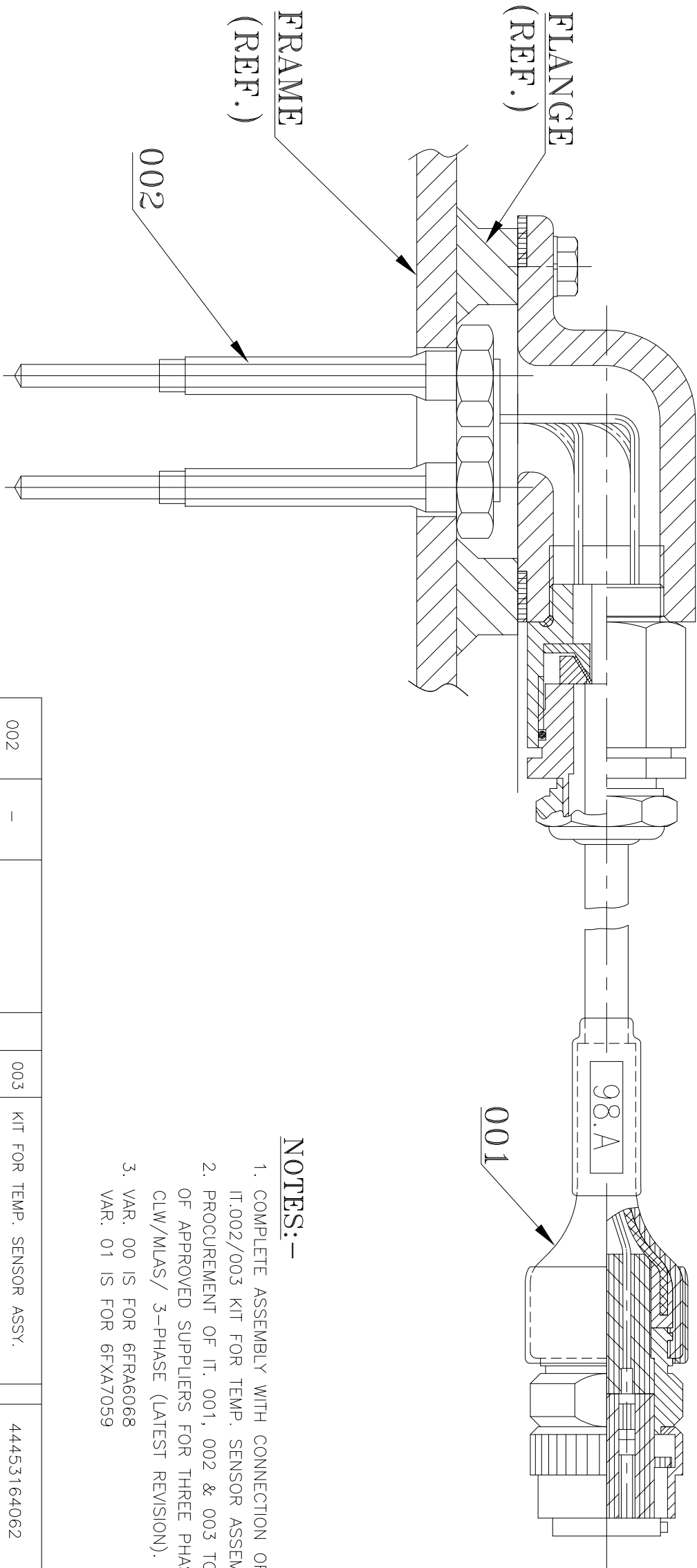



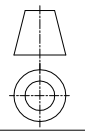
DRG. NO. 3 445 01 64 056



NOTES:—

1. COMPLETE ASSEMBLY WITH CONNECTION OF IT.001 TEMPERATURE SENSOR ASSY. & IT.002/003 KIT FOR TEMP. SENSOR ASSEMBLY TO BE SUPPLIED.
2. PROCUREMENT OF IT. 001, 002 & 003 TO BE DONE AS PER MASTER LIST OF APPROVED SUPPLIERS FOR THREE PHASE ELECTRIC LOCO COMPONENTS CLW/MLAS/ 3-PHASE (LATEST REVISION).
3. VAR. 00 IS FOR 6FRA6068
VAR. 01 IS FOR 6FXA7059

| | | | | | | | | | | | | | | | | |
|--------|--------|---------|---------|----------|----------------------------|------|-------------|-----|------------|-------------|---|------|----------|------|----|------|
| 002 | — | | | 003 | KIT FOR TEMP. SENSOR ASSY. | | 44453164062 | 01 | | | | Kg | | | | |
| — | 002 | | | 002 | KIT FOR TEMP. SENSOR ASSY. | | 44453164062 | 00 | | | | Kg | — | | | |
| 001 | 001 | | | 001 | TEMPERATURE SENSOR ASSY. | | 14450164051 | 00 | | | | Kg | — | | | |
| VAR 01 | VAR 00 | REMARKS | VAR NO. | ITEM NO. | DESCRIPTION | STD. | DRAWING NO. | VAR | MATL. CODE | MATL. SPCN. | C | UNIT | UNIT WT. | QTY. | SZ | ZONE |
| | | | | | | | | | | | | | | | | |

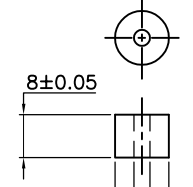
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|----------|--|--------------|--|-----------------------------|--|---|--|------|--|-----------------------------|--|-----------------|--|------------------|--|---|--|-------|--|--------------|--|-------------------|--|----------|--|---------------|--|
| R | | SIGN. & DATE | | INVENTORY NO. | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | ADDITIONAL INFORMATION | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | STATUS OF DRAWING | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | DISTRIBUTION OF PRINTS | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | TME - 1 TXM - 4 TNX - 1 | | | | | | | | | | | | | | | | | | | | | |
| REV. | | DATE | | ALTERED CHECKED APPD. | | REV. | | DATE | | ALTERED CHECKED APPD. | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | 6FRA6068 / 6FXA7059 | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | BHARAT HEAVY ELECTRICALS LTD. BHOPAL | | | | | | | | | | | | | | | | | | | | | |
| | | | | | |  | | | | | | | | | | | | | | | | | | | | | |
| REV. | | DATE | | ALTERED CHECKED APPD. | | REV. | | DATE | | ALTERED CHECKED APPD. | | DEPT. T.M.E. | | GRADE OF UN.TOL. | |  | | SCALE | | WEIGHT(K.G.) | | REF. TO ASSY.DRG. | | ITEM NO. | | NO.OF ITEM | |
| | | | | | | | | | | | | CODE 405 | | | | | | NTS | | 0.88 | | 04451064051 | | 021 | | 003 | |
| | | | | | | TITLE | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | COMPLETE TEMPERATURE SENSOR ASSY. | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | DRAWING NO. | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | REV. | | | | | | | | | | | | | | | | | | | | | |
| SHT. NO. | | 01 | | NO. OF SHT. | | 01 | | | | | | | | | | | | | | | | | | | | | |

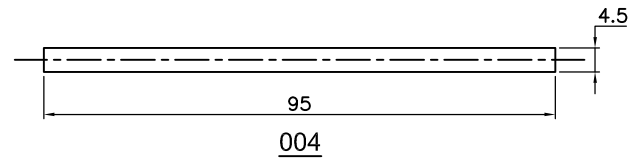
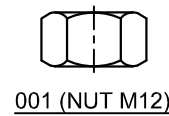
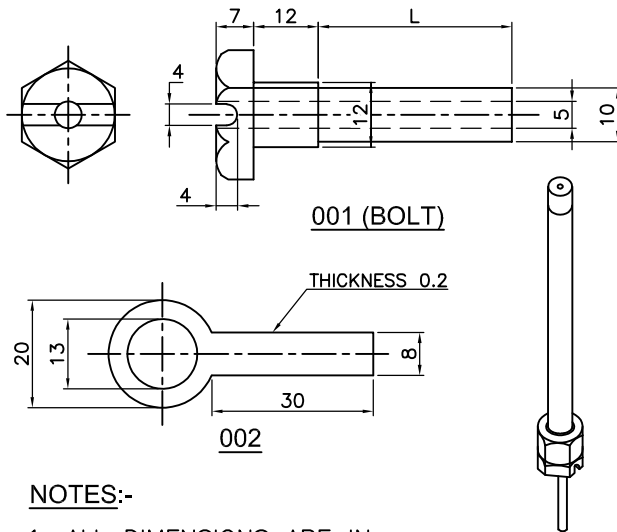
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300736/2023/HEP-TXM20500

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2023/REF-TXN20500


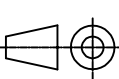
| | | | | | | |
|--|----------|----------|--|----------|----------|---|
| REV. | DATE | ALTERED | REV. | DATE | ALTERED | ADDITIONAL INFORMATION 4TWD.096.163, ALT.4 |
| 02 | 28.05.13 | CHECKED | 03 | 28.11.13 | CHECKED | |
| | | APPROVED | | | APPROVED | |
| LENGTH OF ITEM 001 REVISED INLINE WITH DRG. NO. 04453166053 R03 & 04453164051 R04. | | | IN TABLE DIM.54.5±0.2(FRA) & 96.5±0.2 (FXA) WERE 11.5±0.2 & 26.5±0.2. | | | STATUS OF DRAWING |
| | | | | | | DISTRIBUTION TME- 1, TXM-3 OF PRINTS TNX-1 |
| REV. | DATE | ALTERED | REV. | DATE | ALTERED | STYLE LIST |
| 04 | 31.07.14 | CHECKED | 05 | 23.12.20 | CHECKED | |
| | | APPROVED | | | APPROVED | |
| STYLE TABLE ADDED. | | | TITLE BLOCK MODIFIED. | | | VAR.NO. DESCRIPTION ST.NO. |
| | | | | | | 00 HEX.NUT (KIT FOR TEMP SENSOR ASSY.) BP9094727617 |
| | | | | | | 01 HEX.NUT (KIT FOR TEMP SENSOR ASSY.) BP9094730855 |
| REV. | DATE | ALTERED | REV. | DATE | ALTERED |  |
| 06 | 16.12.21 | CHECKED | 07 | 24.09.22 | CHECKED | |
| | | APPROVED | | | APPROVED | |
| VAR.02 FOR IM4504 ADDED. | | | DRAWING UPDATED IN LINE WITH CLW DRAWING NO. 4TWD.096.163, ALT.4 | | | |
| | | | | | | |



| T.M.TYPE | LENGTH IN mm. (L) |
|-----------|-------------------|
| 6FRA-6068 | 54.5±0.2 |
| 6FXA-7059 | 96.5±0.2 |
| IM4504 | 33.5±0.2 |

NOTES:-

1. ALL DIMENSIONS ARE IN mm.
2. THIS IS A COMMON DRAWING TO 6FRA-6068 AND 6FXA-7059.
3. ONE SAMPLE MUST BE SUPPLIED FOR FITMENT AND APPROVAL BEFORE BULK SUPPLY.
4. VAR.00 FOR 6FRA-6068, VAR.01 FOR 6FXA-7059 & VAR.02 FOR IM4504.

| | | | | | | | | | | | |
|--------------------|--|------------------|---|----------|--|----------------------------|------|--|--------------------------|-------------------------|----------|
| REF. DRG. NO. | 001 | 001 | 001 | 004 | SLEEVE | | | HIGH INSULATION FLEXIBLE COTTON SLEEVE | | | |
| | 001 | 001 | 001 | 003 | BUSH | | | HIGH INSULATION HARD EPOXY/FIBRE | | | |
| | 001 | 001 | 001 | 002 | LOCKING PLATE | | | HIGH FLEXIBLE CORROSION FREE TIN/STEEL | | | |
| | 001 | 001 | 001 | 001 | HEX. HD. BOLT M12x70, Gr.4.6 ALONG WITH HEX NUT M12, Gr.4 | | | PHOSPHATED IS:1364 (P.2)'92 | | | |
| | VAR. 02 | VAR. 01 | VAR. 00 | ITEM NO. | DESCRIPTION | DRAWING | STD | MATL. SPECN. | A/C | UNIT | UNIT WT. |
| | | | | | | | | | | QTY. | |
| | CARD TYPE 3 → 28 | | | | CARD TYPE 1 → 28 | | | | → CARD TYPE 2 | | |
| SIGN. & DATE | <div></div> <div>BHARAT HEAVY ELECTRICALS LTD. BHOPAL</div> | | | | | DRN. | NAME | SIGN | DATE | NO.OF VAR. 02 | |
| | | | | | | CKD. | D.K. | -sd- | 09-09-10 | | |
| | | | | | | APPD. | A.S. | -sd- | 09-09-10 | | |
| INVENTORY NO. | DEPT. TME | UNTOL. DIMS. GR. |  | SCALE | WEIGHT(KG) | REF.TO ASSY.DRG. | | ITEM NO. | NO.OF ITEM 004 | | |
| | CODE | M | | NTS | 0.7 | 34450164056 14451091101 | | 002 003 011 | | | |
| | 405 | | | | | | | | | | |
| | TITLE | | | | | DRAWING NO. | | | | REV | |
| | KIT FOR TEMP SENSOR ASSY. 6FRA-6068/6FXA-7059/IM4504 | | | | | 44453164062 | | | | 07 | |
| | | | | | | SHT.NO | 01 | NO.OF.SHT. | | 01 | |

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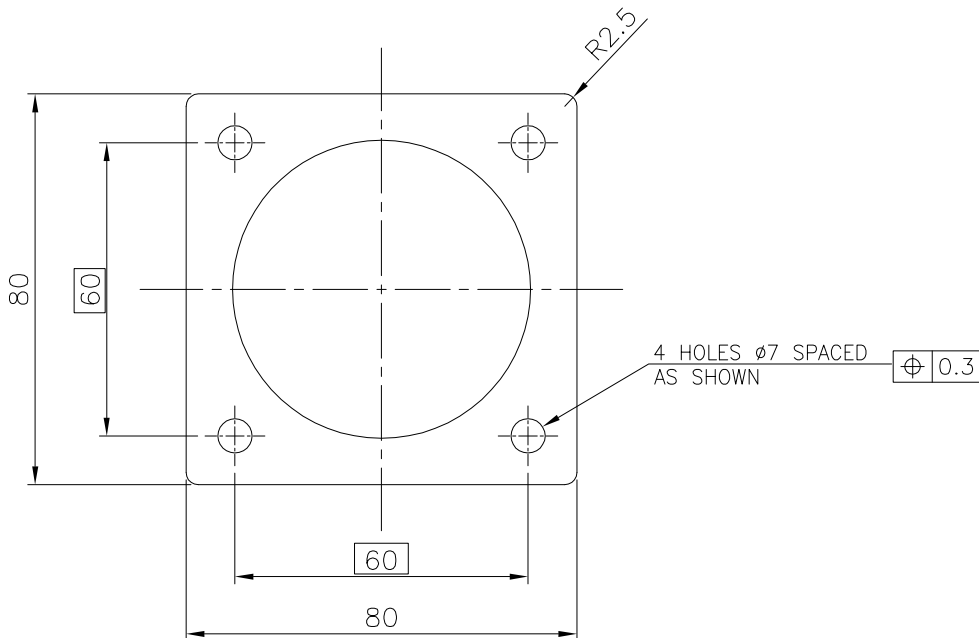
1300736/2023/HEP-TXM20500

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

10/50

| | | | | | | | | |
|------|------|----------|------|----------|--|----|------------------------|-----------------------|
| REV. | DATE | ALTERED | REV. | DATE | ALTERED | VK | ADDITIONAL INFORMATION | SIMILAR COMP. DRG. |
| | | CHECKED | 01 | 23.12.20 | CHECKED | PT | | 3EHM413056 |
| | | APPROVED | | | APPROVED | VR | | |
| ZONE | | | ZONE | | DRG. REVISED IN LINE WITH CLW SPEC. NO. 4TWD.096.087 | | STATUS OF DRAWING | |
| | | | | | | | DISTRIBUTION OF PRINTS | TME-1, TXM-3 TNX-1 |



NOTE:-

1. IT. 001 TO BE MADE FROM SILICONE RUBBER.

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|--------------|---------------|---|--|--|----------|--|-----------------------|--|--------------------|--|----------|-----------------|-------------|---------------|--|------------------------|--|-------------|--|-------------|--|----------|--|
| INVENTORY NO. | SIGN. & DATE | REF. DRG. NO. | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| VAR00 | | | REMARKS | | | ITEM NO. | | DESCRIPTION | | | | | STD | | MATERIAL CODE | | MATERIAL SPECIFICATION | | UNIT | | UNIT WEIGHT | | QUANTITY | |
| | | | | | | 001 | | GASKET 2.4TKx80x80 | | | | | | | SEE NOTE 1 | | | | KG | | 0.02 | | | |
| 59 64 65 | | | 75 25 27 29 | | | | | 58 | | | | | 59 34 | | 45 55 | | 56 | | 58 | | 65 | | | |
| 68 | | | 71 | | | | | | | | | | 46 | | 54 | | 57 | | 60 | | 63 | | | |
| Bharat Heavy Electricals Ltd. Bhopal | | | | | | | | | | | | | NAME | | SIGN | | DATE | | NO. OF VAR. | | | | | |
| DEPT. TME | | | UNTOL. DIMS. GR. | | | SCALE | | WEIGHT (K.G.) | | REF. TO ASSY. DRG. | | ITEM NO. | | NO. OF ITEM | | | | | | | | | | |
| CODE 405 | | | TM20079 M | | | N.T.S. | | | | 1 445 01 64 051 | | 003 | | 001 | | | | | | | | | | |
| TITLE | | | GASKET TEMPERATURE SENSOR 6FRA 6068 | | | | | | | | | | DRAWING NO. | | REV. | | | | | | | | | |
| | | | | | | | | | | | | | 4 445 01 64 051 | | 01 | | | | | | | | | |
| | | | | | | | | | | | | | SHT. NO. | | NO. OF SHT. | | | | | | | | | |
| | | | | | | | | | | | | | 01 | | 01 | | | | | | | | | |

SIZE A4