

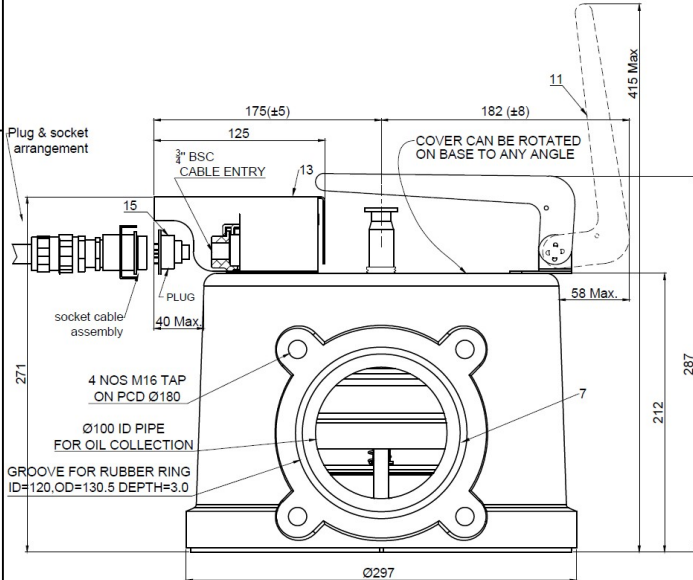
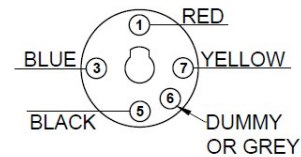
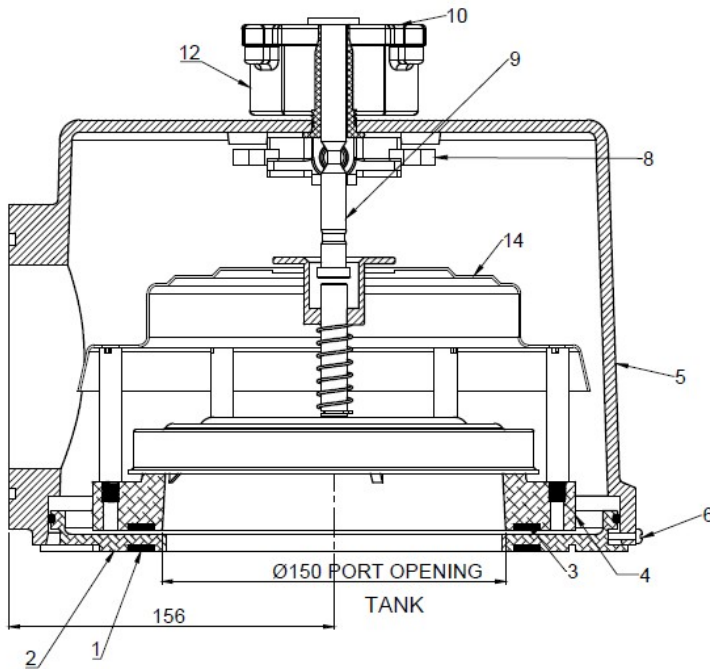


TABLE-1: - PARTS LIST			
SL.	DESCRIPTION	MATERIAL	QTY.
1.	GASKET FOR BASEPLATE	NITRILE RUBBER	1
2.	BASEPLATE FOR SHROUD	CI	1
3.	GASKET FOR SUB-ASSEMBLY	NITRILE RUBBER	1
4.	PRD SUB-ASSEMBLY	-	1
5.	SHROUD	AL	1
6.	SCREW FOR TIGHTENING SHROUD TO BASEPLATE	SS	6
7.	FLAT RING FOR PIPE INSTALLATION (OD=129.5,ID=120.5,TK=4.5)	MS or better	1
8.	SWITCH	-	1
9.	QUICK RESPONSE TRIGGER ASSEMBLY	AL+SS	1
10.	TERMINAL BOX COVER	AL	1
11.	FLAG (YELLOW SEMAPHORE)	POLYCARBONATE/SS	1
12.	TERMINAL BOX	AL	1
13.	RAIN GUARD FOR TERMINAL BOX	SS	1
14.	COVER	SS	1
15.	PLUG	BRASS	1



Wiring Diagram
(5 Core Plug & Socket Arrangement)

Fig.1

REF . COMP. drg .	Form No. 2038	BHEL बी.एच.ई.एल.	उत्पाद मानक परिणामित्र शाप/अभि.निर्देश	PRODUCT STANDARD TRANSFORMER SHOP/ENGG.INSTRUCTIONS	TR20177V	
					4 पृष्ठों में 2	PAGE 2 OF 4
1. General Description The PRV is a spring-loaded safety valve designed for transformer protection during sudden overpressure. I. The valve diaphragm is sealed against a gasket by springs. II. Valve operation is triggered when tank pressure exceeds the spring-set opening pressure, quickly reducing pressure to normal levels. III. The diaphragm is reset to the closed position by the springs. IV. PRV design must include components to ensure IP67/IP55 protection. V. Terminal box cover design must prevent mal-operation due to condensation or water droplet ingress. 2. Application I. Suitable for Outdoor use. II. Degree of protection: IP67/IP55. III. Suitable for operation with transformer oil at temperatures up to 100°C. 3. Scope of Supply The supplier shall provide a Pressure Relief Valve (PRV) with plug and socket arrangement suitable for outdoor use in transformer protection. The PRV must comply with the technical specifications outlined below and meet all relevant national and international standards. 4. General Requirements Hardware Finish I. All hardware shall be zinc-plated Grade Fe/Zn with chromate coating Type 'C' as per IS: 1573 or of stainless steel. II. Minimum local thickness: 80 µm in case of ZPP. Finishing Paint III. Shade of finishing paint: Light grey, Shade No. 631 as per IS: 5. 5. Dimensional Compliance I. All dimensions and constructional features mentioned in the reference figure (Fig-1) are indicative and may vary supplier to supplier. II. The design of the PRV must meet critical mounting dimensions such as PCD, number of holes, size of holes, Oil collection pipe (dia. 100 mm) etc., ensuring compatibility with transformer tank fitment and functional requirements. III. Suitable for a tank opening of 150 mm diameter. IV. Horizontal or vertical mounting on six studs of M12 on a 235 PCD.						
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					APPROVED BY: Pawan Prajapat	
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					दिनांक DATE 29.03.2025	

RFF . COMP. drg .	COPYRIGHT AND CONFIDENTIAL The Information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the interest of the Company.	 Form No. 2038	उत्पाद मानक परिणामित्र शाप/अभि.निर्देश	PRODUCT STANDARD TRANSFORMER SHOP/ENGG.INSTRUCTIONS	TR20177V	
				4 पृष्ठों में 3	PAGE 3 OF 4	
		6. Operating Pressure 0.49 ± 0.07 kg/cm² (7 ± 1 psi). 7. Special Requirement I. The valve must achieve full opening instantaneously to relieve excessive pressure efficiently. II. Visual Indicator: Displays valve operation status, manually resettable. III. Micro Switches: Two switches (2 NO) to activate when internal pressure exceeds operating pressure, with manual reset capability. In special case scenario switch configuration of 1 NO & 1 NC may also be required and will be specified while ordering. 8. Switch Ratings I. 3A, 250VAC (Min.) / 0.25A, 250VDC (Min.). 9. Plug and Socket Arrangement details Cable Specifications: I. Cable Length: 20 meters. II. Cable Type: 5 core, 2.5 sq.mm, 1100 V grade armoured control cable shall be FRLSH type, C2 category conforming to IS:1554 (Part-1) and its amendments. The conductor shall be stranded copper. The insulation shall be extruded PVC of type A of IS:5831. A distinct inner sheath shall be provided in all cables. The outer sheath shall be extruded PVC of type ST-1 of IS:5831 and shall be grey in colour. Socket and Plug Details: I. Type: IP67/IP55-rated industrial plug and socket arrangement. II. Material: Polyamide housing with brass contacts. III. Voltage Rating: 240V AC. IV. Current Rating: 5A. V. Connection: Screw-type terminal connection.				
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COPYRIGHT AND CONFIDENTIAL The Information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the interest of the Company.		10. Testing Requirements A. Routine Tests (Refer IEC 60076-22-7:2020) i. Oil Leakage Test: Oil leakage test of the body to be done by any of the following methods as per the convenience of the supplier before the final assembly: a. Application of a gas pressure of 2.5 x 10 ⁵ Pa for 2 minutes at ambient temperature. b. Application of a pressure of 1 x 10 ⁵ Pa for 30 minutes to the relay filled with oil at 90°C. c. Application of a pressure of 1.4 x 10 ⁵ Pa for 6 hours to the relay filled with oil at ambient temperature. ii. Operation Test: Validate the operation of the valve, switch, and visual indicator at rated pressure. iii. Dielectric Test: Dielectric strength of live terminals (2.0 kV for 1 minute). iv. Leakage Test: At 75% of the operating pressure for 24 hrs. B. Type Tests (Once Every 10 Years) I. Degree of protection test (IP55/IP67) of the terminal box (conducted once every 10 years at NABL-accredited labs). II. Degree of protection test (IP55/IP67) of Socket and Plug assembly (conducted once every 10 years at NABL-accredited labs). Test certificates must be provided with the supply.						
		11. Documentation and Certification - The supplier shall provide test certificates for all routine and type tests conducted. - A detailed technical datasheet, including drawings, material specifications, and operating instructions, must be provided. - Certificates of compliance to relevant standards (e.g., IS, IEC) must be included.						
TR20177V		12. Packaging and Delivery - The PRV shall be delivered in robust, weather-proof packaging to prevent damage during transportation and storage. - Each unit must include a label with identification details such as style number, operating pressure, and date of manufacture.						
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