

FG7 Series Explosion Proof Type Magnetic Floatlevel Transmitter Operation Manual

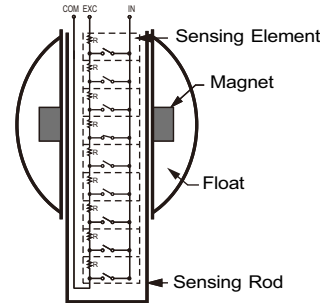
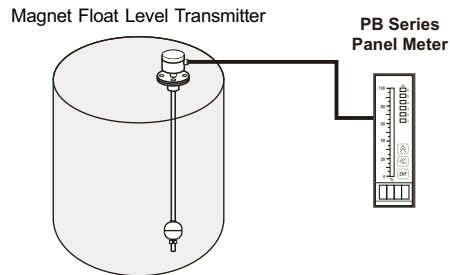


NEPSI Ex d IIC T3~T6 Gb
ATEX Ex d IIC T3 or T4 or T5 or T6 Gb
Ex db IIB T3 or T4 or T5 or T6 Gb
or T85°C Db
IECEX Ex db IIB T3 or T4 or T5 or T6 Gb
Ex tb IIIC T200°C or T135°C or T100°C or T85°C Db

Applicable Model:FG7 Series

Principle

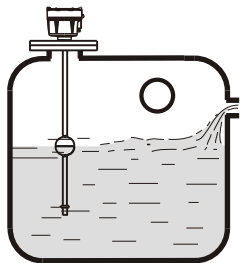
The "Magnet Float Level Transmitter" is composed of the float and sensing rod (shown as below). As the float raised or lowered by liquid level, the sensing rod will have a resistance output, which is directly proportional to the liquid level. Also, the float level indicator can be equipped with the converter to produce a 0/4~20mA signal.



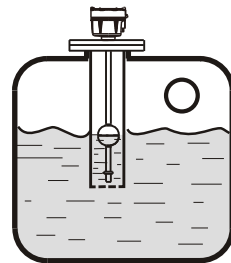
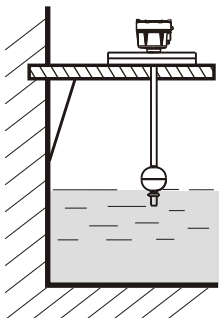
Installation

The float level transmitter should be mounted away from liquid inlet, any strong liquid fluctuation will produce output signal errors.

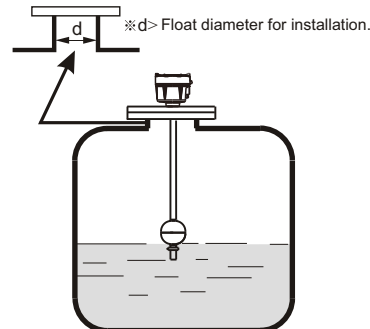
Use a plate shield, pipe shield or equivalent device to reduce the transmitter actuation when used for any agitator application.



Use an angle bracket, when the level transmitter is mounted in a concrete walled tank as figure below.



The standpipe should be selected with a diameter (d) larger than the float to allow installation.



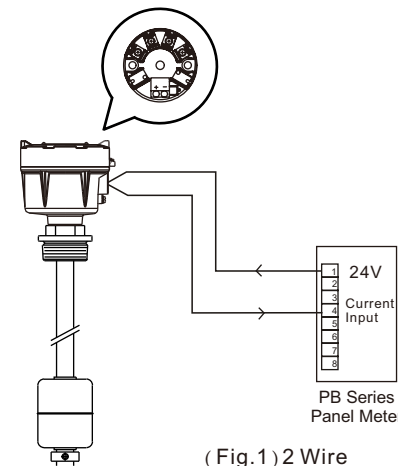
Installation Instructions For Ex-Proof Products:

1. There is an internal/external ground terminal in the housing. Please be sure to ground terminals when you use.
2. When install or maintain in the field, to comply with the caution "Open after power off"
3. Cable conduit should equip with explosion approval device (AD105DS). It can't be revised arbitrarily and have to lock well.
4. Be sure to obey the safe regulation of electric appliance for dangerous field when install and maintain.
5. Corrosive gas or liquid application isn't available for Aluminum & Stainless (SUS) material.
6. The level of temperature class for explosion sign and its maximum allowed temperature relating to the medium.

Temp. categories	T1	T2	T3	T4	T5	T6
Max. surface temp.	≤ 440°C	≤ 295°C	≤ 195°C	≤ 130°C	≤ 95°C	≤ 80°C
Medium temp.	≤ 450°C	≤ 300°C	≤ 200°C	≤ 135°C	≤ 100°C	≤ 85°C

7. Customers can't change the internal components and have to check the outer.

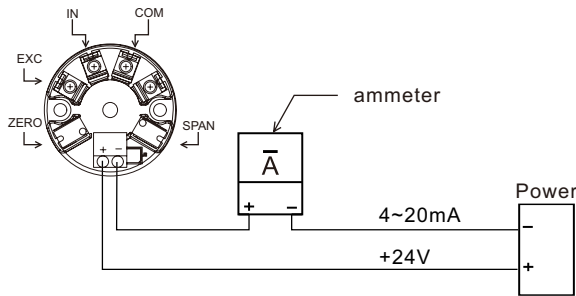
Wiring



Calibration

Calibration is done before shipment. Please proceed the following if needed.

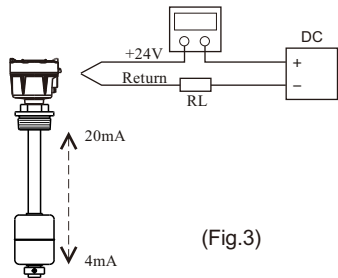
1. As indicated in Fig. below, connect in series with ammeter. (Power: 24Vdc)
2. Move the float to bottom level. Adjust "Zero" until ammeter shows 4mA.
3. Move the float to top level. Adjust "Span" until ammeter shows 20mA.
4. Repeat 2 and 3 to optimize 4-20mA setting.
5. The above-mentioned 1-4 are confined in 2-wire calibration, not in 3-wire.



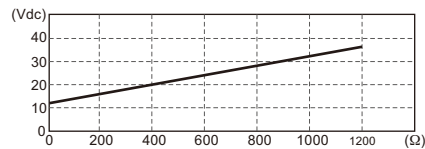
Trouble Shooting

1. Check the normal of wiring, power and circle resistance.
2. As indicated in Fig. 3, check if the ammeter shows 4mA when float is at bottom level and 20mA when float is at top level.
3. Please contact us if it still doesn't function.
4. The extension of transmissive distance and internal resistance of meter affect the function of 4-20mA output signal.

When circle resistance increases, please adjust power supply. (Fig. 4)



(Fig.3)



(Fig.4) Minimum Vdc and Ω



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