

## OIL LEVEL INDICATOR

**MODEL : SO-4-M**

### 1.0 APPLICATION :

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

### 2.0 SCOPE :

Indicator continuously reads level inside the conservator and operates a micro switch when oil level drops near 'Empty' level mark.

### 3.0 CONSTRUCTION & WORKING :

The indicator has aluminum 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. A float is used as sensor & is connected to driving magnet through a bevel gear. The driven magnet is positioned outside in air in main 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 empty level (See Schematic). 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.

### 4.0 SPECIFICATIONS :

#### Liquid in tank :

Transformer oil & other oils.

#### Working :

Temperature : -10° to +115°C of oil.  
 Pressure : Upto 1 kg/cm<sup>2</sup>  
 Environment : Indoor & outdoor.  
 Ingress protection : IP-67.  
 Corrosion resistance : Available in C4-M & C5-M.

#### 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 empty 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.  
 Spread : Max 300° (See Photograph).

#### Float (sensor) and arm :

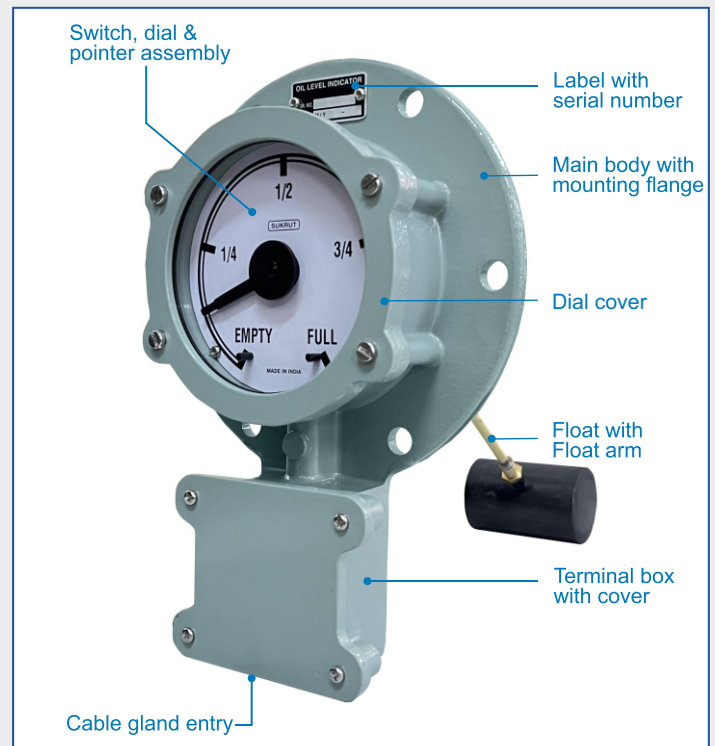
Float & float - arm are made of brass. Float - arm is supplied of fixed length or adjustable length type as per order.

#### Margin :

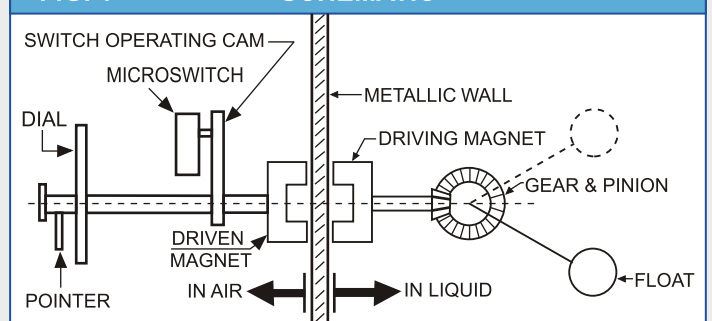
Leave Min. 65 mm beyond lower & higher limit markings to avoid striking of float to bottom & top of conservator. (See Fig.2)

#### Switch :

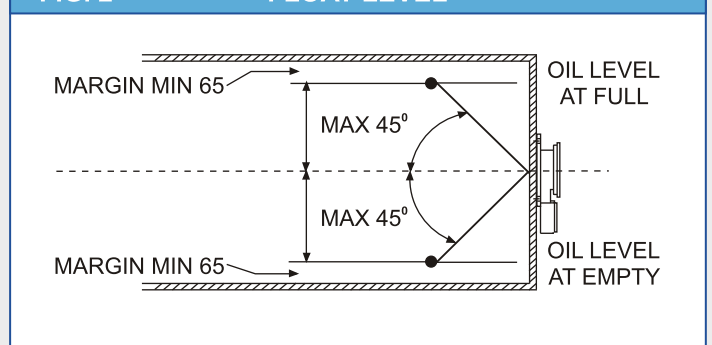
Type : Micro Switch  
 Contact Rating : See wiring diagram (Fig. 5)  
 Operation : See wiring diagram (Fig. 5)



**FIG. 1 SCHEMATIC**



**FIG. 2 FLOAT LEVEL**



### 5.0 ROUTINE TESTS :

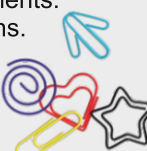
Each indicator is tested for

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 :

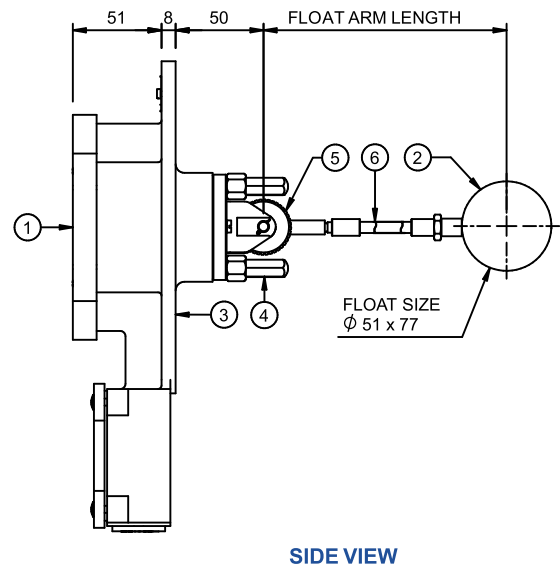
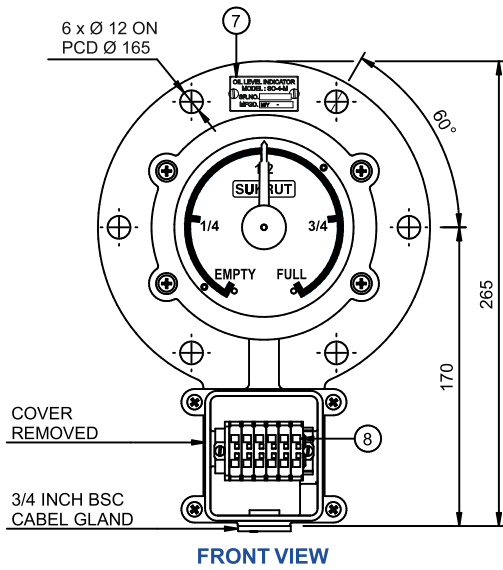
We provide a questionnaire for specifying your requirements. However, a drawing is acceptable giving all specifications.



# OIL LEVEL INDICATOR MODEL : SO-4-M

FIG 3.

OIL LEVEL INDICATOR : SO-4-M



FRONT VIEW

SIDE VIEW

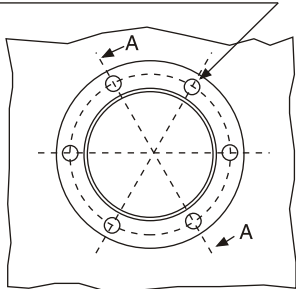
## PART LIST

SR NO.	DESCRIPTION	MATERIAL	QTY	SR NO.	DESCRIPTION	MATERIAL	QTY
1.	Lens	Polycarbonate	1	5.	Level with Gear	Brass	1
2.	Float	Brass	1	6.	Float Arm	Brass	1
3.	Main Body	Cast Al	1	7.	Label with Serial No.	Brass	1
4.	Limit Stoppers	Al. Rod	2	8.	Terminals	Brass	-

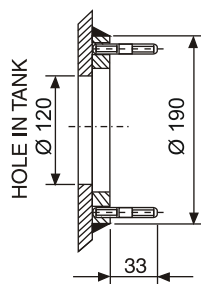
FIG. 4.

MOUNTING PAD

6 STUDS DIA 10 ON 165 PCD



TOP VIEW

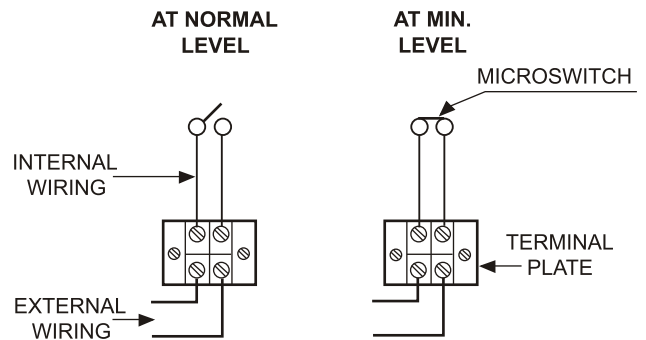


SECTION AT A-A

MOUNTING PAD & GASKET NOT SUPPLIED BY SUKRUT

FIG. 5.

SWITCH CONTACT POSITION



CONTACT RATING 5A 240V AC, 0.5A 240 V DC

SWITCH RESETS AUTOMATICALLY WHEN OIL LEVEL IS BROUGHT TO NORMAL

## GENERAL NOTES :

1. 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.
2. Float & Indicator, loose or assembled, should be handled carefully as they cannot be repaired if damaged.
3. 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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