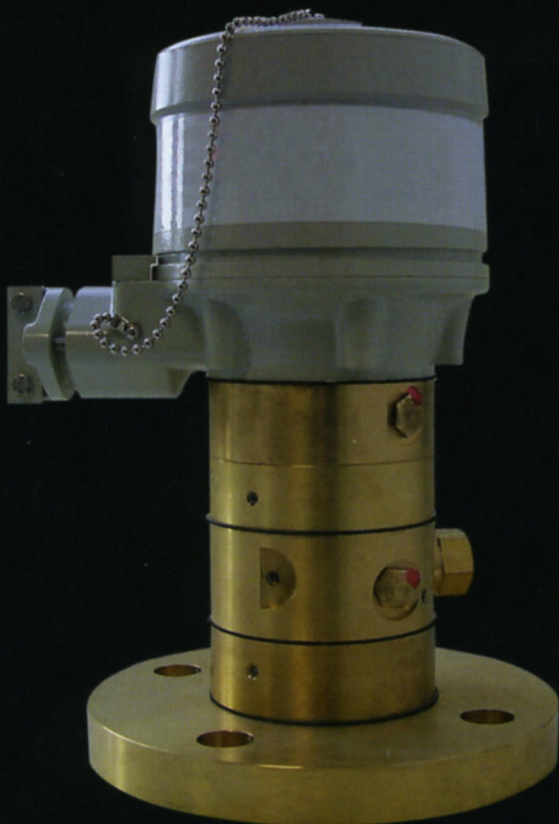


# THE BUBBLER



## **SMART PNEUMATIC LEVEL SENSOR WITH GENERIC 4-20mA OUTPUT**

The Bubbler is an electro-pneumatic level transmitter that allows remote level measurement using a 4-20mA analog output. The lack of air pressure poses no operational problems, due to an automatic one-way valve which closes as soon as the pressure drops below 1 bar, this prevents back flow in the bubbling line towards the transmitter. Over pressure is also protected against by an automatic one-way valve.

- It's the size of a grapefruit
- Standard 1 1/2" ANSI flange mount
- Explosion proof housing
- Accuracy .3% full scale
- 85 ft. tank height
- Automatic cycling at intervals up to 30 minutes
- Automatic over-pressure valve
- Automatic stop valve for air failure
- Automatic cleaning of bubbling line
- Connection for flow test
- Connection for bubbling pressure test
- Connection for pressurized tanks
- Top or side mount
- 2 pair 24 VDC and 4-20mA cable

### **Options:**

- Tank Management Software
- Multiple indoor and outdoor display options
- Two alarm set points
- Big Blue
- Special high temp. cargo "Asphalt"
- Low temp. cargo "LNG"
- Readouts in gallons, bbls, tons, ullage, etc.
- EMS Automated Draft & Trim

# THE BUBBLER

## SMART PNEUMATIC LEVEL SENSOR WITH GENERIC 4-20mA OUTPUT

### ENVIRONMENTAL SPECIFICATIONS

Operating Temperature: -4°F to +158°F  
Explosion Proof Housing: CENELEC

### PHYSICAL CHARACTERISTICS

Size: 10" x 4 1/2"  
Weight: 15 lbs.  
1 1/2" 150 lbs. ANSI Flange

### ELECTRICAL CHARACTERISTICS

Power Supply: 18 to 36 VDC  
Intrinsically Safe: EEx dII CT6

### TECHNICAL SPECIFICATIONS

Transmitter: 2 wires 4-20mA  
Accuracy: 0.3%

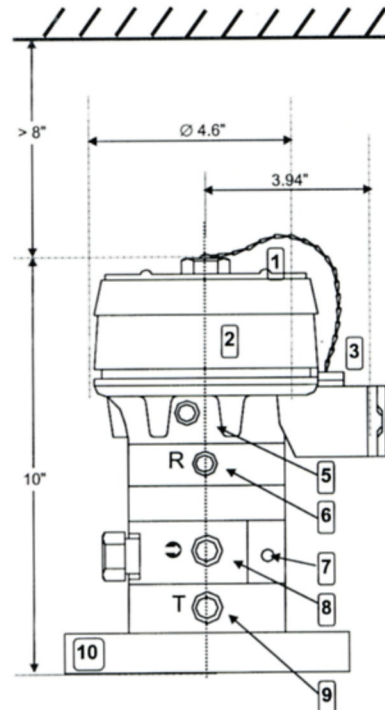
### TYPE APPROVALS

Bureau Veritas  
Det Norske Veritas  
Lloyds Register of Shipping  
USSR Register of Shipping  
American Bureau of Shipping  
Polish Register of Shipping  
French Navy Approval (Shocks & Vibration)

**EMS**  
ELECTRONIC MARINE  
SYSTEMS, INC.

800 Ferndale Place  
Rahway, NJ 07065  
Tel: 732-382-4344  
Fax: 732-388-5111  
E-mail: emsmarcon@aol.com  
Website: www.emsmarcon.com

Specs are subject to change without notice.



- 1- Identification plate
- 2- Explosion-proof case containing electronic transmitter
- 3- Safety pin
- 4- Electrical stuffing-box
- 5- NPT 1/8" coupling for gas cover connection
- 6- NPT 1/8" coupling for connection of pressure indicator
- 7- Air flow setting screw
- 8- NPT 1/4" coupling for air supply connection
- 9- NPT 1/4" coupling for pneumatic testing (only with optional safety valve)
- 10- Mounting of BUBBLER and connection of bubbling probe:  
10.1 BUBBLER B type: Flange ISO PN 16-DN 50 with threaded coupling 1/2" NPT  
10.2 BUBBLER R type: Cylindrical 1" gas fitting (Class A, according to Standard NFE 03.005)

### OPERATING PRINCIPALS

