



Form No. 2038

उत्पाद मानक

परिणामित्र

शाप/अभि. निर्देश

PRODUCT STANDARD

TRANSFORMER

SHOP/ENGG INSTRUCITONS

TR 20166B

3 पृष्ठों में 1

Page 1 of 2

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TITLE: SPECIFICATION FOR MAINTENANCE FREE BREATHER**1. GENERAL**

Each silica gel Breather of the Maintenance-Free regenerative type (Duly filled with Non carcinogenic cobalt free silica gel) shall be equipped with a humidity sensor, a condition based microprocessor control unit and LED status indication. The function shall be tested via a test button. A stainless steel filter at the bottom shall protect the silica gel chamber against external environment influences. This condition controlled application should be environmental friendly.

Item No.	Weight of oil in Transformer(in T)	Style No.
1	<40T	BP9066058994
2	40T-80T	BP9066059001

2. TECHNICAL REQUIREMENT

- Suitable for- Outdoor use & resistive to transformer oil, ultraviolet rays, pollution & salt water
- Working ambient temperature-0 to 80°C
- Degree of Protection- IP:55/IP67
- Rated supply Voltages-230 V, 1-phase, 50Hz AC
- Rated insulation level-
Analog output against ground - 500 V AC, 50 Hz, 1 min w/s
Relay contact against ground - 2.5 kV AC, 50 Hz, 1 min w/s
- The control unit shall be provided on the breather equipped with suitable heater to prevent moisture condensation.
- Status LEDs for local display shall be provided on breather along with suitable contacts to take the signal to remote control room.
- The moisture and temperature measurement system (sensor) installed should be of modular type, making it easy to replace the same if at all the same is necessary during the service of breather. A self-diagnostic system shall be provided with LED indication and remote signal through a relay shall be provided.
- Micro fuse and an additional built in line filter shall be provided to protect against over voltages & to avoid failures caused by high frequency interference.
- The control unit in the breather shall provide analogue output signal of 4-20mA and also shall be equipped with a RS485 port for data logging.
- Suitable Data Logger shall also be provided in the control unit.

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PAGE 1 OF 3

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Page 2 of 2

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PAGE 2 OF 3

- l. The Breather shall also be equipped with integrated test button which should allow to carry out a self-test and to check the functions like relay circuits, heating or the signal transmission in the control room, etc. at any time
- m. Type Test report for Degree of protection for control unit shall be submitted along with offer.
- n. Successful bidder shall offer all acceptance tests on Condition controlled maintenance free dehydrating breather and submit routine test report during acceptance of transformer for each supply. List of acceptance /routine tests shall be submitted with the tender.
- o. Bidder to furnish duly sealed & signed compliance checklist as per Table-I of this document.
- p. Bidder to furnish customer reference list for 3 years of satisfactory operation particularly in large transformers, along with offer.
- q. All dimensions & constructional features may vary supplier to supplier. However, design of Breather should meet the performance parameters to ensure functional requirement.

3. DIMENSIONS DETAILS:

Dimension of the Breather may vary supplier to supplier

4. INSTALLATION, COMMISSIONING & TRAINING

Installation & commissioning of the system shall be in scope by BHEL.

5. INSPECTION & DISPATCH

- a. Three sets of inspection, routine, acceptance and calibration test reports, operation and maintenance manual, descriptive catalogue/ leaflets shall be sent along with dispatch document. One set shall be supplied along with the equipment.
- b. The supplier shall furnish a list of all fittings and components in the dispatch details giving description and quantity of each item (Quantity of each item shall be mentioned). All items shall be properly packed in wooden boxes so as to avoid scratches/damage in transit.

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3 पृष्ठों में 3

Page 3 of 2

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PAGE 3 OF 3

6. CPMPLIANCE CHECKLIST

Table-I


Sl. No.	Requirement	Yes/No	Deviation, If any
1.	GENERAL		
2.	ITEM REQUIRED		
3.	TECHNICAL REQUIREMENTS		
4.	INSTALLATION, COMMISIONING & TRAINING		
5.	INSPECTION & DISPATCH		

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