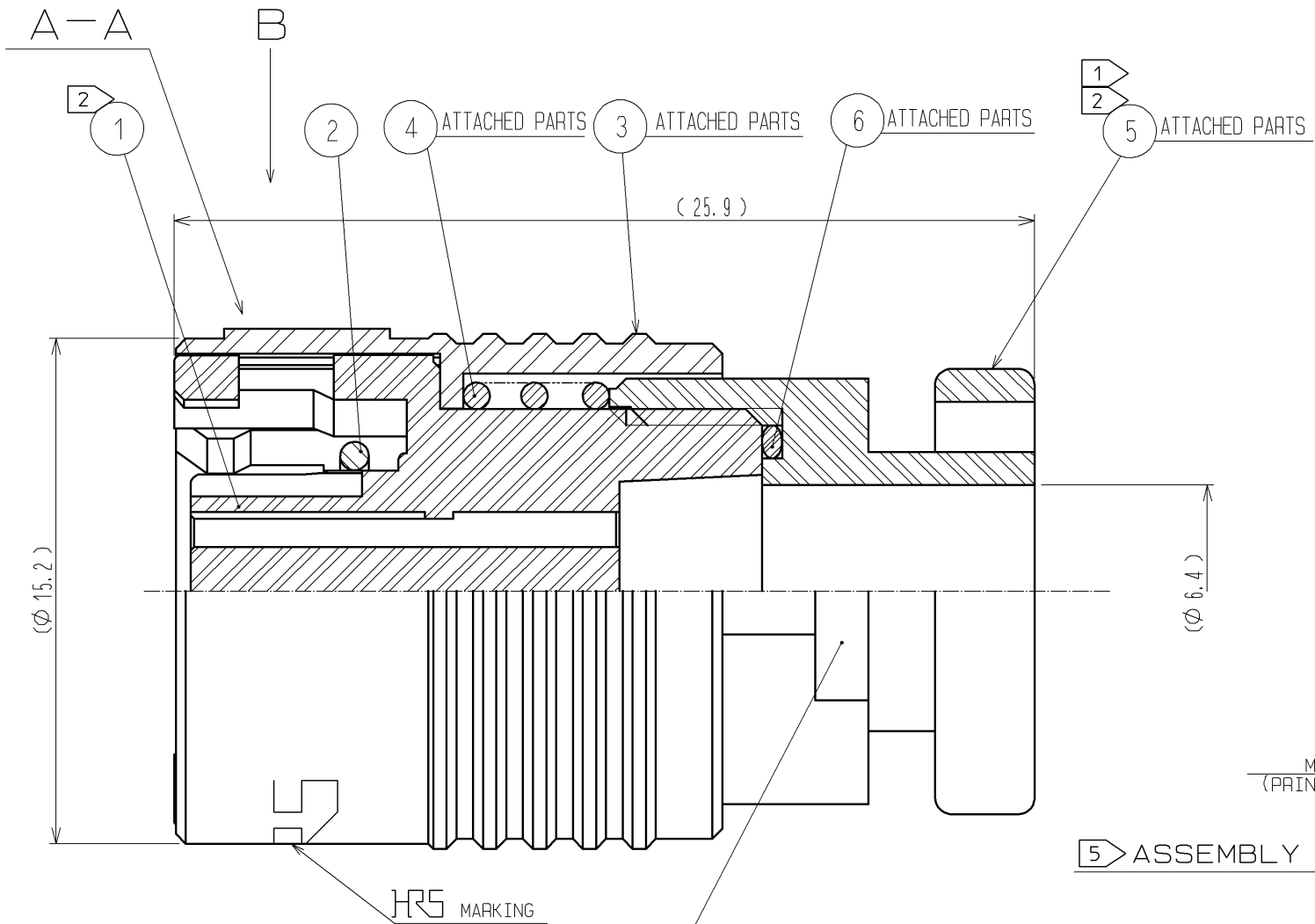
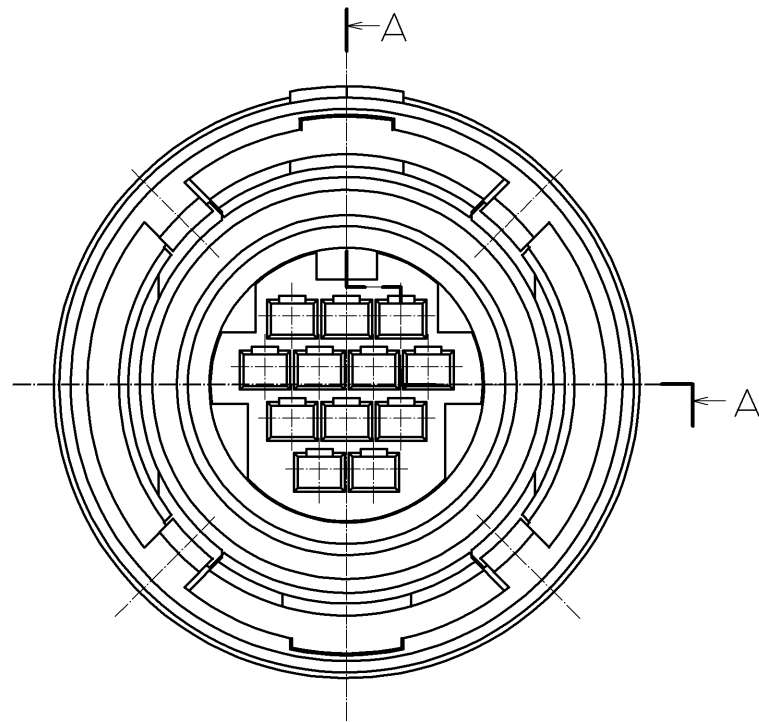
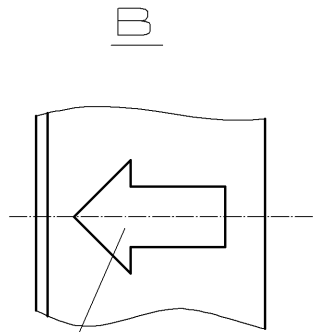
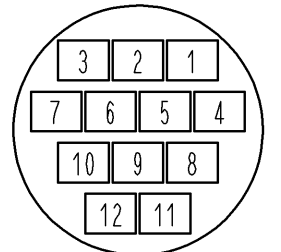


| APPLICABLE STANDARD   |  |                          |   |                  |                |
|---|--|--------------------------|---|------------------|----------------|
| RATING  | OPERATING TEMPERATURE RANGE  | -25 °C TO +85 °C         | STORAGE TEMPERATURE RANGE   | -10 °C TO +60 °C |                |
|   | VOLTAGE  | AC 30 V , DC 42 V        |   |                  |                |
|   | CURRENT  | 2 A                      | APPLICABLE CABLE  |                  |                |
| SPECIFICATIONS  |  |                          |   |                  |                |
| ITEM  | TEST METHOD  |                          | REQUIREMENTS  | QT               | AT             |
| <b>CONSTRUCTION</b>   |  |                          |   |                  |                |
| GENERAL EXAMINATION   | VISUALLY AND BY MEASURING INSTRUMENT.  |                          | ACCORDING TO DRAWING.   | X                | X              |
| MARKING   | CONFIRMED VISUALLY.  |                          |   | X                | X              |
| <b>ELECTRIC CHARACTERISTICS</b>   |  |                          |   |                  |                |
| CONTACT RESISTANCE  | CONTACT SHALL BE MEASURED AT DC 1 A  |                          | 15 mΩ MAX.  | X                | -              |
| INSULATION RESISTANCE   | 100 V DC.  |                          | 1000 MΩ MIN.  | X                | X              |
| VOLTAGE PROOF   | 300 V AC. FOR 1 min.   |                          | NO FLASHOVER OR BREAKDOWN.  | X                | X              |
| <b>MECHANICAL CHARACTERISTICS</b>   |  |                          |   |                  |                |
| CONTACT INSERTION AND WITHDRAWAL FORCES   | φ0.53 ± 0.003 BY STEEL GAUGE.  |                          | INSERTION AND WITHDRAWAL FORCES : 0.15 N MIN.   | X                | -              |
| CONNECTOR INSERTION AND WITHDRAWAL FORCES   | MEASURED BY APPLICABLE CONNECTOR.  |                          | INSERTION AND WITHDRAWAL FORCES<br>LOCKING DEVICE WITH UNLOCK : — N MAX.<br>LOCKING DEVICE WITH LOCK : 50 N MAX.                                      | X                | -              |
| MECHANICAL OPERATION  | 1000 TIMES INSERTIONS AND EXTRACTIONS.   |                          | CONTACT RESISTANCE: 30 mΩ MAX.  | X                | -              |
| VIBRATION   | FREQUENCY: 10 → 55 → 10 (Hz) (1CYC, 5min),<br>SINGLE AMPLITUDE 0.75 mm, AT 10 CYC, FOR 3 DIRECTIONS.             |                          | ① NO ELECTRICAL DISCONTINUITY OF 10 μs.<br>② NO DAMAGE, CRACK AND LOOSENESS, OF PARTS.  | X                | -              |
| SHOCK   | 490 m/s <sup>2</sup> DIRECTIONS OF PULSE 11 ms AT 3 TIMES FOR 3 DIRECTIONS.                                      |                          | ① NO ELECTRICAL DISCONTINUITY OF 10 μs.<br>② NO DAMAGE, CRACK AND LOOSENESS, OF PARTS.  | X                | -              |
| CONTACT RETENTION FORCE   | APPLYING A PULL FORCE THE WIRE AFTER THE APPLICABLE CRIMPED CONTACT IS ASSEMBLED THE BODY.                       |                          | 20 N MIN.   | X                | -              |
| <b>ENVIRONMENTAL CHARACTERISTICS</b>  |  |                          |   |                  |                |
| DAMP HEAT (STEADY STATE)  | EXPOSED AT 40 °C, 90 TO 95 %, 96 h.  |                          | ① INSULATION RESISTANCE: 10 MΩ MIN (AT HIGH HUMIDITY).<br>② INSULATION RESISTANCE: 100 MΩ MIN (AT DRY).<br>③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | X                | -              |
| RAPID CHANGE OF TEMPERATURE   | TEMPERATURE -55 → R/T <sup>(1)</sup> → +85 → R/T °C<br>TIME 30 → 10 TO 15 → 30 → 10 TO 15 min<br>UNDER 5 CYCLES. |                          | ① INSULATION RESISTANCE: 100 MΩ MIN.<br>② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.  | X                | -              |
| CORROSION SALT MIST   | EXPOSED IN 5 % SALT WATER SPRAY FOR 48 h.  |                          | NO HEAVY CORROSION RUIN THE FUNCTION.   | X                | -              |
| DRY HEAT  | EXPOSED AT + 85 °C , 96 h.   |                          | NO DAMAGE, CRACK AND LOOSENESS OF PARTS.  | X                | -              |
| COLD  | EXPOSED AT - 55 °C , 96 h.   |                          | NO DAMAGE, CRACK AND LOOSENESS OF PARTS.  | X                | -              |
| SEALING   | EXPOSED AT A DEPTH OF 1 m FOR 0.5 h.   |                          | NO WATER PENETRATION INSIDE CONNECTOR.  | X                | -              |
| AIRTIGHTNESS  | APPLY AIR PRESSURE 17.6kPa FOR 0.5min TO INSIDE CONNECTOR.   |                          | NO AIR BUBBLES INSIDE CONNECTOR.  | X                | -              |
|   | COUNT  | DESCRIPTION OF REVISIONS | DESIGNED  | CHECKED          | DATE           |
| ①   |  |                          |   |                  |                |
| REMARK  |  |                          | APPROVED  | SU. OBARA        | 09.12.09       |
| NOTES(1)R/T : ROOM TEMPERATURE  |  |                          | CHECKED   | HY. KISHI        | 09.12.09       |
| (2) ABOVE SPECIFICATIONS SHOWS THE VELVE IN ASSEMBLED CONDITION WITH APPLICABLE CRIMP CONTACT.  |  |                          | DESIGNED  | TY. SUZUKI       | 09.12.09       |
| (3) SEALING AND AIRTIGHTNESS SHALL BE TESTED BY APPLICABLE CONNECTOR.   |  |                          | DRAWN   | TY. SUZUKI       | 09.12.09       |
| (4) 2 A RATE CURRENT IS THE MAXIMUM CURRENT FLOW PER CONTACT.<br>THE CURRENT CAPACITY OF WHOLE CONNECTOR IS 20.4 A MAX.<br>Unless otherwise specified, refer to JIS C 5402. |  |                          |   |                  |                |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test  |  |                          | DRAWING NO.   |                  | ELG4-116507-00 |
| <b>HRS</b>  | SPECIFICATION SHEET  |                          | PART NO.  | HR30-7PB-12SC    |                |
|   | HIROSE ELECTRIC CO., LTD.  |                          | CODE NO.  | CL130-0033-0-00  | ① 1/1          |

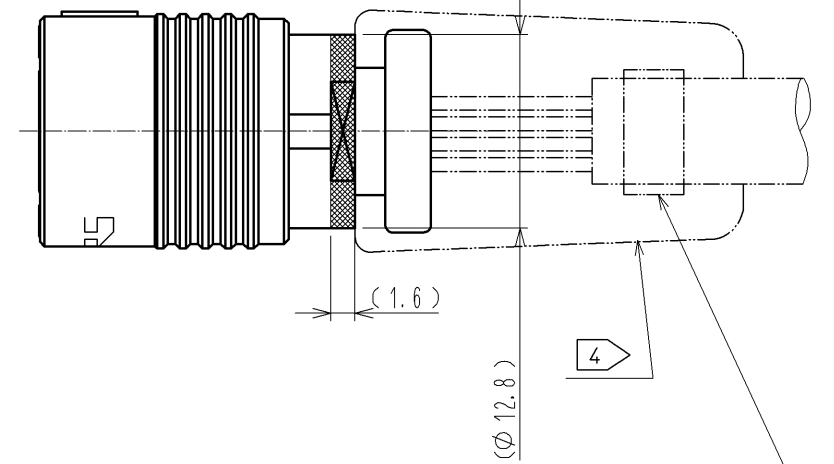


CONTACT POSITION ARRANGEMENT  
THE CONTACT CONFIGURATION DEPICT  
A VIEW FROM THE WIRING SIDE



MATING MARK  
(PRINTING IN WHITE)

ASSEMBLY PROCEDURE (2:1)

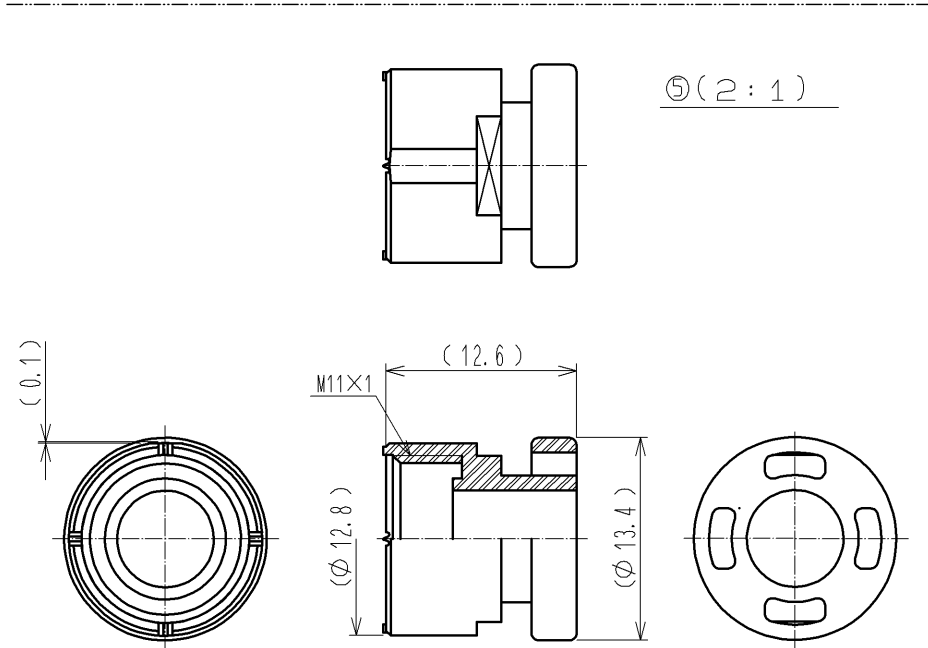


THE USE OF THE CLAMP FITTING IS RECOMMENDED.

HRS MARKING

SPANNER SIZE (11)

- NOTES
- 1 THE RECOMMENDED CLUMP TORQUE OF REF. NO. 5 IS 0.5N·m. LOCTITE 271, LOCPRIMER 7649, HENKEL JAPAN LTD IS RECOMMENDED TO PREVENT REF. NO. 5 FROM LOOSENING.
  - 2 ROTATION EXAMPLES OF NO. 1 AND NO. 5 ARE SHOWN. FOR OVERMOLDING NOTE THAT THE POSITION IS NOT ALWAYS THE SAME.
  - 3 APPLICABLE JIG  
SOLDER TERMINATION FIXTURE : HR30-7P-12SC-T01(CL150-0223-0)
  - 4 WHEN THIS PRODUCT ASSEMBLED, IT SHALL APPLY TO ETAD-C0198 AND BE OVERMOLDED BY CUSTOMER.  
CABLE CLAMP STRENGTH, WATERPROOF PERFORMANCE DEPEND ON OVERMOLD. WE RECOMMENDED CHECKING THE QUALITY BEFORE THE USAGE.
  - 5 THE MOLDING DIE FOR OVERMOLDING SHALL BE DESIGNED AS HOLDING DOWN THE AREA (SPANNER SETTING AREA(11) AND CIRCUMFERENCE OF (12.8)) AS SHOWN IN THE DRAWING.
  - 6 APPLICABLE CRIMPING CONTACT : HR30-SC-211(CL130-0017-3)  
(APPLICABLE WIRE 26 - 30 AWG, WIRE JACKET DIAMETER : 0.1 MAX)  
APPLICABLE CRIMP CONTACT EXTRACTION TOOL : HR30-TP(CL150-0219-2)



| 3                     | POLYBUTYLENE TEREPHTHALATE | (BLACK) UL94V-0  | 6        | SILICONE RUBBER            | (RED)            |
|-----------------------|----------------------------|------------------|----------|----------------------------|------------------|
| 2                     | SILICONE RUBBER            | (RED)            | 5        | POLYBUTYLENE TEREPHTHALATE | (BLACK) UL94V-0  |
| 1                     | POLYPHENYLENE SULFIDE      | (BLACK) UL94V-0  | 4        | STAINLESS STEEL            |                  |
| NO.                   | MATERIAL                   | FINISH . REMARKS | NO.      | MATERIAL                   | FINISH . REMARKS |
| UNITS<br>mm           |                            | SCALE<br>5 : 1   | COUNT    | DESCRIPTION OF REVISIONS   |                  |
| DESIGNED              |                            | CHECKED          |          | DATE                       |                  |
| APPROVED : SU. OBARA  |                            |                  | 09.12.09 |                            |                  |
| CHECKED : HY. KISHI   |                            |                  | 09.12.09 |                            |                  |
| DESIGNED : TY. SUZUKI |                            |                  | 09.12.09 |                            |                  |
| DRAWN : TY. SUZUKI    |                            |                  | 09.12.09 |                            |                  |
| DRAWING NO.           |                            |                  |          | EDC3-116507-00             |                  |
| PART NO.              |                            |                  |          | HR30-7PB-12SC              |                  |
| CODE NO.              |                            |                  |          | CL130-0033-0-00            |                  |
|                       |                            |                  |          | 1/1                        |                  |