Outline
HDRA series connectors have been developed based on the HDR series products for high speed signal interfaces such as SCSI-III, VHDCI and PCI.

Features
• Conforms to the United States ANSI/SFF8441 standards
• Provided with high performance EMI/ESD-shielded structure
• Mounted with locks or screws
• Low profile
• Sequence structure

Principal Applications
Server, Router, Notebook type personal computers and their peripheral equipment, and mobile equipment

Electrical Characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated voltage</td>
<td>30V AC (r.m.s.)</td>
</tr>
<tr>
<td>Rated current</td>
<td>0.3 A</td>
</tr>
<tr>
<td>Insulation resistance</td>
<td>Over 500 megohms at 100V DC</td>
</tr>
<tr>
<td>Dielectric withstanding voltage</td>
<td>250V AC (r.m.s.)</td>
</tr>
<tr>
<td>Contact resistance</td>
<td>70 milliohms or less (for combination of MA or MA1 and LFDT)</td>
</tr>
<tr>
<td></td>
<td>100 milliohms or less (for combination with MA1 and W1LFDT)</td>
</tr>
</tbody>
</table>

Document Disclaimer
- When placing orders with us, minimum order quantities are set for every product.
- Be sure to contact us before starting preliminary design of PCBs using our connectors.
- The specifications and information shown in the catalog are subject to change without notice.
The reflow temperature profile shown in this drawing is for reference purposes. This profile depends on requirements such as reflow equipment, soldering paste, and PCB size. Thus, this profile may not meet with your specific situation. Please evaluate your PCB-mounting soldering and set your own reflow temperature profile.

**Applicable products**

HDRA series SMT type for PCB

The flow temperature profile as shown above is for reference purposes. This profile depends on requirements such as the PCB size. Thus, this profile may not meet with your specific situation. Please evaluate your PCB-mounting soldering and set your own flow temperature profile.

**Applicable products**

HDRA series through hole type for PCB
HONDA TSUSHIN KOGYO CO., LTD.

IDC type male connector for cable
HDRA-E36MA+

Configuration of product Part No.

HDRA- E 36 M A+

1. Series name
2. No. of contacts: 36
3. Type of contact
   M: IDC type, male
4. Compatible cable
   A: AWG#30(7/0.1), dia. 0.58 mm

Components

- Contacts
- Insulator
- Shell
- Spacer
- Cable housing

Mating connector: HDRA series right-angle through hole type or straddle SMT type female connector

For use with housings: HDRA series upright housing, HDRA-E36LPTH

Required tool:
- Termination tool: FHAT-0029
- IDC tool: FHPT-923B
- Hand presser: MFC-K1 (Refer to page Tool-10)
IDC type male connector for cable
HDRA-E68MA+

● Configuration of product Part No.

HDRA- E 6 8 MA+

① Series name
② No. of contacts: 68
③ Type of contact
M: IDC type, male
④ Compatible cable
A: AWG#30 (7/0.1), dia. 0.58 mm

Mating connector: HDRA series right-angle through hole type or straddle SMT type female connector
For use with housings: HDRA series upright housing, HDRA-E68LGKPA
IDC type male connector for cable
HDRA-E68M( )1+

- **Configuration of product Part No.**
  - **HDRA-E68M( )1+**
  - ① Series name
  - ② No. of contacts: 68
  - ③ Type of contact
    - M: IDC type, male
  - ④ Compatible cable
    - Blank: AWG#30 (1/0.254), dia. 0.58 mm
    - A: AWG#30 (7/0.1), dia. 0.58 mm
    - C: AWG#34 (7/0.064), dia. 0.44 mm
  - ⑤ IDC method
    - 1: One side IDC

- **Components**
  - ① Contacts
  - ② Insulator
  - ③ Shell
  - ④ Cable housing

- **Mating connector:** HDRA series right-angle through hole type or straddle SMT type female connector
- **For use with housings:** HDRA series vertical housing, HDRA-E68LGK( )
- **Required tool:** Termination tool: FHAT-0027, IDC tool: FLPT-0021A, Hand presser: RPS-K4 (Refer to page Tool-10)
IDC type male connector for cable
HDRA-E100M( )1+

Configuration of product Part No.

HDRA-E 100 M ( ) 1+

1 Series name
2 No. of contacts: 100
3 Type of contact
   M: IDC type, male
4 Compatible cable
   Blank: AWG#30 (1/0.254), dia. 0.58 mm
   A : AWG#30 (7/0.1), dia. 0.58 mm

Components

- Contacts
- Insulator
- Shell
- Cable housing

Mating connector: HDRA series right-angle through hole type female connector

For use with housings: HDRA series vertical housing, HDRA-E100LP, HDRA-E100LPW()

**Straight DIP type female connector for PCBs**

**HDRA-EC68FDT-( )+**

**Configuration of product Part No.**

**HDRA- EC 68 FD T- ( )+**

1. Series name
2. No. of contacts: 68
3. Form of contact
   - FD: Straight, DIP type, female
4. With ground lock pin
5. Lock screw
   - SLD: Provided
   - Blank: None

**Recommended panel cut-out dimensions**

**Components**

- Insulator
- Contact
- Shell
- Sqr.nut
- Hold down

**Recommended PCB layout**

Mating connector: HDRA series male connectors
Straight DIP type female connector for PCBs
HDRA-EC100FDT-( )+

- Configuration of product Part No.

HDRA- EC 100 FD T- ( )+

1. Series name
2. No. of contacts: 100
3. Form of contact
   FD: Straight, DIP type, female
4. With ground lock pin
5. Lock screw
   SLD: Provided
   Blank: None

Recommended panel cut-out dimensions

Recommended PCB layout

Components
1. Insulator
2. Contact
3. Shell
4. Sqr.nut
5. Hold down

Mating connector: HDRA series, male connector
Right-angle through hole type female connector for PCB
HDRA-EC68LFDT( )-( )+

0.8 mm pitch connector
For PCB
Right-angle Through hole
ANSI/SFF8441

Configuration of product Part No.
HDRA-EC 68 LFD T ( ) -( )+

① Series name ② No. of contacts: 68 ③ Type of contact
LFD: Right-angle through hole type, female ④ With board lock pin
⑤ Length of contact, board lock pins or location peg
Blank: A-2.08 mm contacts ⑥ Lock screws
: B-2.28 mm board lock pins
: C-3.7 mm location peg

Recommended PCB layout

Recommended panel cut-out dimensions

Mating connector: HDRA series IDC type male connector, or straddle SMT type male connector

Select the connector according to panel thickness. For the application without panel, use washers or special lock screw (P/N: HDRA-E68LFDT-7C).
Right-angle through hole type female connector for PCB
HDRA-EC100LFDT( _)-( _)+

- Configuration of product Part No.

<table>
<thead>
<tr>
<th>HDRA- EC 100 LFD T ( _)-( _)+</th>
</tr>
</thead>
<tbody>
<tr>
<td>① Series name</td>
</tr>
<tr>
<td>② No. of contacts: 100</td>
</tr>
<tr>
<td>③ Type of contact</td>
</tr>
<tr>
<td>LFD: Right-angle through hole type, female</td>
</tr>
<tr>
<td>④ With ground contact</td>
</tr>
<tr>
<td>⑤ Through hole length</td>
</tr>
<tr>
<td>Blank: 2.08 mm</td>
</tr>
<tr>
<td>1 : 3.4 mm (under planning)</td>
</tr>
<tr>
<td>⑥ Lock screw</td>
</tr>
<tr>
<td>Blank: None</td>
</tr>
<tr>
<td>SL : Provided</td>
</tr>
<tr>
<td>(Panel thickness: 1.12 mm)</td>
</tr>
<tr>
<td>GP : Guide pin</td>
</tr>
</tbody>
</table>

- Components

| ① Bracket | ② Contacts | ③ Insulator | ④ Shell | ⑤ Hold downs |

- Mating connector: HDRA series male connector

Select the connector according to panel thickness.
For the application without panel, use washers or special lock screw (P/N: HDRA-E68LFD-7C).
Right-angle through hole type female connector for PCB
HDRA-EA36LFDT-( )+

● Configuration of product Part No.

**HDRA- EA 36 LFD T-( )+**

1. Series name
2. No. of contacts: 36
3. Type of contact
   LFD: Right-angle through hole type, female
4. Provided with board lock mechanism
5. Lock screw
   Blank: None
   SL: Provided (Thickness of panel: 1.12 mm)

Recommended PCB layout
\[ t=1.6\text{mm} \]

Recommended panel cut-out dimensions

Select the connector according to panel thickness.
For the application without panel, use washers or special lock screw (P/N: HDRA-E68LFD-7C).

**Components**

1. Bracket
2. Contacts
3. Insulator
4. Shell
5. Square nuts
6. Lock screw
7. Board lock pin

Mating connector: HDRA series IDC type male connector

Note: Jack screw is not available at present.

 Others  Wire wrapping  Crimping  Soldering  IDC  Press-in  SMT  Through hole
Right-angle through hole type female connector for PCB HDRA-E68W( )LFDT1EC-( )+

- **Configuration of product Part No.**

<table>
<thead>
<tr>
<th>HDRA- E 68 W ( ) LFDT T1 E C-( )+</th>
</tr>
</thead>
<tbody>
<tr>
<td>➀ Series name</td>
</tr>
<tr>
<td>➁ No. of contacts: 136 (68×2)</td>
</tr>
<tr>
<td>➂ No. of stacks: 2</td>
</tr>
<tr>
<td>➃ Length of contact, through hole</td>
</tr>
<tr>
<td>1: 2.08 (PCB: 1.6 mm thick)</td>
</tr>
<tr>
<td>2: 3.4 (PCB: 2.4 mm thick)</td>
</tr>
<tr>
<td>➄ Type of contact</td>
</tr>
<tr>
<td>LFD: Right-angle through hole type, female</td>
</tr>
<tr>
<td>➅ Earth lock pin (provided with board lock mechanism)</td>
</tr>
<tr>
<td>➆ Provided with shell connection reinforcement</td>
</tr>
<tr>
<td>➇ Provided with protection cover for contacts and bends</td>
</tr>
<tr>
<td>➈ Lock screw</td>
</tr>
<tr>
<td>Blank: None</td>
</tr>
<tr>
<td>SL : Provided (Thickness of panel: 1.12 mm)</td>
</tr>
</tbody>
</table>

- **Recommended PCB layout**

  *Recommended panel cut-out dimensions*

  - Select the connector according to panel thickness. For the application without panel, use washers or special lock screw (P/N: HDRA-E68LFD-7C).

- **Mating connector:** HDRA series IDC type male cable connector, or straddle SMT type male connector

- **Components**

  - Bracket
  - Contacts
  - Insulator
  - Shell
  - Square nuts
  - Lock screw
  - Board lock pin
  - Shell connector
  - Protection covers

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**Recommended panel cut-out dimensions**

**Mating connector:** HDRA series IDC type male cable connector, or straddle SMT type male connector
Right-angle through hole type female connector for PCB HDRA-E100W( )LFDT1EC-( )+

**Configuration of product Part No.**

**HDRA- E 100 W ( ) LFD T1 E C- ( )+**

1. Series name
2. No. of contacts: 100
3. W: Double stacked connector
4. Length of contacts or board lock pins
   1. A-2.08 mm contacts
   2. B-2.28 mm board lock pins
5. Type of contact
   LFD: Right-angle through hole type, female
6. Earth lock pin (provided with board lock mechanism)
7. Provided with shell connection reinforcement
8. Provided with protection cover for contacts and bends
9. Lock screws
   Blank: None
   SL: provided (Thickness of panel: 1.12 mm)

**Recommended PCB layout**

- t=1.6mm or 2.4mm

**Recommended panel cut-out dimensions**

- Select the connector according to panel thickness. For the application without panel, use washers or special lock screw (P/N: HDRA-E68LFD-7C).

Mating connector: HDRA series IDC type male connector
EMI-shielded vertical plastic housing for standard cable HDRA-E68LGKP( )

● Configuration of product Part No.

**HDRA- E 68 LGKP ( )**

1. Series name  
2. No. of contacts: 68  
3. A: Vertical cable holding type  
C: Vertical ultrasonic welding type  
E: Vertical ultrasonic welding type  
F: Vertical ultrasonic welding type  
Outside diameter of cable is shown in the dimension table.

**HDRA-E68LGKPA**

Thumb screw with plastic cap should be tightened by hand. For screw driver assembly use the product (P/N: HDRA-E68LGKPE3) with metal thumb screws attached.

**HDRA-E68LGKPC,LGKPE,LGKPF**

The following figure shows HDRA-E68LGKPF.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDRA-68LGKPC</td>
<td>11.5</td>
<td>9.5</td>
<td>10.5x9.5</td>
</tr>
<tr>
<td>HDRA-68LGKPE</td>
<td>9.5</td>
<td>7.5</td>
<td>10.5</td>
</tr>
<tr>
<td>HDRA-68LGKPF</td>
<td>9</td>
<td>7.2</td>
<td>10.5</td>
</tr>
</tbody>
</table>

**Components**

1. Cover  
2. Inner shell A  
3. Inner shell B  
4. Cable clamp  
5. Screw  
6. Bushing  
7. Thumb screw  
8. Cap (plastic)

For use with connectors: HDR series IDC type cable connector: -LGKPA for MA, -LGKPC/-LGKPE for MA1, and -LGKPF for MC1

Required tools (for LGKPC, LGKPE and LGKPF): Clamp caulking tools: FLPT-0017B (Refer to page Tool-10)

Ultrasonic welder, Housing holding jig, Sonic welder

Others: Wire wrapping, Crimping, Soldering, IDC, Press-in, SMT, Through hole
EMI-filtered vertical metallic housing
HDRA-E100LPW

● Configuration of product Part No.

<table>
<thead>
<tr>
<th>HDRA- E 100 LP W ( )</th>
</tr>
</thead>
<tbody>
<tr>
<td>➀ ➁ ➂ ➃</td>
</tr>
<tr>
<td>➀ Series name</td>
</tr>
<tr>
<td>➁ No. of contacts: 100</td>
</tr>
<tr>
<td>➂ Type of housing: Vertical type</td>
</tr>
<tr>
<td>➃ Compatible cable and form of through hole</td>
</tr>
</tbody>
</table>

- B: Two holes are available for two cables. Outside diameters of cable are 6.9 mm
- C: One hole is available for one cable. Outside diameter of cable is 9.6 mm

● Components

| ➀ Housing A |
| ➁ Housing B |
| ➂ Lock screws |

For use with connectors: HDRA-E100M( )1+
EMI-shielded vertical plastic housing
HDRA-E36LPTh

Configuration of product Part No.

HDRA-E 36 LPTh

- Series name
- No. of contacts: 36
- Type of housing: Vertical type

Components

<table>
<thead>
<tr>
<th>No.</th>
<th>Case A</th>
<th>Case B</th>
<th>Inner shell A</th>
<th>Inner shell B</th>
<th>Lock spring A</th>
<th>Lock spring B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
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<tr>
<td>6</td>
<td></td>
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</tr>
</tbody>
</table>

For use with connectors: HDRA-E36M(+)
Mating connectors: HDRA-EA36LFDT(+)
Lock screw (HDR-E14LYY-SL-02C) panel 0.5-0.8mm thick

Required tools: Clamp caulking tools: FLPT-0024A (Refer to page Tool-10) Ultrasonic welder, Housing holding jig, Sonic welder