

1300 SERIES RECTANGULAR CONNECTORS

Introduction

MINICON 1300 series is a collection of small, rectangular, multi-contact connectors which HIROSE has developed in order to meet the most stringent demands of high performance and small size equipment manufacturing. The number of contacts available are 8, 12, 16, 20, 24, 28, 34, 45, and 60. Connector inserts

(soldering, crimping, and wire wrapping) along with various accessories are available for a wide range of applications. The plug shell has a rugged push-button lock mechanism to ensure reliable connection. These connectors conform to NTT specifications (SPEC NO.1931).

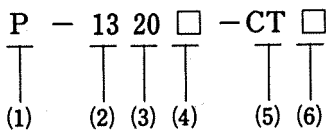
Electrical and Environmental Characteristics

| Item | Standard |
|-----------------------|----------------------|
| Contact resistance | 5mΩ Max |
| Current rating | 5A |
| Voltage rating | AC400V |
| Insulation resistance | 1000MΩ min at DC500V |
| Withstand voltage | AC1200V for 1 minute |

Material and Finish

| Description | Material | Finish |
|-----------------|---------------------|--|
| Molding | Epoxywith | 1 light-green colour |
| Pin contact | Brass | Silver plated |
| Socket contact | Phosphor bronze | Silver plated |
| Plug shell | Zinc alloy die cast | Black baked finish (MTT spec:2.5P B6/2 baked finish) |
| Stopper bracket | Mild steel | |
| Handle | Mild steel | Bichromic acid treatment |

Ordering Information



(1) Shape of terminal opening

P: Male contact
S: Female contact

(2) Series name

13: 1300 series

(3) Number of contacts

(4) Termination

No sign: Soldering

W: Wrapping (signs for sub-groups of "wrapping" are suffixed to W, see tables)

(5) Accessories

CT: Plug case with vertical cable inlet opening

CE: Plug case with horizontal cable inlet opening

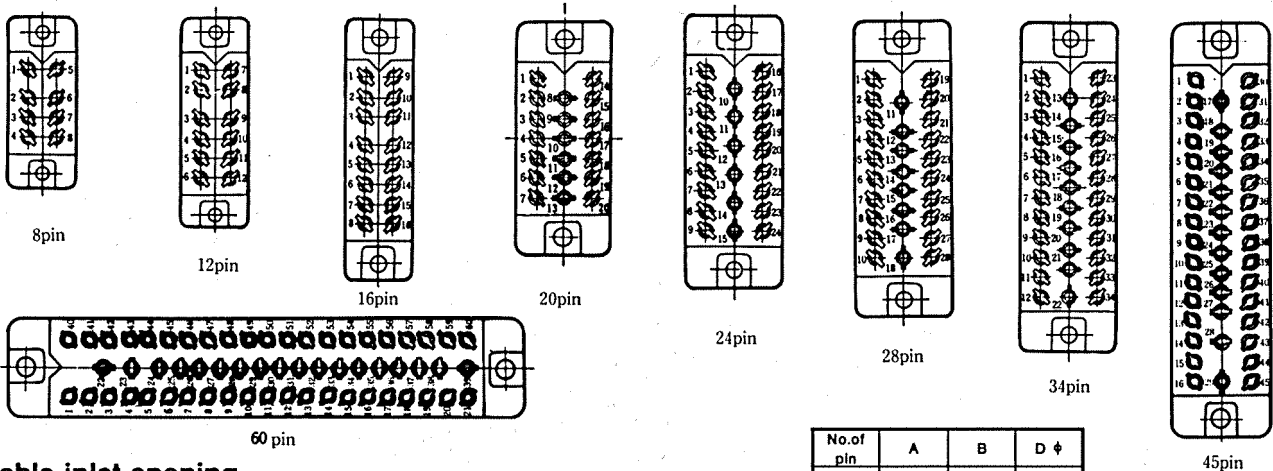
SB: Stopper bracket

H: Handle

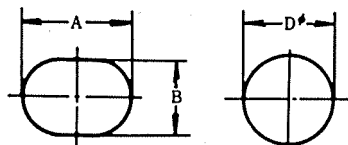
(6) Serial signs for accessories

Contact Arrangements

Figures show connectors viewed from the surface of sockets, namely, the fitting side of socket connectors. Plug units are arranged symmetrically.



cable inlet opening

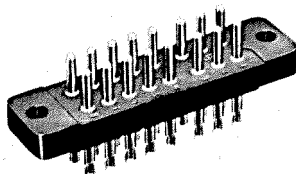


| No. of pin | A | B | D φ |
|------------|------|----|-----|
| 8 | | | 10 |
| 12 | 14 | 10 | |
| 16 | 17.5 | 10 | |
| 20 | 19.2 | 14 | |
| 24 | | | 14 |
| 28 | 28 | 14 | |
| 34 | 30 | 14 | |
| 45 | 27 | 14 | |
| 60 | 34 | 14 | |

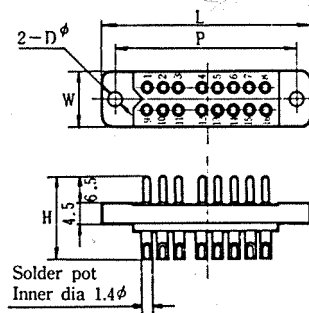
Cross Reference to NTT NO. NTT to HRS

| NTT No. | Short Form | HRS No. | page | NTT No. | Short Form | HRS No. | page |
|--------------|------------|----------------|------|---------------|------------|-----------------|------|
| CN-1208DLPMS | 8DLPMS | P-1308-CTA(02) | 84 | CN-4824DJMS | 24DJMS | P-1324-SB(02) | 84 |
| CN-1208DWPMS | 8DWPMS | P-1308-CEA(02) | 85 | CN-5228DLPMS | 28DLPMS | P-1328-CTA(02) | 84 |
| CN-1208DJFS | 8DJFS | S-1308-SB(02) | 86 | CN-5228DWPMS | 28DWPMS | P-1328-CEA(02) | 85 |
| CN-1208DLPFS | 8DLPFS | S-1308-CTA(02) | 84 | CN-5228DJFS | 28DJFS | S-1328-SB(02) | 86 |
| CN-1208DWPFS | 8DWPFS | S-1308-CEA(02) | 85 | CN-5226DLPFS | 28DLPFS | S-1328-CTA(02) | 84 |
| CN-1208DJMS | 8DJMS | P-1308-SB(02) | 86 | CN-5228DWPFS | 28DWPFS | S-1328-CEA(02) | 85 |
| CN-3712DLPMS | 12DLPMS | P-1312-CTA(02) | 84 | CN-5228DJMS | 28DJMS | P-1328-SB(02) | 86 |
| CN-3712DWPMS | 12DWPMS | P-1312-CEA(02) | 85 | CN-5834DLPMS | 34DLPMS | P-1334-CTA(02) | 84 |
| CN-3712DJFS | 12DJFS | S-1312-SB(02) | 86 | CN-5834DWPMS | 34DWPMS | P-1334-CEA(02) | 85 |
| CN-3712DLPFS | 12DLPFS | S-1312-CTA(02) | 84 | CN-5834DJFS | 34DJFS | S-1334-SB(02) | 86 |
| CN-3712DWPFS | 12DWPFS | S-1312-CEA(02) | 85 | CN-5834DLPFS | 34DLPFS | S-1334-CTA(02) | 84 |
| CN-3712DJMS | 12DJMS | P-1312-SB(02) | 86 | CN-5834DWPFS | 34DWPFS | S-1334-CEA(02) | 85 |
| CN-4616DLPMS | 16DLPMS | P-1316-CTA(02) | 84 | CN-5834DJMS | 34DJMS | P-1334-SB(02) | 86 |
| CN-4616DWPMS | 16DWPMS | P-1316-CEA(02) | 85 | CN-3712DWPMSN | 12DWPMSN | P-1312-CEA1(02) | — |
| CN-4616DJFS | 16DJFS | S-1316-SB(02) | 86 | CN-4616DWPMSN | 16DWPMSN | P-1316-CEA1(02) | — |
| CN-4616DLPFS | 16DLPFS | S-1316-CTA(02) | 84 | CN-4120DWPMSN | 20DWPMSN | P-1320-CEA1(02) | — |
| CN-4616DWPFS | 16DWPFS | S-1316-CEA(02) | 85 | CN-5228DWPMSN | 28DWPMSN | P-1328-CEA1(02) | — |
| CN-4616DJMS | 16DJMS | P-1316-SB(02) | 86 | CN-5834DWPMSN | 34DWPMSN | P-1334-CEA1(02) | — |
| CN-4120DLPMS | 20DLPMS | P-1320-CTA(02) | 84 | CN-5834DWPFSN | 34DWPFSN | S-1334-CEA1(02) | — |
| CN-4120DWPMS | 20DWPMS | P-1320-CEA(02) | 85 | CN-5228DWPFSN | 28DWPFSN | S-1328-CEA1(02) | — |
| CN-4120DJFS | 20DJFS | S-1320-SB(02) | 86 | CN-3712DM | 12DM | P-1312 | 83 |
| CN-4120DLPFS | 20DLPFS | S-1320-CTA(02) | 84 | CN-3712DF | 12DF | S-1312 | 83 |
| CN-4120DWPFS | 20DWPFS | S-1320-CEA(02) | 85 | CN-5834DM | 34DM | P-1334B | 83 |
| CN-4120DJMS | 20DJMS | P-1320-SB(02) | 86 | CN-5834DF | 34DF | S-1334B | 83 |
| CN-4824DLPMS | 24DLPMS | P-1324-CTA(02) | 84 | CN-7245DM | 45DM | P-1345B | 83 |
| CN-4824DWPMS | 24DWPMS | P-1324-CEA(02) | 85 | CN-7245DF | 45DF | S-1345B | 83 |
| CN-4824DJFS | 24DJFS | S-1324-SB(02) | 86 | CN-9060DM | 60DM | P-1360B | 83 |
| CN-4824DLPFS | 24DLPFS | S-1324-CTA(02) | 84 | CN-9060DF | 60DF | S-1360B | 83 |
| CN-4824DWPFS | 24DWPFS | S-1324-CEA(02) | 85 | | | | |

Pin Insert



CL213-0003-1
P-1316

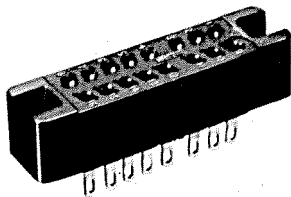


Unit: mm

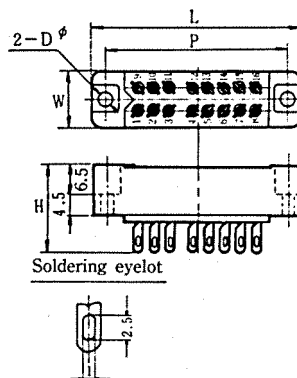
| HRS No. | No. of Pin | Part No. | L | P | W | H | Dφ |
|-------------------|------------|-------------|----|----|----|----|-----|
| * CL213-0001-6-09 | 8 | P-1308(09) | 30 | 25 | 12 | 19 | 2.8 |
| * CL213-0002-9-09 | 12 | P-1312(09) | 37 | 32 | 12 | 19 | 2.8 |
| CL213-0003-1-09 | 16 | P-1316(09) | 46 | 40 | 12 | 19 | 3.2 |
| * CL213-0004-4-09 | 20 | P-1320(09) | 41 | 35 | 17 | 19 | 3.2 |
| * CL213-0005-7-09 | 24 | P-1324(09) | 48 | 42 | 17 | 19 | 3.2 |
| * CL213-0006-0-09 | 28 | P-1328(09) | 52 | 46 | 17 | 19 | 3.2 |
| * CL213-0007-2-09 | 34 | P-1334(09) | 58 | 52 | 17 | 19 | 3.2 |
| * CL213-0098-8-09 | 34 | P-1334B(09) | 58 | 52 | 17 | 22 | 3.2 |
| * CL213-0117-0-09 | 45 | P-1345B(09) | 72 | 66 | 17 | 22 | 3.2 |
| * CL213-0099-0-09 | 60 | P-1360B(09) | 90 | 84 | 17 | 22 | 3.2 |

*: Standard

Socket Insert



CL213-0010-7
S-1316

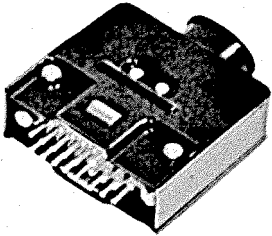


Unit: mm

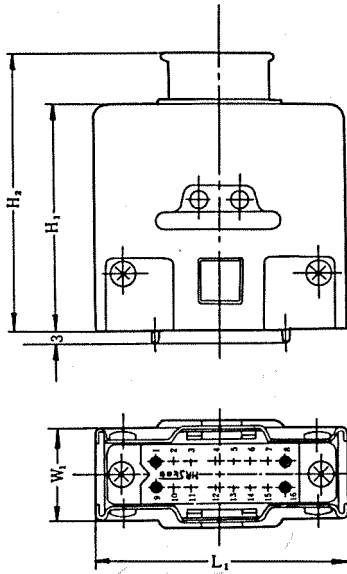
| HRS No. | No. of Pin | Part No. | L | P | W | H | Dφ |
|-------------------|------------|-------------|----|----|----|----|-----|
| * CL213-0008-5-09 | 8 | S-1308(09) | 30 | 25 | 12 | 19 | 2.8 |
| * CL213-0009-8-09 | 12 | S-1312(09) | 37 | 32 | 12 | 19 | 2.8 |
| * CL213-0010-7-09 | 16 | S-1316(09) | 46 | 40 | 12 | 19 | 3.2 |
| * CL213-0011-0-09 | 20 | S-1320(09) | 41 | 35 | 17 | 19 | 3.2 |
| * CL213-0012-2-09 | 24 | S-1324(09) | 48 | 42 | 17 | 19 | 3.2 |
| * CL213-0013-5-09 | 28 | S-1328(09) | 52 | 46 | 17 | 19 | 3.2 |
| * CL213-0014-8-09 | 34 | S-1334(09) | 58 | 52 | 17 | 19 | 3.2 |
| * CL213-0101-0-09 | 34 | S-1334B(09) | 58 | 52 | 17 | 22 | 3.2 |
| * CL213-0118-3-09 | 45 | S-1345B(09) | 72 | 66 | 17 | 22 | 3.2 |
| * CL213-0102-3-09 | 60 | S-1360B(09) | 90 | 84 | 17 | 22 | 3.2 |

*: Standard

Connectors with Lockable Case, Straight Cable-Inlet



CL213-0426-5
P-1316-CTA

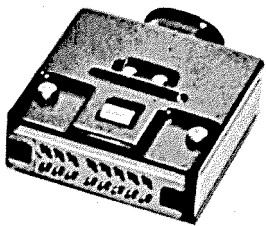


Unit: mm

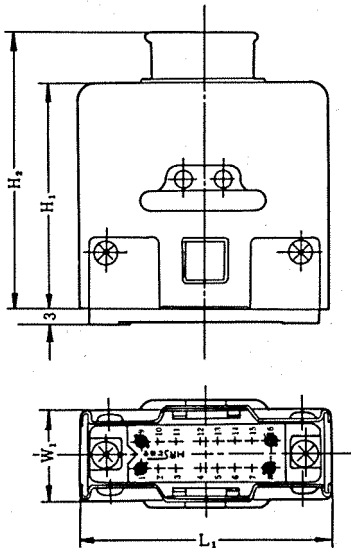
| HRS No. | No. of Pin | Part No. | L ₁ | W ₁ | H ₁ | H ₂ | cable Inlet |
|------------------|------------|-----------------|----------------|----------------|----------------|----------------|-------------|
| *CL213-0424-0-09 | 8 | P-1308-CTA(09) | 33.5 | 18.5 | 36 | 45 | D φ |
| *CL213-0425-2-09 | 12 | P-1312-CTA(09) | 40.5 | 18.5 | 41 | 50 | A×B |
| *CL213-0426-5-09 | 16 | P-1316-CTA(09) | 49.5 | 18.5 | 45 | 55 | A×B |
| *CL213-0427-8-09 | 20 | P-1320-CTA(09) | 44.5 | 23.5 | 48 | 58 | A×B |
| *CL213-0428-0-09 | 24 | P-1324-CTA(09) | 51.5 | 23.5 | 40 | 50 | D φ |
| *CL213-0429-3-09 | 28 | P-1328-CTA(09) | 55.5 | 23.5 | 57 | 67 | A×B |
| *CL213-0373-0-09 | 34 | P-1334-CTA(09) | 61.5 | 23.5 | 59 | 69 | A×B |
| *CL213-0354-6-09 | 45 | P-1345B-CTA(09) | 76 | 23.5 | 56 | 66 | A×B |
| *CL213-0367-8-09 | 60 | P-1360B-CTA(09) | 94 | 23.5 | 63 | 73 | A×B |

* standard

* see page 82 for cable inlet size.



CL213-0432-8
S-1316-CTA



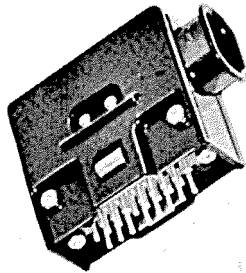
Unit: mm

| HRS No. | No. of Pin | Part No. | L ₁ | W ₁ | H ₁ | H ₂ | cable Inlet |
|------------------|------------|-----------------|----------------|----------------|----------------|----------------|-------------|
| *CL213-0430-2-09 | 8 | S-1308-CTA(09) | 33.5 | 18.5 | 36 | 45 | D φ |
| *CL213-0431-5-09 | 12 | S-1312-CTA(09) | 40.5 | 18.5 | 41 | 50 | A×B |
| *CL213-0432-8-09 | 16 | S-1316-CTA(09) | 49.5 | 18.5 | 45 | 55 | A×B |
| *CL213-0433-0-09 | 20 | S-1320-CTA(09) | 44.5 | 23.5 | 48 | 58 | A×B |
| *CL213-0434-3-09 | 24 | S-1324-CTA(09) | 51.5 | 23.5 | 40 | 50 | D φ |
| *CL213-0435-6-09 | 28 | S-1328-CTA(09) | 55.5 | 23.5 | 57 | 67 | A×B |
| *CL213-0374-3-09 | 34 | S-1334-CTA(09) | 61.5 | 23.5 | 59 | 69 | A×B |
| *CL213-0355-9-09 | 45 | S-1345B-CTA(09) | 76 | 23.5 | 56 | 66 | A×B |
| *CL213-0368-0-09 | 60 | S-1360B-CTA(09) | 94 | 23.5 | 63 | 73 | A×B |

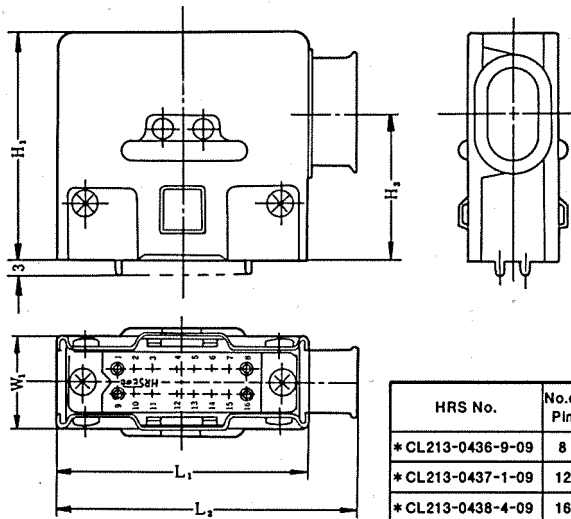
* standard

* see page 82 for cable inlet size.

Side Cable-Inlet



CL213-0438-4
P-1316-CEA

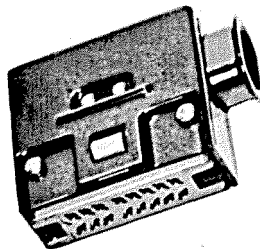


Unit: mm

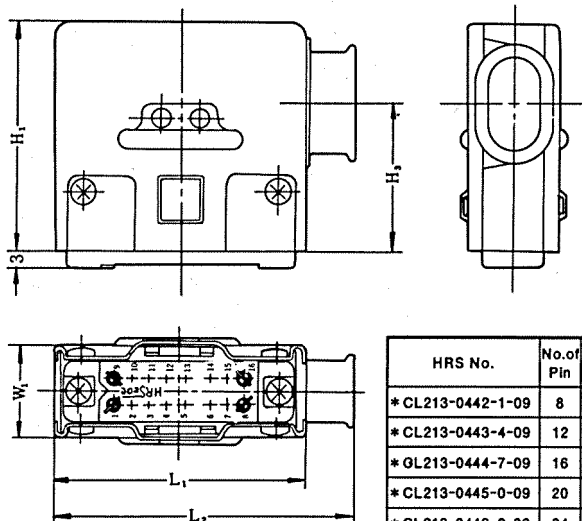
| HRS No. | No. of Pin | Part No. | L ₁ | L ₂ | W ₁ | H ₁ | H ₂ | cable inlet * |
|-------------------|------------|-----------------|----------------|----------------|----------------|----------------|----------------|---------------|
| * CL213-0436-9-09 | 8 | P-1308-CEA(09) | 33.5 | 42.5 | 18.5 | 36 | 24.5 | D φ |
| * CL213-0437-1-09 | 12 | P-1312-CEA(09) | 40.5 | 49.5 | 18.5 | 41 | 27 | AXB |
| * CL213-0438-4-09 | 16 | P-1316-CEA(09) | 49.5 | 59.5 | 18.5 | 41 | 29 | AXB |
| * CL213-0439-7-09 | 20 | P-1310-CEA(09) | 44.5 | 54.5 | 23.5 | 48 | 30.5 | AXB |
| * CL213-0440-6-09 | 24 | P-1324-CEA(09) | 51.5 | 61.5 | 23.5 | 40 | 26.5 | AXB |
| * CL213-0441-9-09 | 28 | P-1328-CEA(09) | 55.5 | 65.5 | 23.5 | 57 | 35 | AXB |
| * CL213-0375-6-09 | 34 | P-1334-CEA(09) | 61.5 | 71.5 | 23.5 | 59 | 36 | AXB |
| * CL213-0356-1-09 | 45 | P-1345B-CEA(09) | 76 | 86 | 23.5 | 56 | 34.5 | AXB |
| * CL213-0369-3-09 | 60 | P-1360B-CEA(09) | 94 | 104 | 23.5 | 63 | 38 | AXB |

* standard

* see page 82 for cable inlet size.



CL213-0444-7
S-1316-CEA



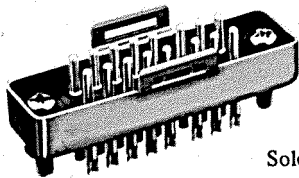
Unit: mm

| HRS No. | No. of Pin | Part No. | L ₁ | L ₂ | W ₁ | H ₁ | H ₂ | cable inlet * |
|-------------------|------------|-----------------|----------------|----------------|----------------|----------------|----------------|---------------|
| * CL213-0442-1-09 | 8 | S-1308-CEA(09) | 33.5 | 42.5 | 18.5 | 36 | 24.5 | D φ |
| * CL213-0443-4-09 | 12 | S-1312-CEA(09) | 40.5 | 49.5 | 18.5 | 41 | 27 | AXB |
| * CL213-0444-7-09 | 16 | S-1316-CEA(09) | 49.5 | 59.5 | 18.5 | 45 | 29 | AXB |
| * CL213-0445-0-09 | 20 | S-1320-CEA(09) | 44.5 | 54.5 | 23.5 | 48 | 30.5 | AXB |
| * CL213-0446-2-09 | 24 | S-1324-CEA(09) | 51.5 | 61.5 | 23.5 | 40 | 26.5 | D φ |
| * CL213-0447-5-09 | 28 | S-1328-CEA(09) | 55.5 | 65.5 | 23.5 | 57 | 35 | AXB |
| * CL213-0376-9-09 | 34 | S-1334-CEA(09) | 61.5 | 71.5 | 23.5 | 59 | 36 | AXB |
| * CL213-0357-4-09 | 45 | S-1345B-CEA(09) | 76 | 86 | 23.5 | 56 | 34.5 | AXB |
| * CL213-0370-2-09 | 60 | S-1360B-CEA(09) | 94 | 104 | 23.5 | 63 | 38 | AXB |

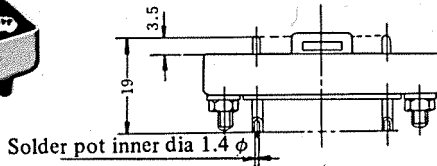
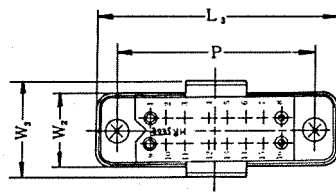
* standard

* see page 82 for cable inlet size.

Connectors with Bracket



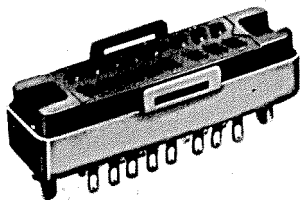
CL213-0045-1
P-1316-SB



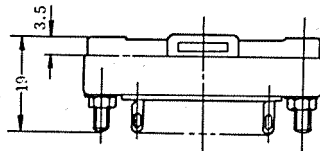
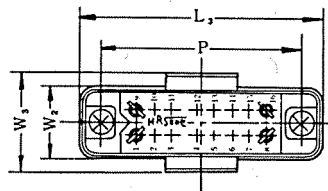
Unit: mm

| HRS No. | No. of Pin | Part No. | W ₂ | W ₃ | P | L ₃ |
|-------------------|------------|----------------|----------------|----------------|----|----------------|
| * CL213-0043-6-09 | 8 | P-1308-SB(09) | 13.5 | 17.5 | 25 | 31.5 |
| * CL213-0044-9-09 | 12 | P-1312-SB(09) | 13.5 | 17.5 | 32 | 38.5 |
| * CL213-0045-1-09 | 16 | P-1316-SB(09) | 13.5 | 17.5 | 40 | 47.5 |
| * CL213-0046-4-09 | 20 | P-1320-SB(09) | 18.5 | 22.5 | 35 | 42.5 |
| * CL213-0047-7-09 | 24 | P-1324-SB(09) | 18.5 | 22.5 | 42 | 49.5 |
| * CL213-0048-0-09 | 28 | P-1328-SB(09) | 18.5 | 22.5 | 46 | 53.5 |
| * CL213-0049-2-09 | 34 | P-1334-SB(09) | 18.5 | 22.5 | 52 | 59.5 |
| * CL213-0358-7-09 | 45 | P-1345B-SB(09) | 18.6 | 22.6 | 66 | 73.5 |
| * CL213-0371-5-09 | 60 | P-1360B-SB(09) | 18.6 | 22.6 | 84 | 91.5 |

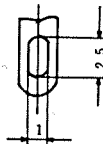
*: standard



CL213-0052-7
S-1316-SB



Solder eyelet

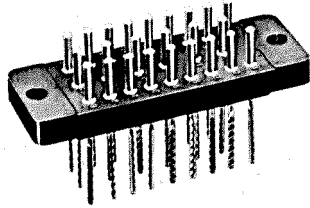


Unit: mm

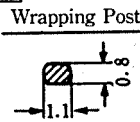
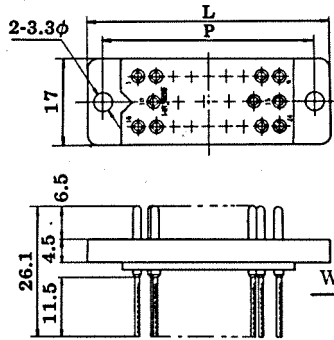
| HRS No. | No. of Pin | Part No. | W ₂ | W ₃ | P | L ₃ |
|-------------------|------------|----------------|----------------|----------------|----|----------------|
| * CL213-0050-1-09 | 8 | S-1308-SB(09) | 13.5 | 17.5 | 25 | 31.5 |
| * CL213-0051-4-09 | 12 | S-1312-SB(09) | 13.5 | 17.5 | 32 | 38.5 |
| * CL213-0052-7-09 | 16 | S-1316-SB(09) | 13.5 | 17.5 | 40 | 47.5 |
| * CL213-0053-0-09 | 20 | S-1320-SB(09) | 18.5 | 22.5 | 35 | 42.5 |
| * CL213-0054-2-09 | 24 | S-1324-SB(09) | 18.5 | 22.5 | 42 | 49.5 |
| * CL213-0055-5-09 | 28 | S-1328-SB(09) | 18.5 | 22.5 | 46 | 53.5 |
| * CL213-0056-8-09 | 34 | S-1334-SB(09) | 18.5 | 22.5 | 52 | 59.5 |
| * CL213-0359-0-09 | 45 | S-1345B-SB(09) | 18.6 | 22.6 | 66 | 73.5 |
| * CL213-0372-8-09 | 60 | S-1360B-SB(09) | 18.6 | 22.6 | 84 | 91.5 |

*: standard

Wire Wrapping Pin Insert



CL213-0577-0
P-1324WF

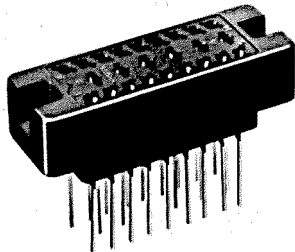


| Unit: mm | | | | |
|-----------------------|------------|--------------|----|----|
| HRS No. | No. of pin | Part No. | L | P |
| *CL213-0577-0-09 | 24 | P-1324WF(09) | 48 | 42 |
| *CL213-0578-3-09 | 28 | P-1328WF(09) | 52 | 46 |
| *CL213-0504-7-09 | 34 | P-1334WE(09) | 58 | 52 |
| *CL213-0537-6-09 | 45 | P-1345WF(09) | 72 | 66 |
| *CL213-0455-3 Note(1) | 60 | P-1360WE | 90 | 84 |

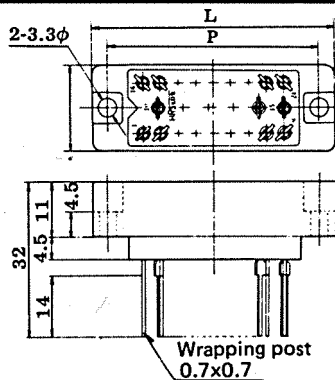
Note: (1) Correspond to CN-9060D2F Connectors of NTT Specifications No.1931.
(2) Wire range: 0.32 to 0.5 φ (solid)

* Standard

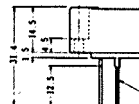
Wire Wrapping Socket Insert



CL213-0582-0
S-1324WB



S-1360WE dimensions

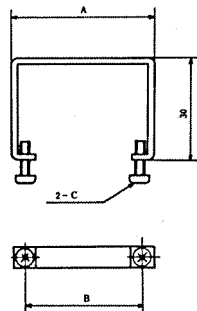


| Unit: mm | | | | |
|-----------------------|------------|--------------|----|----|
| HRS No. | No. of Pin | Part No. | L | P |
| *CL213-0582-0-09 | 24 | S-1324WB(09) | 48 | 42 |
| *CL213-0583-3-09 | 28 | S-1328WB(09) | 52 | 46 |
| *CL213-0384-7-09 | 34 | S-1334WB(09) | 58 | 52 |
| *CL213-0538-9-09 | 45 | S-1345WB(09) | 72 | 66 |
| *CL213-0385-0-09 | 60 | S-1360WB(09) | 90 | 84 |
| *CL313-0457-9-Note(1) | 60 | S-1360WE | 90 | 84 |

Note: (1) Correspond to CN-9060D2F Connectors of NTT Specifications No. 1931.
(2) Wire range: 0.32 to 0.5 φ (solid)

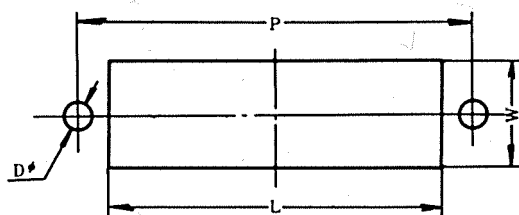
* Standard

Handle



| Unit: mm | | | | | |
|-----------------|------------|--------------|----|----|--------|
| HRS No. | No. of Pin | Part No. | A | B | C |
| CL213-0057-0-01 | 8 | P-1308-H(01) | 31 | 25 | M2.3X8 |

1300 Series Mounting Hole Dimensions



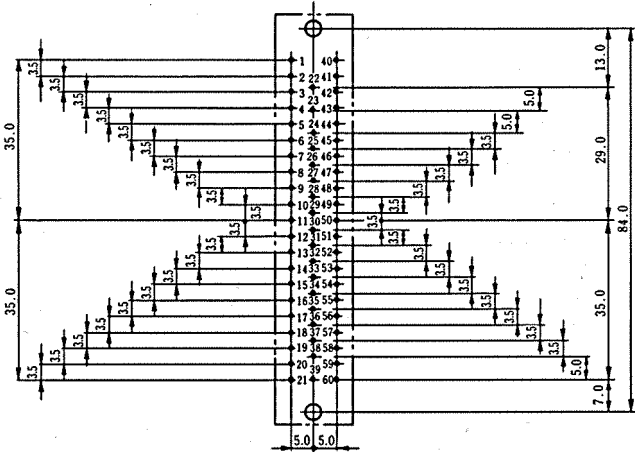
| Unit: mm | | | | |
|------------|----|----|----|-----|
| No. of Pin | L | P | W | D φ |
| 8 | 19 | 25 | 10 | 2.8 |
| 12 | 26 | 32 | 10 | 2.8 |
| 16 | 33 | 40 | 10 | 3.2 |
| 20 | 28 | 35 | 15 | 3.2 |
| 24 | 35 | 42 | 15 | 3.2 |
| 28 | 39 | 46 | 15 | 3.2 |
| 34 | 45 | 52 | 15 | 3.2 |
| 45 | 59 | 66 | 15 | 3.2 |
| 60 | 77 | 84 | 15 | 3.2 |

Location Drawing for Motherboard

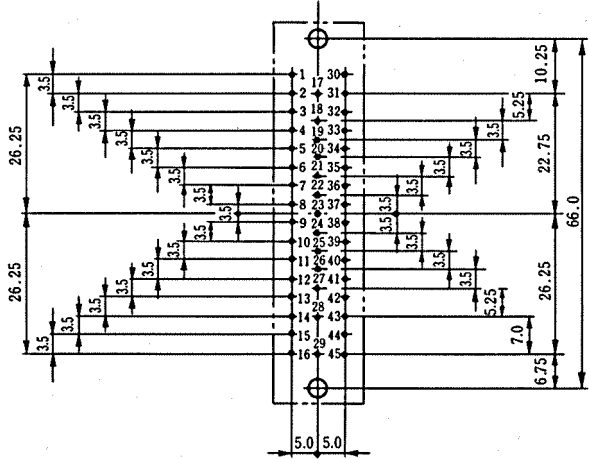
Note 1: Terminal number arrangement illustrated below shows the mating side of the female unit.

Note 2: On a male unit, the row with pin terminal number No.1 is located on the right.

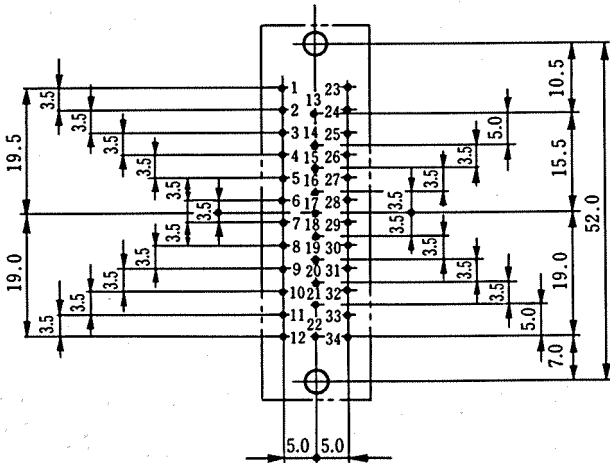
● 60Pin



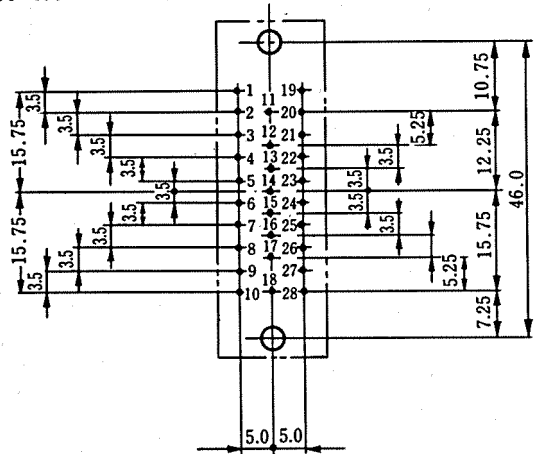
● 45Pin



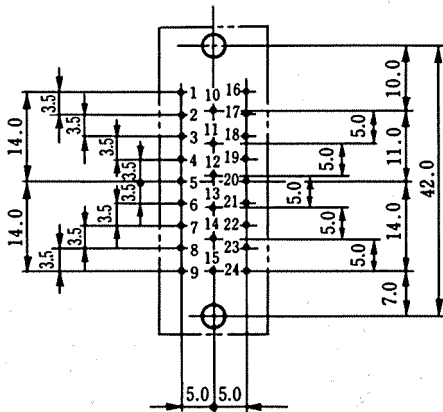
● 34Pin



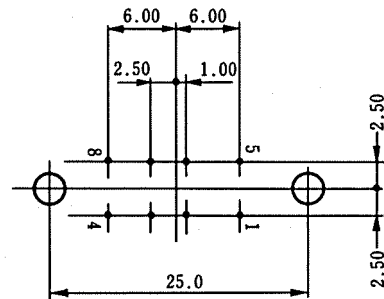
● 28Pin



● 24Pin



● 8 Pin



TOP TOUCH LOCKING CONNECTOR (NTT Specification)

General

These connectors have a top-touch lock, developed from the standard side lock, to increase the connector packing density. Developed jointly with NTT as an indoor device for NTT data communications. The connectors are specified in NTT Specifications SPEC

1931.

Available in three models of 34, 45 and 60 pins. The connectors are the well-known HIROSE original 1300 series, which have a broad variety of applications.

Features

- (1) Facilitates high-density connector packaging due to top-touch lock.
- (2) Locking mechanism requires no resetting, and a well-designed grip allows you to insert and extract the connector easily. The secure holding force assures that the connector will withstand up to 30 kg in any direction.
- (3) Plug case is easy to assemble and maintain because it is divided, including the cable inlet.
- (4) All plug cases have the same packaging height, allowing you to unify the connector packaging space.
- (5) Made of ABS resin, plug case is light, durable, and attractive.

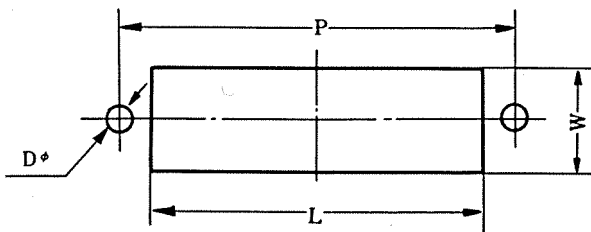
Materials

| Description | Material | Finish |
|-----------------|-----------------|-----------------------|
| Insulator | Epoxy resin | Brownish green |
| Male terminal | Brass | Silver-plated |
| Female terminal | Phosphor bronze | Silver-plated |
| Plug case | ABS resin | 2.5PB 6.0/2.0 (color) |
| Stopper bracket | Copper | Nickel-plated |

Electrical Specifications

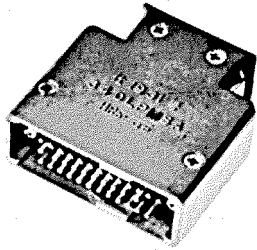
| Item | Standard |
|-----------------------|--------------------------------------|
| Contact resistance | 5m Ω or less |
| Current rating | 5A |
| Insulation resistance | 1,000M Ω or higher at DC 500V |
| Withstand voltage | AC1200V for one minute |

Mounting Hole Dimensions

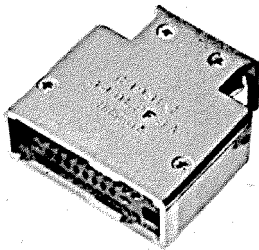


| No. of Pin | Unit: mm | | | |
|------------|----------|----|----|----------------|
| | L | P | W | D ^φ |
| 34 | 45 | 52 | 15 | 3.2 |
| 45 | 59 | 66 | 15 | 3.2 |
| 60 | 77 | 84 | 15 | 3.2 |

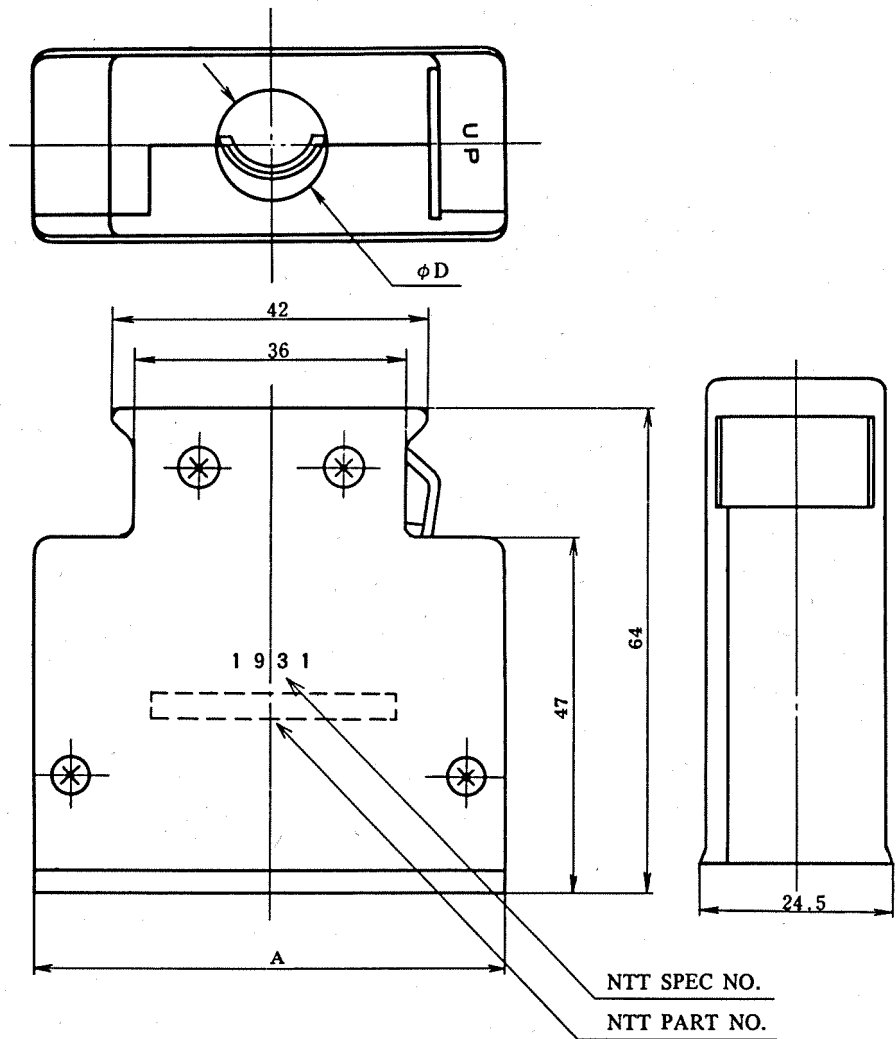
Vertical Cable Inlet Type



CL213-0407-0
P-1334B-CTC



CL213-0408-3
S-1334B-CTC



(Male Connector)

Unit: mm

| HRS No. | NO. of Pin | Part No. | A | D [†] | NTT Part No. | NTT Short Form |
|----------------|------------|-------------|------|----------------|---------------|----------------|
| * CL213-0407-0 | 34 | P-1334B-CTC | 62.5 | 14 | CN-5834DLPMSA | 34DLPMSA |
| * CL213-0413-3 | 45 | P-1345B-CTC | 76.5 | 14 | CN-7245DLPMSA | 45DLPMSA |
| * CL213-0394-0 | 60 | P-1360B-CTC | 94.5 | 15 | CN-9060DLPMSA | 60DLPMSA |

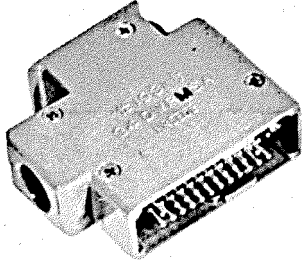
(Female Connector)

Unit: mm

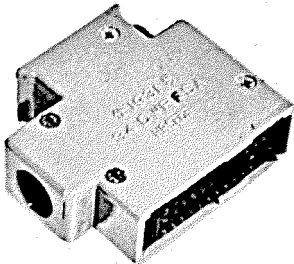
| HRS No. | NO. of Pin | Part No. | A | D [†] | NTT Part No. | NTT Short Form |
|----------------|------------|-------------|------|----------------|---------------|----------------|
| * CL213-0408-3 | 34 | S-1334B-CTC | 62.5 | 14 | CN-5834DLPFSA | 34DLPFSA |
| * CL213-0414-6 | 45 | S-1345B-CTC | 76.5 | 14 | CN-7245DLPFSA | 45DLPFSA |
| * CL213-0419-0 | 60 | S-1360B-CTC | 94.5 | 15 | CN-9060DLPFSA | 60DLPFSA |

* Standard

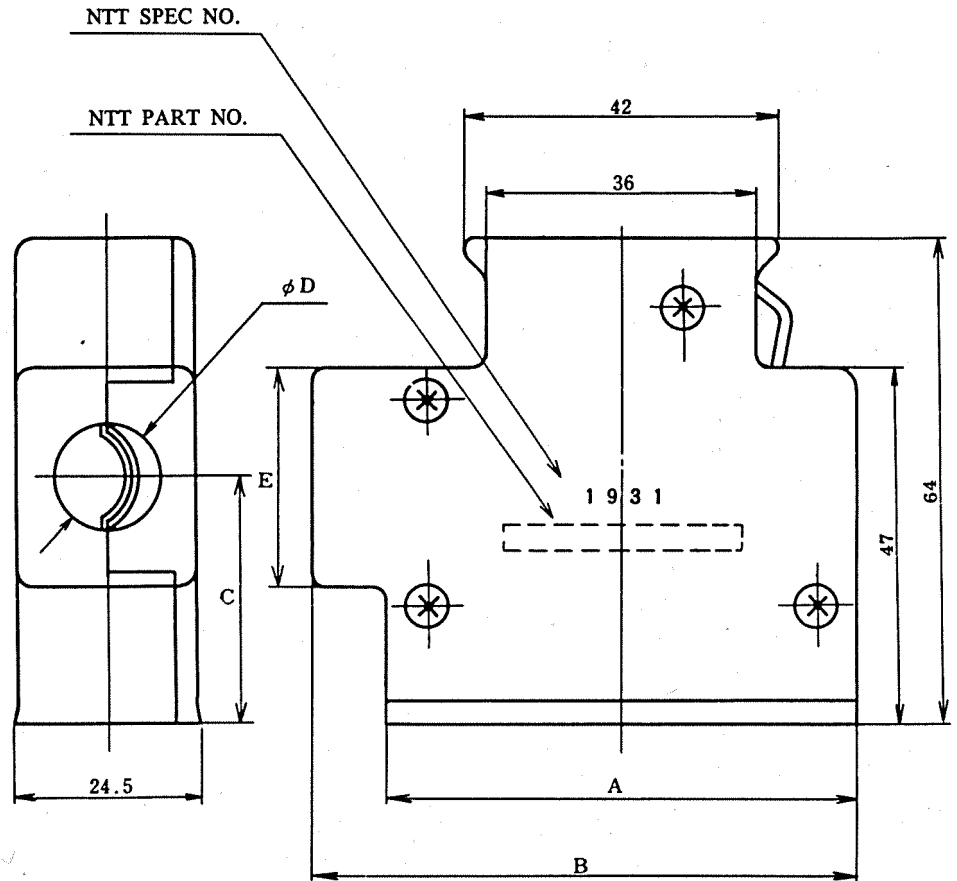
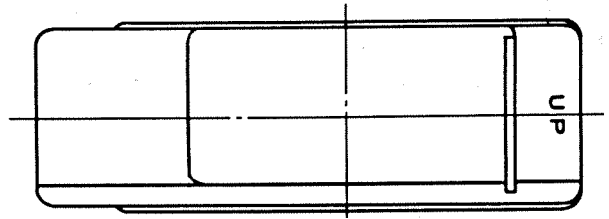
Lateral Cable Inlet Type



CL213-0409-6
P-1334B-CEC



CL213-0410-5
S-1334B-CEC



(Male Connector)

Unit: mm

| HRS No. | NO. of Pin | Part No. | A | B | C | D ϕ | E | NTT Part No. | NTT Short Form |
|---------------|------------|-------------|------|-------|------|----------|----|---------------|----------------|
| *CL213-0409-6 | 34 | P-1334B-CEC | 62.5 | 72.5 | 32.5 | 14 | 29 | CN-5834DWPMSA | 34DWPMSA |
| *CL213-0415-9 | 45 | P-1345B-CEC | 76.5 | 86.5 | 32.5 | 14 | 29 | CN-7245DWPMSA | 45DWPMSA |
| *CL213-0420-9 | 60 | P-1360B-CEC | 94.5 | 104.5 | 32.0 | 15 | 30 | CN-9060DWPMSA | 60DWPMSA |

(Female Connector)

Unit: mm

| HRS No. | NO. of Pin | Part No. | A | B | C | D ϕ | E | NTT Part No. | NTT Short Form |
|---------------|------------|-------------|------|-------|------|----------|----|---------------|----------------|
| *CL213-0410-5 | 34 | S-1334B-CEC | 62.5 | 72.5 | 32.5 | 14 | 29 | CN-5834DWPMSA | 34DWPMSA |
| *CL213-0400-1 | 60 | S-1360B-CEC | 94.5 | 104.5 | 32.0 | 15 | 30 | CN-9060DWPMSA | 60DWPMSA |

* Standard

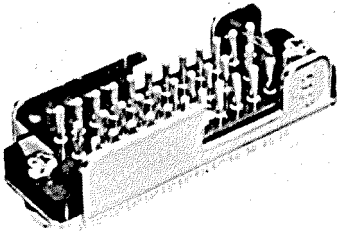
Stopper Bracket

(With Pin Insert)

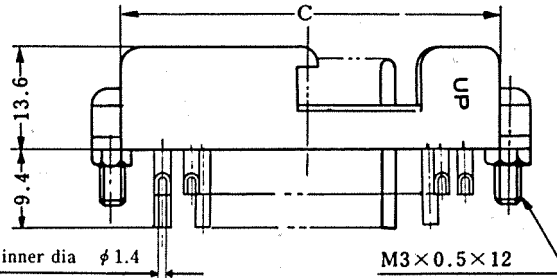
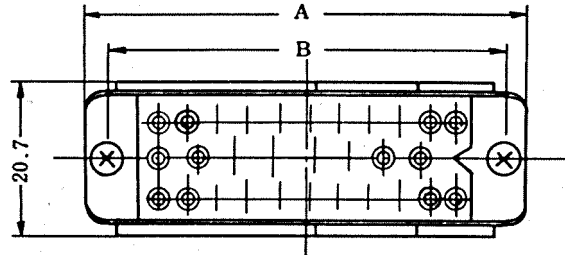
Unit: mm

| HRS No. | No. of Pin | Part No. | A | B | C | NTT Part No. | NTT Short Form |
|---------------|------------|------------|----|----|------------------------|------------------------|----------------|
| *CL213-0411-8 | 34 | P-1334B-ST | 58 | 52 | 50 | CN-5834DJMSA Connector | 34DJMSA |
| *CL213-0417-4 | 45 | P-1345B-ST | 72 | 66 | 64 | CN-7245DJMSA Connector | 45DJMSA |
| *CL213-0421-1 | 60 | P-1360B-ST | 90 | 82 | CN-9060DJMSA Connector | 60DJMSA | |

*: Standard



CL213-0411-8
P-1334B-ST

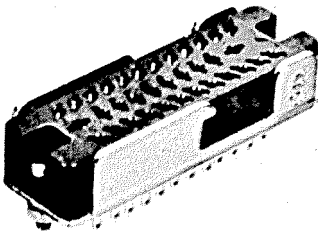


(With Socket Insert)

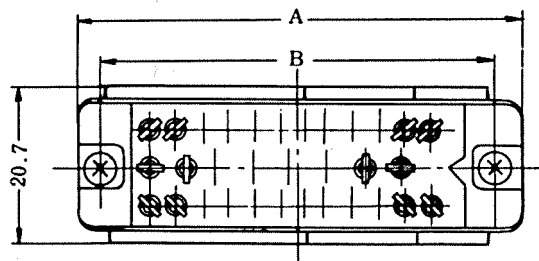
Unit: mm

| HRS No. | No. of Pin | Part No. | A | B | C | NTT Part No. | NTT Short Form |
|-----------------|------------|-----------------|----|----|----|------------------------|----------------|
| *CL213-0412-0 | 34 | S-1334B-ST | 58 | 52 | 50 | CN-5834DJMSA Connector | 34DJMSA |
| *CL213-0418-7 | 45 | S-1345B-ST | 72 | 66 | 64 | CN-7245DJMSA Connector | 45DJMSA |
| *CL213-0395-3 | 60 | S-1360B-ST | 90 | 84 | 82 | CN-9060DJMSA Connector | 60DJMSA |
| CL213-0660-2-09 | 60 | S-1360WE-ST(09) | 90 | 84 | 82 | — | — |

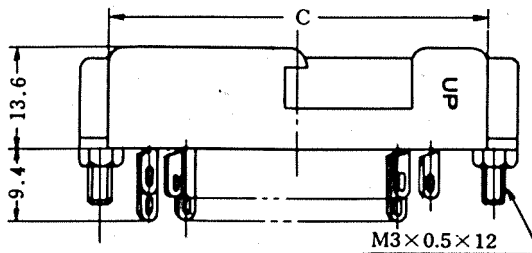
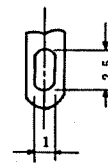
*: Standard



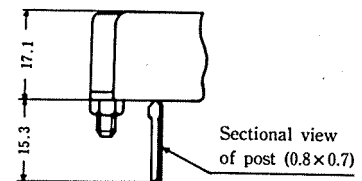
CL213-0412-0
S-1334B-ST



Solder eyelet



See dimensional drawing S-1360WE



TOP TOUCH LOCKING CONNECTOR (HIROSE Original)

General

The 1300 series top touch locking 24-contact connectors are of the same design as the well-known 1600 series top-touch locking connectors. The 1300 series connectors feature a plug case of lightweight, sturdy plastic with a cable inlet allowing cable entry in either

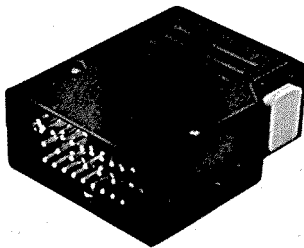
straight or lateral side as necessary, and simple, single-operation connector insertion and extraction. These are suitable for enhancing the packaging density.

Main Specifications

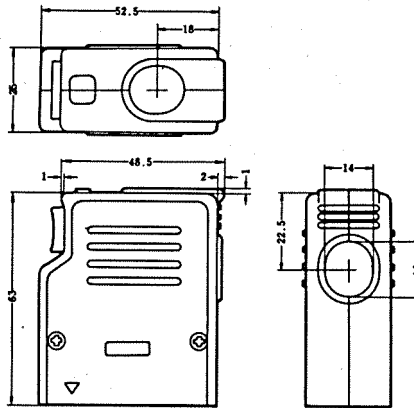
| Item | Standard |
|-----------------------|--------------------------------|
| Contact resistance | 5mΩ or less at 1 ADC |
| Insulation resistance | 1,000 M Ω or higher at 500 VDC |
| Withstand voltage | AC1200V for one minute |
| Current rating | 5A |

Main Material

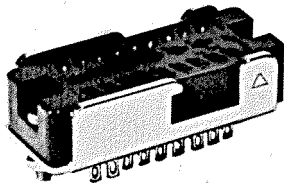
| Description | Material | Finish |
|-----------------|-----------------|---|
| Insulator | Epoxy resin | Bronnish green |
| Male terminal | Brass | Silver-plated |
| Female terminal | Phosphor bronze | Silver-plated |
| Plug case | ABS | Black |
| Stopper bracket | Steel | Treated with dichromate over zinc-plating |



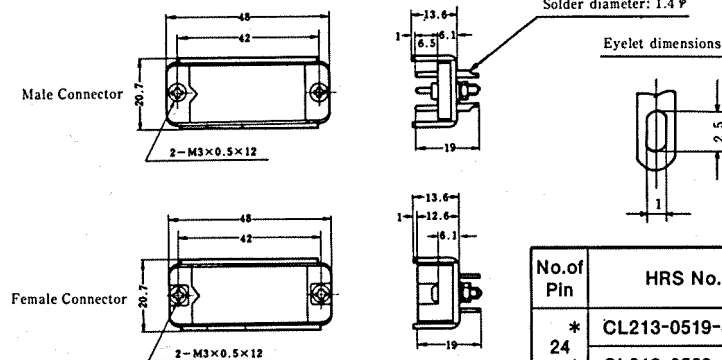
CL213-0517-9(09)
P-1324-CF(09)



| No. of Pin | HRS No. | Part No. |
|------------|------------------|---------------|
| * 24 | CL213-0517-9(09) | P-1324-CF(09) |
| * 24 | CL213-0518-1(09) | S-1324-CF(09) |



CL213-0520-3(09)
S-1324-ST(09)



| No. of Pin | HRS No. | Part No. |
|------------|------------------|---------------|
| * 24 | CL213-0519-4(09) | P-1324-ST(09) |
| * 24 | CL213-0520-3(09) | S-1324-ST(09) |

* standard

General

Based on the 1300 Series connectors with 8 or more contacts, this connector is designed to be compact and light in weight. Grey polyacetal is used as the material for the plug case and bracket. The case has a unique mono-blocking mechanism, enabling easy and

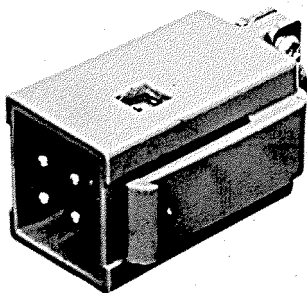
reliable one-touch operation. Other special features are screwless insert assembly with retainers and a deep receptacle shell which offers a low-profile sinking mount.

Electrical Characteristics

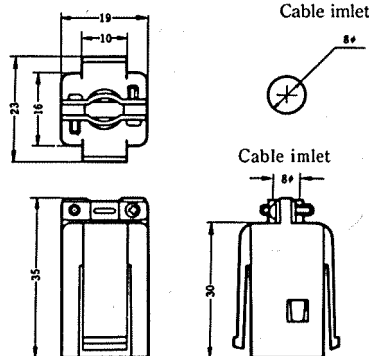
| Item | Standard |
|-----------------------|-----------------------------|
| Contact resistance | 5mΩ or less at DC500V |
| Insulation resistance | 1000M Ω or higher at DC500V |
| Withstand voltage | AC1200V for 1 minute |
| Current rating | 5A |

Material and Finish

| Description | Material | Finish |
|-----------------|-----------------|--------------------|
| Molding | Epoxywith | Light-green colour |
| Pin contact | Brass | Silver plated |
| Socket contact | Phosphor bronze | Silver plated |
| Stopper bracket | Polyacetal | Grey plated |
| Handle | Polyacetal | Grey plated |

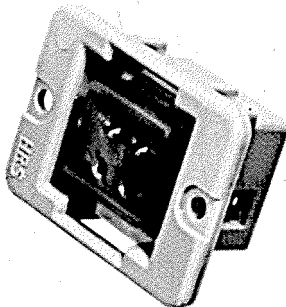


CL213-0611-7
P-1304-CT

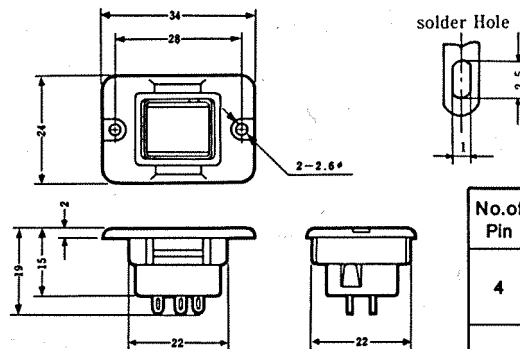


| No. of Pin | HRS No. | Part No. |
|------------|-------------------|---------------|
| 4 | * CL213-0611-7-09 | P-1304-CT(09) |
| | * CL213-0612-0-09 | S-1304-CT(09) |
| 6 | * CL213-0513-8-09 | P-1306-CT(09) |
| | * CL213-0514-0-09 | S-1306-CT(09) |

*: Standard



CL213-0614-5
S-1304-DB

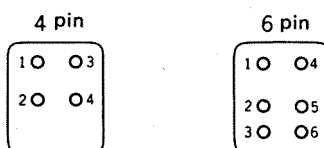


| No. of Pin | HRS No. | Part No. |
|------------|-------------------|---------------|
| 4 | * CL213-0613-2-09 | P-1304-DB(09) |
| | * CL213-0614-5-09 | S-1304-DB(09) |
| 6 | * CL213-0515-3-09 | P-1306-DB(09) |
| | * CL213-0516-6-09 | S-1306-DB(09) |

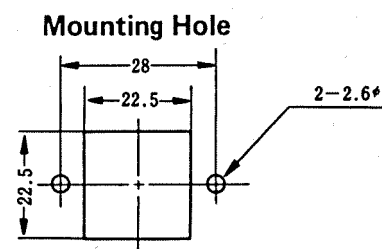
*: Standard

Contact Arrangement

(terminal side of pin insert)



Mounting Hole

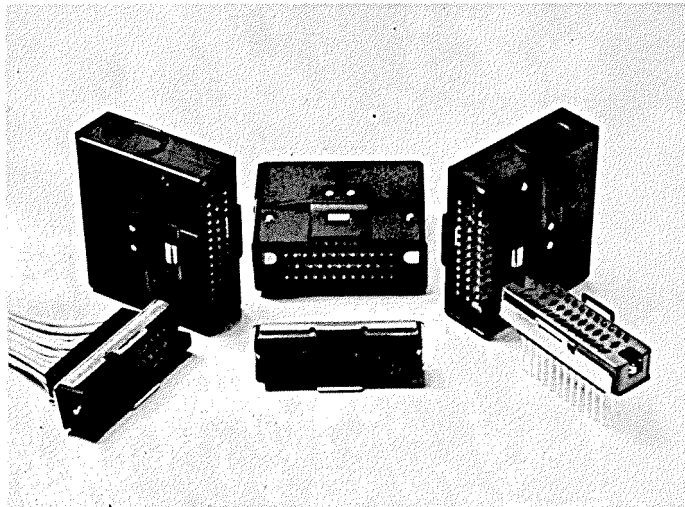


1300 SERIES SIDE-LOCK TYPE PLUG CASES

General

The 1300 Series plug cases and stopper brackets for both upright and transverse receptacles are available in nine models, with 8, 12, 16, 20, 24, 28, 34, 45, or 60 positions. These are interchangeable with conventional pushbutton-lock type plug cases and stopper brackets

(including those designated by NTT specification 1931). In addition to their simple construction, these general-purpose connectors are highly reliable, lightweight, and durable and feature outstanding operability.



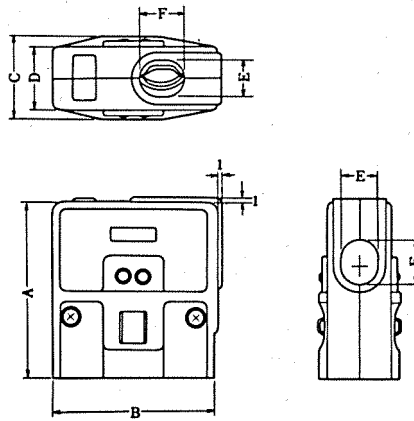
Material and Finish

| Description | Material | Finish |
|-----------------|----------|---------------------|
| Plug Shell | ABS | Black(Matte finish) |
| Stopper Bracket | Steel | Zinc chromitized |

Features

- (1) The lock mechanism is very simple and secure.
- (2) The orientation of the cable inlet port of plug case, vertical or horizontal, can be selected by the user. It is capped on the free side.
- (3) The plug case is made of a tough ABS resin, that is lightweight and durable.
- (4) The plug case is split at the center of the cable inlet port and requires fewer screws. It is very workable, especially when connecting wires. It is also convenient for assembly and maintenance operations.
- (5) The plug case uses an attractive design that matches well with the external appearance of all equipment.
- (6) Solder, press-fit or lapping type connector units in the 1300 series (except for S-1360E CL213-0457-9) can be connected to the plug case.
- (7) Both the plug case and stopper bracket are interchangeable, respectively, with the die-cast frame plug case (12-CTA, CEA type), and with the stopper bracket (13" " -SB type). However, it is not interchangeable with the 13" " -CTA-LF and 13" " -CEA-LF (relay case).

Plug Shell



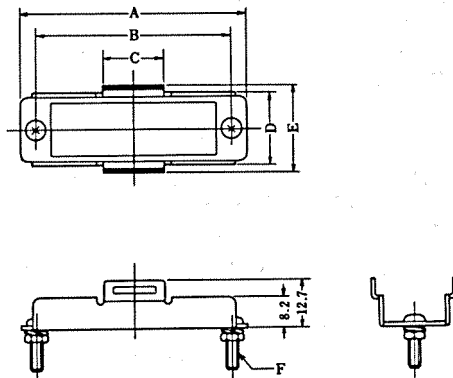
Unit: mm

| No. of Pin | HRS No. | Part No. | A | B | C | D | E | F |
|------------|--------------|----------|----|----|----|----|-----------------|----|
| * 8 | CL213-0729-7 | 1308-CM | 47 | 36 | 22 | 17 | 10 ^φ | |
| * 12 | CL213-0730-6 | 1312-CM | 47 | 43 | 22 | 17 | 10 | 12 |
| * 16 | CL213-0731-9 | 1316-CM | 50 | 52 | 22 | 17 | 10 | 15 |
| * 20 | CL213-0732-1 | 1320-CM | 51 | 47 | 27 | 22 | 14 ^φ | |
| * 24 | CL213-0733-4 | 1324-CM | 51 | 54 | 27 | 22 | 14 | 16 |
| * 28 | CL213-0734-7 | 1328-CM | 55 | 58 | 27 | 22 | 14 | 18 |
| * 34 | CL213-0735-0 | 1334-CM | 55 | 64 | 27 | 22 | 14 | 21 |
| * 45 | CL213-0736-2 | 1345-CM | 61 | 78 | 27 | 22 | 14 | 27 |
| * 60 | CL213-0737-5 | 1360-CM | 68 | 96 | 27 | 22 | 14 | 34 |

*: Standard

Note: All products are available in plug cases. For units order separately

Stopper Bracket



Unit: mm

| No. of Pin | HRS No. | Part No. | A | B | C | D | E | F |
|------------|--------------|----------|----|----|----|------|------|-------------|
| * 8 | CL213-0738-8 | 1308-SBA | 32 | 25 | 10 | 13.8 | 17.5 | M2.3X0.4X12 |
| * 12 | CL213-0739-0 | 1312-SBA | 39 | 32 | 10 | 13.8 | 17.5 | M2.3X0.4X12 |
| * 16 | CL213-0740-0 | 1316-SBA | 48 | 40 | 14 | 13.8 | 17.5 | M3 X0.5X12 |
| * 20 | CL213-0741-2 | 1320-SBA | 43 | 35 | 14 | 18.8 | 22.5 | M3 X0.5X12 |
| * 24 | CL213-0742-5 | 1324-SBA | 50 | 42 | 14 | 18.8 | 22.5 | M3 X0.5X12 |
| * 28 | CL213-0743-8 | 1328-SBA | 54 | 46 | 16 | 18.8 | 22.5 | M3 X0.5X12 |
| * 34 | CL213-0744-0 | 1334-SBA | 60 | 52 | 16 | 18.8 | 22.5 | M3 X0.5X12 |
| * 45 | CL213-0745-3 | 1345-SBA | 74 | 66 | 16 | 18.8 | 22.5 | M3 X0.5X12 |
| * 60 | CL213-0746-6 | 1360-SBA | 92 | 84 | 22 | 18.8 | 22.5 | M3 X0.5X12 |

*: Standard

Note: All products are available in plug cases. For units order separately