



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 operate 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. $\{12 + (0.02 \times \text{Loop resistance in } \Omega)\}$ VDC.



- ❑ Minimum span
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

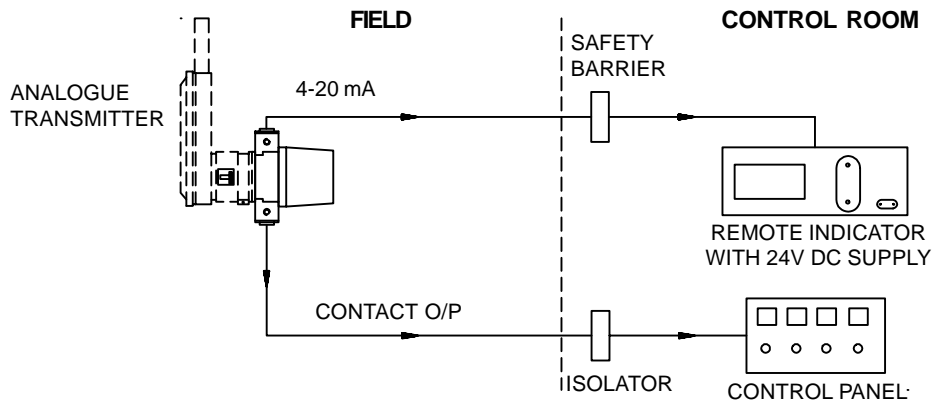
1 3 3 T S

RANGE CODE
 0-08000 mm 1
 0-12000 mm 2
 0-16000 mm 3
 0-24000 mm 4

CODE VERSION
 3 Two wire transmitter
 4 Two wire transmitter with 2 Limit Switches
 5 Two wire transmitter with 4 Limit Switches

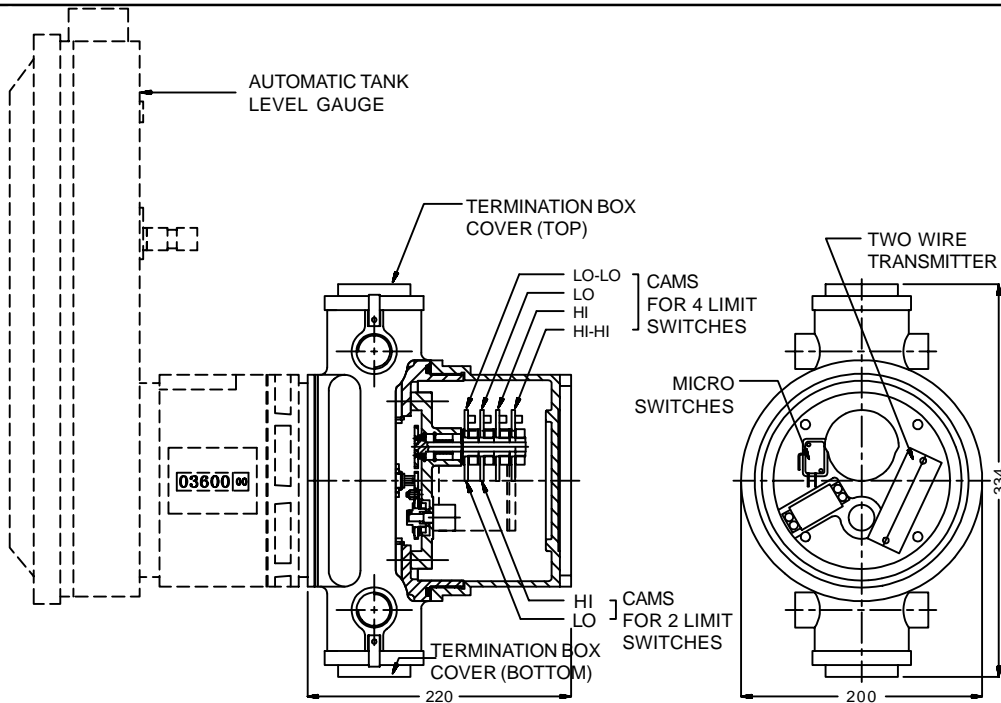
CODE ENCLOSURE
 1 Weatherproof (WP)
 2 Flameproof (FLP) + WP

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



*** Continuous development may necessitate changes without notice.

LF-133-0802 Rev.04 (W) 03/99

SBEM Pvt. Ltd.

39, Electronic Co-Operative Estate, Pune-Satara Road, Pune - 411 009 (INDIA)

Tel. : 91-20-4220505, 4223375 Fax - 91-20-4215670

Email : sales@sbem.co.in sbemsales@vsnl.com Web: www.sbem-india.com

Works : Bibwewadi Industrial Estate, 691/A/2, Pune-Satara Road, Pune-411 037(India) Email : mfg@sbem.co.in

Office : MUMBAI

CHENNAI

NEW DELHI

VADODARA

Tele. : 91-22-2782 3601, 2782 3603

91-44-2445 1235, 2441 2947

91-11-2656 0647, 2696 9679

91-265-233 5196, 235 8184

Fax : 91-22-2782 3603

91-44-2441 2947

91-11-2696 9679

91-265-233 0906

Email : mumbai@sbem.co.in

chennai@sbem.co.in

newdelhi@sbem.co.in

vadodara@sbem.co.in

