SERIES T7B / T7B

Working system of T7B (level) and T7B (density) series transmitters is based on Archimede's buoyancy principle. These instruments are designed for continuous measurement of level, interface and density of liquids in all industrial applications, offering very high reliability and robustness within a wide pressure and temperature range: -1÷100 bar / -100°C ÷ +350°C.

APPLICATION FIELDS

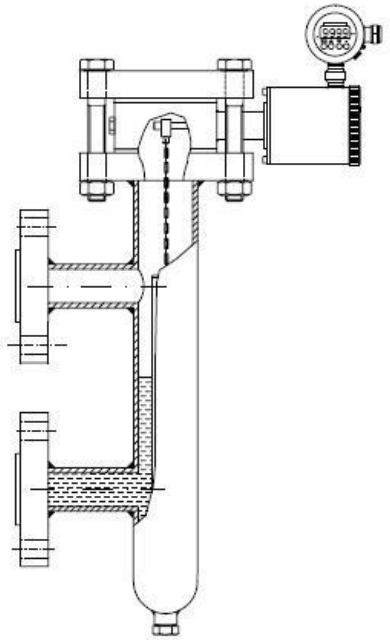
T7B series transmitters are used in all industry branches for continuous measurement of specific gravity, level and interface of liquids in open or closed tanks. Because of the adopted construction solutions, T7B allows to realize a reliable measuring system easy to install since no additional components are required.

TECHNICAL FEATURES

- Supply 10÷40Vdc
- Output 4÷20mA 2 wire system (min 3.85mA, ma x 21.5mA) + HART® communication protocol
- Response time: <256 ms (Std Hart®)
- Measured value update frequency: 1s
- Measuring range level: Min.= 0.3 meters - Max.= 1 0 meters
- Total accuracy level: ± 0.4%FS
- Resolution level: 0.01%FS
- Measuring range density: Min.= 0.5kg/l - Max.= 3kg/l
- Total accuracy density: typical ± 3gr/l, max ± 5gr/l
- Resolution density: 1gr/l
- Maximum static pressure: 100 bar (on request)
- Ambient temperature range: -40÷85°C (+120° o n request)

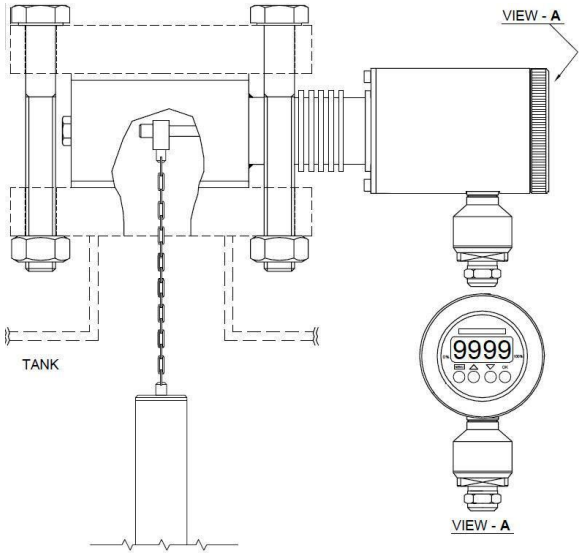
- **Process temperature range**: -100÷200°C (+350°C finned)
- Static pressure shift: 0.1% FS x 10bar
- Zero thermal drift: 0.15% x 10°C (-20÷70°C)
- Max load: Rlmax = (Vdc – 12V) / 21.5mA with HART® output: 220Ω < RL < 600Ω
- Damping: 0÷60s
- Displacer weight: max 2.4kg
- Storage temperature : -50÷130° C (-40÷+90°C with indicator)

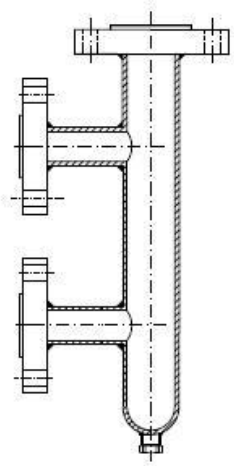
CONFIGURATION EXAMPLE



A) Electronic transmitter for continuous level measurement, integrated electronics, measuring range 0÷1500 mm, AISI 316 housing with rotating head, process connection flange ND80, gasket material FPM, AISI 316/ELGILOY wetted parts, displacer length 1500 mm, process temperature -10÷60 °C, PG13 st.st. cable gland , 4÷20 mA+HART protocol output, complete with Digital indicator and push buttons.

B) Electronic transmitter for continuous level measurement, integrated electronics, measuring range 0÷1000 mm, AISI 316 housing with fixed head, process connection flange ND80, gasket material FPM, AISI 316/301 wetted parts, displacer length 1200 mm, process temperature -40÷150 °C, PG9 st.st. cable gland , 4÷20 mA+HART protocol output, complete with Digital indicator and push buttons

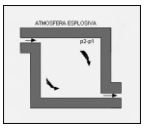
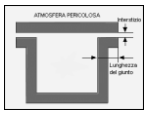
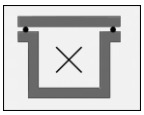
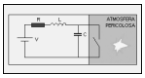




CAGE FOR EXTERNAL MOUNTING AVAILABLE ON REQUEST

Technical changes reserved

Methods of explosion protection for electrical equipment used in hazardous atmospheres

Protection Concept	Symbol	Icon	Description	Category	EN Standard
General requirements	-	-	General requirements	-	EN 50014
Oil immersion	Ex o		Explosive gas excluded by immersing ignition source in oil	2	EN 50015
Pressurized	Ex p		Explosive gas excluded by surrounding ignition source with pressurized inert gas	2	EN 50016
Powder filled	Ex q		Explosive gas excluded by immersing ignition source in sand	2	EN 50017
Explosion proof	Ex d		Ignition within the apparatus enclosure is contained and will not ignite surrounding explosive atmosphere	2	EN 50018
Increased safety	Ex e		Designs excludes the possibility of incendive arcs, sparks or hot surfaces	2	EN 50019
Intrinsic safety	**Ex ia**		Energy in circuit and temperature on components reduced to a safe level	1	EN 50020
	Ex ib			2	
Non incendive	Ex n		Apparatus will not ignite explosive gas in normal operation, faults unlikely to occur	3	EN 50021
Encapsulation	Ex m		Explosive gas excluded by encapsulating the ignition source in resin	2	EN 50028