

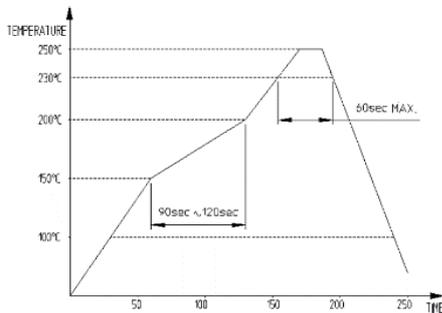
Nov.1.2025 Copyright 2025 HIROSE ELECTRIC CO., LTD. All Rights Reserved.
In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

| REV | COUNT | DESCRIPTION OF REVISIONS | BY | CHKD | DATE | REV | COUNT | DESCRIPTION OF REVISIONS | BY | CHKD | DATE |
|--|---------------------------------|--------------------------|---|------|----------|---|----------|--------------------------|---|------|----------|
| △ | - | Revised | KYG | LHJ | 21.08.30 | △ | 1 | RE-2-2139 | PYB | LHJ | 23.02.07 |
| △ | - | Revised | KYI | LHJ | 21.12.16 | △ | 4 | RE-2-2437 | OSW | LHJ | 23.10.24 |
| APPLICABLE STANDARD | | | Universal Serial Bus Type-C Cable and Connector Specification Release 2.1 Universal Serial Bus Type-C Connectors and Cable Assemblies Compliance Document Revision 2.1b | | | | | | | | |
| RATING | CURRENT | | 1.50A max. for each power pin (i.e. A1, A4, A9, A12, B1, B4, B9, B12) 1.25A max. for VCON(i.e. B5), 0.25A for the other pins | | | | | | | | |
| | VOLTAGE | | 48V AC/DC | | | | | | | | |
| OPERATING CONDITION | | | -40℃ ~ +105℃ (Including Temp. rise), 95% RH Max. (Non-condensing) | | | | | | | | |
| STORAGE CONDITION | | | -10℃ ~ +60℃ (With packing), 15% ~ 70% RH | | | | | | | | |
| Para. | Test Description | | Test Procedure | | | Test Requirement | | | QT | AT | |
| 1 | Examination of product | | EIA 364-18 Visual inspection | | | No physical damage. | | | 0 | 0 | |
| Electrical Requirements | | | | | | | | | | | |
| 2 | Low Level Contact Resistance | | EIA 364-23 Measure at 20mV max open circuit at 100mA max. (DC or 1000Hz) 4-wire measurement is required and the resistance of PCB termination shall be deducted from the reading. | | | Initial : 40mΩ max After test : 50mΩ max | | | 0 | - | |
| 3 | Dielectric Withstanding Voltage | | EIA 364-20 Measure per Method B with unmated condition. 100V AC RMS for 1 minute at sea level. | | | No disruptive discharge. | | | 0 | - | |
| 4 | Insulation Resistance | | EIA 364-21 500V DC with unmated and mated condition. | | | 100MΩ min. | | | 0 | - | |
| Mechanical Requirements | | | | | | | | | | | |
| 5 | Insertion force | | EIA 364-13 Measure at 12.5mm/minute min. | | | Initial : 5N ~ 20N After test : 5N ~ 20N (with virgin plug) | | | 0 | - | |
| 6 | Extraction force | | EIA 364-13 Measure at 12.5mm/minute min. | | | Initial : 8N ~ 20N After test : 6N ~ 20N (with virgin plug) | | | 0 | - | |
| 7 | Durability | | EIA 364-09 Mated 10,000 times Mechanically operated : 500cycles/hr Mating stroke : 2.75mm Insertion, extraction force shall be measured at a maximum speed of 12.5mm/min | | | No physical damage. | | | 0 | - | |
| 8 | Random Vibration | | EIA 364-28 Test Condition VII, Test Letter D Mated specimens to 3.10 G's RMS between 20 to 500Hz 15 minutes in each of 3 mutually perpendicular planes. | | | No physical damage. No discontinuity of 1μs of longer duration when mated connector during test. | | | 0 | - | |
| REMARKS | | | | | DRAFT | DESIGN | CHECK | APPROVAL | RELEASE | | |
| | | | | | Y.B.PARK | Y.B.PARK | H.J.LEE | H.J.LEE |  | | |
| | | | | | 21.08.05 | 21.08.05 | 21.08.05 | 21.08.05 | | | |
| NOTE) QT : QUALIFICATION TEST, AT : ASSURANCE TEST, O : Applicable Test | | | | | | | | | | | |
| DWG NO | | | CL NO | | | PART NO | | | | | |
| ELC4-633145-00 | | | CL 6249-0002-9-000 | | | CX90MW6-16P | | | | | |
|  | | | | | | PRODUCT SPECIFICATION | | | | 1 | 3 |

Nov. 1. 2025 Copyright 2025 HIROSE ELECTRIC CO., LTD. All Rights Reserved.
In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

| Para. | Test Description | Test Procedure | Test Requirement | QT | AT |
|-----------------------------------|---|--|--|----|----|
| Environmental Requirements | | | | | |
| 9 | Temperature Life | EIA 364-17, Method A 105°C without applied voltage for 120 hours. | No physical damage. | O | - |
| 10 | Cyclic Temperature and Humidity | EIA 364-31 25±3°C at 80±3% RH for 1 hour. 65±3°C at 50±3% RH for 1 hour. Thermal ramp : 0.5 hour Number of cycles : 24 cycles | No physical damage. | O | - |
| 11 | Thermal Shock | EIA 364-32 10 cycles -55°C and +105°C | No physical damage. | O | - |
| 12 | Solderability | EIA 364-52 Dwell in 245±5°C of the solder bath for 5 sec. | Solder coverage shall be 95% min. of the immersed surfaces. | O | - |
| 13 | Salt Spray | EIA 364-26 5% of NaCl in 35°C for 48 hours. | No corrossions that affect to the connector operation. | O | - |
| 14 | Co-Planarity | Measure Co-planarity of each contact lead. | 0.08 Max before reflow. 0.10 Max after reflow 2times. | O | - |
| 15 |  High Temperature and Humidity | EIA-364-31 High-temperature 85°C/85% RH for 120 hours. | No physical damage. No change to performance. | O | - |
| 16 | IPX8 | IEC 60529 Immersion in the water at the depth of 1.5m for 30min. | No water leakage. | O | - |
| 17 |  IP6X | IEC 60529 Duration : 8hours at least. Amount of talcum powder of the test chamber : 2 kg/m ³ Dust type : Talcum Powder (less than 75µm) | No ingress of dust | O | - |
| 18 | Temperature Rise | IEC60529, EIA-364-70, method B : A current of 6.0 A shall be applied collectively to VBUS pins (i.e., pins A4, A9, B4, and B9) and 1.5 A applied to the Vconn pin (i.e., B5 of the plug connector) with the return path through the corresponding GND pins (i.e., pins A1, A12, B1, and B12). A minimum current of 0.25 A shall also be applied individually to all the other contacts. | Temperature rise shall not exceed 30°C | O | - |
| 19 | Reflow Heat | Reflow profile [Fig.1] Peak 250°C max for 10 sec 2 times. | No deformation of mold No shape of blister and popcorn | O | - |

REMARKS



 [Fig.1] REFLOW TEMPERATURE

NOTE) QT : QUALIFICATION TEST, AT : ASSURANCE TEST, O : Applicable Test

| | | |
|---------------------------------|------------------------------------|-------------------------------|
| DWG NO ELC4-633145-00 | CL NO CL 6249-0002-9-000 | PART NO CX90MW6-16P |
|---------------------------------|------------------------------------|-------------------------------|

Qualification Test Sequence Table

| Para. | Test Description | Test Group | | | | | | | | | | |
|-------|---------------------------------|------------|-------|------|------|------|------|------|------|------|------|------|
| | | A | B | C | D | E | F | G | H | I | J | K |
| 1 | Examination of product | 1, 6 | 1, 14 | 1, 6 | 1, 6 | 1, 6 | 1, 3 | 1, 6 | 1, 4 | 1, 4 | 1, 4 | 1, 9 |
| 2 | Low Level Contact Resistance | 3, 5 | 3, 13 | 3, 5 | 3, 5 | 3, 5 | | 3, 5 | | | | 3, 8 |
| 3 | Dielectric Withstanding Voltage | | 4, 12 | | | | | | | | | |
| 4 | Insulation Resistance | | 5, 11 | | | | | | | | | |
| 5 | Insertion force | | 6, 10 | | | | | | | | | |
| 6 | Extraction force | | 7, 9 | | | | | | | | | |
| 7 | Durability | | 8 | | | | | | | | | 4 |
| 8 | Random Vibration | 4 | | | | | | | | | | |
| 9 | Temperature Life | | | 4 | | | | | | | | |
| 10 | Cyclic Temperature and Humidity | | | | 4 | | | | | | | |
| 11 | Thermal Shock | | | | | 4 | | | | | | 5 |
| 12 | Solderability | | | | | | 2 | | | | | |
| 13 | Salt Spray | | | | | | | 4 | | | | |
| 14 | Co-planarity | | | | | | | | 3 | | | |
| 15 | High Temperature and Humidity | | | | | | | | | | | 6 |
| 16 | IPX8 | | | | | | | | | 3 | | |
| 17 | IP6X | | | | | | | | | | | 7 |
| 18 | Temperature Rise | | | | | | | | | | 3 | |
| 19 | Reflow Heat | 2 | 2 | 2 | 2 | 2 | | 2 | 2 | 2 | 2 | 2 |

REMARKS

1) Numbers in the table above indicate the sequence corresponding to each test group.

NOTE) QT : QUALIFICATION TEST, AT : ASSURANCE TEST, O : Applicable Test

| | | |
|--------------------------|-----------------------------|------------------------|
| DWG NO ELC4-633145-00 | CL NO CL 6249-0002-9-000 | PART NO CX90MW6-16P |
|--------------------------|-----------------------------|------------------------|



HIROSE KOREA.CO.,LTD

PRODUCT SPECIFICATION

3
3