



SF6 Gas pressure monitor with low and high alarm contact

1.0 Application:

The gas pressure monitor will be used for monitoring of SF₆ gas pressure to be used in Gas Insulated Switchgear.

2.0 Special features:

2.1	Modified pressure gauge with bourdon tube and gas filled case
2.2	Wetted parts: stainless steel
2.3	Local readout with alarm contacts
2.4	Temperature compensated and hermetically sealed, therefore no influence temperature, by atmospheric pressure fluctuation or differences in altitude.
2.5	Serial number

3.0 Specification and vendor compliance

S. No.	Description	Vendor com.
3.1	SF ₆ Gas Density monitors (Pressure Gauge) with Bourdon tube.	
3.2	Temperature compensated Type , hermetically sealed Casing with bayonet bezel of stainless steel – SS 304	
3.3	Case filled with Inert Gas	
3.4	Window of laminated safety glass	
3.5	Bourdon tube in stainless steel 316L/SS 316 Ti	
3.6	Accuracy 1.0% of fsd at-20°C. And +/-2.5% of fsd for range -40 to +60°C.	
3.7	With alarm contacts magnetic snap action & galvanic isolation	
3.8	<u>Double contacts type :</u> Contact 1: Set at 0.8 Bar for Alarm ckt (1 NO & 1 NC contact should be provided) Contact 2: Set at 0.7 Bar for Lock out/Trip ckt (1 NO & 1 NC contact should be provided)	
3.9	Hysteresis for rise in pressure 2 - 4%	
3.10	Contact rating : 30 W/50 VA, max 1A	
3.11	Material of contacts : 80% Ag + 20% Ni + 10 micron gold plated	
3.12	High voltage test : 2 kV, 50 Hz , 1s	
3.13	Dial: Aluminum ,red-green-yellow section	
3.14	Pointer: Black aluminum pointer	
3.15	Case: Stainless steel with gas filling	
3.16	Gas tight: Leakage rate <1 x10 ⁻⁵ mbar l/s	

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REV.	00	PRINTS TO:-		APPROVED –		
ALTD.	AK	RPD	1	HRP		
		SWM(P)	1	PREP	ISSU	DATE
		SWM(shop)	1	ARED	ED	
APPD.	HRP	SWM(TC Assy)	1	AK	VD	29.04.15
DATE.	29.04.15	QCX	1			



PRODUCT STANDARD
SWITCHGEAR ENGINEERING DIVISION

SG 24311

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S.NO.	Description	Vendor com.
3.17	Ingress protection : IP 65	
3.18	Bottom connection: ¼ " BSP	
3.19	Weight: approx. < 1 kg	
3.20	Dial marking	
3.20.1	Red arc: less than 0.8 bar	
3.20.2	Yellow arc : 0.8 bar to 1.2 bar	
3.20.3	Green arc: beyond 1.2 bar EL	
3.21	Filling pressure : 1.2 bar	
3.22	Calibration pressure :1.2 bar	
3.23	Range -1 to 2 Bar	
3.24	Calibration and Type test report to be submitted along with Technical offer.	
3.25	Temperature compensated certificate to be submitted	

4.0 Acceptance Criteria

1. **For Sample:** Supplier should submit 2 No samples and shall start bulk manufacturing only after approval of sample by BHEL. Criteria for sample approval are –
 2. Dimensional verification as per drawing 45170000004-002 Rev 01 approved by BHEL.
 3. Operational verification for measurement of SF6 gas pressure on actual assembly
 4. **Verification of electrical Contacts (Contact 1 & Contact 2) as mentioned in cl. 3.8**
 5. Leak test :
Sample shall be tested for SF6 gas leakage by mounting it on switchgear assembly with 1 Bar SF6 gas pressure. No leakage should be observed at the coupling joint.
 6. Verification of the Electrical contacts.
7. **Latest Type test certificate and calibration report to be furnished as mentioned in cl. 3.24**
8. **(B) For Lot**
 - Dimensional verification as per BHEL approved drawing.

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ALTD.	AK	RPD	1 1 1 1	HRP		
APPD.	HRP	SWM(P)		PREP	ISSU	DATE
DATE.	29.04.15	SWM(shop)		ARED	ED	
		SWM(TC Assy)		AK	VD	29.04.15
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