

CT801A

Electro-pneumatic Tank Level Transmitter – Deck Installation with Explosion Proof & Intrinsic Safe Options

The CT801A electro-pneumatic tank level transmitter performs level measurements of tanks on ships, barges and yachts based on the bubbler-type principle. Compressed air is sent via a simple pipe to the bottom of the tank; the pressure equivalent to the column of liquid is measured by a very sensitive differential pressure sensor and transmitted as output signal. A simple pipe being the only wetted part rules out any chances of instrument corrosion. Measurement accuracy is totally immune to bad conditions like sloshing, angled surface, foam, solid deposits, unlike many other gauging technologies. Ease of installation and simple on-board maintenance with pre-stocked spare parts has made CT801 series the instrument of choice since 1966, whenever electro-pneumatic tank level measurement is required. The pneumatic level indicator CT080 can be connected to CT801 series without additional power supply.

Honeywell offers a wide variety of choices for electro-pneumatic level measurement with a portfolio spanning independent stand alone level transmitters, and bubbling cabinets for measurement and signal accumulation from a common cabinet. The CT801A is designed for tank top mounting on open deck using a bracket or flanged connection. Both explosion proof and intrinsic safe options are available. These transmitters are designed to avoid common malfunctions such as lack of air pressure supply or overpressure. An automatic non-return valve is activated as soon as the supply pressure falls below 1 bar in order to prevent the liquid from going into the bubbling line and reaching the transmitter. For pressurized tanks, the level is calculated by deducting the inert gas pressure above the liquid from the measured hydrostatic pressure.



TECHNICAL SPECIFICATIONS

Operating Temperature	- 40°C to + 70°C (ATEX Certificate: - 20°C to + 70°C)
Air Supply Quality	4 to 10 Bar Quality 3 Particle size 5 microns Pressure Dew point: -20°C Oil content: 1mg/m ³
Range	0 mBar to 4000 mBar
Power Supply	12 to 28V DC
Accuracy	+/-0.3% FS @20°C
Output Signal	4-20mA
Protection Class	IP66
Weight	9.2 Kg

PNEUMATIC FEATURES & CONNECTIONS

Safety Features	<ul style="list-style-type: none">• Automatic operation of:• Overpressure valve• Air supply safety valve• Bubbling line non-return valve• Bubbling line cleaning• Venting nipple for open deck mounting
Connections	<ul style="list-style-type: none">• Pressurized tanks• Pressure level indicator
Bubbling flow	• 10l/h (automatic regulator)
Bubbling line connections	1" BSPP 1/2" NPT (With Flange)

APPROVALS

Intrinsic Safety Approval	IECEX, ATEX. II 1 G D Ex ia IIC T6 Ga Ex ia IIIC T70°C Da
Explosion Proof Approval	ATEX. II 2 G Ex d IIC T6 Gb

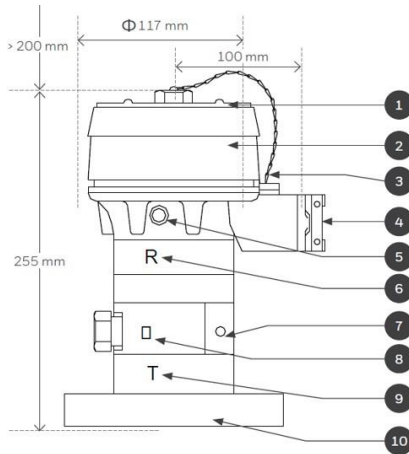
DOCUMENTATION	
Technical manual	MT322381
Maintenance manual	MM322382

SELECTION	PRESSURE RANGE - ELECTRONIC PCB
1	0-40/70mbar
2	0-70/350mbar
3	0-350/1050mbar
4	0-1050/2100mbar
5	0-2100/4100mbar

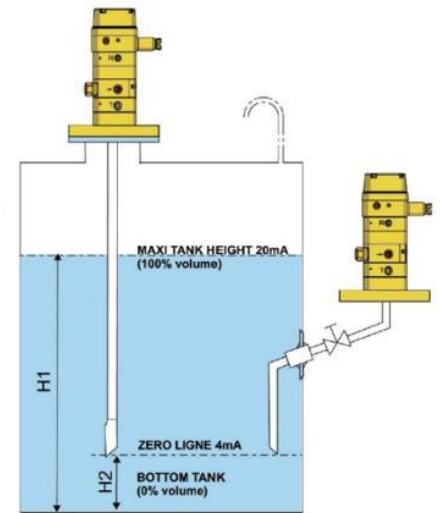
SELECTION	PROCESS CONNECTION TYPE
_-B06-****	PN16/DN50 SS316L, 1/2 IN NPT
_-B07-****	PN16/DN100 SS316L, 1/2 IN NPT
_-B08-****	PN20/DN50 SS316L, 1/2 IN NPT
_-B09-****	PN20/DN80 SS316L, 1/2 IN NPT
_-B10-****	PN50/DN50 SS316L, 1/2 IN NPT

MATERIALS	
	Head & Body: Stainless Steel SS316 Flange: Stainless Steel SS316

DRAWING



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 CT801 and connection of bubbling probe:
 - 10.1. Flange PN 16-DN 50 with threaten coupling 1/2" NPT
 - 10.2. Cylindrical 1" gas fitting (Class A, according to Standard NFE 03.005)



For More Information

www.process.honeywell.com

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This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements.

All specifications are subject to change without notice.

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