



6.3 GHz Low Frequency Loop Powered Radar

2-Wire, Lightweight Design

Ultra Low Power

Microwave Pulse Radar Technology

Local Display With IR Programmability

Analog 4-20mA and Digital HART Outputs

Calibration Via MCG 2150 or HART Handheld

Antennas Tailored for Specific Applications

The L&J Engineering MCG 1800 Process Radar Gauge

Process Radar

The MCG1800 is a non-contact, loop powered pulse radar level gauge employing L&J's state of the art Infrared technology. It is ideally suited for all process industries including chemical, petrochemical, pharmaceutical, water and waste water treatment, food and beverage and refining, among others. It is the preferred alternative to other level devices which are less reliable and demand maintenance. An on-board program "wizard" simplifies calibration and walks the operator through 5 easy interactive steps.

Infrared Capability

L&J Engineering's patented Infrared technology provides the ability to setup, calibrate, diagnose and maintain the MCG 1800 by using the intrinsically safe L&J Engineering MCG 2150 Handheld Infrared Calibrator, or the MCG 2151 SFI Programmer along with the local or remote LCD display with infrared pickup.

All Environments

The 1800 withstands corrosive, caustic, acidic, or any other harsh environment. Different antenna configurations accommodate various process parameters like surface conditions, measuring distance, dielectric constant of product, and internal obstructions.

Multiple Protocol

The standard unit provides a 2-wire 4-20mA output. Optional outputs include L&J Tankway, HART, Profibus, Fieldbus and others are also available.

Input/Output

Optional temperature inputs and relay outputs are available.

Ground Level Display

Ground level display is available which provides full calibration and programming functionality. This eliminates the need to access the radar gauge by providing an identical display at a convenient location for facility personnel.

Applications

Liquid level gauging of virtually any corrosive, contaminated or viscous product including:

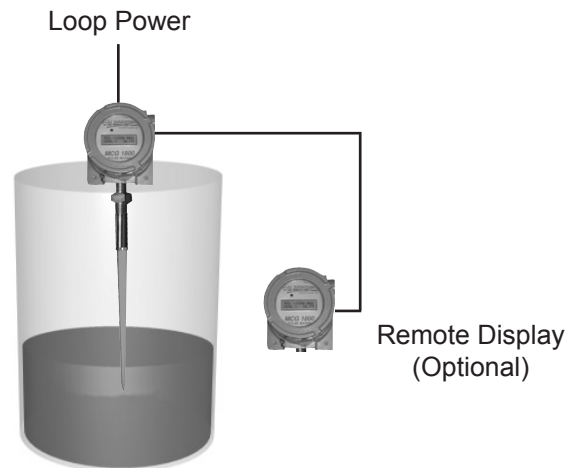
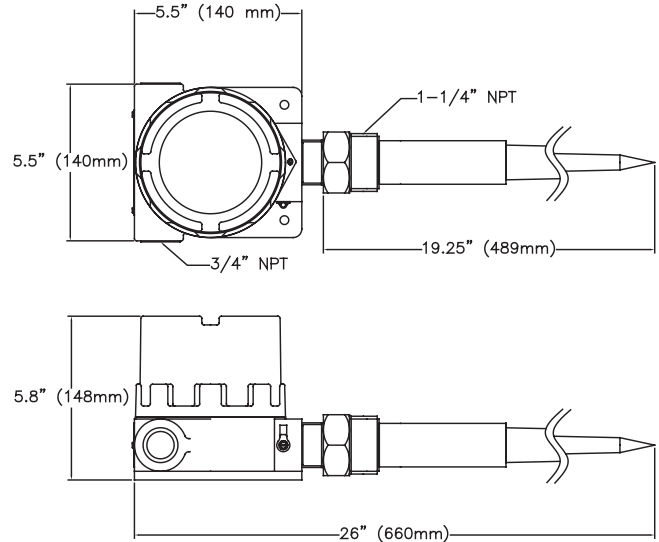
oil	chemicals	gasoline	paraffin	limestone rock
tar	molten sulfur	phosgene	pharmaceutical base products	chocolate
latex	polyethylene	titanium dioxide	cryogenic or liquified gases	molten aluminum

SPECIFICATIONS

Measuring Principle:	Pulse
Frequency:	6.3 GHZ
Accuracy:	± 10MM
Resolution:	1 MM
Supply Volt:	20-36VDC, 110VAC
Range:	0-75 feet (23m) standard. Up to 180 feet (55m) optional
Radar Power:	Less than 1mw (0dBm)
Electronics Temperature:	-40° F to 150° F (-40°C to +65° C)
Product Temperature:	-148° F to 482° F (-100° C to 250° C)
Local Display:	2 X16 character LCD
Optional Digital Communications:	HART, Profibus, Fieldbus, L&J Tankway
Max. Pressure:	150PSIG (or 300PSIG optional)
Construction:	Cast Aluminum (Standard) Stainless Steel (Optional)
Mounting:	1 1/4" NPT Standard, Others Optional including DIN and JIS
Weight:	8 lbs. - AL
Safety:	Explosion Proof / Intrinsically Safe*, Class I, Div. 1, Group B, C & D *(with Appropriate Barriers)
Antennas:	Cone, Rod, Stillwell, Guided Wire (others available)
Optional Input/Outputs:	Temperature Input 2 Relay Outputs

All designs subject to change. Certified dimensions and specifications available upon request.

DIMENSIONS



INFORMATION REQUIRED TO ORDER:

MCG 1800 - AB - CD - EF - GH

HOUSING/MATERIAL OF CONST. _____

POWER OUTPUT _____

GROUND DISPLAY/ANTENNA _____

INPUTS/RELAYS _____

MCG 1800 PROCESS RADAR GAUGE

MCG 2150 HANDHELD INFRARED CALIBRATOR
(One Required)

MCG 2151 SFI PROGRAMMER

MODEL NUMBER SELECTION:

The model number will have a base number, **MCG 1800**, followed by 8 digits. These digits will represent 4 sets of option tables.

MCG 1800 - AB - CD - EF - GH

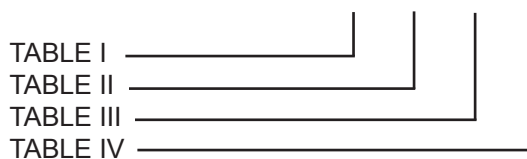


TABLE I - HOUSING / MATERIAL OF CONSTRUCTION

AB

- 00 - Aluminum
- 01 - Stainless Steel Housing

TABLE II - POWER / OUTPUT

C

- 0 - Loop Power
- 1 - 110VAC
- 2 - 24VDC
- 3 - 220VAC

D

- 0 - None
- 1 - 4-20mA Analog Output
- 2 - HART
- 3 - Profibus
- 4 - Fieldbus
- 5 - L&J Tankway
- 6 - Wireless (Explosion Proof)
- 7 - Wireless (Non-Explosion Proof)
- X - Other Protocols Available Upon Request

TABLE III - GROUND LEVEL DISPLAY / ANTENNA

E

- 0 - No Ground Level Display
- 1 - Ground Level Display (Loop Power)
- 2 - Ground Level Display (110VAC)
- 3 - Ground Level Display (220VAC)

F

- 1 - Rod
- 2 - Guided Wire
- 3 - 2" Stilling Well Antenna 316SS
- 4 - 2" Conical Horn Antenna Teflon Coated AL
- 5 - 4" Conical Horn Antenna Teflon Coated AL
- 6 - 6" Conical Horn Antenna Teflon Coated AL
- 7 - 8" Conical Horn Antenna Teflon Coated AL
- 8 - 4" Conical Horn Antenna 316SS
- 9 - 6" Conical Horn Antenna 316SS

TABLE IV - INPUT / RELAYS

G

- 0 - No Temperature In
- 1 - Temperature

H

- 0 - No Relays Out
- 1 - 2 Relays
- 2 - 4 Relays

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