

Ultrasonic Level Meter BULM500

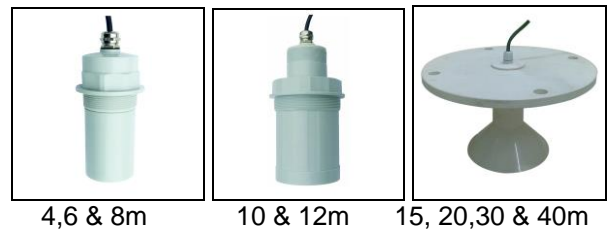
- Non-contacting measurement
- No moving parts
- Integral LCD and push-buttons for on-site programming
- Continuous measurement of level or distance-to-surface.
- Measuring range up to 40m
- Rugged ABS housing
- ABS/PVC/PTFE wetted material
- Protection IP67
- Output 4-20mA & RS485 MODBUS
- HART or PROFIBUS (option)
- Cable between probe and host up to 1000m

MEASUREMENT PRINCIPLE

The BASI BULM500 Series is a liquid or solid level meter based on ultrasonic technology that is suitable for many liquid and solid applications. Ultrasonic pulse signals are transmitted and reflected from the liquid or solid surface. The transmitter 'listens' for reflected signals (echoes) and measures the time-delay between transmitting and receiving. The distance to the liquid surface is automatically calculated using the computed time-delay. An integral temperature sensor continuously measures the air temperature around the transmitter. It then computes the speed of sound in air, automatically compensating the Distance for temperature effects. The distance measurement can be sent through the 4–20 mA & RS485 MODBUS output. HART, PROFIBUS protocol on request.

TECHNICAL SPECIFICATIONS

Range (1) : 0-4, 0-6, 0-8, 0-10, 0-15, 0-20, 0-30, 0-40m
Dead zone : 0,2, 0,25,0,3, 0,4, 0,6, 1,2 1,4, 1,6m
Beam Angle : 8°(3db) for range :4, 6, 8m
 5° (3db) for range 12, 15, 20, 30, 40m
Measuring cycle: 1 second
Damping : Adjustable
Output signal : 4-20mA & RS485 MODBUS
Baud rate : 19200/9600/4800
Protocol : HART, PROFIBUS, MODBUS(standard)
Relay output : 2, 4, 6 relay 5/A/250VAC
Power supply : 24VDC 30mA or 220VAC
Load limitation : 0 - 500Ω
Indicator : 14-digit LCD in two rows
Protection : IP67 weather-proof
Zero and span : Push button adjustment or remote
Ambient temp : -40 to 80 °C
Temp. Comp. : whole range
Pressure : ±0,1Mpa (1bar)
Humidity limits : 0 - 100% RH
Configuration : By 3 pushbutton or remote



Note 1: When using to measuring solid level, the most energy of ultrasonic is absorbed or scattered by solid level, so the back wave is very little, the valid measuring range of solid level is about 50% of liquid level. And the valid measuring range of solid level is determined by the installing location and rang.

Performance Specifications

Resolution : 1mm
Inaccuracy : 0.2% FS (in air)
Power supply effect : Negligible between 20 and 32 VDC
EMC : EN 50081-1, EN 50082-2, 89/336/EEC



Physical Specifications

Electrical connection : PG13,5
Process connection : G2", M95 or flange
Wetted parts : ABS/PVC/PTFE
Electronic housing : ABS
Identification plate : 304 SST
Approximate weight : 1,8 to 5kg depending of model
Mounting : Directly supported by piping or flange



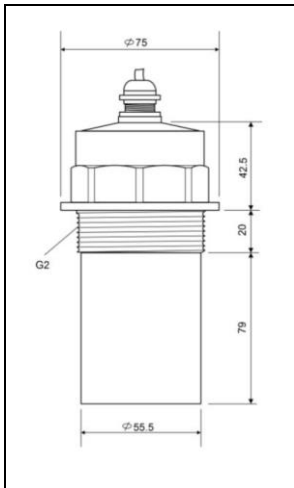
Order Information

BULM5XX

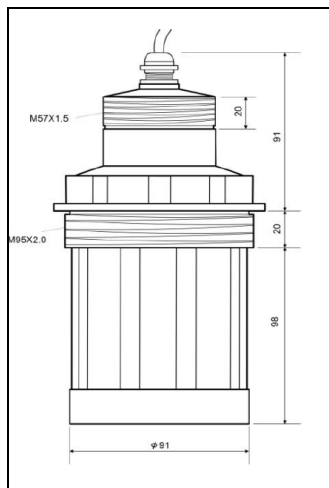
RANGE	SENSOR MATERIAL	CONNECTION	OUTPUT	RELAY	PROTOCOL	SUPPLY
04 0-4m	S ABS & PVC	1 M95	I 4-20mA	2 2 Relay	M MODBUS	D 24VDC
06 0-6m	F PTFE	2 G 2"	R RS485	4 4 Relay	H HART	A 220VAC
08 0-8m	Q Other specify	3 DN50	& 4-20mA	6 6 Relay	P PROFIBUS	
10 0-10m		4 DN65				
12 0-12m		5 DN80				
15 0-15m		6 DN100				
20 0-20m		7 DN150				
30 0-30m		8 DN200				
40 0-40m		X Specify				

Eg: BULM504S3RD Level Meter 0-4m, PVC sensor, Process connection DN50, RS485 and supply 24VDC

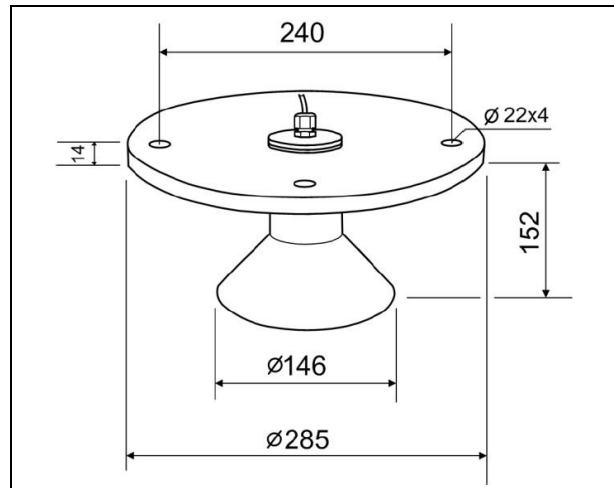
Mechanical Specifications



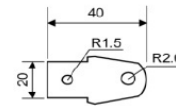
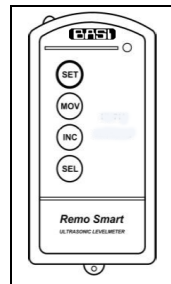
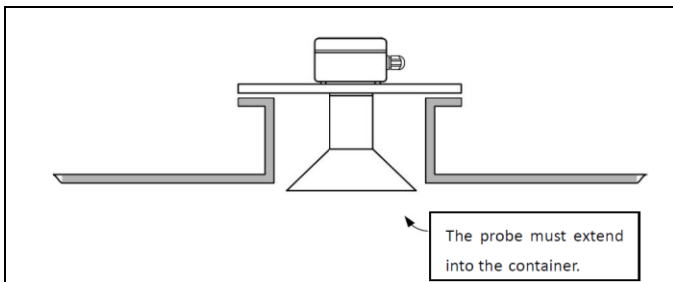
Probe 4, 6 & 8m



Probe 10 & 12m



Probe 15, 20, 30 & 40m



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