

INTRODUCTION

The Radar Level Transmitter Liquid (138 W52) is a high-performance, non-contact level sensor designed for precise measurements in various water applications. It uses advanced FMCW radar technology, ensuring accuracy with respect to the surrounding environmental conditions. The device offers a high measurement accuracy of ± 5 mm with an 8° beam angle, a 150 mm dead band and operates within a temperature range of -10°C to 60°C . It provides a maximum measuring range of up to 30 meters. The 138 W52 features a two-wire configuration along with keypad display and delivers a 4–20 mA output signal with optional HART communication for improved integration and diagnostics. Its robust design and reliable performance make it ideal for a wide range of water and wastewater level measurement applications.



SPECIFICATIONS

Parameter Name	Parameter Description
Measuring Range (m)	5 m, 10 m, 15 m, 30 m
Dead Band (mm)	150 mm
Beam Angle	8°
Power Supply	24 VDC @ 30 mA
Accuracy	± 5 mm*
Analog Output	2 Wire, 4-20 mA @500 Ω load
Communication Output	HART 7 (Optional)
Threading Type	1 1/2" BSP Threaded
Slip on Flange Type	2" / 2 1/2" / 3" / 4" / 5" / 6" ANSI 150#
Antenna Type	Lens Antenna
Housing Enclosure	Aluminium
Antenna / Sensor Material	Polyphenylene Oxide (PPO)**
Flange Material	Polypropylene (PP), Carbon Steel (CS), Stainless Steel (SS316), Stainless Steel (SS304)
Installation Method	Threaded & Slip On Flange
Protection Class	Standard IP67 / IP68 on Request
Process Temperature	-10°C to 60°C
Operating Temperature	-10°C to 60°C



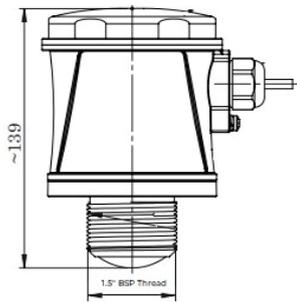
FEATURES & BENEFITS

- Maintenance-free operation
- Minimal dead band 150 mm for maximising small tank fill capacity
- Configuration via HART server

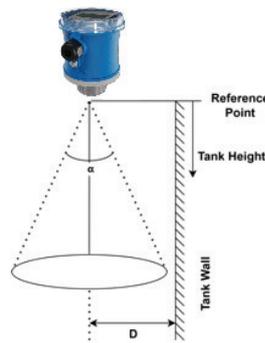
APPLICATIONS

- Fresh Water Tanks
- Hydrological Application
- Irrigation System
- Water Resources Development
- Drinking Water

MECHANICAL DIMENSIONS



BEAM ANGLE



Tank Height (m)	Tank wall 'D' (mm) $\alpha=8^\circ$
1	85
2	160
5	400
10	760
15	1060
20	1400
25	1800
30	2100

ORDERING CODE

138 W52

MR

PC

OPI

SF

MS

MR

Measuring Range

0 : 05 m
1 : 10 m
2 : 15 m
3 : 30 m

PC

Process Connection

2 : 1½" BSP Threaded
1 : Slip on Flange
9 : For Other Contact to HO

OPI

Output 1 (Signal Output)

1 : 4-20 mA
2 : 4-20 mA + HART

SF

Slip on Flange Type

XX : Not Applicable
21 : 2" ANSI 150#
26 : 2½" ANSI 150#
31 : 3" ANSI 150#
41 : 4" ANSI 150#
51 : 5" ANSI 150#
61 : 6" ANSI 150#

MF

MOC – Slip On Flange

X : Not Applicable
0 : Polypropylene (PP)
1 : Carbon Steel (CS)
2 : Stainless Steel (SS316)
3 : Stainless Steel (SS304)

Note:

*Under the Factory Set Condition.

**Contact HO for Other Sensor Material.

#Continuous development may necessitate changes without notice.

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About SBEM Pvt. Ltd.

For over 50 years of expertise, SBEM has built a strong reputation in Level measurement, Flow measurement, and Pressure measurement, integrating with the cloud-based IoT platform by gradually adopting and mastering new technologies to meet the changing needs of industries across India and the globe.

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