

Tank Inventory Management Systems

Two Wire Transmitter & Limit Switch Assembly, 133 TS

This accessory for Automatic Tank Level Gauge - 133, provides 4-20 mA current output proportional to level with / without built-in adjustable limit switch contacts (2 or 4 contacts). It provides substantial cost saving as it houses both - the 4-20 mA transmitter and limit switch - in a single enclosure. This unit offers superior features of two wire transmitter. The maximum span of 24 meters is divided into four ranges. For each range the performance is optimized by using a different gear train. The 4-20 mA output can be used as input to a DCS or a remote indicator in control room to display level. The gear train also drives a set of cams to operte the limit switches. A maximum of 4 limit switches are available.

The transmitter output and alarms can be adjusted without physically changing the level in the tank by decoupling the level reading counter from the main shaft.

This accessory is certified as Intrinsically safe associated apparatus - Ex ia IIA IIB T6 vide CMRI report no.: CMRI/TC/H667 dated 07/05/97. Use of a suitable Safety Barrier and Isolator is necessary for Intrinsic Safety.

SPECIFICATIONS

ENCLOSURE

Flame Proof as per IS:2148-1981 suitable for Gr IIA & IIB area. Certificate No.: CMRI/TC/H554 dtd 19/12/96 issued by CMRI, Dhanbad. Weather Proof conforming to IP-65 as per IS:2147-1962. Cable entries - 4 nos. Standard - 1/2" NPT (F). TWO WIRE TRANSMITTER Range 8000 / 12000 / 16000 / 24000 mm.

	Output
	4 to 20 mADC.
	Input sensor
	3 wire, precision, multi turn wire wound
	potentiometer.

Source voltage (V_{source}) (from external source) Max. 36 VDC. Min. $\{12 + (0.02 \times Loop \text{ resistance in } \Omega)\}\ VDC.$



25 % of the range. Accuracy (Includes errors due to nonlinearity and Hysteresis.) ± 0.75 % for measuring range below 6000 mm. ± 0.50 % for measuring range above 6000 mm. **Terminals** Suitable for conductor size upto 2.5 mm².

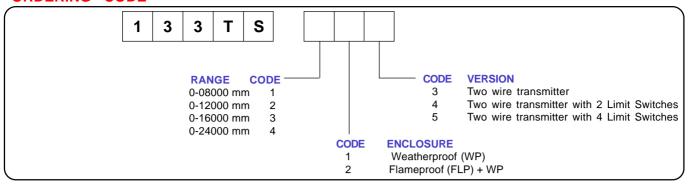
LIMIT SWITCH

Range (Factory set).
8000 / 12000 / 16000 / 24000 mm.
Number of switches
2 or 4
Range of adjustment
0-50% for LO & LO-LO
50-100% for HI & HI-HI
Repeatability
± 20 mm

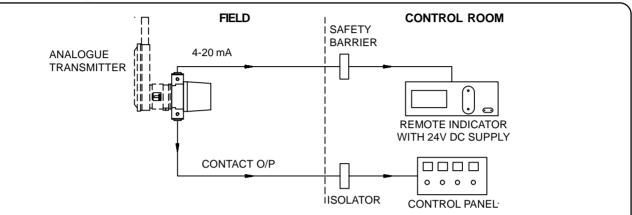
- Hysteresis (For 8000/12000/16000/24000 mm ranges - 40 / 55 / 70 / 100 mm respectively. Contact type and rating
- Microswitch, 5A @ 230 VAC or 2A @ 24 VDC (Resistive).
- Contact configuration 1 c/o (NO, NC, POLE) per limit switch.

The minimum distance between two setpoints should be (Hysteresis + 50) mm.

ORDERING CODE

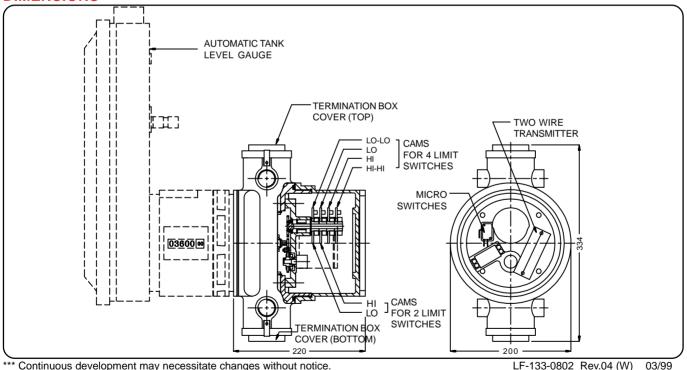


GENERAL ARRANGEMENT



NOTE: Use of a suitable safety barrier (e.g. MTL787S+, MTL788R+, Baliga Stahl 9001/51-280-091-14, 9001/51-280-110-14, OSNA Z-129/Ex, Z-428/Ex or equivalent) & isolator is necessary for intrinsic safety.

DIMENSIONS



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