

Approved for all UST EPA requirements

High resolution of +/- .001"

Two separate levels simultaneously measured

Optional Ground Level Display Available

Average temperature with internal sensors

Flexible probes up to 50 feet

The L&J Engineering MCG 8152 Magnetostrictive Level Gauge

An Integrated Approach

The MCG 8152 Magnetostrictive Level Probes are highly accurate, continuous measurement devices that are easy to install and maintain. The magnetostrictive technology that is employed in the MCG 8152 has been proven to be extremely reliable. The probe is comprised of a wave guide, one or two floats with permanently-embedded magnets, a motion or stress sensing device and a probe housing. Together, these components measure the level of product in a vessel through a simple physical property known as the Wiedemann Effect. The 8152's compact design allows for the collection and transmission of an impressive amount of data. In addition to measuring two levels (product and interface or two interfaces), five (5) temperature sensors are embedded in the probe at different levels to provide average temperature measurement of the product. With its flexible probe available in lengths up to 50 feet (15.2 m), the MCG 8152 Level Gauge can be installed in nearly any type of storage or process vessel; aboveground or underground. Mounting options include a 4" riser or a 7/8" NPT connector. Flanged connections are also available.

Level Measurement and Point Switch...All in One

Because of the probe's packaging and its high degree of resolution (+/- .001"), the MCG 8152 can provide both level gauging data and act as a point switch for process vessels or overspill alarms.

Display and Processing

The MCG 8152 display and single board transmitter actually provides more processing power than many of the full sized computers of just a few years ago. The "Super Smart" on-board processing power gives the L&J devices the capability to manipulate the data locally. The 8152 can store strapping tables and be programmed to accept density inputs from external sources. In addition, the 8152 provides for protocol emulations, virtually unlimited custom programmed features, as well as complete self diagnostics. With a 4 x 20 character LCD readout and infrared programming capabilities as standard features, the unit can be utilized as stand-alone gauge or be integrated as part of a complete gauging system.

Compatibility

Like all L&J Gauges, the MCG 8152 communicates via the standard L&J Tankway data highway. Intelligent modules to emulate nearly any other protocol or highway are also available and easily interchangeable. The unit may also be configured to accommodate temperature inputs (Spot or Average), relays (up to 4), 4-20mA inputs or outputs (up to 2), and four discrete inputs or outputs. In addition to a level probe, the MCG 8152 accepts input from various L&J leak detection sensors (vapor and/or liquid). When used as a part of a multiple unit system, each receiver can be calibrated and configured for any or all of the available options.

Convenient

Calibration can be accomplished via the MCG 2150 hand-held infrared calibrator; eliminating the need to remove the cover from the gauge housing. Current level, temperature, volume, and bottom/sediment, or pressure information is easily accessible, right at the tankside. System configuration and parameters can also be downloaded from an MCG 3000 Series Gauging System. Comprehensive surge and lightning protection is also an integral part of the unit.

Applications

Approved for leak detection in tanks up to 150,000 gallons

Can be used in various storage or process vessels; above or underground

Custody transfer on products such as diesel fuel

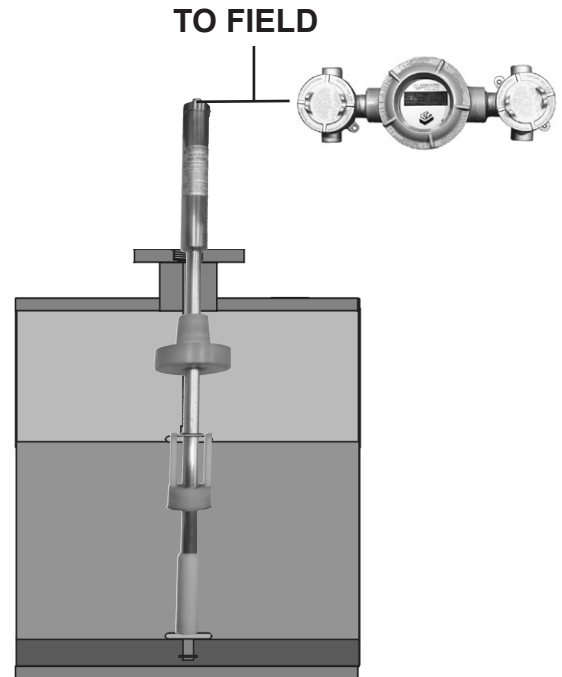
Level measurement on food and beverage process tanks

Level control on chemical process vessels

STANDARD FEATURES

The MCG 8152 Series Level Sensing Probe is a permanently installed in-tank sensor which is equipped with the following features:

- Precision Weighted Float (2nd float optional)
- Standard 4" Riser Mount with Other Sizes Available
- Wiring to Junction Box
- Programmable display at head



MCG 8152 TYPICAL ARRANGEMENT

SPECIFICATIONS

Operating Principle:	Magnetostrictive Sensing
Communication:	L&J 4-Wire Data Highway
Level Resolution:	.001 inch
Temperature Sensing:	5 Temp. Detectors
Temperature Resolution:	.01°F
Enclosure Size:	Varies with Tank Diameter
Approvals:	UL Listed
Floats:	2" or 4" Floats available

INFORMATION REQUIRED TO ORDER:

MCG 8152 - AB - CD - EF - GH - IJ

TANK HEIGHT IN FEET ———
INTERSTITIAL CAPABILITIES ———
OPENING SIZE AND FLOAT MATERIAL ———
ANALOG INPUT - TEMP./RELAY ———
POWER SUPPLY ———

MCG 8152 MAGNETOSTRICTIVE LEVEL GAUGE

Includes: Local Readout, Capable of Displaying Two Items (Level & Temp., or Volume or BS&W), Explosion-Proof Housing, Infrared Programmable, L&J Tankway Output, Stainless Steel magnetostrictive probe with two (2) nitrophenyl floats and 5 RTDs. Up to 50 feet (15.2 m). Riser cap. Mounts into 4" riser pipe. (Other mountings available).

MODEL NUMBER SELECTION:

The model number will have a base number, **MCG 8152**, followed by ten digits. These digits will represent five option tables.

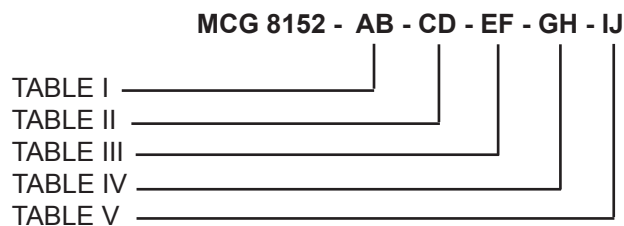


TABLE I - TANK HEIGHT IN FEET

**Probe will be 4 inches taller than the height of the tank*

AB - Rigid Probes (2'-24')

02 - 2' Tank (0.6 m)	14 - 14' Tank (4.2 m)
04 - 4' Tank (1.2 m)	15 - 15' Tank (4.5 m)
05 - 5' Tank (1.5 m)	16 - 16' Tank (4.8 m)
06 - 6' Tank (1.8 m)	17 - 17' Tank (5.1 m)
07 - 7' Tank (2.1 m)	18 - 18' Tank (5.4 m)
08 - 8' Tank (2.4 m)	19 - 19' Tank (5.7 m)
09 - 9' Tank (2.7 m)	20 - 20' Tank (6.0 m)
10 - 10' Tank (3.0 m)	21 - 21' Tank (6.3 m)
11 - 11' Tank (3.3 m)	22 - 22' Tank (6.6 m)
12 - 12' Tank (3.6 m)	23 - 23' Tank (6.9 m)
13 - 13' Tank (3.9 m)	24 - 24' Tank (7.2 m)

AB - Flexible Probes (25'-50')

25 - 25' Tank (7.3 m)	38 - 38' Tank (11.6 m)
26 - 26' Tank (7.9 m)	39 - 39' Tank (11.9 m)
27 - 27' Tank (8.2 m)	40 - 40' Tank (12.2 m)
28 - 28' Tank (8.5 m)	41 - 41' Tank (12.5 m)
29 - 29' Tank (8.8 m)	42 - 42' Tank (12.8 m)
30 - 30' Tank (9.1 m)	43 - 43' Tank (13.1 m)
31 - 31' Tank (9.4 m)	44 - 44' Tank (13.4 m)
32 - 32' Tank (9.7 m)	45 - 45' Tank (13.8 m)
33 - 33' Tank (10.1 m)	46 - 46' Tank (14.0 m)
34 - 34' Tank (10.4 m)	47 - 47' Tank (14.3 m)
35 - 35' Tank (10.7 m)	48 - 48' Tank (14.6 m)
36 - 36' Tank (10.9 m)	49 - 49' Tank (14.9 m)
37 - 37' Tank (11.3 m)	50 - 50' Tank (15.2 m)

**For larger size tanks, consult factory.*

TABLE II - 1 OR 2 LEVELS / INTERSTITIAL CAPABILITIES

CD

- 01 - Product Level & BS&W With Interstitial Capability (shared interface)
- 02 - Product Level & BS&W Without Interstitial Capability
- 12 - Product Level Only

TABLE III - OPENING SIZE AND FLOAT MATERIAL*

EF

- 02 - 2" Nitrophyl Floats/Opening (316 S.S. Probe)
- 03 - 3" Nitrophyl Floats/Opening (316 S.S. Probe)
- 04 - 4" Nitrophyl Floats/Opening (316 S.S. Probe)
- 12 - 2" Stainless Steel Floats/Opening (316 S.S. Probe)
- 13 - 3" Stainless Steel Floats/Opening (316 S.S. Probe)
- 14 - 4" Stainless Steel Floats/Opening (316 S.S. Probe)
- 22 - 2" Monel Floats/Opening (Monel Probe)
- 23 - 3" Monel Floats/Opening (Monel Probe)
- 24 - 4" Monel Floats/Opening (Monel Probe)

* For other materials, consult factory.

TABLE IV - ANALOG INPUT - TEMPERATURE / RELAY

GH

- 02 - None
- 03 - Internal RTD* (1-5 Points)
- 06 - Spot Temperature**
- 07 - Average Temperature***
- 10 - 4-20mA Input, Internal RTD*
- 11 - 4-20mA Input, Spot Temperature**
- 14 - 4-20mA Input, Average Temperature***
- 15 - Internal RTD* (1-5 Points), 4 Relays
- 18 - Spot Temperature**, 4 Relays
- 19 - Average Temperature*** (Up to 14 Points), 4 Relays
- 20 - 4-20mA Input, Internal RTD*, 4 Relays
- 21 - 4-20mA Input, Spot Temperature**, 4 Relays
- 22 - 4-20mA Input, Average Temperature***, 4 Relays
- 23 - Dual 4-20mA Input, Average Temperature***
- 24 - Valve & Pump (2 point)
- 25 - Valve & Pump (4 point)
- 26 - 4-20mA Input, Valve & Pump (2 point)
- 27 - 4-20mA Input, Valve & Pump (4 point)
- 28 - Valve & Pump (2 point), Average Temperature***
- 29 - Valve & Pump (4 point), Average Temperature***
- 32 - Valve & Pump (2 point), Spot Temperature**
- 33 - Valve & Pump (4 point), Spot Temperature**

* Only available with MCG 8150B or MCG 8190A Probe

** RTD Probe must be ordered separately

*** Requires MCG 2350 Average Temperature Assembly and Average Temperature bulb (ordered separately).

TABLE V - POWER SUPPLY

IJ

- 01 - 48VAC
- 03 - 24VAC
- 05 - 110VAC
- 07 - 220VAC
- 11 - Solar Ready
- 21 - 48VDC
- 13 - 24VDC
- 14 - 12VDC