

## PRESSURE RELIEF DEVICE

**MODEL : RT - 50 - SH (WITH PROTECTION SHROUD)**

### 1.0 FEATURES :

- Avoids disaster of injury to persons by providing Shroud.
- A strong structure of Aluminium for Shroud with louvers.
- Reliable operation of PRD.
- Weather proof terminal box & easy to connect terminals.
- Lightweight compact construction. Hence easy to handle.
- A Red colored large circular Cap is provided for indication of operation.

### 2.0 SCOPE:

When pressure in tank rises beyond predetermined safe limit, the PRD operates & performs following functions.

- 2.1 Reduces the pressure in the tank by instantaneously opening the port.
- 2.2 Initiates precautionary electrical system by operating Limit switch.

### 3.0 CONSTRUCTION & WORKING :

For mounting PRD, four holes of 18 dia on 125 PCD are provided on the base. For the operation, a port to suit 50 mm dia opening in tank is provided. The port is sealed by a spring loaded diaphragm. The diaphragm rests on a rubber ring, thereby keeping the port sealed during normal pressure in the tank. As soon as the pressure in the tank rises above predetermined safe limit, the diaphragm gets lifted from its seat thereby opening the port. The diaphragm seals the port again after the pressure in the tank reduces to safe limit. A switch is provided for initiating electrical safety system. The lifting of diaphragm from its seat is linked to the switch. Therefore the first lift of diaphragm operates the switch. To avoid repeated on - off of contacts, manual resetting type switch is used. So even if the diaphragm operates repeatedly, the switch remains operated until it is reset manually.

### 4.0 TESTS:

Each PRD is tested for following Routine Tests

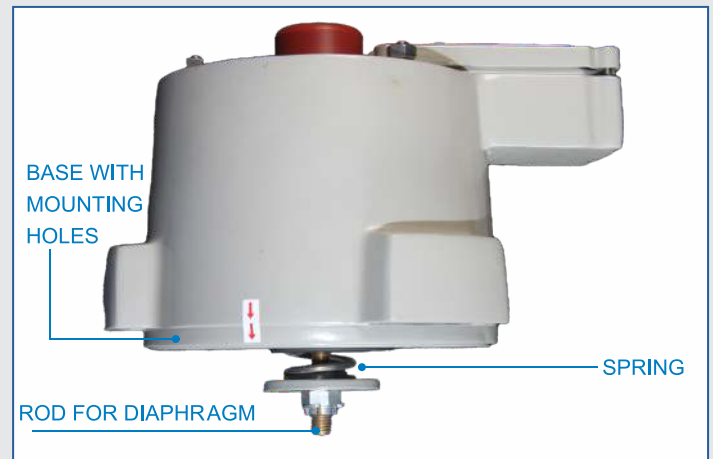
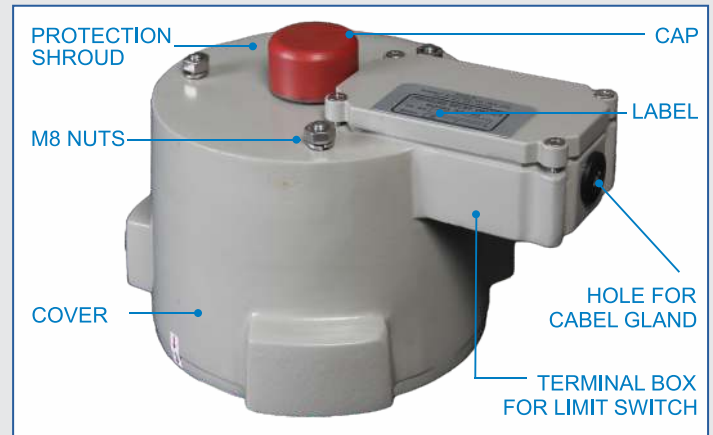
- 4.1 Operating Pressure test at specified value with compressed air.
- 4.2 Leakage test, at 75% value of specified operating pressure, with air at room temperature for 24 hours.
- 4.3 Switch operation test as per Wiring Diagram by operating PRD with compressed air.
- 4.4 Breakdown test at 2 kV for one minute between live terminals and body.

A Test Certificate is issued with each PRD. All above tests are included in the Test Certificate.

### 5.0 INSTALLATION:

**5.1 LOCATION FOR INSTALLATION** - For installation, user has to provide a leak proof Mounting Pad as per Fig. 2 of drawing at suitable place on top cover of the tank. The position should be selected in such a way that the indicating rod should be seen easily as it needs to be reset manually after the operation of PRD & at the same time wiring should be easy. Provide a leak proof Mounting Pad as per Fig.2 of drawing at suitable place on top cover of the tank. The position should be selected in such a way that the indicating Red Cap can be seen easily as it needs to be reset manually after the operation of PRD & at the same time wiring should be easy.

**5.2 PROCEDURE** - By removing 3 Nos M 8 Nuts, remove the Protection Shroud of PRD. Place the PRD in proper position with O Ring on Mounting Pad. Tighten 4 Nos M16 bolts with washers and Nuts to install the PRD. Always tighten opposite bolts carefully. Negligence in tightening the bolts may result in cracking of the Base of PRD thus making it unserviceable. Replace the Protection Shroud in proper position by tightening 3 nos. M8 nuts with washers. Now remove the Terminal Box Cover, and do the wiring / connections as per Fig. 3. Replace the Cover of Terminal Box. Check the operation of switch by manually lifting the cap. Reset the cap after checking the switch operation.



### 6.0 SPECIFICATIONS:

- |                          |   |
|--------------------------|---|
| 1. Liquid In Tank        | : Transformer Oil   |
| 2. Degree of Protection  | : IP-65   |
| 3. Operating Pressure    | : 0.28 to 0.84, kg/cm <sup>2</sup><br>(Order any one Value) |
| 4. Operating Tolerance   | : ±0.10 kg/cm <sup>2</sup>                                  |
| 5. Standard Limit Switch | : 1NO+1NC or 2NO + 2NC Contacts                             |
| 6. Operating Time        | : Instantaneous   |
| 7. Switch Resetting      | : Manual  |
| 8. Operating Temperature | : -10 to 100° C of Liquid in Tank                           |
| 9. Environment           | : Indoor to Outdoor   |
| 10. Port Opening         | : Suitable for 50mm dia Opening in Tank                     |

### 7.0 FAULTS AND REMEDIES :

Only the Limit Switch can be replaced if necessary. For all other faults, the PRD has to be returned to SECPL for repairs.

### 8.0 HOW TO ORDER :

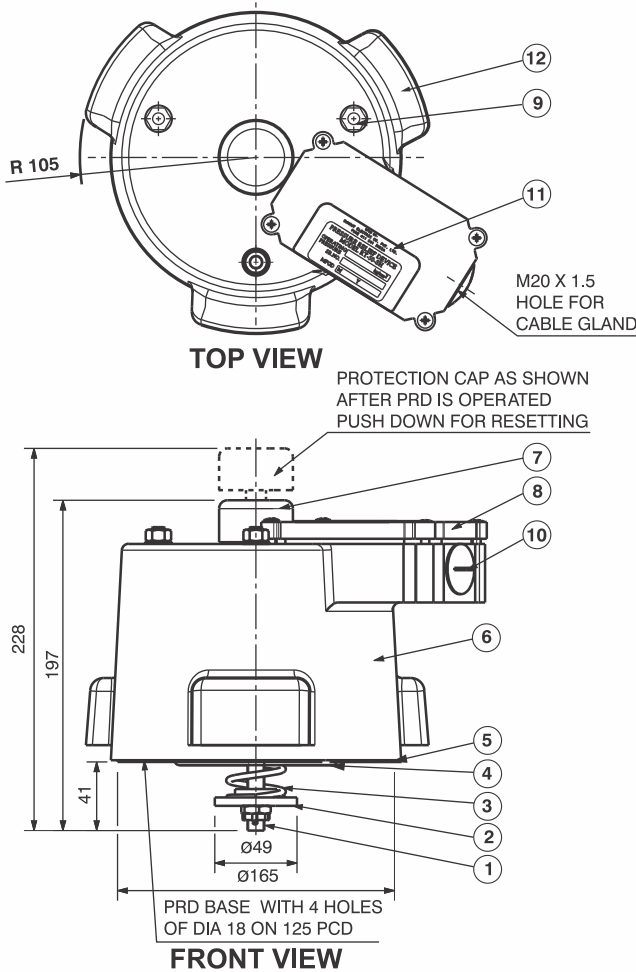
To make an offer, We need to know Model Number and Operating Pressure (any one value)



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## MODEL : RT - 50 - SH (WITH PROTECTION SHROUD)

**FIG 1. MODEL : RT - 50 - SH (WITH PROTECTION SHROUD)**



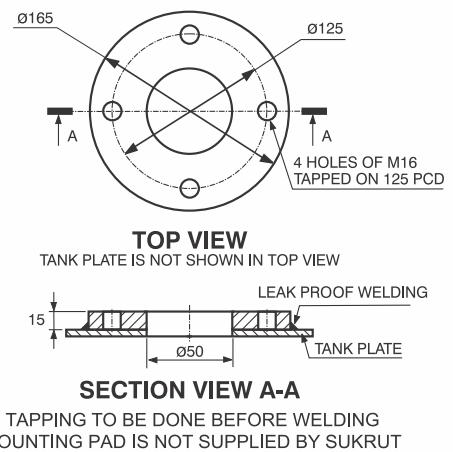
ALL DIMENSIONS IN MM  
CABLE GLAND IS NOT SUPPLIED BY SUKRUT  
EXCEPT MOUNTING DIMENSIONS, ALL DIMENSIONS ARE GIVEN FOR GUIDANCE, THEY WILL NOT BE PART OF INSPECTION SCHEDULE

**PART LIST FOR FIG. 1**

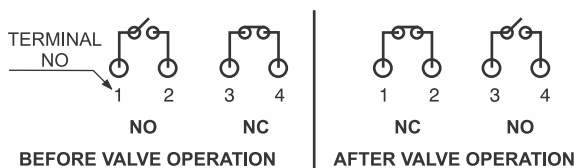
SR NO.	DESCRIPTION	MATERIAL	QTY
1.	ROD FOR DIAPHRAGM	BRASS	1
2.	SPRING BASE	CAST AL	1
3.	SPRING	S. S.	1
4.	BOTTOM O-RING	NBR	1
5.	BASE	CAST AL	1
6.	PROTECTION SHROUD	CAST AL	1
7.	PROTECTION CAP	PLASTIC	1
8.	TERMINAL BOX COVER	CAST AL	1
9.	NUT M8	S.S	3
10.	PLUG M20	PLASTIC	1
11.	LABEL - SR.NO. & MODEL PLATE	ALUMINUM	1
12.	VENT FOR OIL DRAIN	-	3

**FIG. 2**

### MOUNTING PAD



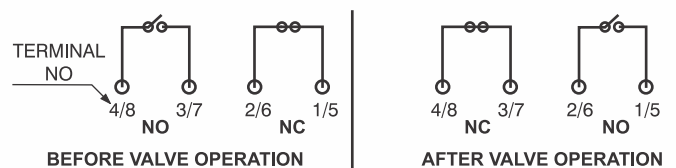
**FIG.3 STANDARD WIRING DIAGRAM FOR 1 NO + 1 NC CONTACT**



**NOTES :**

1. ALL CONTACTS OPERATE SIMULTANEOUSLY.
2. SWITCH RESETTNG IS TO BE DONE MANUALLY.
3. FOR ANY OTHER REQUIREMENT CONTACT US.

**FIG.4 STANDARD WIRING DIAGRAM FOR 2NO + 2NC CONTACT**



**CONTACT RATING**

- 240V, 5A - AC  
240V, 2.2A - DC

**GENERAL NOTES :**

1. Purchase Order should be placed with detailed specifications of PRO .
2. For any assistance, correspondence should be made with Sr. No. of PRO.



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