



Magnetostrictive Level Probe 134 - TM With Indicator-Transmitter 134-H

APPLICATIONS

The Magnetostrictive Probe provides reliable & accurate Level and interface level measurement in under-ground and aboveground horizontal cylindrical pressurized - atmospheric storage tanks containing clear liquids eg.LPG Motor Spirit, High Speed Diesel, Superior Kerosene Oil.

This is ideal for accurate & economical Level Indication for inventory management. The addition of SBEM "Petroquant-134-PQ" facilitates Remote Indication in safe area. The HART® output configuration permits daisy chaining to reduce cabling. The probe circuit is a low power micro-processor based intelligent circuit with an analogue to digital converter, giving high accuracy over a wide range of measurement. This also makes it suitable for operation in Zone 0 and Zone 1 areas, using safety barriers. The probe with transmitter may be used with a standard **Digital Indicator** with 4-20 mA analog output for level indication.

PRINCIPLE OF OPERATION

The Magnetostrictive Level Sensor consists of non-magnetic, pressure tight stainless steel tube over which a cylindrical titanium or stainless steel magnet encased float slides. The float moves along the tube as level changes. The magnet causes a discontinuity in the wire inside the sensor. The distance to the discontinuity is sensed as a time delay by a pulse sent by the circuit in the probe head located at the top end of the tube. The circuit converts the delay into level. An optional temperature sensor may be incorporated to enable temperature measurement of liquid.

ACCESSORIES

REMOTE INDICATOR UNIT - PETROQUANT 134-PQ

The unit is housed in a CRCA sheet steel enclosure, suitable for mounting on the wall / surface / pipe in a Control Room (Safe Area). It has a 2 X 16 character backlit LCD display to indicate measured level and calculated parameters. It has terminals for connecting Digital Level Probe/s, Power supply & Printer .

FIELD BUS INDICATOR

One common flameproof Field Bus Indicator may be used with up to 3-Indicator-Transmitter (134-H) for viewing of all the tanks at one point .

POWER SUPPLY UNIT

Power supply (24v dc) unit needs to be used when Petroquant is not used.

FEATURES

- Pressure tight sensor tube .
- Accurate Level, Interface, temperature measurement
- 100 point strapping table
- Suitable for small capacity Petroleum Product Tanks
- High Reliability and Extended Life
- Level Resolution: 1 mm
- No maintenance
- Flameproof & IP65 – weatherproof enclosure
- Intrinsically safe probe



Note: distance between level probe & remote Indicator-Transmitter –10M Max.

Level Measurement

Accuracy	: ≤ 1 mm	Resolution	: ≤ 1 mm
Hysteresis	: ≤ 0.5 mm	Linearity	: ≤ 1 mm
Pressure	: Atmospheric		
Operating Temp.	: -20 to + 60 °C		
Measuring Range	: Up to 5000 mm,		
Density Range	: 0.45 to 1.2 gm/cc		
Cable Entry	: ½" NPT		

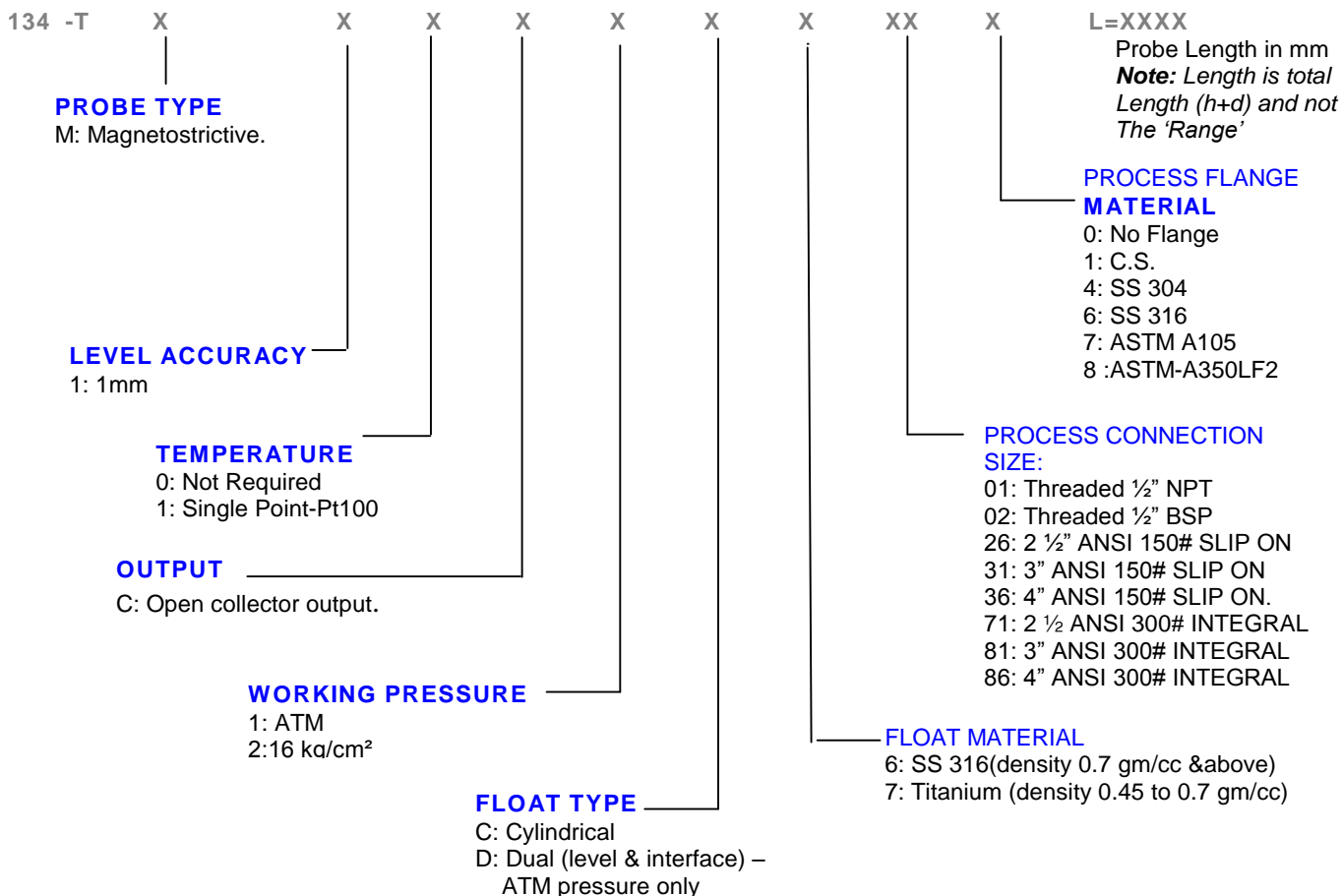
Temperature Measurement

Sensor	: Pt 100	Range:	: 0-100 °C
Accuracy	: ± 0.5 °C	Resolution	: ± 0.1 °C

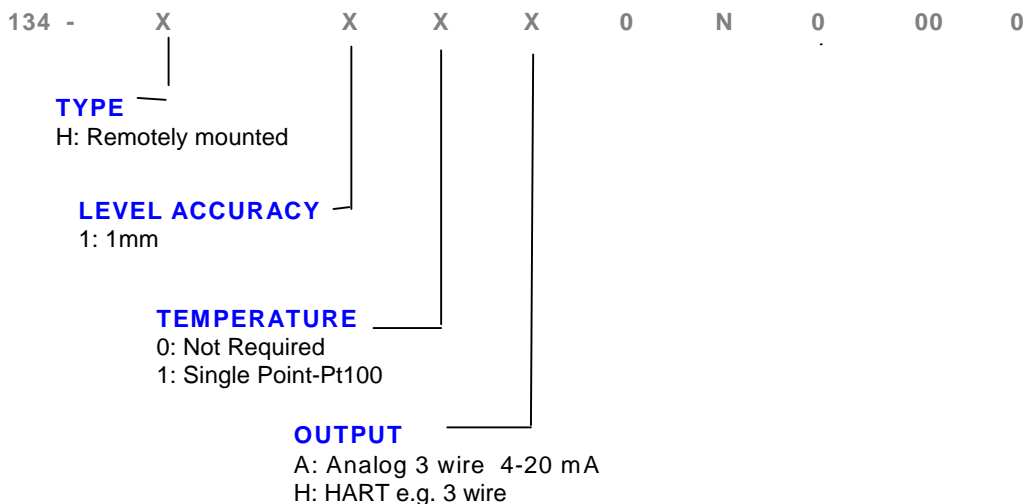
Safety

Probe Head	: Flameproof IS:2148-1981 Gr. IIA & IIB Weatherproof IP:65 as per IS:2147-1962
Circuit	: Intrinsically Safe as per IS:5780-1980 for Ex iA IIA & IIB T6

ORDERING INFORMATION FOR PROBE:



ORDERING INFORMATION FOR INDICATOR -TRANSMITTER:



REMOTE INDICATOR-TRANSMITTER

The Remote Indicator –transmitter enables display of level, temperature interface level, volume % volume at the fill point or bottom of tank. HART® output allows daisy chain loop which reduces cabling cost. It has 6 DIGIT LCD DISPLAY 15mm high .Programming ,calibration can be done from front panel keypad interface in field due to intrinsic safe design.

FEATURES:

- FLAMEPROOF & WEATHERPROOF ENCLOSURE.
- DIGITAL HART OUTPUT
- INTRINSICALLY SAFE ENCLOSURE.
- COMPACT & RUGGED DESIGN
- SIMPLE PIPE MOUNTED VERSION
- SUITABLE FOR ZONE 1 & ZONE 2 AREAS



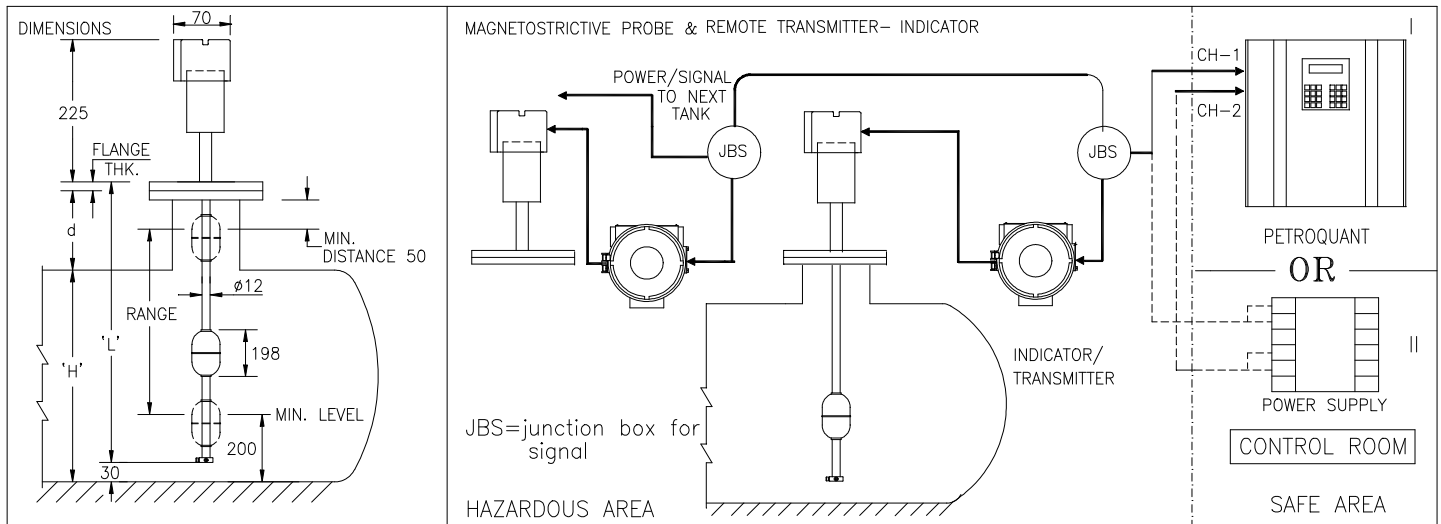
Ordering Example for Probe:

134-T M 1 0 C 2 C 7 86 8 L=1000 mm Magnetostrictive type probe ,1mm accuracy without temperature ,open collector output ,for pressure of 16 kg/cm2 with cylindrical float of titanium ,process connection 4" ANSI 300# integral flange of ASTM-A-350-LF2,probe length 1000mm.

Ordering Example for Indicator-Transmitter:

134- H 1 0 H 0 N 0 0 0 0 ,INDICATOR –TRANSMITTER remotely mounted type having 1 mm accuracy without temperature measurement with HART® output.

GENERAL ARRANGEMENT



***Continuous developments may necessitate various changes

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