 g (3 lbs)
Flow Control: No Flow control	Approvals: per EN61010-1:2001
Screw terminals for RS-232/485/422 interface	

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.

TRADEMARK NOTICE:

®, *omega.com*®, and are Trademarks of OMEGA ENGINEERING, INC.

MADE IN USA

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **one (1) year** from the date of purchase. In addition to OMEGA's standard warranty period, OMEGA Engineering will extend the warranty period for **four (4) additional years** if the warranty card enclosed with each instrument is returned to OMEGA.

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 which wear are not warranted, including but not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by it will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESS OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR WARRANTY RETURNS, please have the following information available BEFORE contacting OMEGA:

- Purchase Order number under which the product was PURCHASED,
- Model and serial number of the product under warranty, and
- Repair instructions and/or specific problems relative to the product.

FOR NON-WARRANTY REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

- Purchase Order number to cover the COST of the repair,
- Model and serial number of product, and
- Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

© Copyright 2002 OMEGA ENGINEERING, INC. All rights reserved. This document may not be copied, photocopied, reproduced, translated, or reduced to any electronic medium or machine-readable form, in whole or in part, without the prior written consent of OMEGA ENGINEERING, INC.

PATENT AND TRADEMARK NOTICE: This product is covered by one or more of the following patents: U.S. Pat. No. Des. 336,893; 5,274,577; 6,243,021/ CANADA 2052599; 2052600/ ITALY 1249456; 1250938/ GERMANY DE 41 34398 C2/ SPAIN 2039150; 2048066/ UK Patent No. GB2 249 837; GB2 248 954/ FRANCE BREVET No. 91 12756. Other U.S. and International Patents pending or applied for.

OPERATION MANUAL

RoHS 2 Compliant



iLD24-C2
Big Remote Display
with RS-232 Input

omega.com

® OMEGA®

OMEGAnet® On-Line Service www.omega.com	Internet e-mail info@omega.com
--	-----------------------------------

Servicing North America:

USA: ISO 9001 Certified	One Omega Drive, P.O. Box 4047 Stamford CT 06907-0047 TEL: (203) 359-1660 e-mail: info@omega.com FAX: (203) 359-7700
Canada:	976 Bergar Laval (Quebec) H7L 5A1 TEL: (514) 856-6928 e-mail: info@omega.ca FAX: (514) 856-6886

For immediate technical or application assistance:

USA and Canada:	Sales Service: 1-800-826-6342 / 1-800-TC-OMEGA® Customer Service: 1-800-622-2378 / 1-800-622-BEST® Engineering Service: 1-800-872-9436 / 1-800-USA-WHEN®
Mexico and Latin American:	TEL: (001)800-TC-OMEGA® En Español: (001) 203-359-7803 e-mail: espanol@omega.com FAX: (001) 203-359-7807

Servicing Europe:

Benelux:	Postbus 8034, 1180 LA Amstelveen, The Netherlands TEL: +31 20 3472121 Toll Free in Benelux: 0800 0993344 e-mail: sales@omegaeng.nl FAX: +31 20 6434643
Czech Republic:	Frystatska 184, 733 01 Karviná TEL: +420 59 6311899 e-mail: info@omegashop.cz FAX: +420 59 6311114
France:	11, rue Jacques Cartier, 78280 Guyancourt TEL: +33 1 61 37 29 00 Toll Free in France: 0800 466 342 e-mail: sales@omega.fr FAX: +33 1 30 57 54 27
Germany/Austria:	Daimlerstrasse 26, D-75392 Deckenpfronn, Germany TEL: +49 7056 9398-0 Toll Free in Germany: 0800 639 7678 e-mail: info@omega.de FAX: +49 7056 9398-29
United Kingdom: ISO 9002 Certified	One Omega Drive River Bend Technology Centre Northbank, Irlam Manchester M44 5BD United Kingdom TEL: +44 161 777 6611 Toll Free in England: 0800 488 488 e-mail: sales@omega.co.uk FAX: +44 161 777 6622

The iLD24 is a 4-digit master/slave display providing remote readout from instruments such as programmable controllers, digital panel meters and other instruments with serial output. Communication interfaces supported are RS-232 or RS-485 standards. Both RS-232 or RS-485 are programmable through front panel buttons.

SAFETY:

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

- 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.

FRONT VIEW

12.31 [312.7]
11.73 [298.0]
10.90 [277.0] *

5.35 [135.0]
6.27 [159.2]

1
2
°C
°F

8.8.8.8

4 PLCS

* MOUNTING HOLE LOCATION

REAR VIEW

WIRE PASS-THROUGH AREAS.
MAX DIAMETER OF FITTINGS: 1.25 [31.8]
MAX PROTRUSION OF FITTINGS INTO CASE: 0.50 [12.7]

PANEL CUTOUT

11.00±0.02 [279.4±0.5]
R0.19^{+0.00}_{-0.19} [R4.8^{+0.0}_{-4.8}]
4 PLCS

PANEL THICKNESS

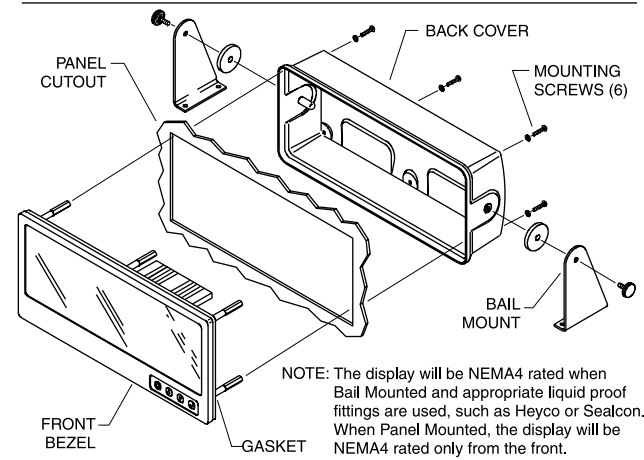
4.60±0.02 [116.8±0.5]
0.25 [6.4] MAX
0.03 [0.8] MIN

PANEL MOUNT

0.41 [10.5]
2.60 [65.0]

BACKET MOUNT

3.27 [83.0]
2.89 [73.5]
*2.00 [50.8]



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.

1. Use the Big Display template to mark the location of mounting screws on the flat surface.
2. Be sure to leave enough room around the bail (as noted on the template drawing) to allow for removal and rotation of the display.
3. The display can be rotated for the best viewing angle.

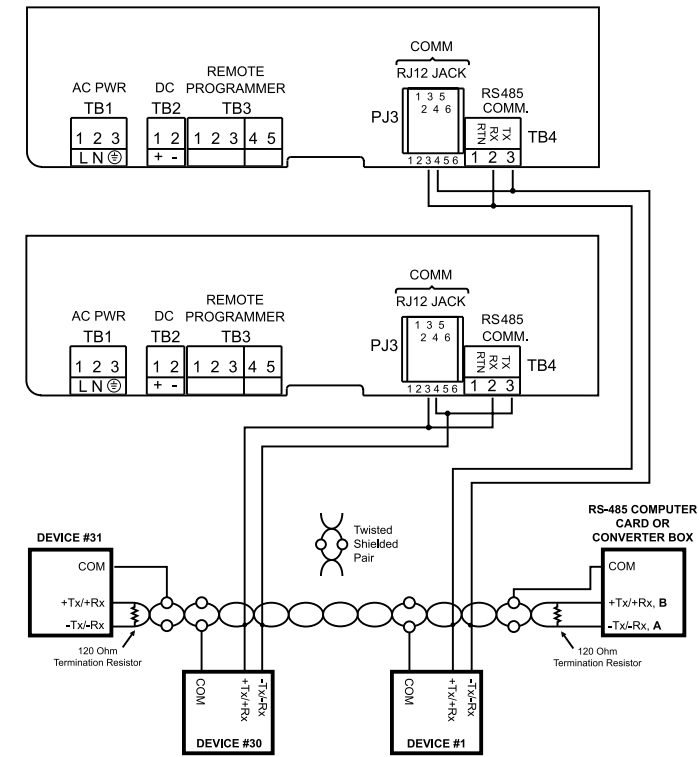
 Warning: Disconnect all ac power from the unit before proceeding.

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.

1. Wiring RS-232 Interface.

Device with RS-232 Pin Function	Large Remote Display	
	RJ-12	Screw Terminal
Receive (Rx)	4 (Tx)	3 (Tx)
Transmit (Tx)	3 (Rx)	2 (Rx)
Common Ground (COM)	5	1

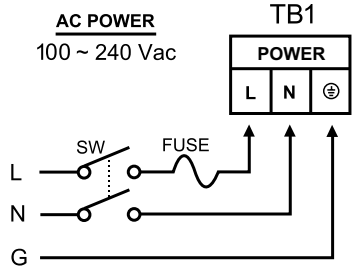
The RS-485 standard (multipoint) allows a computer, one or more devices and Big Displays (up to 32) to be connected using a two-wire connection (half-duplex) plus a common wire to connect to the shield of the cable. It is recommended to use shielded cable with one twisted pair for EMI noise protection.



Note Connections to the computer are optional.

Computer Card or Converter Box Pin Function	Device with RS-485 Pin Function	Remote Display	
		RJ-12	Screw Terminal
A, -Tx/-Rx	-Tx/-Rx	4	3
B, +Tx/+Rx	+Tx/+Rx	3	2
COM	COM		1

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



1. Peak Value (Display in Host Mode)

Press **▲** to request "Peak" value:

- a) RS-232 Mode, will send:
*X02 (Interface DRNT), or *X03 (Interface DRNP)
- b) RS-485 Mode, will send:
*01X02 (Interface DRNT), or *01X03 (Interface DRNP)

Note In the examples for RS-485 it is assumed that the device address is 01.

Press ▼ to request “Valley” value.

- a) RS-232 Mode, will send:
*X03 (Interface DRNT), or *X04 (Interface DRNP)
- b) RS-485 Mode, will send:
*01X03 (Interface DRNT), or *01X04 (Interface DRNP)

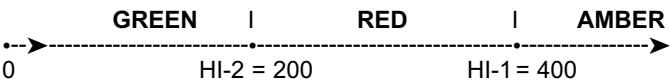
Press to request "Process" Value.

- a) RS-232 Mode, will send: *X01
b) RS-485 Mode, will send: *01X01
- 4. Write alphanumeric characters to the Big Display from the computer (Display in Slave Mode)**
- a) Single Big Display: (RS232) write 4 characters, then CR (carriage return)
b) Multiple Big Display: (RS485) write *, device address (2 digit), CR, 4 characters, then CR

This menu allows the user to select the color of the display in normal conditions and when alarm is triggered. If user wants the Display to change color every time when both Alarm 1 and Alarm 2 are triggered, the Alarm values should be set in such a way that Alarm 1 is always on the top of Alarm 2 value, otherwise value of the Alarm 1 will overwrite value of Alarm 2 and Display color would not change when Alarm 2 is triggered.

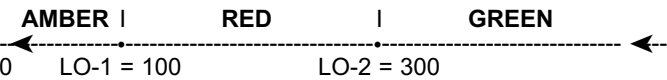
Alarm 1 setup: "ON", Alarm Mode High "A1HI", Alarm High Value "HI-1"=400, Alarm Color "A1CR"=Amber
Alarm 2 setup: "ON", Alarm Mode High "A2HI", Alarm High Value "HI-2"=200, Alarm Color "A2CR"=Red
Normal Color: "NO.CR"=Green

Display colors change sequences:



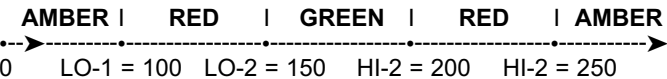
Alarm 1 setup: "ON", Alarm Mode Low "A1LO", Alarm Low Value "LO-1"=100, Alarm Color "A1CR"=Amber
Alarm 2 setup: "ON", Alarm Mode LO "A2LO", Alarm High Value "LO-2"=300, Alarm Color "A2CR"=Red
Normal Color: "NO.CR"=Green

Display colors change sequences:



Alarm 1 setup: "ON", Alarm Mode Low/High "A1LH", Alarm Low Value "LO-1"=100, Alarm High Value "HI-1"=250, Alarm Color "A1CR"=Amber
Alarm 2 setup: "ON", Alarm Mode Low/High "A2LH", Alarm Low Value "LO-2"=150, Alarm High value "HI-2"=200, Alarm Color "A2CR"=Red
Normal Color: "NO.CR"=Green

Display colors change sequences:



Button Functions 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 submenu selections. When a numerical value is displayed press this key to increase value of a parameter that is currently being modified. • In the Run Mode pressing  causes the display to flash the PEAK value several times before returning to the Run Mode. • In the top menu press  causes the display to return to the Run Mode.
 (DOWN)	• Press the down  button to scroll through submenu selections. When a numerical value is displayed press this key to decrease value of a parameter that is currently being modified. • In the Run Mode press  causes the display to flash the Valley value several times before returning to the Run Mode. • In the top menu press  causes the display to return to the Run Mode.
 (ENTER)	• Press this button to access the submenus from a Top Level Menu item. • Press this button to store a submenu selection or after entering a value – the display will flash a STORE message to confirm your selection.

Note x, w, z, and some punctuations are non-printable characters.