

GT32 Series

Compact, Shielded 4pos. Connector for Differential Signals



Automotive



High-Speed



Shield



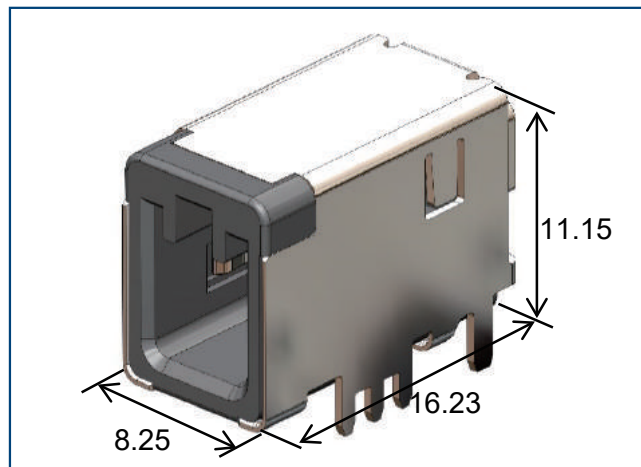
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Features

1. Industry's Smallest Shielded 4pos. Connector

2pos. for Signal + 2pos. for Power Supply
A compact design with a width of only 8.25mm fits tight spaces.



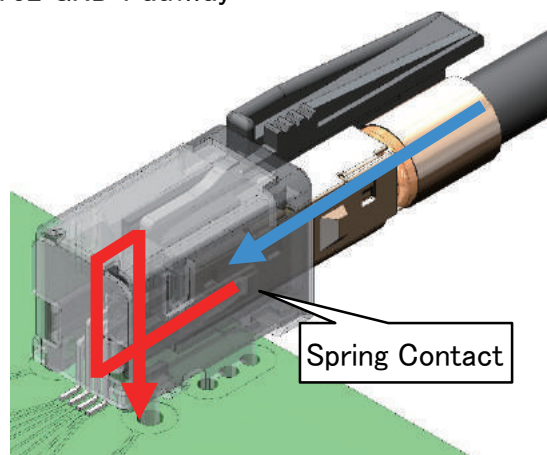
2. Enhanced Shield Design for Video Applications

The GT32J shortens the GND path to reduce noise, making it compatible with the LVDS protocol for video signals. It can be used in a wide range of applications.

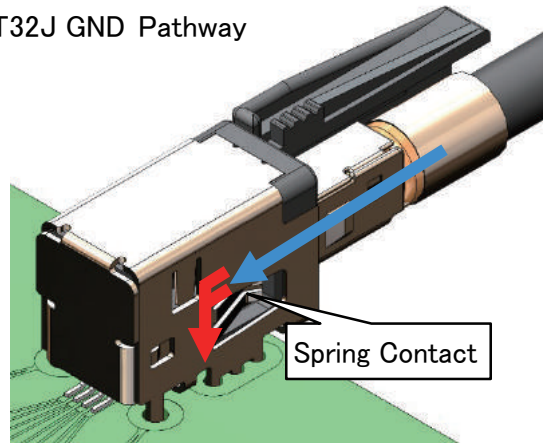
Recommended Applications
GT32 : USB2.0 Connection
GT32J : LVDS Connection

- *1 Connector size, board pattern and plug are common.
- *2 Please contact our sales representative for details on compatible SerDes and transmission characteristics.
- *3 The transmission speed may vary depending on the compatibility of the set, cable and connector used. Please contact our sales representatives before use.

GT32 GND Pathway



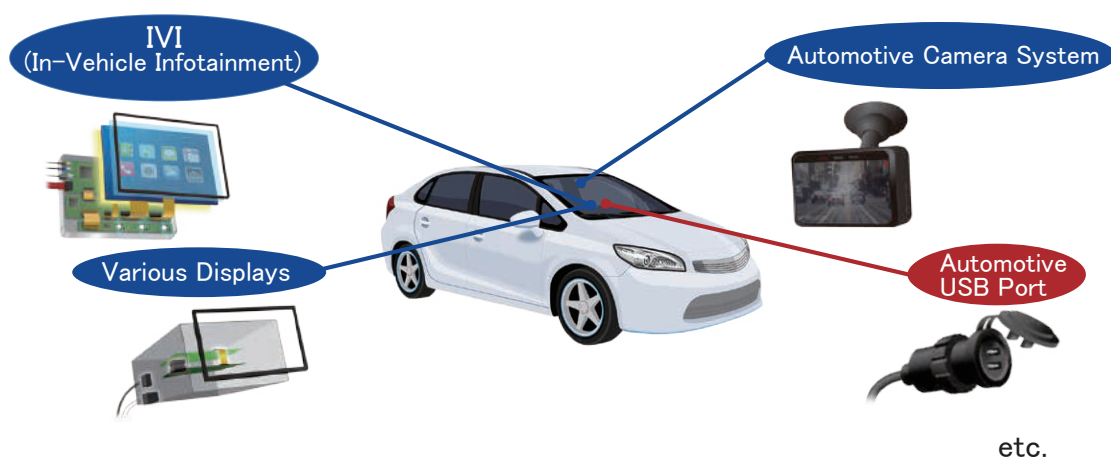
GT32J GND Pathway



3. Multi-port Receptacles, plus High Density Mounting

The 3 port or 2 port (under planning) Receptacle gives you the freedom to design sets and further contributes to the reduction of customer man-hours.

Application



Recommended Connector

Red : USB2.0 connection : GT32 4pos. Series

Blue : LVDS connection : GT32J 4pos. Series when noise resistance is critical

Note : This is also applicable to non-automotive applications.

Product Specifications

| | | | |
|---------------|--------|--------------------------------|---------------|
| Rated Current | 1A | Operating Temperature (Note 1) | -40 to +105°C |
| Rated Voltage | 30V AC | Storage Temperature (Note 2) | -10 to +60°C |

| Item | Specification | Condition |
|-----------------------|---|---------------------|
| Contact Resistance | Signal : 30m Ω Max. Shield : 60m Ω Max. | Measured at 1A DC |
| Insulation Resistance | 100M Ω Min. | Measured at 500V DC |
| Withstanding Voltage | No insulation breakdown | 1000V AC for 1 min. |
| Mating Durability | Contact Resistance : Signal : 60m Ω Max. Shield : 120m Ω Max. | 30 times |

Note 1 : Includes the temperature rise due to current flow.

Note 2 : Storage refers to long-term storage for unused items before mounting the board. The operating temperature is applied when the circuit board is not energized after mounting, or when it is temporarily stored during transportation.

Material/Finish

| Item | Component | Material | Color/Finish |
|------------|-----------------|--------------|---|
| Receptacle | Shield Case | Copper Alloy | Tin Plating |
| | Insulator | PA | Dark Gray (Note), Brown, Green, Blue, Black |
| | Contact | Brass | Tin Plating |
| Plug | Housing | PBT | Dark Gray (Note), Brown, Green, Blue, Black |
| | Insulation Case | PBT | Light Gray |
| | Outer Terminal | Copper Alloy | Tin Plating |
| | Shield Cover | | |
| | Center Terminal | | |

Note : The standard color is Dark Gray.

Product Number Structure

Refer to the chart below when determining the product specifications from the product number.
Please select from the product numbers listed in this catalog when placing orders.

■ Connector

GT32 J - 4 D P - 1.5 H (A)

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

■ Center Terminal

GT32 - 2428 SCF

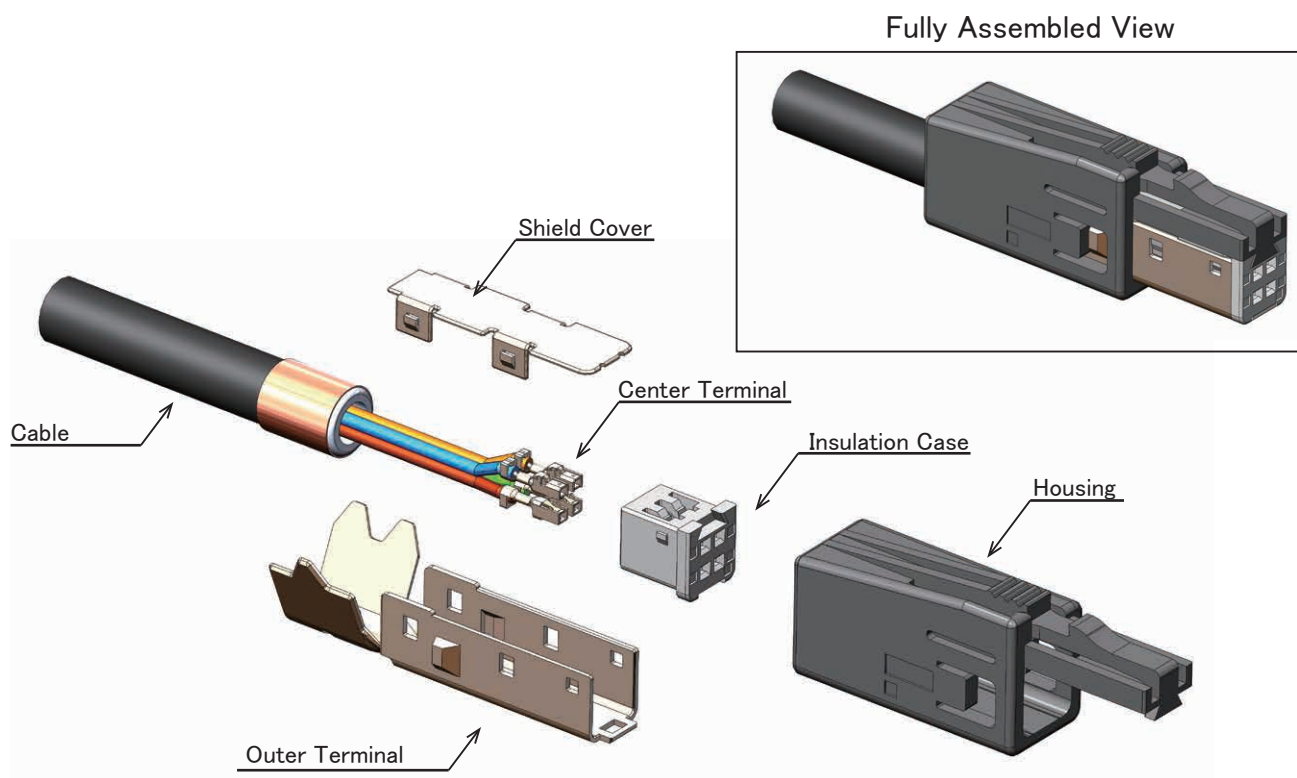
① ⑨ ⑩

| | | | |
|------------------|--|--------------------|--|
| ① Series Name | GT32 | ⑦ Component Type | H : Right Angle SMT V : Straight SMT HU : Plug Housing C : Insulation Case 5CF : Outer Terminal SC : Shield Cover |
| ② Design | None : Standard J : Enhanced Shield Design D : Shield Case Through Hole Length 2.3mm (Standard 1.6mm) | ⑧ Mating Key | None : Standard, A, B, C, D |
| ③ No. of Pos. | 4 : 4pos. 4/4/4 : 3 Ports, 12pos. Total | ⑨ Applicable Cable | 2428 : 24 to 28 AWG |
| ④ Columns | D : 2 Rows | ⑩ Shape Type | SCF : Female Contact |
| ⑤ Connector Type | P : Receptacle S : Plug | | |
| ⑥ Contact Pitch | 1.5mm | | |

Plug Configuration

The plug consists of 5 components.

(Housing, Insulation Case, Outer Terminal, Shield Cover and Center Terminal)



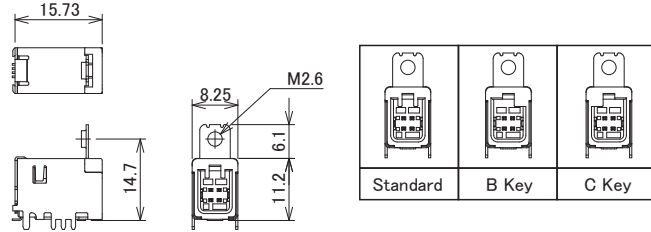
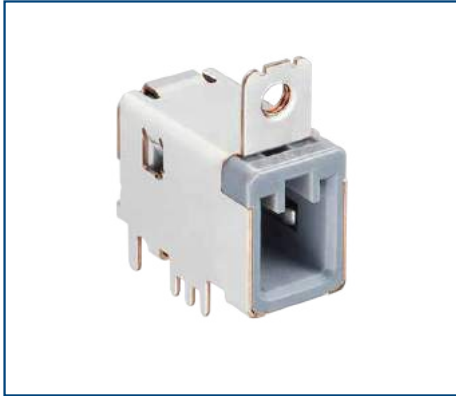
This product is not compatible with the GT32F Series, which is an in-line connector.

Please refer to our website for information on the GT32F series.

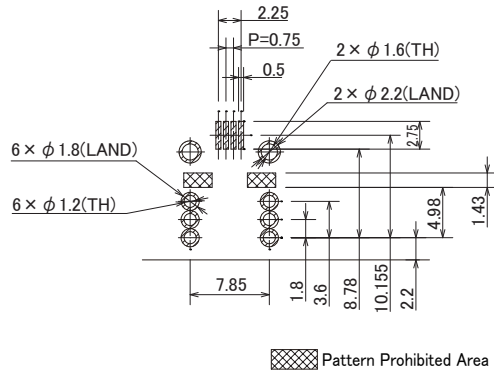
<https://www.hirose.com/en/product/series/GT32F/>

Right Angle Receptacle

M2.6 Flange Mount Design

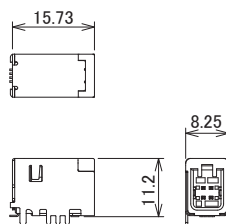
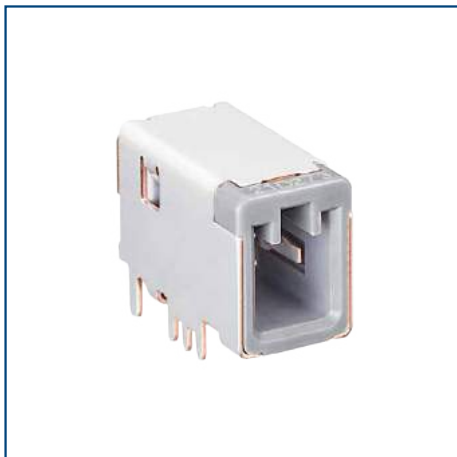


Recommended PCB Layout (Recommended PCB Thickness : 1.6mm)



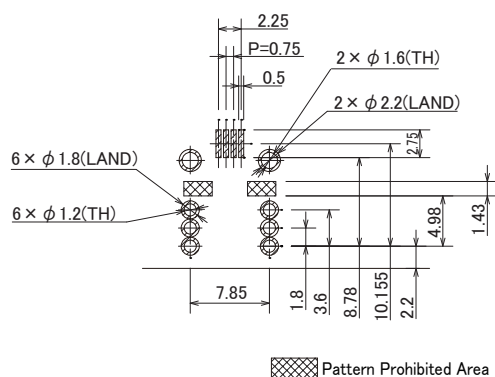
| Part No. | HRS No. | Color | Mating Key | Purchase Unit |
|----------------------|------------------|-----------|------------|----------------|
| GT32-4DP-1.5H(30) | CL0782-0038-1-30 | Dark Gray | Standard | 90pcs per tray |
| GT32-4DP-1.5H(B)(30) | CL0782-0062-6-30 | Green | B Key | |
| GT32-4DP-1.5H(C)(30) | CL0782-0063-9-30 | Blue | C Key | |

Non-Flanged Design



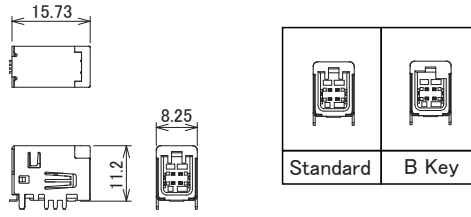
| | | | | |
|----------|-------|-------|-------|-------|
| | | | | |
| Standard | A Key | B Key | C Key | D Key |

Recommended PCB Layout (Recommended PCB Thickness : 1.6mm)

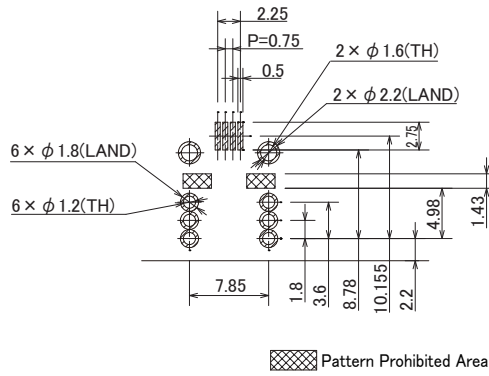


| Part No. | HRS No. | Color | Mating Key | Purchase Unit (##) : (11) | Purchase Unit (##) : (12) |
|----------------------|------------------|-----------|------------|------------------------------|------------------------------|
| GT32-4DP-1.5H(##) | CL0782-0038-1-## | Dark Gray | Standard | 90pcs per tray | 350pcs per reel |
| GT32-4DP-1.5H(A)(##) | CL0782-0061-3-## | Brown | A Key | | |
| GT32-4DP-1.5H(B)(##) | CL0782-0062-6-## | Green | B Key | | |
| GT32-4DP-1.5H(C)(##) | CL0782-0063-9-## | Blue | C Key | | |
| GT32-4DP-1.5H(D)(##) | CL0782-0064-1-## | Black | D Key | | |

Enhanced Shield Design



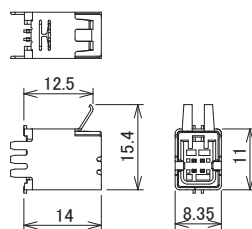
Recommended PCB Layout (Recommended PCB Thickness : 1.6mm)



| Part No. | HRS No. | Color | Mating Key | Purchase Unit |
|-----------------------|------------------|-----------|------------|----------------|
| GT32J-4DP-1.5H(11) | CL0782-0085-0-11 | Dark Gray | Standard | 540pcs per box |
| GT32J-4DP-1.5H(B)(11) | CL0782-0086-0-11 | Green | B Key | |

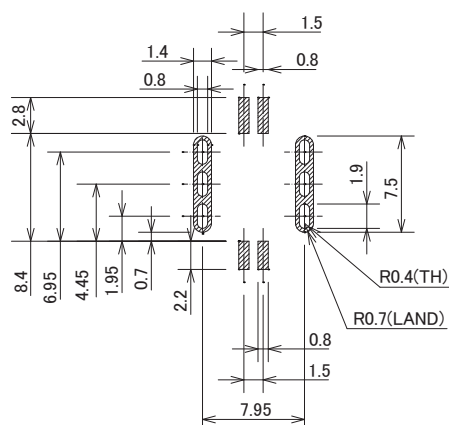
Straight Receptacle

Non-Flanged Vertical Design



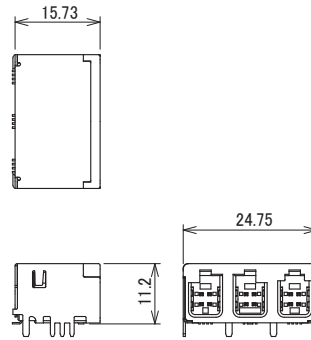
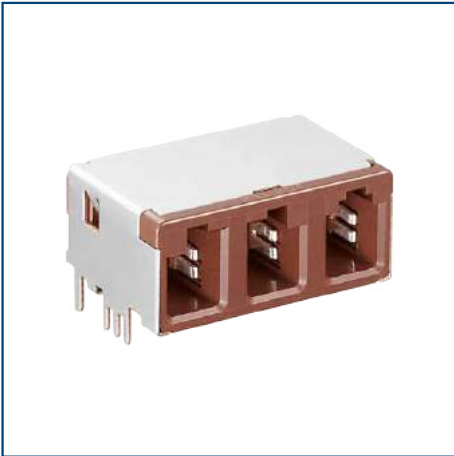
| | | | | |
|----------|-------|-------|-------|-------|
| | | | | |
| Standard | A Key | B Key | C Key | D Key |

Recommended PCB Layout (Recommended PCB Thickness : 1.6mm)

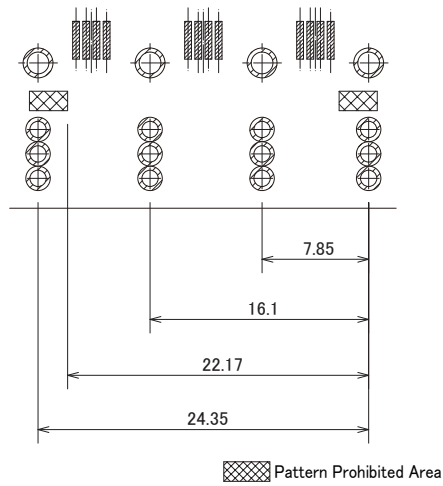


| Part No. | HRS No. | Color | Mating Key | Purchase Unit (##) : None | Purchase Unit (##) : (30) |
|----------------------|------------------|-----------|------------|------------------------------|------------------------------|
| GT32-4DP-1.5V(##) | CL0782-0060-0-## | Dark Gray | Standard | 105pcs per tray | 300pcs per reel |
| GT32-4DP-1.5V(A)(##) | CL0782-0065-4-## | Brown | A Key | | |
| GT32-4DP-1.5V(B)(##) | CL0782-0066-7-## | Green | B Key | | |
| GT32-4DP-1.5V(C)(##) | CL0782-0067-0-## | Blue | C Key | | |
| GT32-4DP-1.5V(D)(##) | CL0782-0068-2-## | Black | D Key | | |

3 Port Receptacle



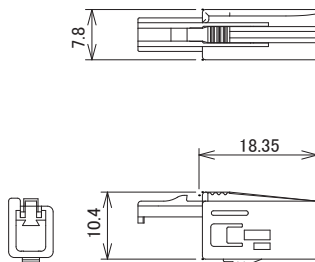
Recommended PCB Layout
 (Recommended PCB Thickness : 1.6mm)
 *See GT32-4DP-1.5H for detailed dimensions



| Part No. | HRS No. | Color | Mating Key | Purchase Unit |
|-----------------------|-----------------------|-------|-----------------------------|---------------|
| GT32D-4/4/4DP-1.5HCBA | Under Planning (Note) | Brown | From left to right, CBA Key | - |

Note : Product without HRS No. is currently being planned for development. Please contact a Hirose representative regarding questions on pin count variation development.

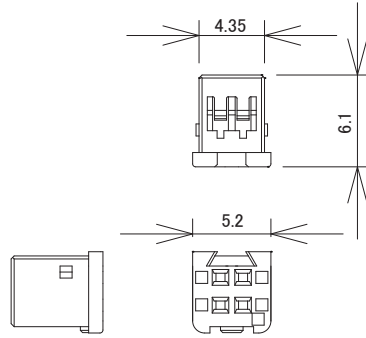
Plug Housing



| | | | | |
|----------|-------|-------|-------|-------|
| | | | | |
| Standard | A Key | B Key | C Key | D Key |

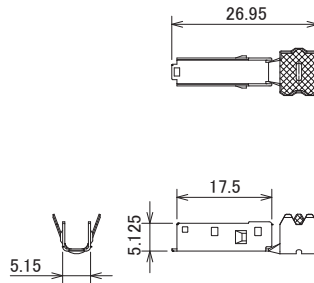
| Part No. | HRS No. | Color | Mating Key | Purchase Unit |
|----------------|------------------|-----------|------------|----------------|
| GT32-4DS-HU | CL0782-0042-9-00 | Dark Gray | Standard | 100pcs per bag |
| GT32-4DS-HU(A) | CL0782-0055-0-00 | Brown | A Key | |
| GT32-4DS-HU(B) | CL0782-0056-3-00 | Green | B Key | |
| GT32-4DS-HU(C) | CL0782-0057-6-00 | Blue | C Key | |
| GT32-4DS-HU(D) | CL0782-0058-9-00 | Black | D Key | |

Insulation Case



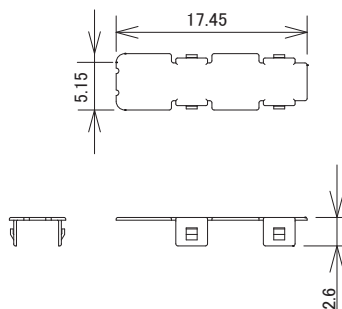
| Part No. | HRS No. | Color | Purchase Unit |
|---------------|------------------|------------|----------------|
| GT32-4DS-1.5C | CL0782-0039-4-00 | Light Gray | 100pcs per bag |

Outer Terminal



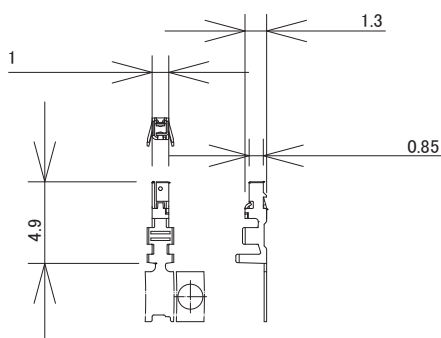
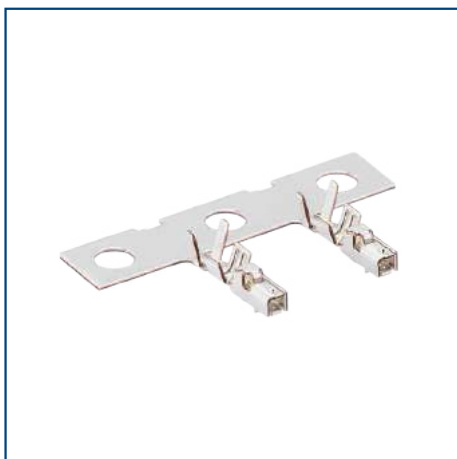
| Part No. | HRS No. | Applicable Cable Diameter | Purchase Unit |
|--------------|------------------|---------------------------|----------------|
| GT32-4DS-5CF | CL0782-0040-3-00 | φ 4.8 to 5.0 | 100pcs per bag |

Shield Cover



| Part No. | HRS No. | Purchase Unit |
|-------------|------------------|----------------|
| GT32-4DS-SC | CL0782-0041-6-00 | 100pcs per bag |

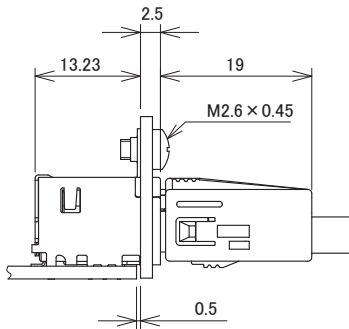
Center Terminal



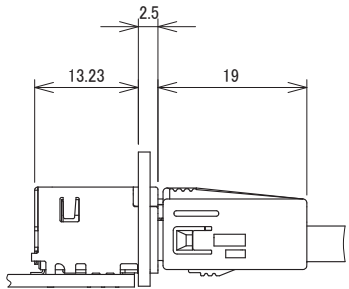
| Part No. | HRS No. | Applicable Cable | Purchase Unit |
|--------------|------------------|---|--------------------|
| GT32-2428SCF | CL0782-0007-8-00 | Wire Size : 24 to 28 AWG Cable Jacket Outer Diameter : ϕ 0.8 to 1.0 | 10,000pcs per reel |

Mated Diagram

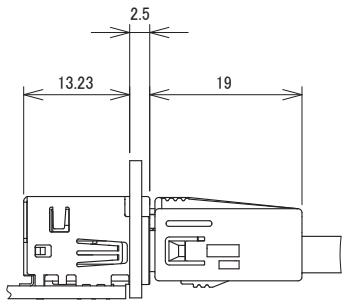
Right Angle (Flange Mount Design) to Plug Connection



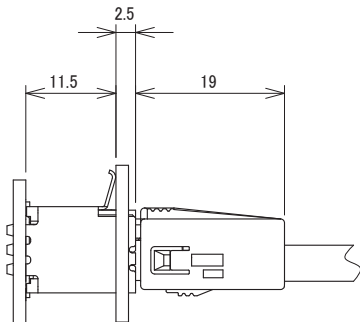
Right Angle (Non-Flanged Design) to Plug Connection



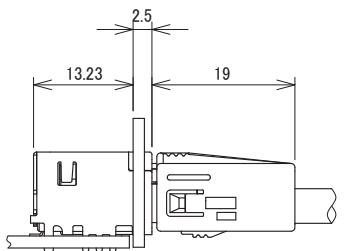
Right Angle (Enhanced Shield Design) to Plug Connection



Straight Receptacle to Plug Connection



3 Port Receptacle to Plug Connection



Applicable Tools

Contact Crimping Tool

| Type | Part No. | HRS No. | Applicable Center Terminal |
|----------------------------|------------------|------------------|----------------------------|
| Automatic Crimping Machine | CM-105C | CL0901-0001-0-00 | - |
| Applicator | AP105-GT32-2428S | CL0901-5223-2-00 | GT32-2428SCF |

Note 1 : Conduct crimping based on the "Crimp Quality Standard" and "Crimp Condition Table."

Contact Insertion Tool

| Part No. | HRS No. | Applicable Center Terminal |
|----------------|------------------|----------------------------|
| GT32-CON/PR-MD | CL0902-5125-0-00 | GT32-2428SCF |

Note 2 : This tool uses the GT32-2428SCF only when inserting it into Insulation Case.
Please note that this tool can not be used for other Contact or Insulation Cases.

Outer Terminal Caulking Tool

| Type | Part No. | HRS No. | Applicable Outer Terminal |
|----------------------------------|----------------------|------------------|---------------------------|
| Hand Press | HOS-7 | CL0902-0132-8-00 | - |
| Applicator | GT32-4DS-5/CR-MP | CL0902-5519-5-00 | GT32-4DS-5CF |
| Hand Press + Applicator (Note 3) | GT32-4DS-5/CR-MP(01) | CL0902-5519-5-01 | GT32-4DS-5CF |

Note 3 : (01) Specifications's Outer Terminal Crimping Tool is sold as a set with the Hand Press HOS-7.

Note 4 : Usage of tools not specified by Hirose will void the warranty.

Usage Precautions

| | | |
|---|---|--|
| Recommended Temperature Profile | <p>Temperature (°C)</p> <p>Time (s)</p> <p>90±30s</p> <p>30±10s</p> | <p>【Conditions】</p> <ol style="list-style-type: none"> 1. Peak Temperature : 250°C Peak 2. Reflow Temperature/Time : 230°C Min. 20 to 40 sec. 3. Preheat Temperature : 150 to 180°C 60 to 120 sec. 4. Reflow Cycles : 2 times Max. 5. Recommended Solder Thickness : 0.12mm |
| Recommended Manual Soldering Conditions | Soldering Iron Temperature : 280 to 300 °C , Soldering Time : 2 seconds Max. | |
| Precautions | <ol style="list-style-type: none"> 1. Excessive pull force during unmating may damage the connector. If it is difficult to remove, push in lightly once and then release the lock. 2. Always make sure to turn off the power before reinserting the connector. 3. Do not directly touch the terminal when electricity is flowing since it is extremely dangerous. 4. Contact a Hirose representative for cable assembly procedures or handling manuals. | |

While Taking into Consideration

Specifications mentioned in this catalog are reference values.

When considering to order or use this product, please confirm the Drawing and Product Specifications sheets.

Use an appropriate cable when using the connector in combination with cables.

If considering usage of a non-specified cable, please contact your sales representative.

If assembly process is done by jigs & tools which are not identified by Hirose, assurance will not be given.

If considering usage for below mentioned applications, please contact your sales representative.

In cases where the application will demand a high level of reliability, such as automotive, medical instruments, public infrastructure, aerospace/ defense etc. Hirose must review before assurance of reliability can be given.