

# Level Plus®

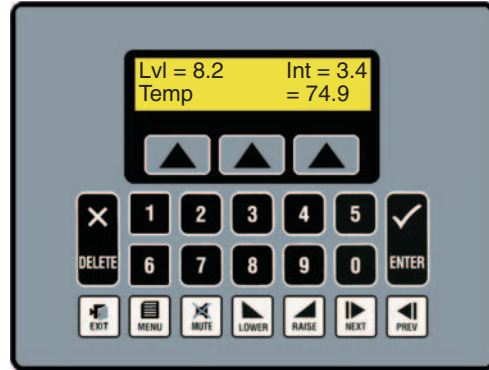
## Magnetostrictive Level Sensors



LCD Operator Interface Terminal  
Stand Alone Master for Modbus RTU

550935 B

### Instruction Sheet



LCD Operator Interface Terminal

#### Features

- Displays level, interface and temperature data for up to 1 MTS DDA or 7 Modbus RTU sensors all using separate screens
- Diagnostic Page allows the user to check gauge function status
- 2 line X 20 character liquid crystal display with LED back light

#### Applications

- Tank-side indication
- Stand-alone monitoring
- Panel mount or NEMA enclosure (optional)

#### Markets

- Petroleum/Petrochemical
- Propane/Terminals
- Biotech/Pharmaceutical
- Food and Beverage
- Municipalities/Utilities

#### Stand Alone master for Modbus RTU

The Model CL01 LCD Operator Interface Terminal provides reliability in displaying Level Plus data. The CL01 displays the level, interface and temperature of the specific Level-Plus sensor it is addressed for. The diagnostic screen displays trigger levels and error flags which can assist in pinpointing possible problems. The front keypad is used to scroll through the preset addresses for sensors 1 through 7.

#### Buttons, screens and what they do

Screen selection:

- **Address Select Screen** - This screen displays for 5 seconds when the program is powered on. If a keypad command is not performed, the Address select screen times out. During normal operation, the Address Select screen can be accessed by pressing the **Menu + 0** keys.
- **Screen Modes** - There are eight Screen modes (defined below) that are accessible by pressing a number on the keypad that correspond to the Screen mode number (for example, Screen mode 1 displays when you press key 1).

Screen mode	Key command	Screen Definitions
Screen Mode 0,1	1	Level, Interface and Average Temp.
Screen Mode 2	2	DT1, DT2 and DT3
Screen Mode 3	3	DT4 and DT5
Screen Mode 4	4	API and GOVP
Screen Mode 5	5	API and GOVI
Screen Mode 6	6	API and NSVP
Screen Mode 7	7	GOVU and MASS
Screen Mode 8,9	8	TL0, TL1 and Status

#### Parameter Specification

**Temperature:** 32 - 104 °F (0 - 40 °C)

**Power:** 11 - 30 Vdc at 2.5 W

**Agency Approvals:** For use in hazardous locations:  
Class I, Division 2, Group A, B, C and D  
Class II, Division 2, Groups F and G  
Class III, Division 2



#### Version Key:



- Press this key to display the software revision.
- Press any key to return to the data screen.

#### Previous and Next Buttons:



- Use the Prev (Increase) and Next (Decrease) keys to change an address.

#### Raise and Lower Buttons:

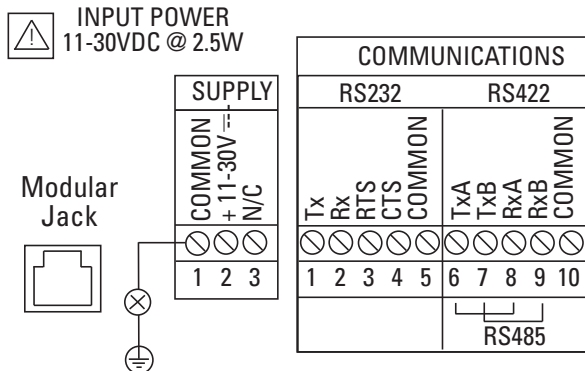


- Use the Raise and Lower buttons to scan through addresses in ascending or descending order.

All specifications are subject to change. Please contact MTS for specifications that are critical to your needs. For more information, go to [www.mtssensors.com](http://www.mtssensors.com).

## Ordering and Connection information

### Wiring

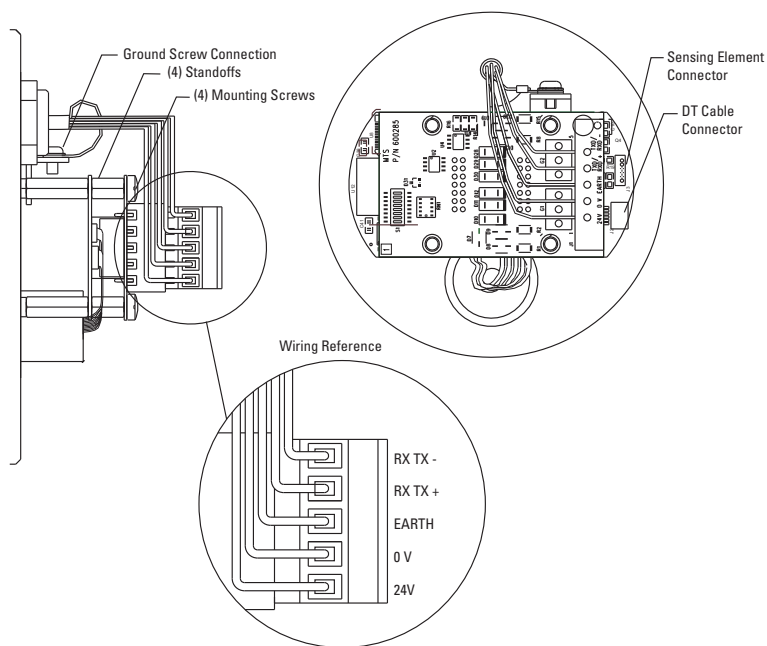


**Note:**

Refer to installation drawing, part number 650838 for details on I.S. wiring.

**Typical Wiring Chart:**

MTS Level Gauge	CL01
RX TX -	RXB/TXB
RX TX +	RXA/TXA
Earth Gnd	Earth Gnd
0 V PWR	Common
24 V PWR	+ 11 - 30V



### Ordering information

**Ordering Information**

MTS CL01 Modbus Master Part Number: 253023-3  
 MTS CL01 Modbus Slave Part Number: 253023-4



Part Number: 07-04 550935 Revision B

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All Level Plus sensors are covered by US patent number 5,545,984. Additional patents are pending. Printed in USA. Copyright © 2004 MTS Systems Corporation. All Rights Reserved.



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