

## OIL LEVEL INDICATOR

**MODEL: SO-100-ST-R3**

### 1.0 APPLICATION :

This indicator is suitable for oil filled distribution transformers & oil filled tanks.

### 2.0 SCOPE:

Indicator continuously reads level inside the conservator and operates a microswitch when oil level drops near Min. level mark.

### 3.0 CONSTRUCTION & WORKING :

The indicator has aluminium body with built in flange for mounting. To avoid leakage of oil and to avoid entry of contaminated air into tank, a pair of permanent magnets is used separated by a metallic wall (See Schematic). A float is used as sensor & is connected to driving magnet immersed in oil. The driven magnet is positioned outside in body which carries a pointer and a cam. The pointer is set to read the oil level and the cam is set to operate the switch near Min. level. Switch resets automatically when level of oil is brought to normal. Contacts of switch are brought outside in terminal box with threaded hole for fixing cable gland. The body of indicator with dial and switch is sealed to avoid entry of moist air. Hence switch is not accessible for resetting or servicing. The length of Float - Arm can be adjusted by Allen Screw (Item 3, Fig.3).

### 4.0 SPECIFICATIONS :

#### Liquid in tank :

Transformer oil & other oils.

#### Working :

Temperature : -30° to 100° Cent. of oil.

Pressure : 0 to 1 Kg/Cm<sup>2</sup>

Environment : Indoor or outdoor.

#### Mounting :

To mount the indicator, buyer is required to provide a pad as per Fig. 4. The position can be selected on vertical wall of conservator / tank depending on importance of oil level readings and switching near Min. level.

#### Calibration :

Dial Size : 100 mm round (nominal)

Unit : Any calibration as per Customer's requirement is possible.

Colour : Black marking on white background or any other combination as required.

#### Float (sensor) and arm :

Material : Float-synthetic, Arm - S.S. Wire.

Travel : Max 70 degrees below & above centre.

Distance : Max 185 mm below and above center.

Length : The length of float arm is adjustable. Max 200 mm.

#### Margin :

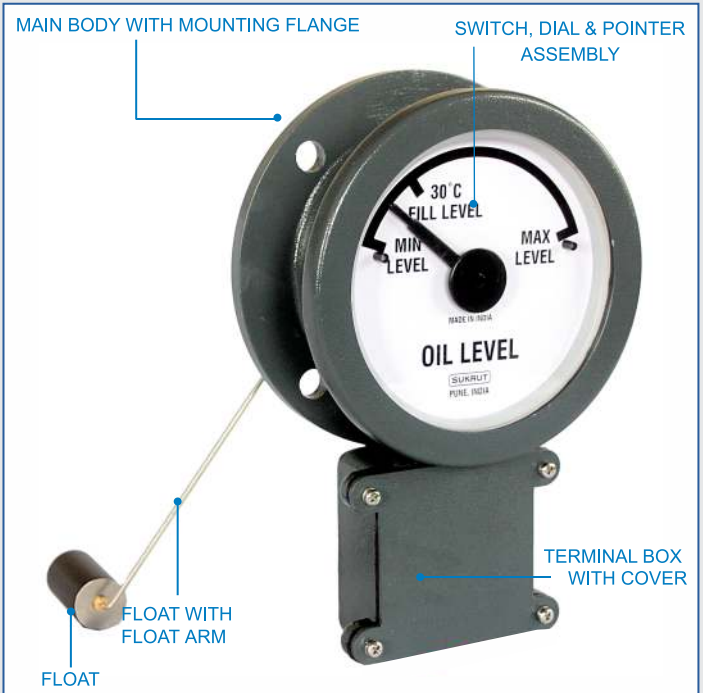
Leave Min. 40 mm beyond lower & higher limit markings to avoid striking of float to bottom & top of conservator. (See Fig.2)

#### Switch :

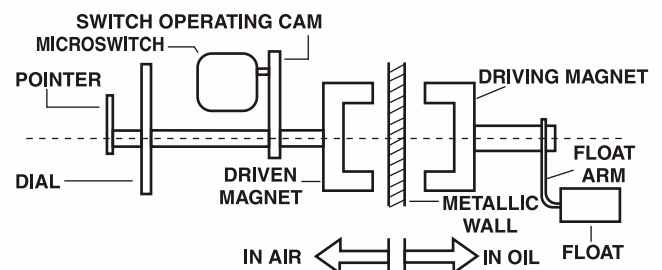
Type : Microswitch

Contact Rating : See wiring diagram. (Fig. 5)

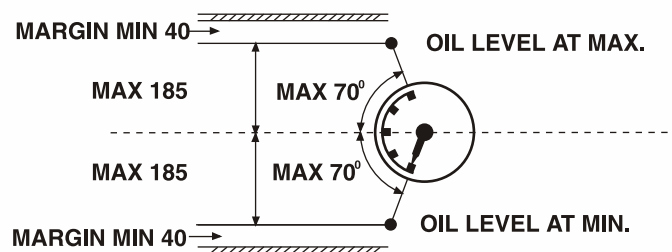
Operation : See wiring diagram (Fig. 5)



**FIG. 1 SCHEMATIC**



**FIG. 2 FLOAT LEVEL**



### 5.0 ROUTINE TESTS

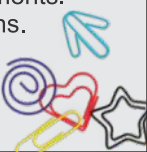
Each indicator is tested for

1. Specified levels.
2. Switch operation
3. HV Test
4. Leakage Test.

A combined test certificate is issued for each batch.

### 6.0 HOW TO ORDER :

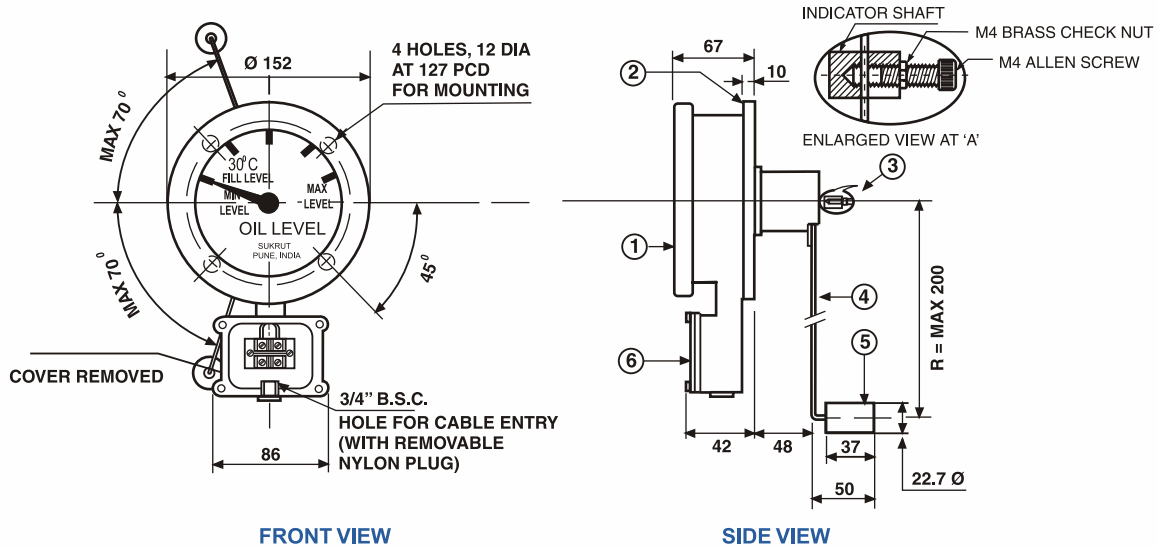
We provide a Questionnaire for specifying your requirements. However, a drawing is acceptable giving all specifications.



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FIG 3.



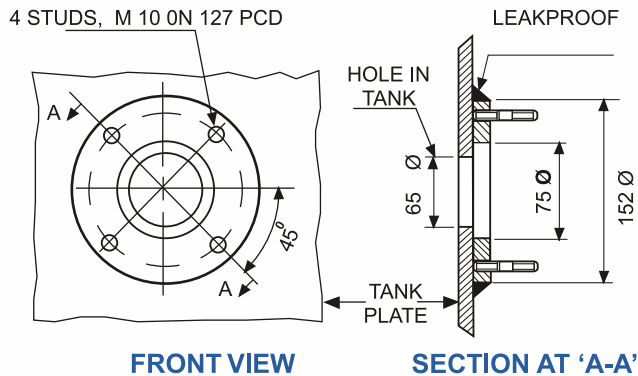
## PART LIST

SR NO.	DESCRIPTION	MATERIAL
1.	Crystal	Glass
2.	Main Body with mounting Holes	Cast Al
3.	Allen Screw for adjusting length of Float Arm	M-4

SR NO.	DESCRIPTION	MATERIAL
4.	Float Arm(Assembled with Float)	S.S. 2 dia
5.	Float 22.7 dia	Synthetic
6.	Terminal Box with Gasket & Cover	Cast Al. & Neoprene

FIG. 4

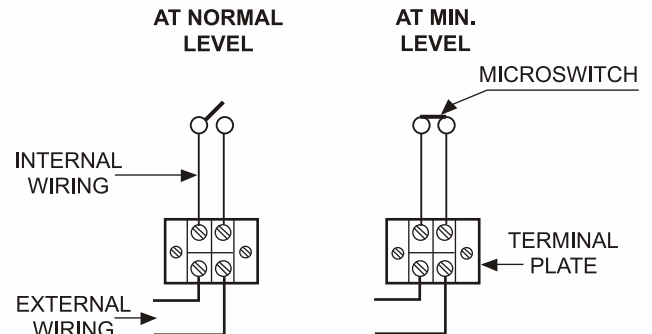
## MOUNTING PAD



MOUNTING PAD & GASKET NOT SUPPLIED BY SUKRUT

FIG. 5

## SWITCH CONTACT POSITION



CONTACT RATING 5A 240V AC, 0.25A 240 V DC

SWITCH RESETS AUTOMATICALLY WHEN OIL LEVEL IS BROUGHT TO NORMAL

## GENERAL NOTES :

- Indicators of different specifications are not interchangeable. Hence care should be taken while storing Indicators and their Float with Arms. This indicator can be used for vertical or inclined mounting as per order.
- Float & Indicator, loose or assembled, should be handled carefully as they cannot be repaired if damaged.
- The complaint of damage or demand for spares should be very specific with respect to Sr. No. of indicator. Lot of correspondence and time can be saved just by informing Sr. No. of concerned Indicator.



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