Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

2007/03/07 18:11:17 TS.SAKAIZAWA
DRAWING FOR REFERENCE:This is subject to change without notice

| APPLICABLE STANDARD | | USB2.0 SPECIFICATION | | |
|---|---|---|---|---|
| RATING | OPERATING TEMPERATURE RANGE | 0 °C TO +50° C | STORAGE TEMPERATURE RANGE | -20 °C TO +60 °C |
| | VOLTAGE | 30V AC | OPERATING HUMIDITY RANGE | - % TO - % |
| | CURRENT<br>1) SIGNAL ONLY<br>2) POWER APPLY | 1) 1 A/pin<br>2) 1.8 A/pin (PIN No.1,5)<br>0.5 A/pin (PIN No.2-4) | APPLICABLE CABLE | USB CABLE<br>1) SIGNAL : AWG 28 MAX<br>2) POWER : AWG 26 MAX |

# SPECIFICATIONS

| ITEM | TEST METHOD | REQUIREMENTS | QT | AT |
|---|---|---|---|---|
| **CONSTRUCTION** | | | | |
| GENERAL EXAMINATION | VISUALLY AND BY MEASURING INSTRUMENT. | ACCORDING TO DRAWING. | X | X |
| MARKING | CONFIRMED VISUALLY. | | X | X |
| **ELECTRIC CHARACTERISTICS** | | | | |
| CONTACT RESISTANCE | 100 mA (DC OR 1000 Hz). | 30 mΩ MAX. | X | X |
| INSULATION RESISTANCE | 500 V DC. | 100 MΩ MIN. | X | X |
| VOLTAGE PROOF | 100 V AC FOR 1 min. | NO FLASHOVER OR BREAKDOWN. | X | X |
| CAPACITANCE | MEASURE ADJACENT TWO CONTACTS AT $1000 \pm 10$ Hz AC VOLTAGE. | 2 pF MAX. | X | — |
| **MECHANICAL CHARACTERISTICS** | | | | |
| INSERTION AND WITHDRAWAL FORCES | A MAXIMUM RATE OF 12.5 mm/min.<br>MEASURED BY APPLICABLE CONNECTOR. | INSERTION FORCE 35 N MAX.<br>WITHDRAWAL FARCE 8 N MIN. | X | — |
| MECHANICAL OPERATION | 10000 TIMES INSERTIONS AND EXTRACTIONS.<br>MATING SPEED<br>- MECHANICALLY OPERATED : 500 CYCLES / h.<br>- MANUALLY OPERATED : 200 CYCLES / h | 1) CONTACT RESISTANCE:<br>NO INCREASE OF MORE THAN 10 m Ω<br>FROM INITIAL VALUE.<br>2) INSERTION FORCE 35 N MAX.<br>WITHDRAWAL FORCE 8 N MIN.<br>3) NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | X | — |
| VIBRATION | FREQUENCY 10 TO 55 Hz,<br>SINGLE AMPLITUDE 0.75 mm,<br>AT 2h FOR 3 DIRECTIONS,TOTAL 6 h. | 1) NO ELECTRICAL DISCONTINUITY OF 1 μs.<br>2) NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | X | — |
| RANDOM VIBRATION | FREQUENCY 50 TO 2000 Hz AT 15 min<br>FOR 3 DIRECTIONS. | | X | — |
| SHOCK | 490 m/s$^2$ DIRECTIONS OF PULSE 11 ms<br>AT 3 TIMES FOR 6 DIRECTIONS,TOTAL 18 TIMES. | | X | — |
| **ENVIRONMENTAL CHARACTERISTICS** | | | | |
| THERMAL SHOCK | TEMP –55 → 15 TO 35 → 85 → 15 TO 35 °C<br>TIME 30 → 2 TO 3 → 30 → 2 TO 3 min.<br>UNDER 10 CYCLES.<br>(MATING APPLICABLE CONNECTOR) | 1) CONTACT RESISTANCE: 70 mΩ MAX.<br>2) INSULATION RESISTANCE: 10 MΩ MIN.<br>3) NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | X | — |
| HUMIDITY LIFE | TEMPERATURE –10 TO 65 °C,HUMIDITY 90 TO 98 %<br>UNDER 7 CYCLES. (168 h)<br>(MATING APPLICABLE CONNECTOR) | NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | X | — |
| DRY HEAT | EXPOSED AT $85 \pm 2$ °C, 96 h.<br>(MATING APPLICABLE CONNECTOR) | NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | X | — |
| COLD | EXPOSED AT $-40 \pm 2$ °C, 96 h.<br>(MATING APPLICABLE CONNECTOR) | NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | X | — |
| CORROSION SALT MIST | EXPOSED IN 5 % SALT WATER, 35 °C, FOR $48 \pm 4$ h. | NO HEAVY CORROSION. | X | — |
| RESISTANCE TO SOLDERING HEAT | TEMPERATURE : $350 \pm 10$ °C<br>TIME : $5 \pm 1$ s AT SOLDERING PARTS | NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | X | — |
| | | | | |

| | COUNT | DESCRIPTION OF REVISIONS | DESIGNED | CHECKED | DATE |
|---|---|---|---|---|---|
| A | | | | | |

REMARK

Unless otherwise specified, refer to USB2.0 or EIA364

| | | |
|---|---|---|
| APPROVED | A0. SUZUKI | 07. 03. 06 |
| CHECKED | HK. TANAKA | 07. 03. 06 |
| DESIGNED | TS. SAKAIZAWA | 07. 03. 06 |
| DRAWN | TS. SAKAIZAWA | 07. 03. 06 |

Note QT:Qualification Test AT:Assurance Test X:Applicable Test

DRAWING NO. ELC4-126085-00

HRS

SPECIFICATION SHEET

HIROSE ELECTRIC CO., LTD.

PART NO. ZX20-B-5S-UNIT

CODE NO. CL242-0012-8-00 A 1/1

FORM HD0011-2-1

2007/03/07 18:11:18 TS.SAKAIZAWA
DRAWING FOR REFERENCE:This is subject to change without notice

| APPLICABLE STANDARD | | USB2.0 SPECIFICATION | | |
|---|---|---|---|---|
| RATING | OPERATING TEMPERATURE RANGE | 0 °C TO +50° C | STORAGE TEMPERATURE RANGE | -20 °C TO +60 °C |
| | VOLTAGE | - | OPERATING HUMIDITY RANGE | - % TO - % |
| | CURRENT | - | APPLICABLE CABLE | - |

# SPECIFICATIONS

| ITEM | TEST METHOD | REQUIREMENTS | QT | AT |
|---|---|---|---|---|
| CONSTRUCTION | | | | |
| GENERAL EXAMINATION | VISUALLY AND BY MEASURING INSTRUMENT. | ACCORDING TO DRAWING. | X | X |
| MARKING | CONFIRMED VISUALLY. | | X | X |

| | COUNT | DESCRIPTION OF REVISIONS | DESIGNED | CHECKED | DATE |
|---|---|---|---|---|---|
| A0 | | | | | |

REMARK

| | | |
|---|---|---|
| APPROVED | A0. SUZUKI | 07. 03. 06 |
| CHECKED | HK. TANAKA | 07. 03. 06 |
| DESIGNED | TS. SAKAIZAWA | 07. 03. 06 |
| DRAWN | TS. SAKAIZAWA | 07. 03. 06 |

Note QT:Qualification Test AT:Assurance Test X:Applicable Test

DRAWING NO. ELC4-126148-00

HRS

SPECIFICATION SHEET

HIROSE ELECTRIC CO., LTD.

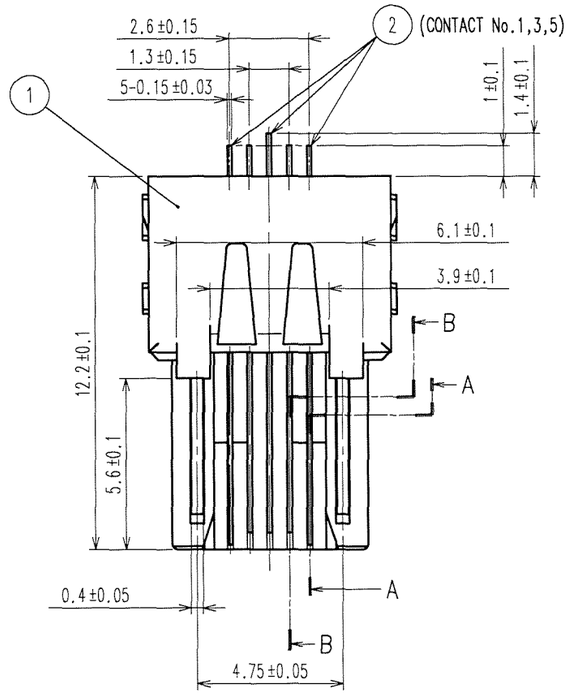
PART NO. ZX20-B-SLDC

CODE NO. CL242-0022-1-00 A0 1/1

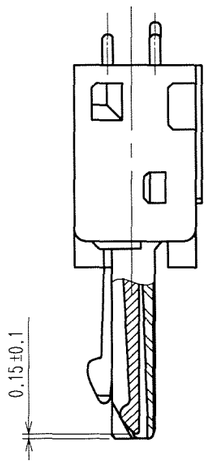
FORM HD0011-2-1

DRAWING FOR REFERENCE: This is subject to change without notice
2007/03/07 18:11:18 TS.SAKAIZAWA

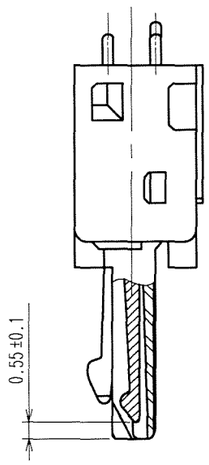
| | COUNT | DESCRIPTION OF REVISIONS | BY | CHKD | DATE | | COUNT | DESCRIPTION OF REVISIONS | BY | CHKD | DATE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| △ | | | | | . . | △ | | | | | . . |
| △ | | | | | . . | △ | | | | | . . |
| △ | | | | | . . | △ | | | | | . . |

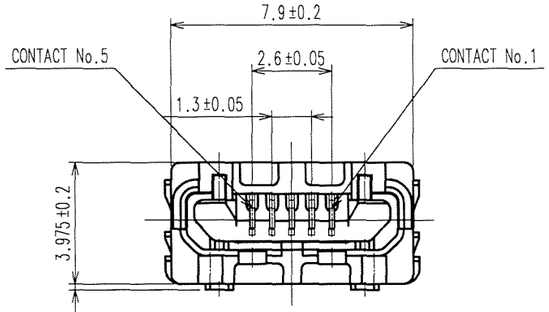


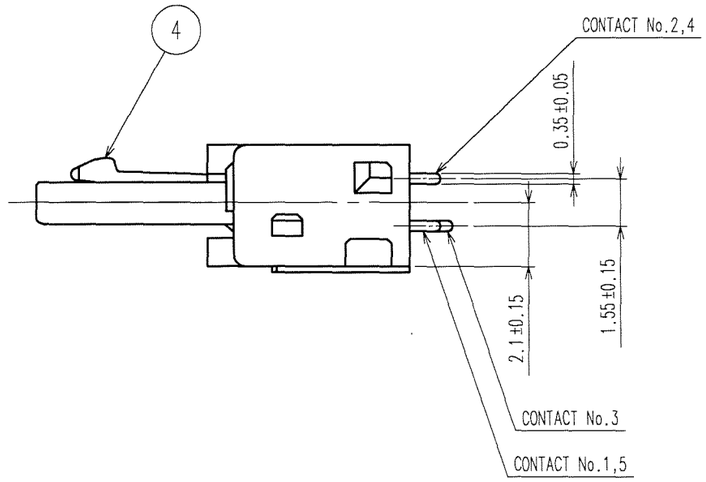

A-A(CONTACT No.1,5)




B-B(CONTACT No.2,3,4)



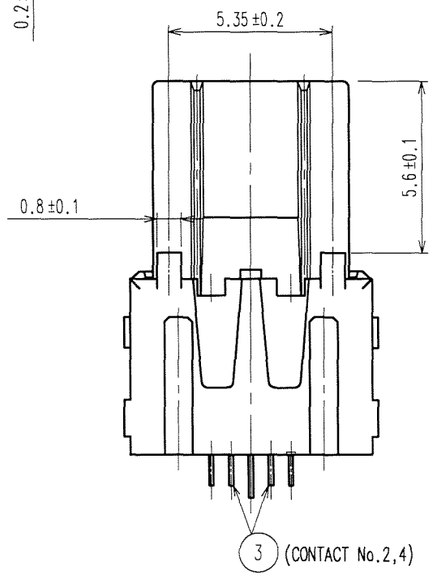
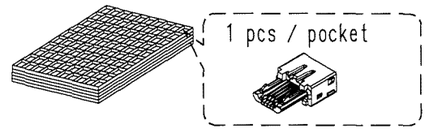
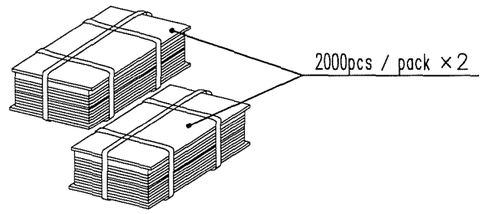




Fig - 1 PACKING SPECIFICATION -In the case of 4000 pcs-

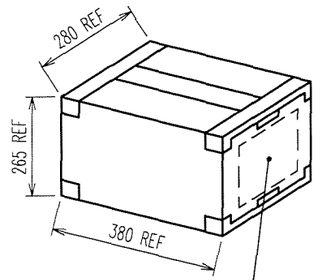
1.STORED IN A TRAY (200pcs / tray)



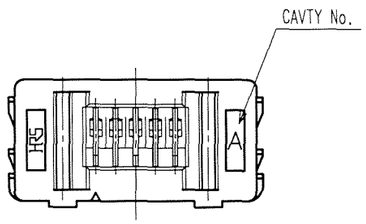

2.BANDED FOR A PACK




3.STORED IN A CARTON BOX




SHOWN AS FOLLOWS;
- Part No.
- Code No.
- QTY
- Lot No.




NOTES [1] PLATING
UNDER PLATING : NICKEL 2 μm MIN.
CONTACT AREA : GOLD 0.75 μm MIN.
LEAD AREA : TIN 1 μm MIN.

| NO. | MATERIAL | FINISH, REMARKS | NO. | MATERIAL | FINISH, REMARKS |
|---|---|---|---|---|---|
| 2 | COPPER ALLOY | [1] | 4 | STAINLESS STEEL | |
| 1 | LCP | UL94V-0, BLACK | 3 | COPPER ALLOY | [1] |

| CODE NO.(OLD) | DRAWN | DESIGNED | CHECKED | APPROVED | RELEASED |
|---|---|---|---|---|---|
| | T.Sakaizawa '07.03.06 | T.Sakaizawa '07.03.06 | H.Tomioka '07.03.06 | '07.03.06 | . . |

| SCALE | DRAWING NO. | PART NO. |
|---|---|---|
| 5 : 1 | EDC3-126085 | ZX20-B-5S-UNIT |
| UNITS mm | HIROSE ELECTRIC CO., LTD | CODE NO. CL242-0012-8 1/2 |

TO

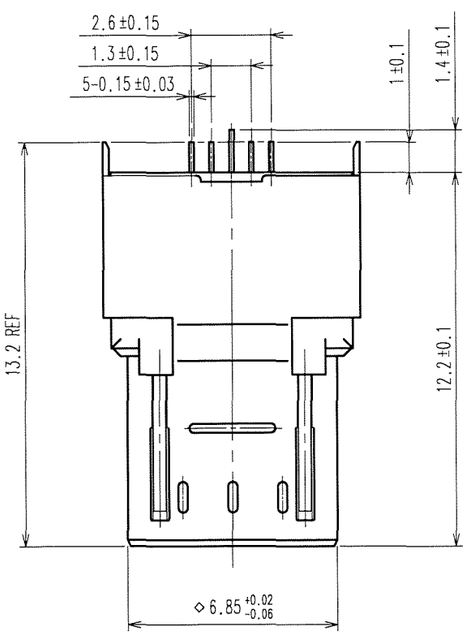
FORM NO.229

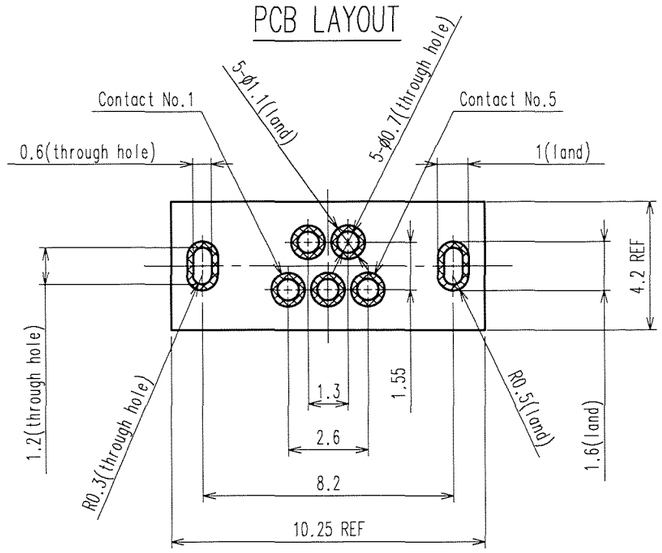
DRAWING FOR REFERENCE: This is subject to change without notice

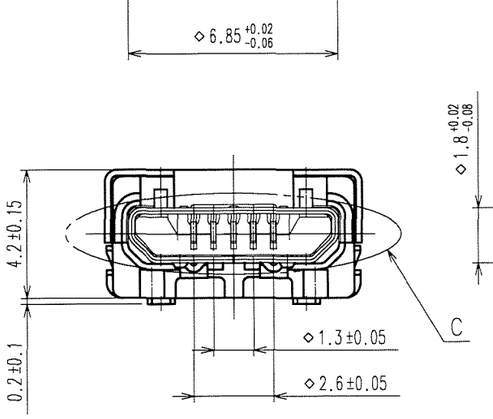
2007/03/07 18:11:19 TS.SAKAIZAWA

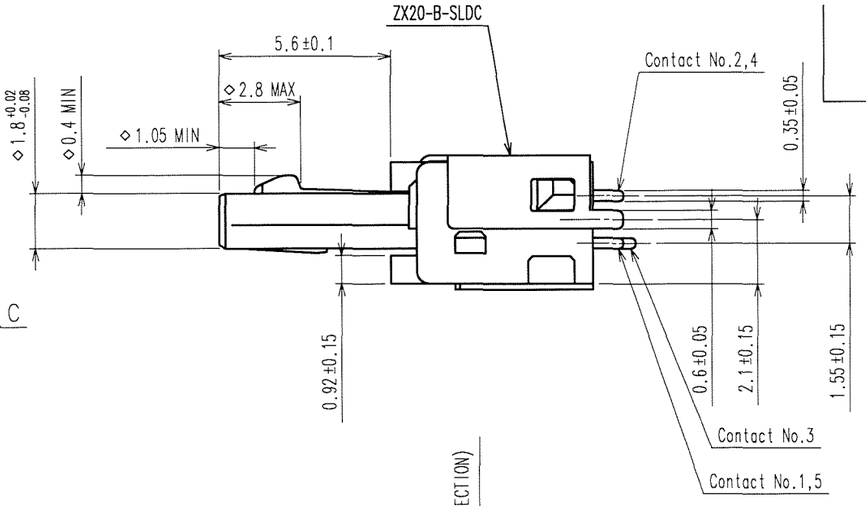
| COUNT | DESCRIPTION OF REVISIONS | BY | CHKD | DATE | | COUNT | DESCRIPTION OF REVISIONS | BY | CHKD | DATE |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | . . | | | | | | . . |
| | | | | . . | | | | | | . . |
| | | | | . . | | | | | | . . |

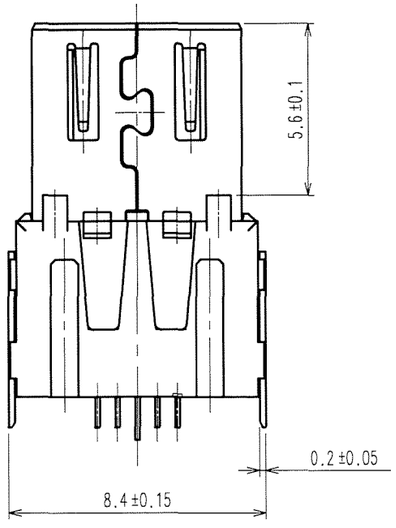
## 2 Fig-2 SHIELDING-PLATE ASSEMBLY

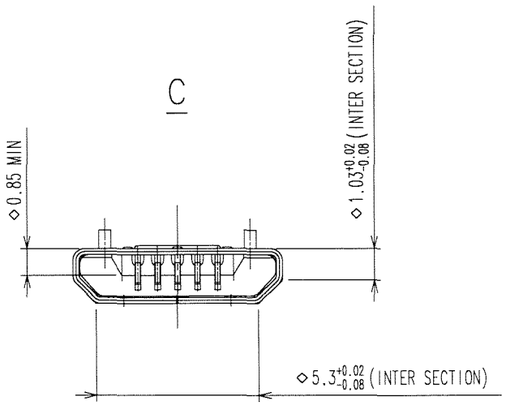


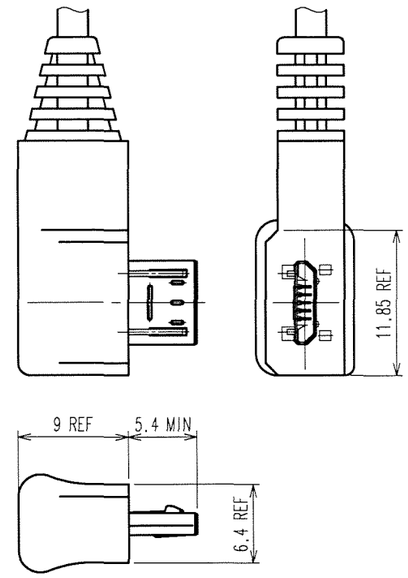



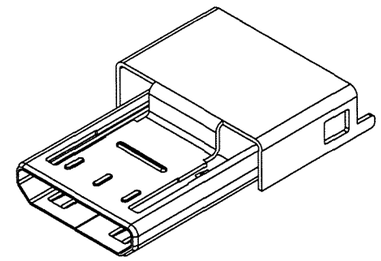




## Fig-3 OVER-MOLDING(REFERENCE)



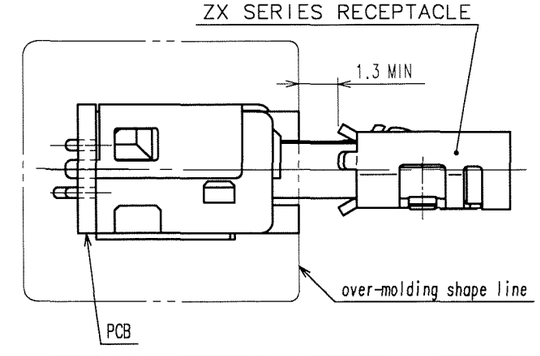

## 2 ZX20-B-SLDC

Code No. CL242-0022-1



NOTE:
- SOLD SEPARATELY
- DELIVERED BY THE REEL

## Fig-4 MATED CONDITION




NOTES 2 SHIELDING-PLATE, ZX20-B-SLDC, IS USED FOR ASSEMBLY.

3. "◇"SYMBOL ADDED TO EACH DIMENSION MEANS CRITICAL DIMENSION ON USB SPECIFICATION. PLEASE CHECK THEM AFTER OVER-MOLDING.

| TO |
|---|
| |
| |
| |
| |

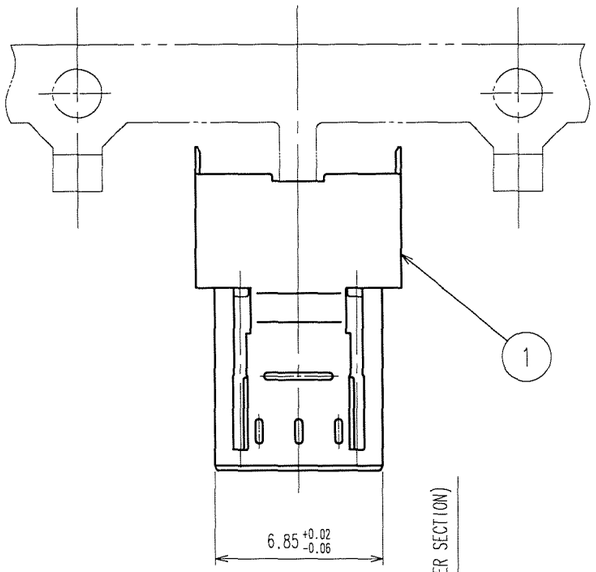
| CODE NO.(OLD) | DRAWN | DESIGNED | CHECKED | APPROVED | RELEASED |
|---|---|---|---|---|---|
| | T.Sakaizawa '07.03.06 | T.Sakaizawa '07.03.06 | H.Yamabe '07.03.06 | '07.03.06 | . . |

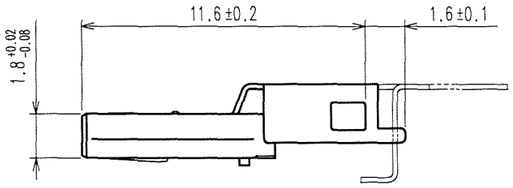
| SCALE | DRAWING NO. | PART NO. |
|---|---|---|
| 5 : 1 | EDC3-126085 | ZX20-B-5S-UNIT |
| UNITS mm | HIROSE ELECTRIC CO., LTD | CODE NO. CL242-0012-8 2/ |

FORM NO.229

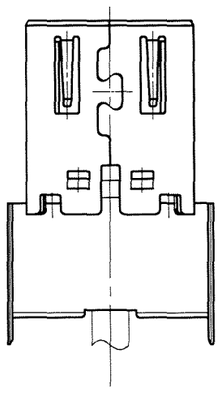
2007/03/07 18:11:19 TS.SAKAIZAWA
DRAWING FOR REFERENCE:This is subject to change without notice

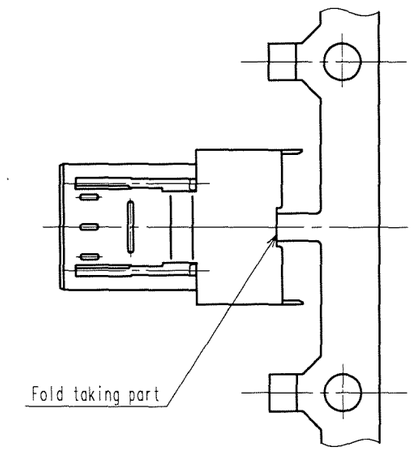
| | COUNT | DESCRIPTION OF REVISIONS | BY | CHKD | DATE | | COUNT | DESCRIPTION OF REVISIONS | BY | CHKD | DATE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| △ | | | | | . . | △ | | | | | . . |
| △ | | | | | . . | △ | | | | | . . |
| △ | | | | | . . | △ | | | | | . . |

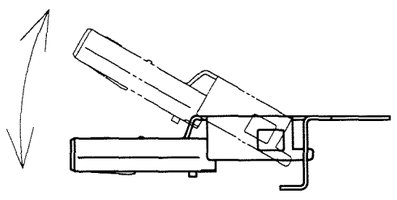


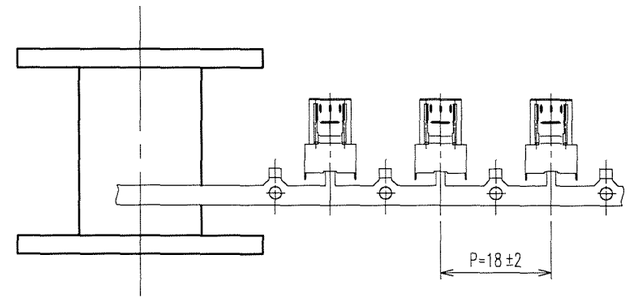

3 Fig-2 CUT OFF A CAREER(FREE)

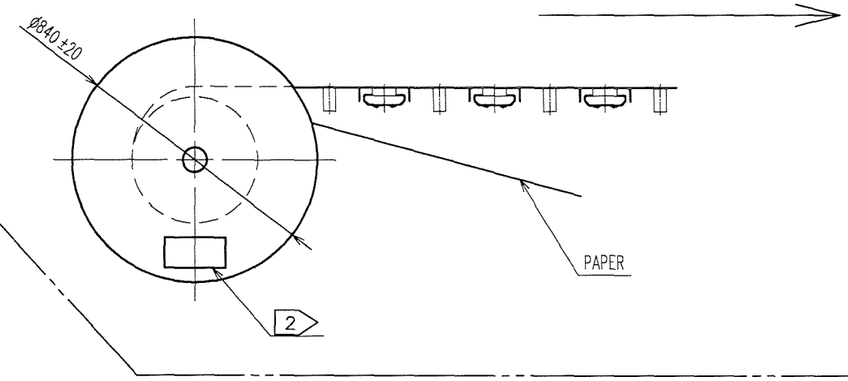




1 Fig-1 REELING(FREE)




NOTE 1 This is delivered by a reel.QTY:4000pcs.

2 Shown on a reel and a box is ; "Part No.", "Code No.", "Lot No.", "QTY"

3 Cut off a career as shown in Fig-2.

| NO. | MATERIAL | FINISH, REMARKS |
|---|---|---|
| 1 | STAINLESS STEEL | Nickel 0.1 μm min. |

| CODE NO.(OLD) | DRAWN | DESIGNED | CHECKED | APPROVED | RELEASED |
|---|---|---|---|---|---|
| | T.Sakaizawa '07.03.06 | T.Sakaizawa '07.03.06 | H.Tomabechi '07.03.06 | '07.03.06 | . . |

| | | |
|---|---|---|
| SCALE 4 : 1 | DRAWING NO. EDC3-126148 | PART NO. ZX20-B-SLDC |
| UNITS mm | HRS HIROSE ELECTRIC CO., LTD | CODE NO. CL242-0022-1 |

1/1

FORM NO.229

TO