DISPLAY ABBREVIATIONS

| ALD4 | Alama 1 Ctatus | | |
|-------------|---------------------------------|----------------------|---------------------------|
| ALR1 | Alarm 1 Status | ON | Al 1+ O |
| 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 | 0.11 | 7 ((4) (1) 2 ((4) (4) (4) |
| A2LO | Alarm 2 Low | A2HI | Alarm 2 High |
| A2LH | Alarm 2 Low/High | AZIII | Alaitii 2 Filgii |
| LO-2 | Alarm 2 Low | -999 | Alarm 2 Low Value |
| HI-2 | Alarm 2 High | 9999 -999 9999 | Alarm 2 High Value |
| A2CR | Display color when | | triagorod |
| GRN | Green Color | REd | Red Color |
| AMbR | Amber Color | NEU | Red Coloi |
| | Alarm Latched/Unla | tobod oo | laction |
| OUt LAtC | | | |
| | Latched | | Unlatched |
| NO.CR | Display Color in No | | Red Color |
| GRN | Green Color | REd | Red Color |
| AMbR | Amber Color | | |
| MOdE | Data Flow Mode | 01.417 | |
| HOSt | Host Mode | SLAV | Slave Mode |
| bAUd | Baud Rate | 300 19200 | Baud Rate Value |
| FORM | Data Format | | |
| 701 | 7 Bit, Odd, | 7E1 | 7 Bit, Even, |
| | 1 Stop Bit | | 1 Stop Bit |
| 8N1 | 8 Bit, No parity, 1 Stop Bit | | |
| СОММ | Communication Sta | ındard | |
| 232 | RS-232 Standard | 485 | RS-485 Standard |
| AddR | Device Address | 0000 0099 | Address Value |
| INtF | Interface Device | | |
| dRNt | DRN with | dRNP | DRN with |
| | Temperature Input | | Process Input |
| Miscella | | | |
| PEAk | Peak Value | VALL | Valley Value |
| PROC | Process Value | RUN | Run Mode |
| OVLd | Input Overload | StOR | Stored Message |
| | pat 0 tolload | 5.5.1 | Stored Moodage |



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

OPERATIONS

1. Peak Value (Display in Host Mode)

device address is 01.

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)

In the examples for RS-485 it is assumed that the

2. Valley Value (Display on Host Mode)

Press of 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)

3. Process Value (Display on Host Mode)

Press 2 to request "Process" Value. a) RS-232 Mode, will send: *X01 b) RS-485 Mode, will send: *01X01

4. Write alphanumeric characters to the Remote Display

- from the computer (Display in Slave Mode)
 a) Single Remote Display: (RS232) write 4(6) characters, then CR (carriage return)
- b) Multiple Remote Display: (RS485) write *, device address (2 digit), CR, 4(6) characters, then CR

5. Display Color Setup (Alarm Setup)

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.

Example 1:

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:

| | GREEN | I | RED | I | AMBER |
|---|---------|---------|-----|-----------|-------|
| 0 | -HI | 2 = 200 | | HI-1 = 40 | _ |

Example 2:

"ON", Alarm Mode Low "A1LO", Alarm Low Alarm 1 setup: 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:

| AMBER I | RED | I | GREEN | |
|-----------|-----|----------|-------|--|
| 0 1 - 100 | | 0.3 - 30 | • | |

Example 3:

"ON", Alarm Mode Low/High "A1LH", Alarm Low Alarm 1 setup: 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

"NO.CR"=Green Normal Color:

Display colors change sequences:

| | MBER R | | | |
|---|------------|------|------|------|
| _ | LO-1 = 100 | | | > |

SPECIFICATION

Temperature Stability:

50 ppm/°C

Display:

4-digit, 7-segment LED.

57.2 mm (2.25")

with red, green and amber programmable colors.

Alarm:

Alarm 1 & 2 programmable, Latch/Unlatch, High, Low, High/Low

Serial Input:

Serial ASCII RS-232 or RS-485 Menu

selectable Input levels:

RS-232 and RS-485 Standard Voltage

Baud Rate:

300, 600, 1200, 2400, 4800, 9600, 19200

RS-485 address: 0 to 99

Data Format:

7O1-7 bit, Odd, 1 stop bit, 7E1- 7 bit, even, 1 stop bit

8N1 – 8 bit, No parity, 1 stop bit

Operating Temperature:

Relative Humidity:

Dimensions:

Panel Cutout:

Weight:

1,360 g (3 lbs)



iLD-RS **Big Display** with Serial Communication



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0 to 40°C

Storage Temperature:

-20 to 60°C

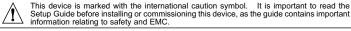
0 to 85%

Protection: NEMA-4x (IP65)

298 L x 137 W x 73 D mm (11.75" x 5.375" x 2.875")

279.4 L x 116.8 W mm

CE per EN50081-1, EN50082-2,



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The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in FOR <u>NON-WARRANTY</u> REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

FOR WARRANTY RETURNS, please have the following information available BEFORE

- following information available DEFONE contacting OMEGA:

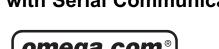
 1. Purchase Order number under which the product was PURCHASED,
- Model and serial number of the product under warranty, and Repair instructions and/or specific problems relative to the product.

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

OPERATION MANUAL







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Toll Free in England: 0800 488 488

MQS3722/1101

Power Supply: 100-240 Vac ±10%, 50/60 Hz, 22.5 W

(11.00" L x 4.60" W) Approvals:

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

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 CE mark to every appropriate device upon certification.

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EN61010-1







iLD-RD REMOTE Big Display

DESCRIPTION:

The iLD are 4(6)-digit master/slave displays providing remote readout from instruments such as programmable controllers, digital panel meters and other instruments with serial output. Two communication interfaces are supported in Remote Display: RS-232 and RS-485 standards. Both RS-232 and RS-485 are programmable through front panel buttons.

The Remote Display features a large three color programmable display with the capabitity to change color every time an Alarm is triggered.

SAFETY:

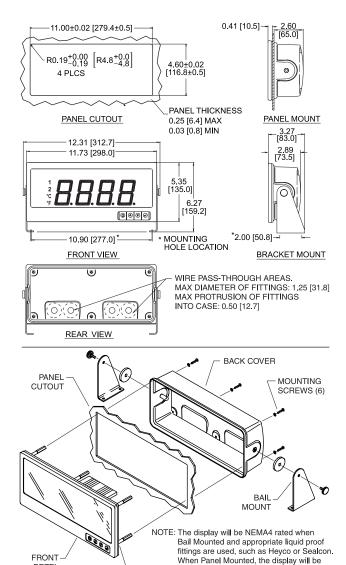
• The instrument is a panel mount device protected in accordance with Class III of IEC 1010.

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

BEZEL



NEMA4 rated only from the front.

Mounting Remote 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 remote 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 remote display and reinstall screws.

Mounting Remote Display on Bail:

- 1. Use the Remote 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.

Disassembly Instruction:



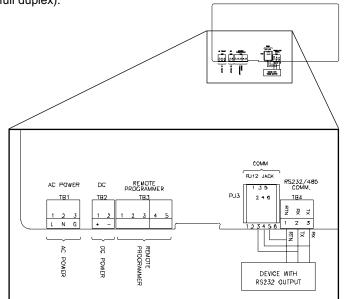
Warning: Disconnect all ac power from the unit before proceeding.

- 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 remote display and back cover.
- 3. Remove the Remote Display from the panel.
- 4. To remove the Remote Display from the bail, unscrew the two knobs at each end of the mounting brackets.

WIRING

1. Wiring RS-232 Interface.

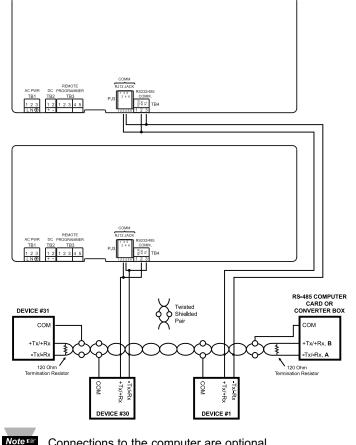
The RS-232 standard (point-to-point) allows a single device to be connected to the Remote Display using a three-wire connection (full duplex).



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

2. Wiring RS-485 Interface.

The RS-485 standard (multipoint) allows a computer, one or more devices and Remote 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.

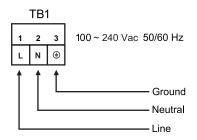


Connections to the computer are optional.

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

3. Power Connection.

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



CONFIGURATION

Button Functions in Configuration Mode

| Dutton | -unctions in Configuration Mode |
|----------|---|
| | • To enter the Menu, the user must first press ② button. |
| | Use this button to advance/navigate to the next menu |
| ● | item. The user can navigate through all the top level |
| (MENU) | menus by pressing ② . |
| | While a parameter is being modified, press to |
| | escape without saving the parameter. |
| | 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. |
| (UP) | In the Run Mode pressing causes the display |
| (UP) | to flash the PEAK value several times before returning |
| | to the Run Mode. |
| | In the top menu press a causes the display to return to |
| | the Run Mode. |
| | Press the down |
| | selections. When a numerical value is displayed press |
| | this key to decrease value of a parameter that is |
| 0 | currently being modified. |
| (DOWN) | In the Run Mode press |
| (DOWN) | 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. |
| | Press this button to access the submenus from a Top |
| • | Level Menu item. |
| (ENIZED) | Press this button to store a submenu selection or after |
| (ENTER) | entering a value – the display will flash a 5 t 0 R |
| | message to confirm your selection. |

x, w, z, and some punctuations are non-printable

Underline denotes factory default setup

characters.



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

