

In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

TO  
PCM  
USA

| COUNT   | DESCRIPTION OF REVISIONS  | BY   | CHKD     | DATE              | COUNT | DESCRIPTION OF REVISIONS  | BY               | CHKD | DATE |
|---|---|--|----------|-------------------|-------|---------------------------|------------------|------|------|
| <b>APPLICATION STANDARD</b>                                       |   |  |          |                   |       |                           |                  |      |      |
|   | OPERATING TEMPERATURE RANGE   | -55 °C TO +85 °C   |          |                   |       | STORAGE TEMPERATURE RANGE | --- °C TO --- °C |      |      |
|   | RATING VOLTAGE  | 200V AC  |          |                   |       | OPERATING HUMIDITY RANGE  | --- % TO --- %   |      |      |
|   | CURRENT   | 2 A  |          |                   |       | APPLICABLE CABLE          | _____            |      |      |
| <b>SPECIFICATIONS</b>   |   |  |          |                   |       |                           |                  |      |      |
| ITEM  | TEST METHOD   | REQUIREMENT  | QT       | AT                |       |                           |                  |      |      |
| <b>CONSTRUCTION</b>   |   |  |          |                   |       |                           |                  |      |      |
| GENERAL EXAMINATION   | VISUALLY AND BY MEASURING INSTRUMENT.   | ACCORDING TO DRAWING   | ○        | ○                 |       |                           |                  |      |      |
| MARKING   | CONFIRMED VISUALLY  |  | ○        | ○                 |       |                           |                  |      |      |
| <b>ELECTRICAL CHARACTERISTICS</b>                                 |   |  |          |                   |       |                           |                  |      |      |
| CONTACT RESISTANCE  | 100 mA (DC OR 1000 Hz)  | 30 mΩ MAX.   | ○        | ○                 |       |                           |                  |      |      |
| CONTACT RESISTANCE  | mV MAX. mA (DC OR Hz)   | mΩ MAX.  | -        | -                 |       |                           |                  |      |      |
| MILLIVOLT LEVEL METHOD  |   |  | -        | -                 |       |                           |                  |      |      |
| INSULATION RESISTANCE   | 500 V DC  | 1000 MΩ MIN.   | ○        | ○                 |       |                           |                  |      |      |
| VOLTAGE PROOF   | 650 V AC FOR 1 min.   | NO FLASHOVER OR BREAKDOWN  | ○        | ○                 |       |                           |                  |      |      |
| <b>MECHANICAL CHARACTERISTICS</b>                                 |   |  |          |                   |       |                           |                  |      |      |
| CONTRACT INSERTION AND EXTRACTION FORCES                          | BY STEEL GAUGE.   | INSERTION FORCE: N MAX. N MIN.   | -        | -                 |       |                           |                  |      |      |
| INSERTION AND WITHDRAWAL FORCES                                   | MEASURED BY APPLICABLE CONNECTOR.   | INSERTION FORCE: 7.84 N MAX. WITHDRAWAL FORCE 0.49 N MIN.  | ○        | ○                 |       |                           |                  |      |      |
| MECHANICAL OPERATION  | 100 TIMES INSERTION AND EXTRACTIONS.  | 1) CONTACT RESISTANCE: 40 mΩ MAX. * OF PART.   | ○        | ○                 |       |                           |                  |      |      |
| VIBRATION   | FREQUENCY: 10 TO 55 Hz. AMPLITUDE: 1.52 mm, - m/s <sup>2</sup> AT 2 h FOR 3 DIRECTIONS. | 1) NO ELECTRICAL DISCONTINUITY OF 1 μs<br>2) CONTACT RESISTANCE: - mΩ MAX.<br>3) NO DAMAGE, CRACK AND LOOSENESS OF PART.   | ○        | ○                 |       |                           |                  |      |      |
| SHOCK   | 490 m/s <sup>2</sup> DURATION OF PULSE 11 ms AT 3 TIMES FOR 3 DIRECTIONS.               |  | ○        | ○                 |       |                           |                  |      |      |
| <b>ENVIRONMENTAL CHARACTERISTICS</b>                              |   |  |          |                   |       |                           |                  |      |      |
| DAMP HEAT (STEADY STATE)  | EXPOSED AT 40±2 °C, 90~95 %, 96 h.  | 1) CONTACT RESISTANCE: 40 mΩ MAX. *<br>2) INSULATION RESISTANCE: 1000 MΩ MIN.  | ○        | ○                 |       |                           |                  |      |      |
| RAPID CHANGE OF TEMPERATURE                                       | TEMPERATURE -55~+5~+35~+85~+5~+35 °C TIME 30 → 10~15 → 30 → 10~15 min. UNDER 5 CYCLES.  | 3) NO DAMAGE, CRACK AND LOOSENESS OF PART.   | ○        | ○                 |       |                           |                  |      |      |
| DAMP HEAT, CYCLIC   | EXPOSED AT % TOTAL TO °C, TO °C, TO h).   | 1) CONTACT RESISTANCE: mΩ MAX.<br>2) INSULATION RESISTANCE: MΩ MIN. (AT HIGH HUMIDITY)<br>3) INSULATION RESISTANCE: MΩ MIN. (AT DRY)<br>4) NO DAMAGE, CRACK AND LOOSENESS OF PART. | -        | -                 |       |                           |                  |      |      |
| DRY HEAT  | EXPOSED AT °C, h.   | 1) CONTACT RESISTANCE: mΩ MAX.<br>2) NO DAMAGE, CRACK AND LOOSENESS OF PART.   | -        | -                 |       |                           |                  |      |      |
| CORROSION SALT MIST   | EXPOSED IN 5 % SALT WATER SPRAY FOR 48 h.   | 1) CONTACT RESISTANCE: 40 mΩ MAX. *<br>2) NO HEAVY CORROSION.  | ○        | ○                 |       |                           |                  |      |      |
| HYDROGEN SULPHIDE   | EXPOSED IN 3 PPM FOR 120 h. (TEST STANDARD: JEIDA-38)                                   |  | ○        | ○                 |       |                           |                  |      |      |
| SULPHUR DIOXIDE   | EXPOSED IN PPM FOR h. (TEST STANDARD: JEIDA-39)   |  | -        | -                 |       |                           |                  |      |      |
| RESISTANCE TO SOLDERING HEAT                                      | SOLDER TEMPERATURE, °C FOR IMMERSION DURATION, s. (MIL-STD-202)                         | NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINAL.   | -        | -                 |       |                           |                  |      |      |
| SOLDERABILITY   | SOLDERED AT SOLDER TEMPERATURE, °C FOR IMMERSION DURATION, s. (MIL-STD-202)             | A NEW UNIFORM COATING OF SOLDER SHALL COVER A MINIMUM OF 95 % OF THE SURFACE BEING IMMERSERD.  | -        | -                 |       |                           |                  |      |      |
| REMARKS   | CONTACT RESISTANCE WITH * MARK IS THE VALUE INCLUDING 2POINTS OF CONTACT.               | DRAWN DESIGNED CHECKED APPROVED RELEASED   |          |                   |       |                           |                  |      |      |
| UNLESS OTHERWISE SPECIFIED, REFER TO MIL-STD-1344                 | AT ASSURANCE TEST AT APPLICABLE TEST  | 99.12.1 99.12.1 97.12.01 97.12.04  |          |                   |       |                           |                  |      |      |
| NOTE  | QT: QUALIFICATION TEST  | AT ASSURANCE TEST  | ○        | ○                 |       |                           |                  |      |      |
| <b>HRS HIROSE ELECTRIC CO., LTD. SPECIFICATION SHEET A3-SP(A)</b> |   |  |          |                   |       |                           |                  |      |      |
| CODE NO. (OLD)  | DRAWING NO.   | ELC4-020728  | CODE NO. | CL 621 - 0180 - 4 |       |                           |                  |      |      |
| CL  |   |  | 1        | 1                 |       |                           |                  |      |      |