

MCG 8153 Flexible Magnetostrictive Level Gauge

An Integrated Approach

The MCG 8153 Flexible Magnetostrictive Level Gauge is a highly accurate, continuous measurement device that is easy to install and maintain. 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. The MCG 8153 features a multi-protocol capable digital output to easily interface with both existing and new systems.

Versatility

With flexible probes in lengths up to 70 feet, the MCG 8153 probe 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 & Point Switch...All in One

Because of the probe's packaging and its high degree of resolution ($\pm .001''$), the MCG 8153 can provide both level gauging data and act as a point switch for process vessels or overspill alarms.

Proven Technology

The magnetostrictive technology that is employed in the MCG 8153 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.



Features

- High Resolution of $\pm .001''$
- Two Separate Levels Simultaneously Measured
- Average Temperature with Internal Sensors
- Digital Communication Output

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

Specifications:

Operating Principle:
Magnetostrictive Sensing

Communication:
Digital (See Ordering Guide)

Resolution Level:
.001 inch

Temperature Sensing:
Average Temperature (5 Internal RTD's)

Temperature Resolution:
.01°F

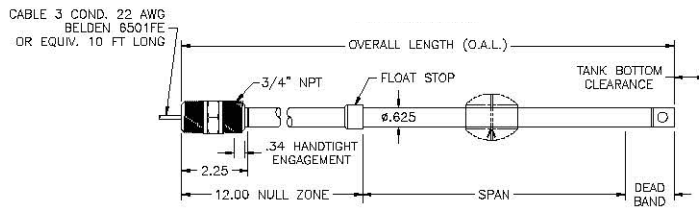
Floats:
2" or 3" Polyurethane or Stainless

Probe Material:
Flexible PVDF magnetostrictive level probe

Power:
12-70 VDC Standard

Consult Factory Regarding Additional Feature & Option Requirements

Dimensions

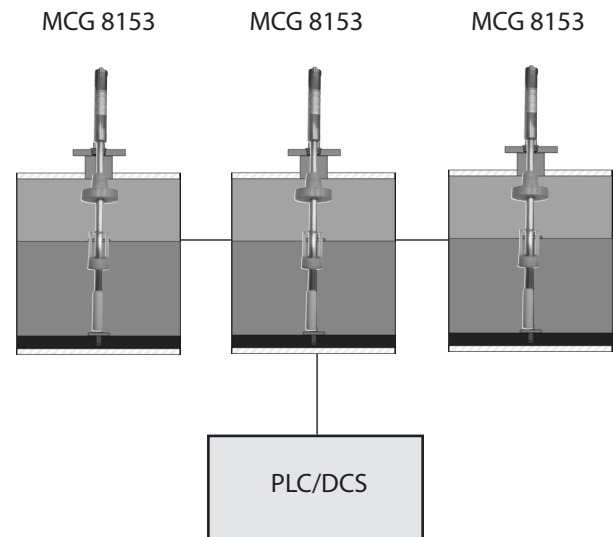


EXPANSION CLEARANCE REQ'D AT BOTTOM OF TANK (V STYLE):
MIN. CLEARANCE = (O.A.L.) X (MAX. OPERATING TEMP(°C) - 20) X (.00014)
OVERALL LENGTH = TANK HEIGHT - CLEARANCE + 1"

NOTE:
FOR DUAL FLOAT PROBES WITH OVERALL LENGTH GREATER THAN 288", A FLOAT SPACER WILL BE REQUIRED BETWEEN TWO FLOATS.

O.A.L. (in)	DEAD BAND(in)	TANK BOTTOM CLEARANCE(in)
47-144	6.00	1.00
145-288	8.00	2.00
289-432	12.00	3.00
433-600	14.00	4.00

Typical System Layout



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

MCG 8153 Ordering Guide

MCG 8153 Flexible Magnetostrictive Level Gauge

Includes: Flexible PVDF magnetostrictive level probe and 5 RTDs. Up to 840" (70'). Mounts into 2", 3" or 4" opening.

Model Number Selection:

The model number will consist of a base number **MCG 8153** followed by 9 digits. These digits will represent 3 sets of option tables:

MCG 8153 - ABC - D - E - F - G - H

ABC - Tank Height in Inches		
ABC - ABC	ABC - ABC	ABC - ABC
044" - 096" (3'8" - 8')	445" - 456" (37'1" - 38')	649" - 660" (54'1" - 55')
097" - 120" (8'1" - 10')	457" - 468" (38'1" - 39')	661" - 672" (55'1" - 56')
121" - 144" (10'1" - 12')	469" - 480" (39'1" - 40')	673" - 684" (56'1" - 57')
145" - 192" (12'1" - 16')	481" - 492" (40'1" - 41')	685" - 696" (57'1" - 58')
193" - 216" (16'1" - 18')	493" - 504" (41'1" - 42')	697" - 708" (58'1" - 59')
217" - 240" (18'1" - 20')	505" - 516" (42'1" - 43')	709" - 720" (59'1" - 60')
241" - 264" (20'1" - 22')	517" - 528" (43'1" - 44')	721" - 732" (60'1" - 61')
265" - 288" (22'1" - 24')	529" - 540" (44'1" - 45')	733" - 744" (61'1" - 62')
289" - 312" (24'1" - 26')	541" - 552" (45'1" - 46')	745" - 756" (62'1" - 63')
313" - 336" (26'1" - 28')	553" - 564" (46'1" - 47')	757" - 768" (63'1" - 64')
337" - 360" (28'1" - 30')	565" - 576" (47'1" - 48')	769" - 780" (64'1" - 65')
361" - 384" (30'1" - 32')	577" - 588" (48'1" - 49')	781" - 792" (65'1" - 66')
385" - 396" (32'1" - 33')	589" - 608" (49'1" - 50')	793" - 804" (66'1" - 67')
397" - 408" (33'1" - 34')	609" - 624" (50'1" - 52')	805" - 816" (67'1" - 68')
409" - 420" (34'1" - 35')	625" - 636" (52'1" - 53')	817" - 828" (68'1" - 69')
421" - 432" (35'1" - 36')	637" - 648" (53'1" - 54')	829" - 840" (69'1" - 70')
433" - 444" (36'1" - 37')		

D - 1 or 2 Levels	
0	Product Level & BS&W
1	Product Level Only

E - Float Material*	
0	3" Polyurethane Float**
1	2.05" Stainless Steel Float
2	2.05" Kynar Coated SS Float

*For other materials, consult factory.
 **Not available with table G option 2.

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F - Opening Size	
0	2" Opening
1	3" Opening
2	4" Opening

H - Power	
1	48 VDC (12-70 VDC Standard)

G - Digital Output	
1	L&J Tankway
2	Modbus on RS-485 (2-Wire)