

Wireless Technology

Battery Operation

High resolution of +/- .001"

Two separate levels simultaneously measured

Average temperature with internal sensors

The L&J Engineering MCG 8140 Wireless Magnetostrictive Level Gauge

An Integrated Approach

The MCG 8140 Wireless Magnetostrictive Level Gauge is a highly accurate, continuous measurement device that is easy to install and maintain. The MCG 8140 combines our highly reliable magnetostrictive technology with our wireless Spread Spectrum Technology (frequency hopping) to provide both highly accurate, reliable level data transmission without the need of any power or signal wire. The 8140'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 rigid probe available in lengths up to 24 feet (7.3 meters) and its flexible probe available in lengths up to 50 feet (15.2 meters), the MCG 8140 Wireless Magnetostrictive 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.

Wireless Technology

The MCG 8140 features an integrated radio and antenna design eliminating hardwire cable and conduit connections to the control room. The wireless Spread Spectrum Technology provides a transparent, wireless RF link to the MCG 5102 Wireless Base Station connected to your gauging system of choice such as the MCG 3900 Inventory Management System. The wireless technology is compatible with all existing L&J protocols and many other standard protocols.

Level Measurement and Point Switch...All in One

Because of the probe's packaging and its high degree of resolution (+/- .001"), the MCG 8140 can provide both level gauging data and act as a point switch for process vessels or overspill alarms.

Standalone/Low Power/Cost Effective

The battery powered operation of the MCG 8140 allows it to act as a standalone, cost effective level gauging solution. If field power to the tank farm were to fail there would be no effect on the MCG 8140 because of this. The power draw of the MCG 8140 is minimal so constant battery changing and servicing is not required.

Proven Technology

The magnetostrictive technology that is employed in the MCG 8140 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.

Applications

Can be used in various types of storage or process vessel; above or underground

Level measurement on food and beverage process tanks

Level control on chemical process vessels

Stand-alone operation due to battery power & wireless data transmission

SPECIFICATIONS

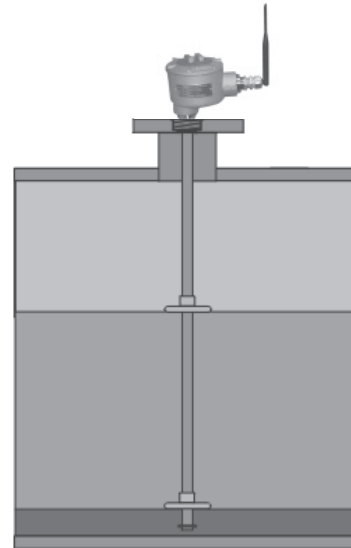
Operating Principle:	Magnetostrictive Sensing
Communication:	Wireless
Level Resolution:	.001 inch (Leak Detect Mode)
Temperature Sensing:	5 Temp. Detectors
Temperature Resolution:	.01° F
Enclosure Size:	Varies with Tank Diameter
Approvals:	-
Floats:	2" or 4" Floats available

STANDARD FEATURES

The MCG 8140 Series Level Gauge 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
- Wireless Data Transmission
- Battery or Line Powered

WIRELESS DATA TRANSMISSION



MCG 8140 TYPICAL ARRANGEMENT

INFORMATION REQUIRED TO ORDER:

MCG 8140 - AB - CD - EF

TANK HEIGHT IN FEET _____
INTERSTITIAL CAPABILITIES _____
OPENING SIZE AND FLOAT MATERIAL _____

MCG 8140 WIRELESS MAGNETOSTRICTIVE LEVEL GAUGE

Includes: Stainless steel magnetostrictive probe with two (2) nitrophyl floats and 5 RTDs. Up to 50 feet (15.2 m). Riser cap. Mount into 4" riser pipe. (Other mountings available).

MODEL NUMBER SELECTION:

The model number will have a base number, MCG 8140, followed by six digits. These digits will represent three option tables.

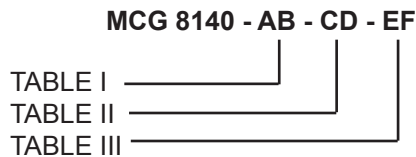


TABLE I - TANK HEIGHT IN FEET

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

AB - Rigid Probes (2'-24')

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

AB - Flexible Probes (25'-50')

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

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.*