LEVEL MEASUREMENT
Radar Level Transmitter
138-W52

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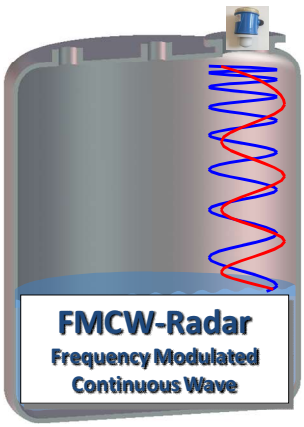
INTRODUCTION

The Radar level Transmitter Liquid (138-W52) is a highly reliable and user-friendly non contact level sensor. Its utilizes advanced 80 GHz radar measurement technology, which remains unaffected by the type of liquid or solid being measured, as well as the surrounding environment. The 138-W52 series offers an accuracy of ±5mm, with an 8°beam angle. It can operate in temperature ranging from 0° to 60° C . This two wire transmitter provides a 4 to 20mA + HART output.

WORKING PRINCIPLE

The sensor emits a continuous radar signal through the antenna, which is then reflected by the medium and received as an echo by the same antenna. The frequency difference between the emitted and received signal is directly related to the distance and, consequently, the filling height of the medium. This measured filling height is processed and converted into an output signal by the microcontroller circuit. The microcontroller then converts this data into an output signal, which can be either an analog signal 4-20 mA or a digital signal 4-20 mA + HART. This output can be used for monitoring or controlling the level in a process control system.



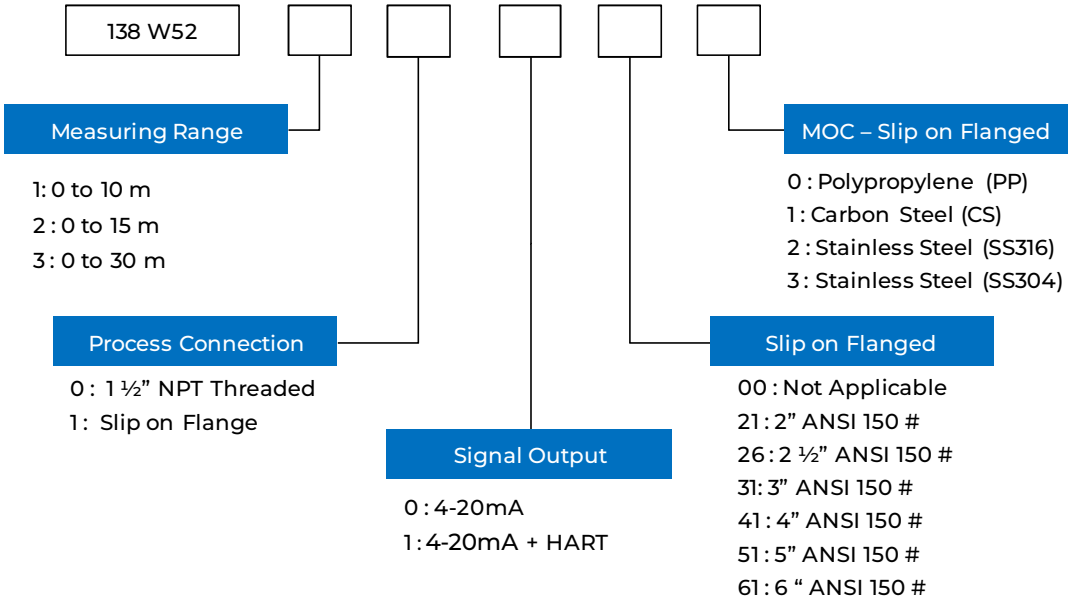
FEARURES

- 80 GHz technology for reliable and maintenance-free operation
- Rugged PVDF antenna and enclosure for corrosive liquid.
- IP68 rated sensor for harsh outdoor or below grade installations
- Measures level & Distance.
- Minimum dead band maximizes the potential fill capacity of small tanks
- Configuration via HART Server.

AREA OF APPLICATIONS

- Water reservoirs
- Water Level Measurement - Rivers, Lakes, Channels, Reservoirs, Sinks
- Fresh Water Tanks
- Hydrological Application
- Irrigation System
- Water resources Development
- Drinking Water
- Water Distribution

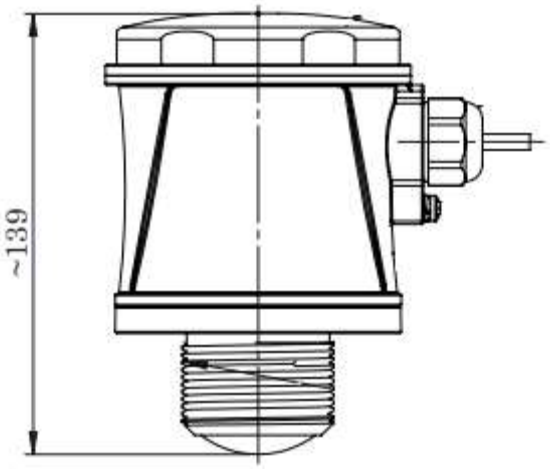
ORDERING CODE



SPECIFICATIONS

Sr.No.	Category	Parameter Name	Parameter Description
1	General	Operating Frequency	80 GHz
2		Measuring Ranges	10m , 15m, 30m
3		Blind Zone	150mm
4		Display Version	With Display
5		Beam angle	8°
6		Installation method	Threaded & Slip On Flange
7		Threading Type	1 1/2" BSP Threaded
8		Slip on Flange Type	2" / 2 1/2" /3"/4"/5"/6" ANSI 150#
9		Accuracy	±5mm
10		Power Supply	24 VDC @ 30mA
11		Analog Output	2 Wire, 4-20mA @500Ω load
12		Communication O/P	Not Applicable / HART (Optional)
14		Antenna type	Lens antenna
15	Construction	Housing Enclosure	PP
16		Antenna /Sensor Material	PP
17		Flange Material	PP
21		Process Temperature	0 to 60 °C
22		Process Pressure	Atmospheric
23		Protection class	Standard IP 67 / IP68 on Request
24	Environmental	Humidity	≤ 95%RH
25		Operating Temperature	0 to 60 °C

MECHANICAL DIMENSIONS



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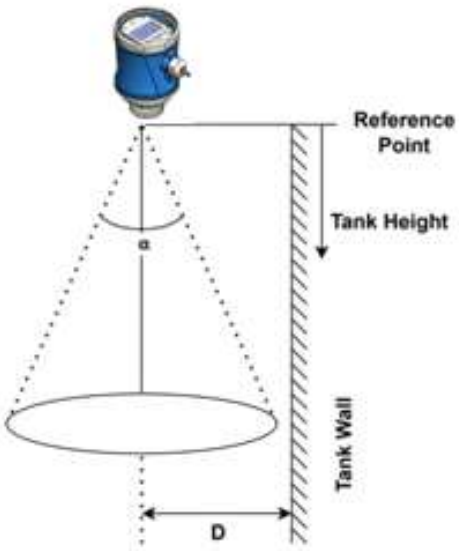

Tank Height (m)	Tank Wall "D" mm
	α=8°
1	70
5	350
10	699
15	1049
20	1398
25	1748
30	2097

***Continuous development may necessitate changes without notice

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