



उत्पाद मानक **PRODUCT STANDARD**
परिणामित्र **TRANSFORMER**

TR 10173B

Form no.2038

शाप/उमि. निर्देशिका **SHOP / ENGG. INSTRUCTIONS**

4 पृष्ठ में 1

PAGE 1 OF 4

शीर्षक : **SPECIFICATION FOR BUCHHOLZ (GAS OPERATED) RELAY.**
TITLE :

REF.
COMP.DRG.

1. APPLICATION:-

FOR PROTECTION OF OIL FILLED TRANSFORMERS/REACTORS FITTED WITH SEPARATE CONSERVATOR VESSEL. THE RELAY SHALL OPERATE SATISFACTORILY WITH OIL TEMPERATURE UPTO 100°C AND SHALL BE ALSO SUITABLE FOR FULL VACUUM CONDITION.

2. CONSTRUCTION

- (i) THE RELAY SHALL COMPRISE OF FLANGED HOUSING, DETACHABLE FRONT COVER TERMINAL BOX, TOUGHENED GLASS WINDOW, ALARM AND TRIPPING DEVICES HAVING BUCKET TYPE FLOATS WITH MICRO SWITCHES AND PETCOCKS /NEEDLE VALVES FITTED WITH CHAIN & CAP AND SHALL BE GENERALLY CONFORM TO IS 3637
- (ii) RELAY HOUSHING SHALL BE WEATHER RESISTANT AND SHALL BE MADE FROM SUPERIOR GRADE CAST IRON OR FABRICATED FROM M.S. SHEET/ PLATES.
- (iii) A PETCOCK/NEEDLE VALVE WITH 1/8" B.S.P MALE THREADS AND HAVING HORIZONTAL TAKE OFF SHALL BE PROVIDED ON TOP OF THE RELAY FOR COLLECTING GAS SAMPLES. A SIMILAR PETCOCK/NEEDLE VALVE SHALL BE PROVIDED IN A CONVENIENT POSITION TO FACILITATE SITE TESTING OF THE TRIPPING DEVICE.
- (iv) A MECHANICAL DEVICE CAPABLE OF BEING OPERATED FROM THE EXTERIOR OF THE RELAY TO CHECK THE CONTINUITY OF ELECTRICAL CIRCUITS AND LOCK THE ALARM & TRIP DEVICES DURING TRANSIT, SHALL BE PROVIDED.
- (v) INNER PARTS OF THE RELAY SHALL BE MADE FROM MATERIAL WHICH WILL WITHSTAND THE EFFECT OF HOT TRANSFORMER OIL AND SHALL NOT DISINTEGRATE DURING SERVICE.
- (vi) RELAY SHALL BE PROVIDED WITH ONE SUITABLE DRAIN PLUG OF 1/8" BSP.

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TR 10173B

PAGE 1 OF 4

CONTD/2.....

Rev.-03 DATE: 26/02/2009	DRG. REDRAWN ON COMPUTER AND TYPE OF SWITCHES CHANGED TO MICRO FROM MERCURY.	वितरण DISTRIBUTION	सं. स्वीकृत किया- APPROVED : sd/BSB,
Rev.-04 DATE: 22/07/2011	TYPE OF SWITCH MODIFIED.	TRE/TRM/FTM TRX/ITG QC-TCB/QA-TCB JHANSI	जारी किया :- ISSUED : टीकरें मानक/ TRE/STD. तैयार किया- PREPD. J.L. MARATHE
	BHARTI SKS A.DEOTA P.chaturvedi N.K. 23/10/11 2/02 A.DEOTA		निर्देशक : DATE : 13/10/92



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4 पृष्ठ में 2 PAGE 2 OF 4

शीर्षक : **SPECIFICATION FOR BUCHHOLZ (GAS OPERATED) RELAY.**
TITLE :

3. **SWITCHES & CONNECTING LEADS:**

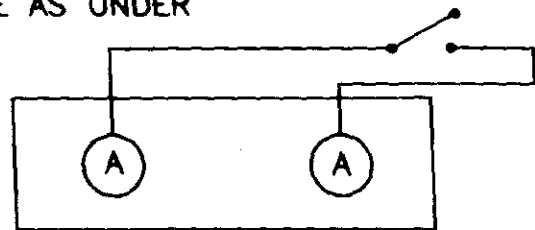
(i) TWO MAGNETIC / REED SWITCHES ONE FOR ALARM AND OTHER FOR TRIPPING SHALL BE PROVIDED.

RATING SHALL BE AS PER TABLE

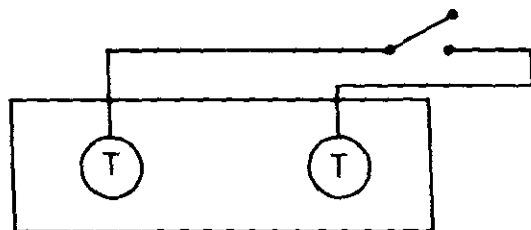
RATING	AC	DC
MAX CURRENT	3A	3A
MAX VOLTAGE	230 V	127 V
MAX LOAD	400 w	250VA

CIRCUIT DIAGRAM SHALL BE USE AS UNDER

ALARM CIRCUIT



TRIP CIRCUIT



CIRCUIT	SERVICE POSITON	OPERATING POSITION
ALARM	OFF	ON
TRIP	OFF	ON

(ii) THE DESIGN & MOUNTING ARRANGEMENT FOR THE SWITCHES SHALL BE SUCH THAT MAL-OPERATION DOES NOT OCCUR UNDER NORMAL SERVICE CONDITIONS OF TRANSFORMER/REACTOR.

CONTD/3.....

TR 10173B

PAGE 2 OF 4

गुण: Rev.-03
दिनांक
DATE
26/02/2009

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वितरण
DISTRIBUTION

सं. स्वीकृत किया-
APPROVED : sd/BSB,

गुण: Rev.-04
दिनांक
DATE
22/07/2011

TYPE OF SWITCH MODIFIED.

TRE/TRM/FTM
TRX/TTG
QC-TCB/QA-TCB
JHANSI

जारी किया :- ISSUED :
टिप्पण मालक/ TRE/STD.
रखा किया- PREPD.
J.L. MARATHE

दिनांक : DATE :
13/10/92

BHARTI SKS A.DEOTA
P. Chaturvedi N.K. A.DEOTA



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4 पृष्ठ में 3 PAGE 3 OF 4

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- (iii) CONNECTING LEADS (PREFERABLY SHALL NOT BE LESS THAN 0.25 mm²) FROM THE SWITCHES SHALL BE MADE OF TINNED COPPER FLEXIBLE WIRE, INSULATED WITH CERAMIC BEADS OR WITH BRAIDED SILK OR WITH ANY OTHER EQUIVALENT INSULATING MATERIAL THEY SHALL BE TERMINATED ON OUTLET BUSHING BY MEANS OF COMPRESSED TERMINAL LUGS.
- (iv) THE OUTLET TERMINALS SHALL BE SUITABLE FOR CONNECTION TO EXTERNAL CONDUCTORS OF SIZE 1.5 TO 4 mm² AND HOUSED IN WEATHER PROOF AIR INSULATED TERMINAL BOX ON RELAY HOUSING.

4. DIMENSIONS :

DIMENSIONS OF THE RELAY SHALL BE AS PER OUR STANDARD DRG. TR 20053B.

5. FINISH:

- (i) RELAY HOUSING SHALL BE CLEANED PROPERLY BY SHOT/SAND BLASTING
- (ii) INSIDE SURFACE SHALL BE PAINTED WITH TWO COATS OF WHITE PAINT OF TRANSFORMER OIL RESISTANT QUALITY.
- (iii) OUTSIDE SURFACE SHALL BE PAINTED WITH TWO COATS OF ZINC PRIMER (IS-2074) FOLLOWED BY TWO COATS OF FULL GLOSSY FINISHING PAINT (IS-2932) OF LIGHT GREY SHADE TO IS 631 OF IS-5.
- (iv) HARDWARES USED SHALL BE ZINC PLATED AND PASSIVATED (ZN PLATING GRADE FE/ZN 12.5 TO IS-1573, PASSIVATION TO IS-1340)

6. MARKING :

THE FOLLOWING PARTICULARS SHALL BE MARKED DISTINCTLY AND PERMANENTLY ON EVERY RELAY IN A POSITION VISIBLE FROM FRONT

- (i) A REFERENCE TO STANDARD i.e. IS 3637.

CONTD/4.....

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4 पृष्ठ में 4 PAGE 4 OF 4

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- (ii) MANUFACTURERS NAME AND OR TRADE MARK.
 - (iii) MANUFACTURER'S TYPE REFERENCE & SERIAL NUMBER.
 - (iv) DIRECTION OF FLOW CAUSING OPERATION OF THE RELAY SHALL BE INDELIBLY MARKED BY AN ARROW ON BOTH FRONT & BACK SIDES OF THE RELAY, ONE OF THE ARROW MAY BE PROVIDED ON TERMINAL BOX COVER. IN THAT CASE ARRANGEMENT OF FIXING THE COVER SHALL BE SUCH THAT THIS COVER CAN BE FITTED ONLY IN ITS CORRECT POSITION.
 - (v) OUTLET TERMINALS OF ALARM & TRIP CIRCUITS SHALL BE CLEARLY MARKED BY LETTERS 'A' AND 'T'.
 - (vi) GRADUATED SCALES SHALL BE PROVIDED WITH WINDOW GLASS TO READ THE VOLUME OF GAS COLLECTED INSIDE THE RELAY.
7. TESTING :
- (i) RELAYS SHALL BE TESTED FOR ALL ROUTINE TESTS AS PER IS 3637 AND T.C. SHALL BE FURNISHED INDICATING THE SI.NO.
 - (ii) RELAYS SHALL BE ALSO TESTED FOR TYPE TESTS i.e. MECHANICAL STRENGTH, VELOCITY CALIBRATION & VACUUM TESTS WHEN ASKED FOR.
8. PACKING:
- (i) FINISHED RELAYS SHALL BE PROPERLY BLANKED WITH PLY BOARD OF SUFFICIENT THICKNESS & STRENGTH AND THEN WRAPPED IN THICK POLYETHENE SHEET BEFORE DESPATCH TO AVOID DAMAGE IN TRANSIT AND ALSO TO STOP DUST & FOREIGN PARTICLES ENTERING INSIDE THE RELAY.

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PAGE 4 OF 4

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