

# MAGNETIC OIL LEVEL GAUGE

Dial Size : 4" (100 mm), 6" (150 mm) and 10" (250 mm)

Contacts : Single or Multiple • Conservator Type : Conventional or Aircel

Float movement : Radial or Axial • Available With 4-20mA Output

India Relevant Models Only



**VIAT**

**INSTRUMENTS**

AT01R2

**ATVUS®**

## CONSTRUCTION & WORKING

The 'ATVUS' Magnetic Oil Level Gauge consists of the main body with following sub-assembly / parts :

1. Gear assembly
2. Magnetic couple
3. Float with arm
4. Cam assembly with micro switch
5. Dial with pointer

The schematic diagram of the full assembly is shown below.

The float is hinged and swings up or down when oil level rises or falls. This rise or fall rotates the bevel gear and thus the pinion of the gear assembly. The pinion in turn rotates the driving magnet inside the conservator. The follower magnet positioned outside carries a pointer and a cam. The pointer reads oil level and the cam is set to operate the micro switch at a predetermined low level.

### AT A GLANCE

Operating Liquids	Transformer oil to IS 335. Other liquids on request.
Working Pressure	0 to 4 Kg/Sq. Cm.
Environment	Suitable for indoor & outdoor use.
Electric Switch	Micro Switch SPST
Contact Rating	As per drawing.
Switch Operation	Low Level (LOLA)/ Low and Very Low Level (LOLA & VLOLA) / Low and High Level (LOLA & HOLLA)
IP Protection	IP 67 / IPX7
Dial Size	100, 150, & 250 mm.
Dial Marking	Std: Black on white marking. Customized options possible

## MOUNTING

A suitable pad has to be provided to mount the indicator. The mounting can be done vertically or at an inclination to facilitate easy viewing.

The indicators are normally mounted at the center of one end of the conservator or at the bottom. The different mounting positions are illustrated with individual models.

## SWITCH

The indicator oil level gauge is factory calibrated to operate the switch at low / very low / high levels in any combination as required by customer.

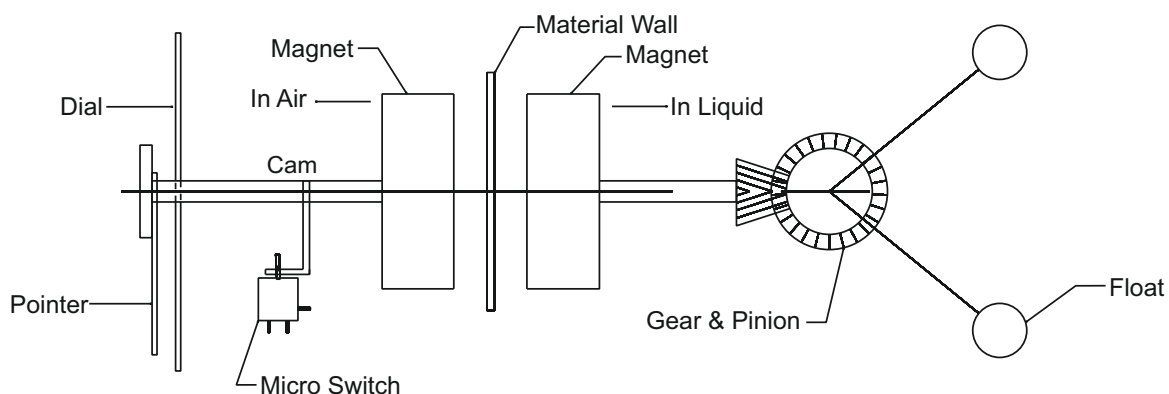
The 'ATVUS' Indicator Oil level gauges can be used for varied purposes. In a transformer they are mounted on the conservator to read oil level in hermetically sealed transformers. They are also mounted on side wall tank with radial float movement.

## CALIBRATION

The dial is calibrated as per customers specification. Hence a drawing showing heights of oil levels inside the conservator at corresponding marking on dial should be made available.

We also provide a questionnaire for specifying your requirement.

Alternately calibration can be provided to ATVUS internal specification.



**SCHEMATIC (REPRESENTATIONAL ONLY)**

# CONVENTIONAL CONSERVATOR SO4 (100mm) AND SO6 (150mm)

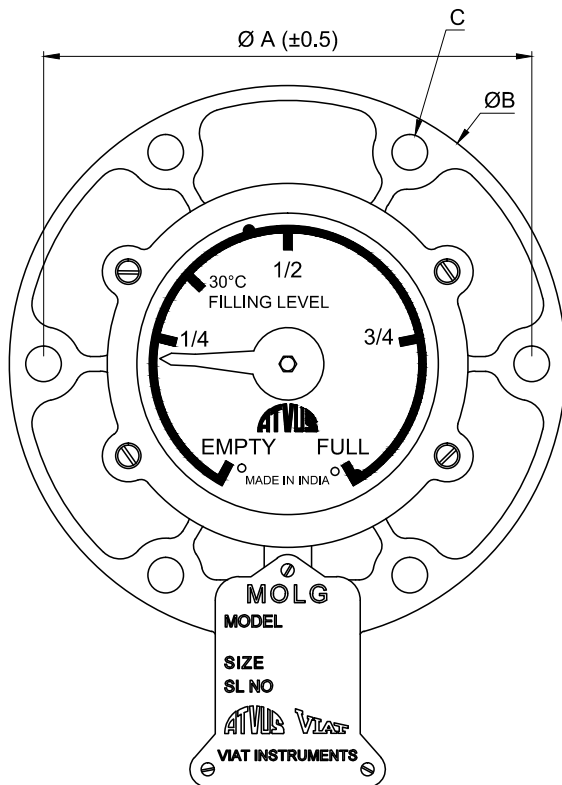
## FEATURES

- All aluminium and brass body and components
- Use of rare earth magnets for perfect coupling
- Every unit tested for porosity test
- Solid Nitrophyl float for lifetime trouble free performance.
- Low level alarm contact standard.
- Vertical or inclined mounting.

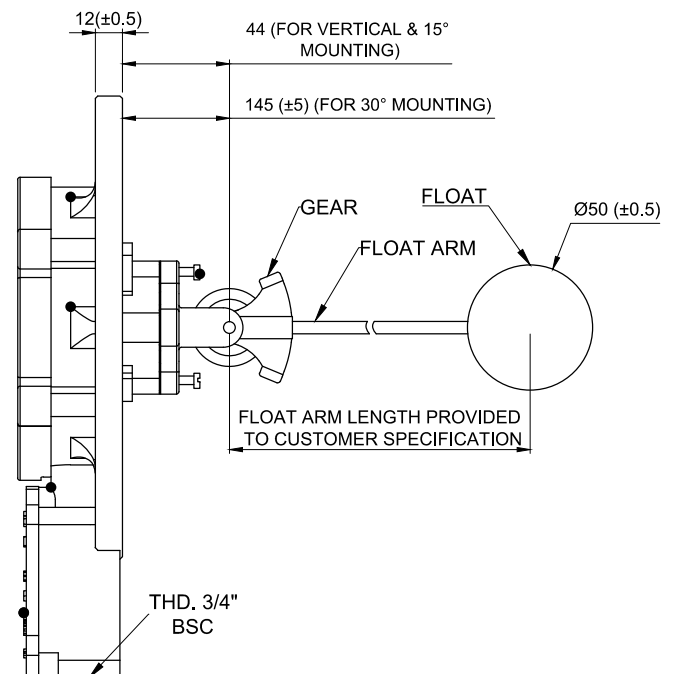
## VARIETY AVAILABLE

Dial: Standard or Customised  
 Switch : Low Level Alarm (LOLA)  
 Low & High Level Contacts (LOLA+HOLA)  
 Low & Very Low Level Contacts (LOLA+VLOLA)  
 Mounting : Vertical, 15° or 30°  
 Switch Wiring : Single Switch : 1 NO or 1 NC available  
 Double Switch : Both switches NO, both switches NC or any combination thereof  
 4-20 mA output : Integrated type and separate CCU type available

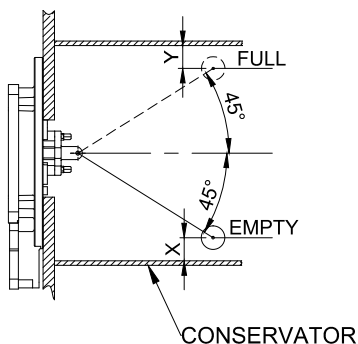
FRONT VIEW



SIDE VIEW



FLOAT MOMENT FOR CONVENTIONAL MOLG



INCLINED MOUNTING  
ALSO AVAILABLE

MODEL	A	B	C
SO4	Ø165	Ø190	6 Nos HOLE Ø12
SO6	Ø209.7	Ø235	8 Nos HOLE Ø12

# AIRCEL CONSERVATOR S04 (100mm) AND S06 (150mm)

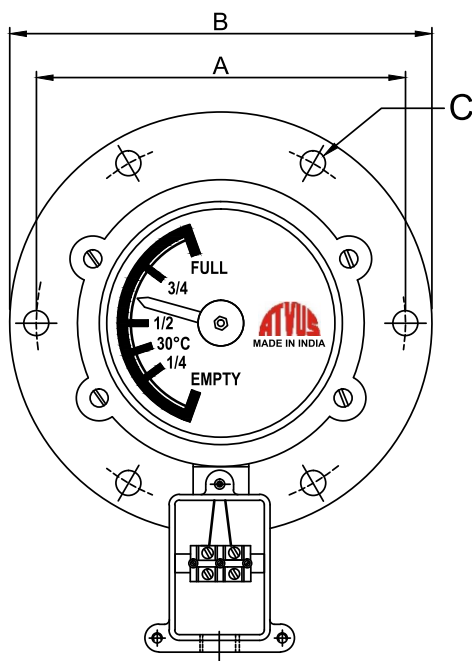
## FEATURES

- Inhouse facility of conservator with air cell to check performance with rising and falling oil level
- Interchangeable with other makes.
- Individually calibrated and tested.
- Float arm length with solid float train assembly, in line with international specification.

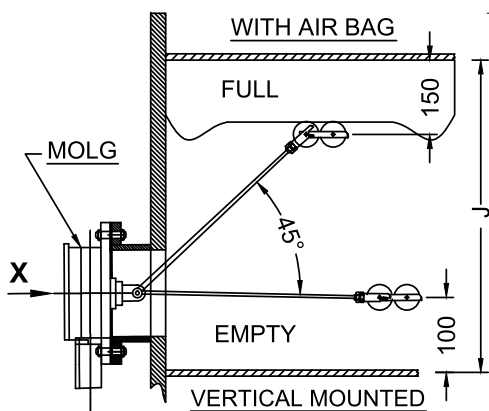
## VARIETY AVAILABLE

Dial : Standard or Customised  
 Switch : Low Level Alarm (LOLA)  
 Low & High Level Contacts (LOLA+HOLA)  
 Low & Very Low Level Contacts (LOLA+VLOLA)  
 Mounting : Vertical, 15° or 30°  
 Switch Wiring : Single Switch : 1 NO or 1 NC available  
 Double Switch : Both switches NO, both switches NC or any combination thereof  
 4-20 mA output : Integrated type and separate CCU type available

FRONT VIEW



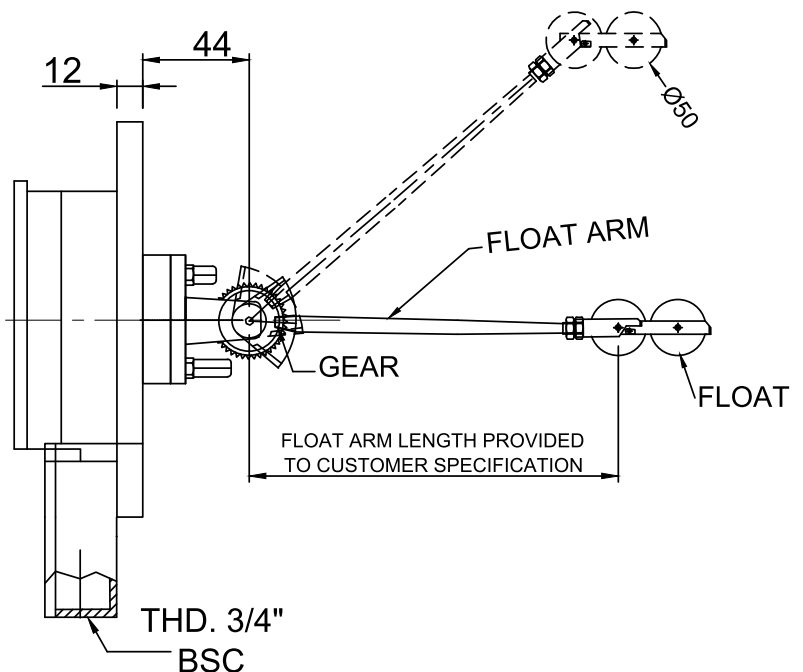
FLOAT MOMENT FOR ATMS MOLG



INCLINED MOUNTING ALSO AVAILABLE



SIDE VIEW



MODEL	A	B	C
SO4	Ø165	Ø190	6 Nos HOLE Ø12
SO6	Ø209.7	Ø235	8 Nos HOLE Ø12

## S04 WITHOUT SWITCH, 100mm DIAL

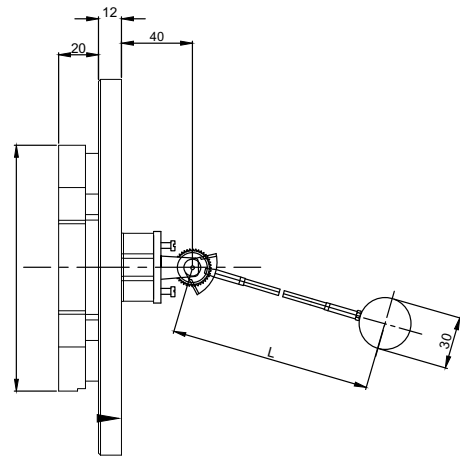
### FEATURES

- Radial or axial dial movement
- Genuine 100 mm dial with economical design
- Magnetic coupling allows no possibility of oil leakage

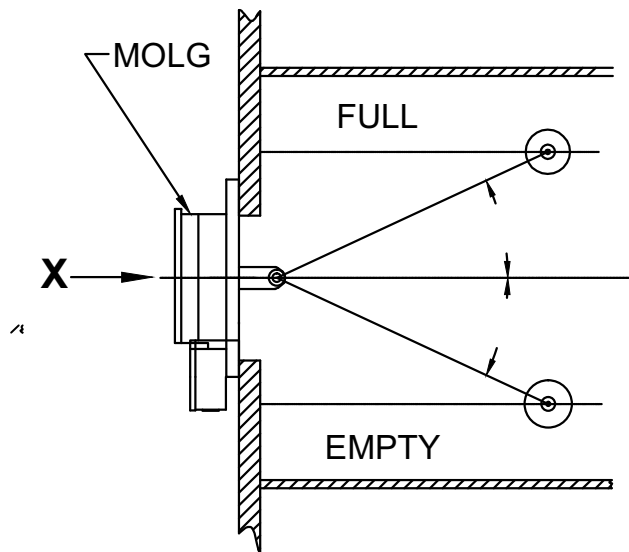
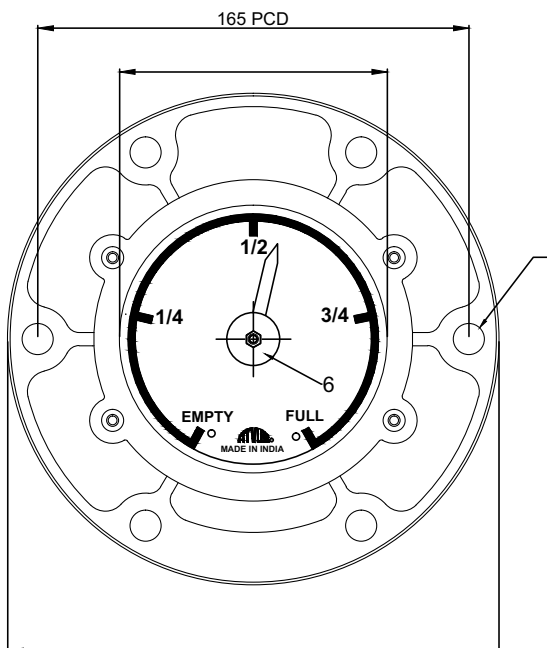
### VARIETY AVAILABLE

Customized dials available

Radial type available in switched models also



L = ADJUSTABLE OR FIXED FLOAT ARM LENGTH.  
PROVIDED TO CUSTOMER SPECIFICATION



# CONVENTIONAL CONSERVATOR S010 (250mm)

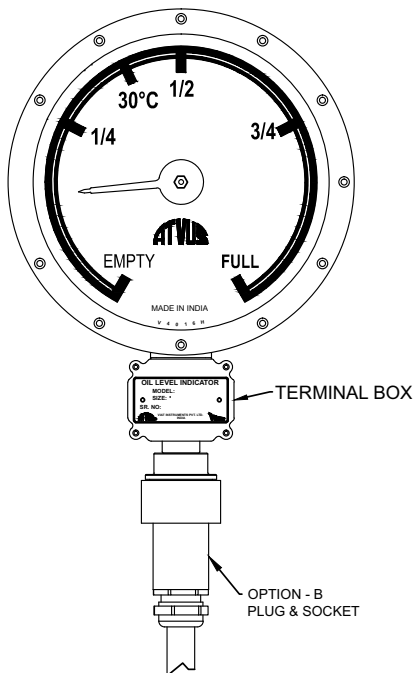
## FEATURES

- Single piece aluminium housing.
- Front view toughened glass replaceable.
- Use of rare earth magnets for perfect coupling.
- Solid Nirtophyl float assembly
- Very simple and robust internal design

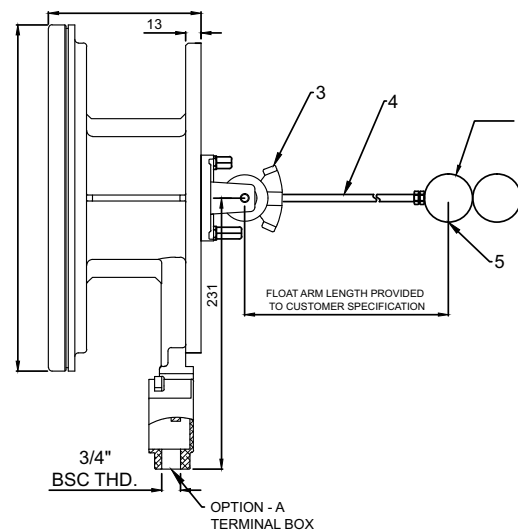
## VARIETY AVAILABLE

- Dial : Standard or Customised
- Switch : Low Level Alarm (LOLA)  
Low & High Level Contacts (LOLA+HOLA)  
Low & Very Low Level Contacts (LOLA+VLOLA)
- Mounting : Vertical, 15° or 30°
- Switch Wiring : Single Switch : 1NO or 1NC available  
Double Switch : Both switches NO, both switches NC or any combination thereof

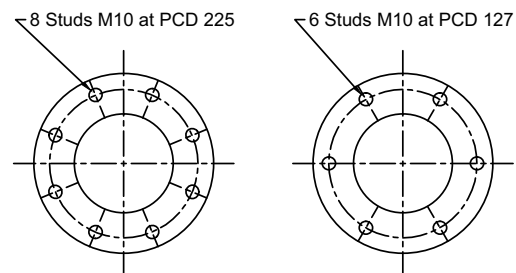
FRONT VIEW



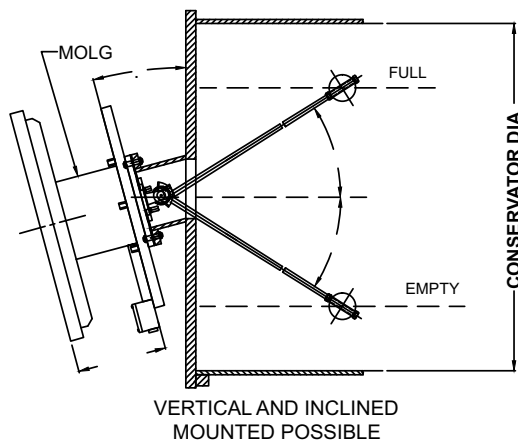
SIDE VIEW



DETAIL OF MOUNTING



FLOAT MOVEMENT CROSS SECTION



MOUNTING DETAIL  
V - VERTICAL

CONNECTION TYPES  
T-TERMINAL BOX  
2C - ALARM SWT ONLY PLUG AND SOCKET CONNECTOR  
5C - ALARM AND TRIP SWT ONLY PLUG AND SOCKET CONNECTOR

SO10 NORMAL X X 225 X

MOUNTING PCD  
225 :- 8Nos HOLE 225 PCD  
127 :- 6Nos HOLE 127 PCD

SWITCH CONNECTION  
L - (LOLA :- LOW OIL LEVEL ALARM)  
LL - (LOLA VLOLA :- LOW OIL LEVEL ALARM & VERY LOW OIL LEVEL ALARM)  
LH - (LOLA HOLA :- LOW OIL LEVEL ALARM & HIGH OIL LEVEL ALARM)



# AIRCEL TYPE CONSERVATOR S010 (250mm)

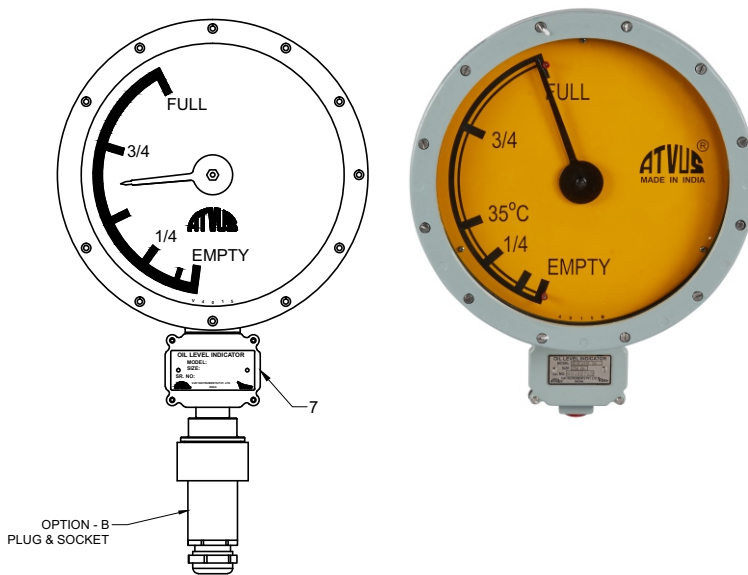
## FEATURES

- Single piece aluminium housing.
- Front view toughened glass replaceable.
- Use of rare earth magnets for perfect coupling.
- Solid float train assembly.
- Very simple and robust internal design.
- In house facility of conservator with air cell to check calibration.

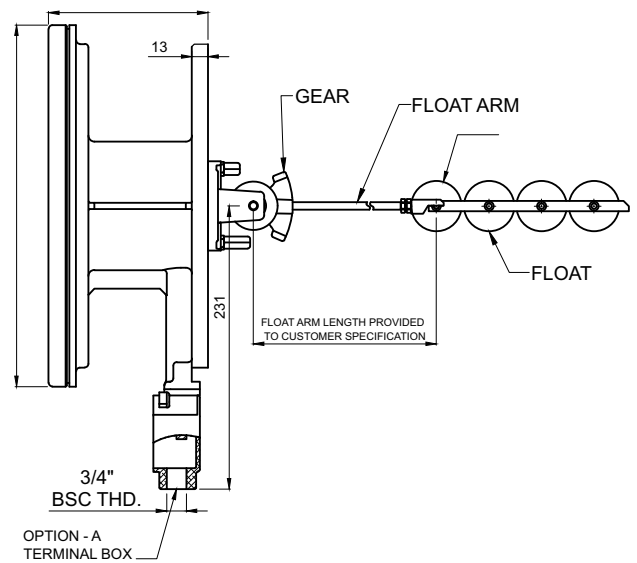
## VARIETY AVAILABLE

- Dial : Standard or Customised
- Switch : Low Level Alarm (LOLA)  
Low & High Level Contacts (LOLA+HOLA)  
Low & Very Low Level Contacts (LOLA+VLOLA)
- Mounting : Vertical, 15° or 30°
- Switch Wiring : Single Switch : 1NO or 1NC available  
Double Switch : Both switches NO, both switches NC or any combination thereof

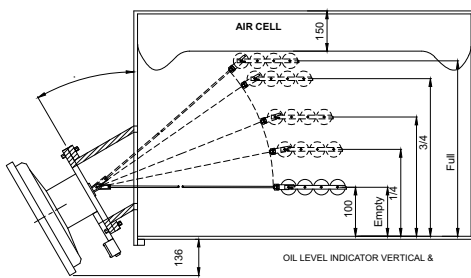
## FRONT VIEW



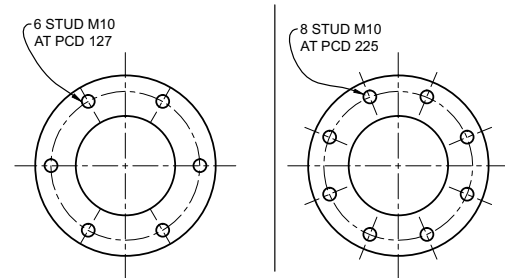
## SIDE VIEW



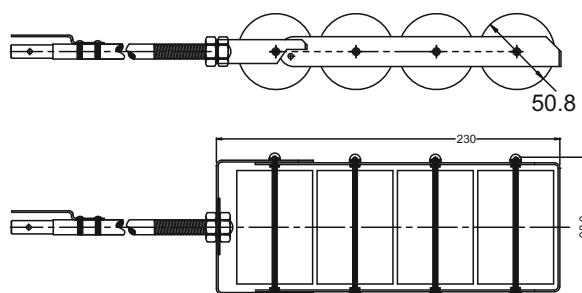
## FLOAT MOVEMENT CROSS SECTION



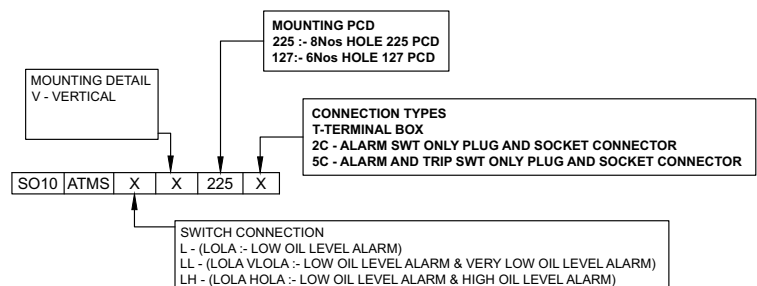
## DETAIL OF MOUNTING



## SOLID FLOAT TRAIN ASSEMBLY



## VARIETY AND CODING



# MOLG WITH 4-20mA OUTPUT : SEPARATE CCU TYPE

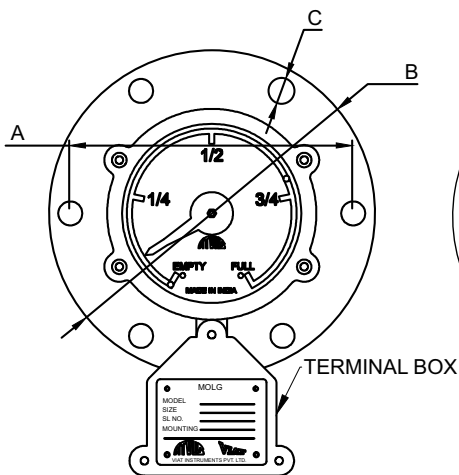
## FEATURES

- MOLG with 100/150mm dial 4-20mA output(s)
- Physical pointer and dial and regular electrical contacts are present on MOLG, besides addition of 4-20mA output.
- Separate CCU type: Electronic circuit is in separate CCU that is connected to MOLG and to be placed in the marshalling box. Power input and 4-20mA output from CCU.
- Each piece calibrated individually
- Remote display available

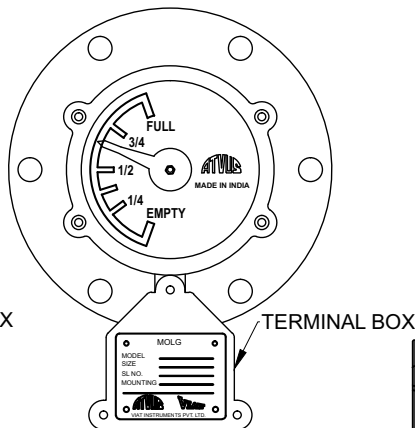
## VARIETY AVAILABLE

- Dial : Standard or Customised  
 Conservator: Conventional or Aircel  
 Switch : Low Level Alarm (LOLA)  
 Low & Very Low Level Contacts (LOLA+VLOLA)  
 Mounting : Vertical, 15°  
 Switch Wiring : Single Switch : 1 NO or 1 NC available  
 Double Switch : Both switches NO, both switches NC or any combination thereof

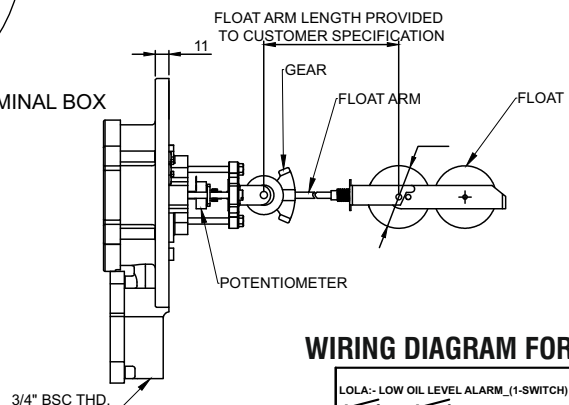
FRONT VIEW  
CONVENTIONAL



FRONT VIEW  
ATMS

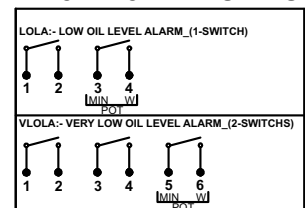


SIDE VIEW

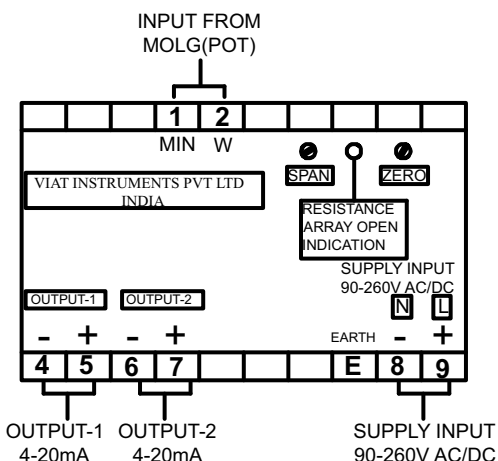


MODEL	A	B	C
SO4	Ø165	Ø190	6 Nos HOLE Ø12
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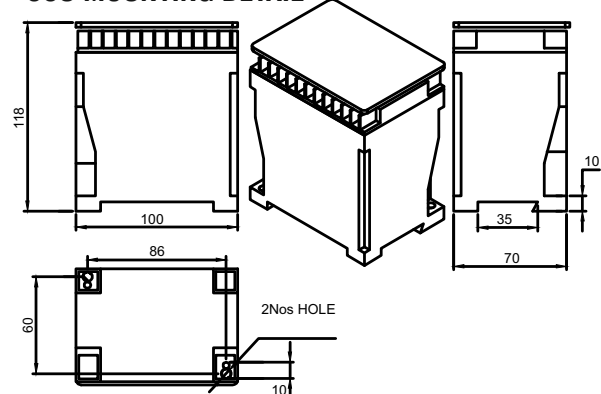
WIRING DIAGRAM FOR MOLG



## CURRENT CONVERTER MARKING



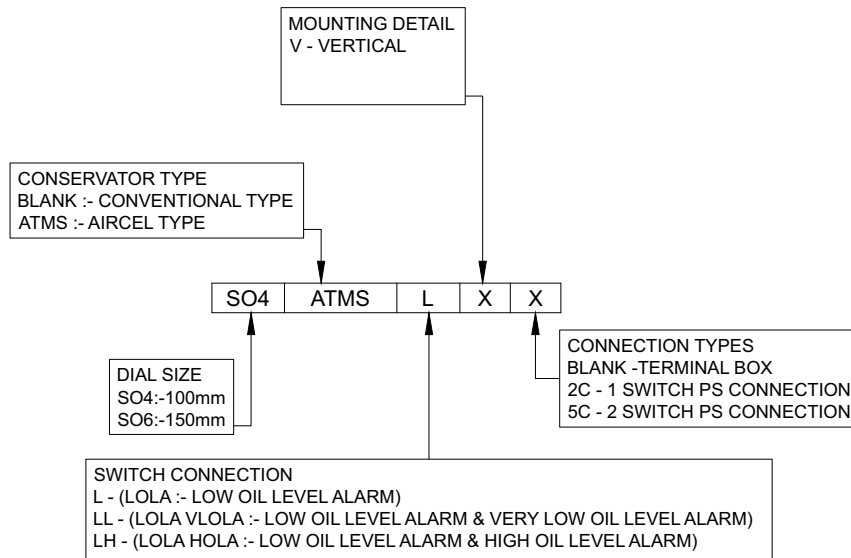
## CCU MOUNTING DETAIL



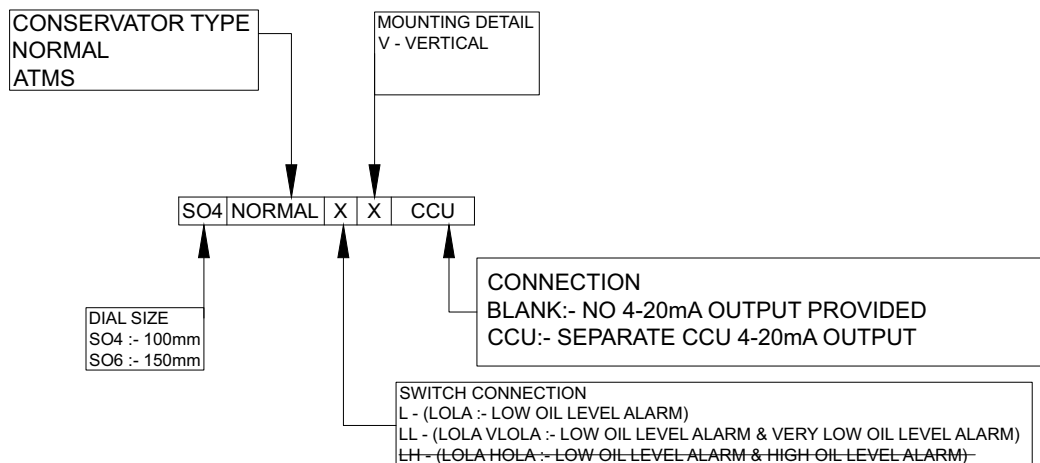


# VARIETY AND CODING FOR S04 AND S06

## S04 | S06 WITHOUT 4-20 MA OUTPUT



## S04 | S06 WITH 4-20 MA OUTPUT



### GENERAL NOTES

Indicators with different specifications are not interchangeable.

Calibration for dial in other units is possible.

The calibration and switch setting is factory adjusted and should not be tampered.

We continuously review specifications and where appropriate, introduce modifications.

We therefore, reserve the right to change specifications in this catalogue without prior notice.

### HOW TO ORDER

1. Mounting position of indicator.
2. Dial marking.
3. Conservator diameter.
4. Oil level inside conservator, corresponding to dial marking.
5. A separate Questionnaire is made available in which details of technical specifications required by us are given. Please ask for the same.

Due to our policy of continuous product improvement, dimensions and designs are subject to change.

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