

LEVELCom 100™ LIQUID LEVEL COMPUTER



Take CONTROL...

TMS is pleased to present the LevelCom 100™ Liquid Level Computer, a quality engineered instrument specifically designed to monitor and control liquid levels and volumes. Maximize the value of tank level gauging while minimizing the risk of accidental spills.

LEVELCom 100...

- Completely self contained - no external pressure sensor or transmitter required.
- Direct replacement for obsolete, inherently hazardous, mercury manometers.
- Displays depth, weight and volume of the tank contents in either innage or ullage.
- Completely self-diagnostic. The LevelCom 100 automatically monitors the sense line for plugs and leaks.
- Fully programmable to the shape of the tank. No custom scales required.
- Stands alone or is easily ganged for multiple tank installations.



- Programmable alarm and control points.
- Addressable RS232/422 communications to the TMS TrendMaster™ software package.
- Optional "Form C" relay contacts for external alarm and control functions.

TMS

Technical Marine Service, Inc.

Made in the U.S.A.



LEVELCom 100™ LIQUID LEVEL COMPUTER

KEY FEATURES

- Direct replacement for obsolete mercury manometers. Utilizes the existing pneumatic sense and supply lines.
- Continuously monitors the sense line for plugs and leaks alerting the operator to problems.
- Displays depth, volume and weight of the tank contents in either innage or ullage.
- A 10 point depth/volume "Tank Table" accurately tracks the shape of the tank.
- The user-friendly menu driven program allows field set-up of scales, offsets, tank contours, alarm and control points, etc.
- Fully programmable sample and purge cycles eliminate the need for continuous air flow and greatly reduce the chance of plugged sense lines.
- No custom scales required.
- Automatically self calibrates at least once a day.
- Stands alone or is easily ganged for multiple tank installations.
- Bright 100 segment bargraph and 6 digit displays.
- Non-volatile memory retains the LevelCom configuration in the event of a loss of power.

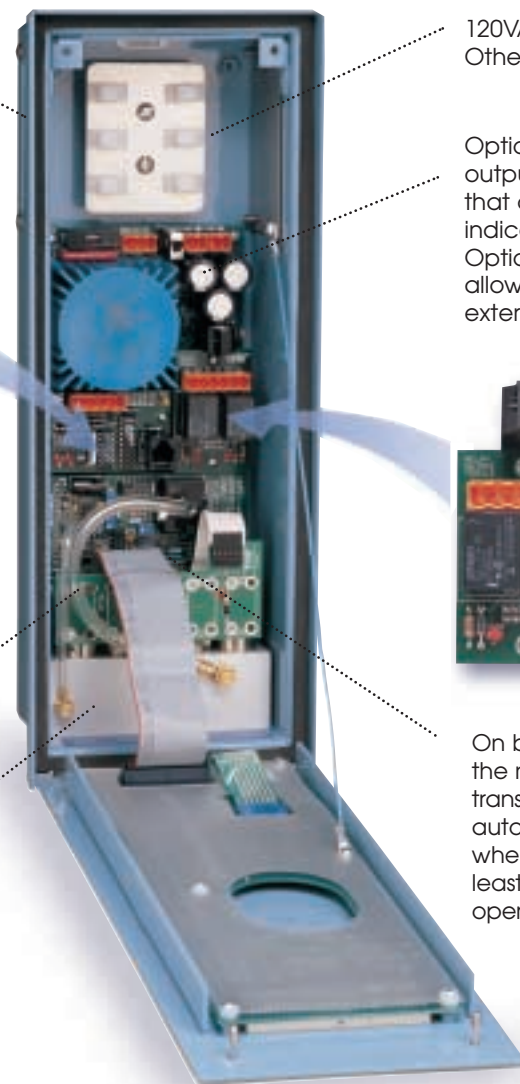
TANK LEVEL INDICATION AND CONTROL SYSTEM

The LevelCom 100™ is engineered to accept wiring inputs from either side. Each LevelCom is shipped with stainless steel side plates fitted with either 1 or 2 holes for standard 1/2" strain relief connectors or the LevelCom interconnection kit. Blank plates are used for sealing sides not used for wiring.

The optional RS232/422 Communications Module provides communication to the TMS TrendMaster™ software package. Up to 128 LevelComs may be networked on a single line to communicate with the TrendMaster™ providing historic and real time depth/volume data on a standard PC.

Multiport manifold utilizes high quality solenoid valves to perform sample and purge functions at programmed intervals.

The LevelCom 100 is self-diagnostic. The instrument constantly monitors the condition of the sense line and automatically alerts the operator to plugs, leaks or abnormal supply air conditions.



120VAC/0.1A/60HZ is standard. Other voltages are available.

Optional 4-20mA analog output provides a precise signal that can be used for remote indication or control functions. Optional 4-20mA analog input allows connection to any external pressure transmitter.



The optional Relay Module provides 2 SPDT "Form C" relays that are programmable for external alarm or control functions.

On board sensor eliminates the need for external pressure transmitters. The LevelCom 100 automatically self calibrates when power is applied and at least once a day while in operation.

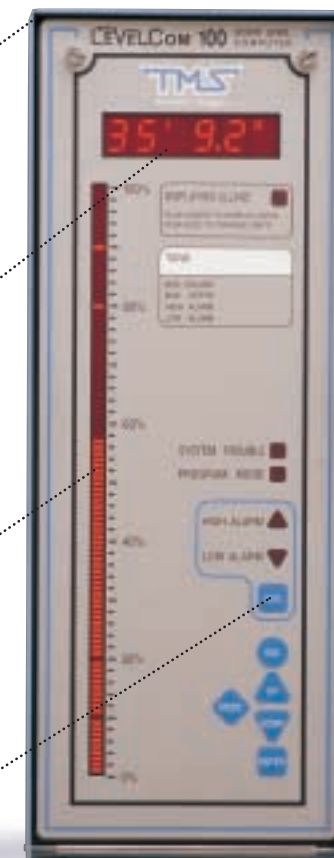
Designed for surface or flush mounting, the LevelCom 100 is constructed of heavy duty aluminum and is fully gasketed. The LevelCom is designed to give years of reliable performance in the harshest environments.

The bright 6 digit alpha-numeric digital display provides precise depth/volume/weight data as well as programming information, error and alarm messages.

At a glance, the bright 100 segment bargraph indicates from 0 to 100% of the depth of the tank. Alarm setpoints and overfill data are also indicated with the bargraph.

Environmentally sealed faceplate buttons provide access to all programming functions including a "Hot Menu" of selected features and parameters.

A user defined 1 to 6 digit password protects the LevelCom program from unauthorized adjustments to the configuration.



OPTIONS:

- Addressable RS232/422 Communications Module allows communication to the TMS Trendmaster software package. Provides real-time and historic depth and volume data on a standard PC.
- Relay Module provides two (2) SPDT "Form C" relay contacts for external alarm and control functions.
- 4-20mA output for remote indication or process control.
- 4-20mA input allows connection to virtually any external pressure transmitter.
- Automatic Specific Gravity calculation.
- Automatic Differential Pressure detection.
- Front panel mounted piezoelectric alarm horn provides audible local alarm indication.
- 1-5 VDC input
- Resistive input (scaleable)

The standard LevelCom 100 is designed to connect directly to a pneumatic sense line. Optional models also accept input from virtually any pressure sensor. Completely self contained, the LevelCom 100 requires no external devices such as pressure transmitters, purge valves, or custom scales. The LevelCom 100 is completely programmable allowing it to be used in a wide variety of applications including:

- Ships
- Dairy Farms
- Pulp and Paper Mills
- Liquid storage facilities
- Barges
- Food processing
- Industrial process control
- Dams and reservoirs

S P E C I F I C A T I O N S

Design Standards: The LevelCom 100™ meets or exceeds the requirements of 46 CFR 62.25-30 and the American Bureau of Shipping (ABS) 1997 Rules for Building and Classing Steel Vessels, Part 4-Machinery Equipment and Systems.

UL 1092 - Process Control Equipment (UL File E185105)

Power: 120VAC / 0.1A / 60HZ (Other voltages are available)

Pneumatic: Compressed air at regulated pressure (see table below) filtered to 40 microns. Pneumatic connections are standard 1/4" tube.

Temperature: Operating range: -10F to +140F

Humidity: 5-95% RH non-condensing

Enclosure: UL listed as "Raintight/Indoor use only". NEMA 4 Constructed of .090" Powder coated aluminum alloy. All fasteners are 304 stainless steel

Dimensions: 14.5"(37cm)H x 5.5"(14cm)W x 3.8"(9.6cm)D

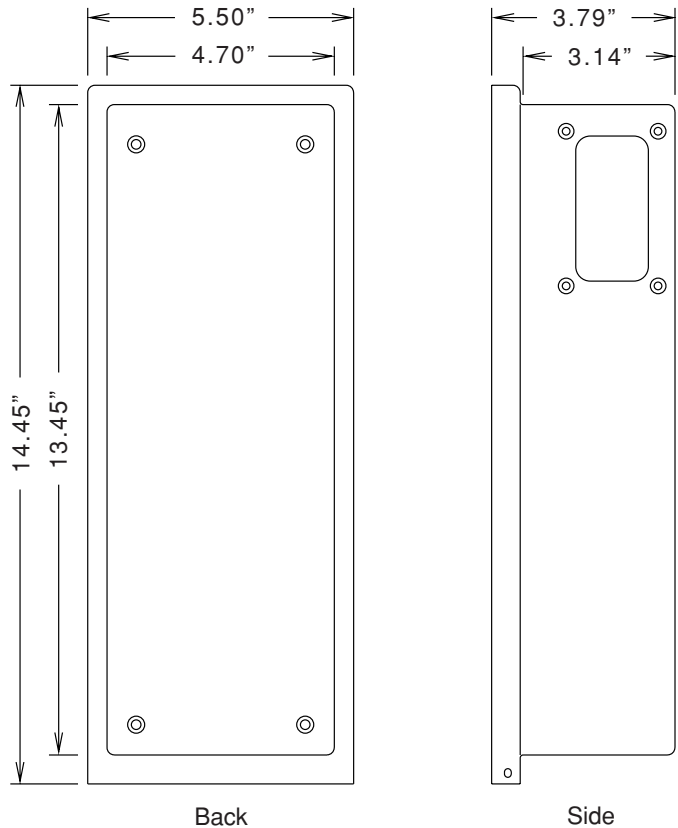
Alarm Setpoints: Four (4) programmable setpoints (Relay option required for remote alarm activation)

Control Setpoints: Four (4) programmable set points Control 1 & 2 On/Off (Relay option required)

Security: User defined 1-6 digit password protection

Options:

- Alarm/Control relays: 2 SPDT "Form C" relays (Contacts rated "Pilot Duty")
- RS232/422 Communications to the TMS TrendMaster™ software
- Automatic Specific Gravity detection
- Automatic Differential Pressure compensation
- Analog voltage/current input
- Analog 4-20mA output
- Integral piezoelectric alarm horn



Tank Sensing Range:	0 - 31' (9.45m)	0 - 62' (18.9m)	0 - 90' (27.43m)
Sensor Range:	0 - 15 psi	0 - 30 psi	0 - 100 psi
Accuracy (Full Scale):	+/-0.2% FS (+/-0.75")	+/-0.2% FS (+/-1.5")	+/-0.2% FS (+/-2.2")
Resolution (Full Scale):	0.1" (2.54mm)	0.2" (5.08mm)	0.3" (7.62mm)
Supply Air Pressure:	20 - 30 psi	30 -50 psi	45 - 60 psi

For more information about the LevelCom 100™ Liquid Level Computer family, or other products and services offered, contact the representative listed or Technical Marine Service directly. TMS designs and manufactures innovative draft and level gauging systems, and complete powerplant control systems for marine and industrial use.



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