PRODUCT CATALOG

HIROSE ELECTRIC CO.,LTD.

GT32 Series

Compact, Shielded 4pos. Connector for Differential Signals

Automotive

High-Speed

Shield



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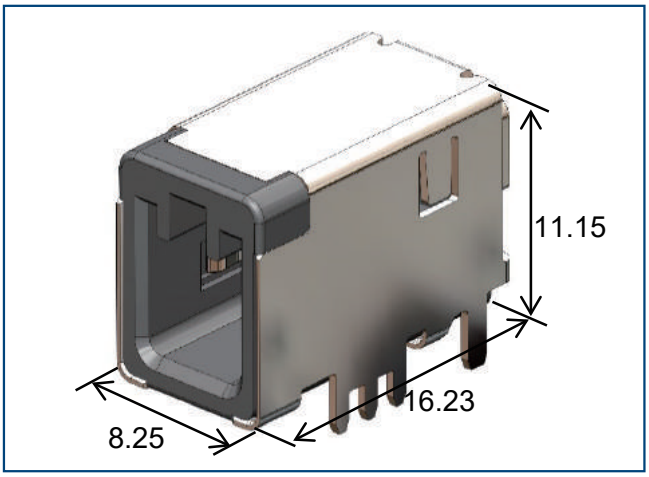
Product Page
https://www.hirose.com/en/product/series/GT32/

Nov. 2022

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.

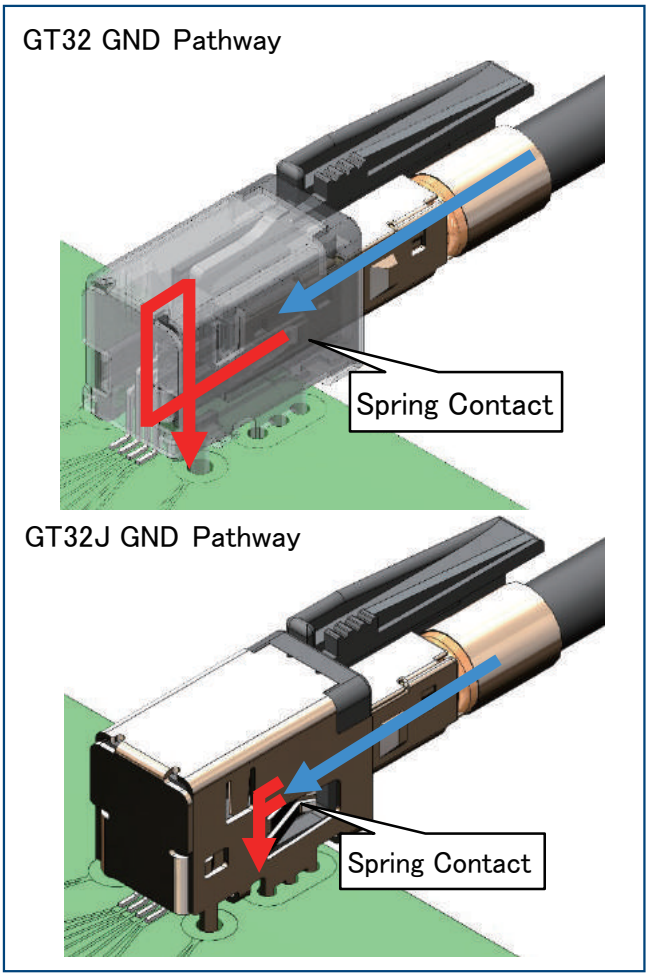


2. Enhanced Shield Design for Video Applications

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.

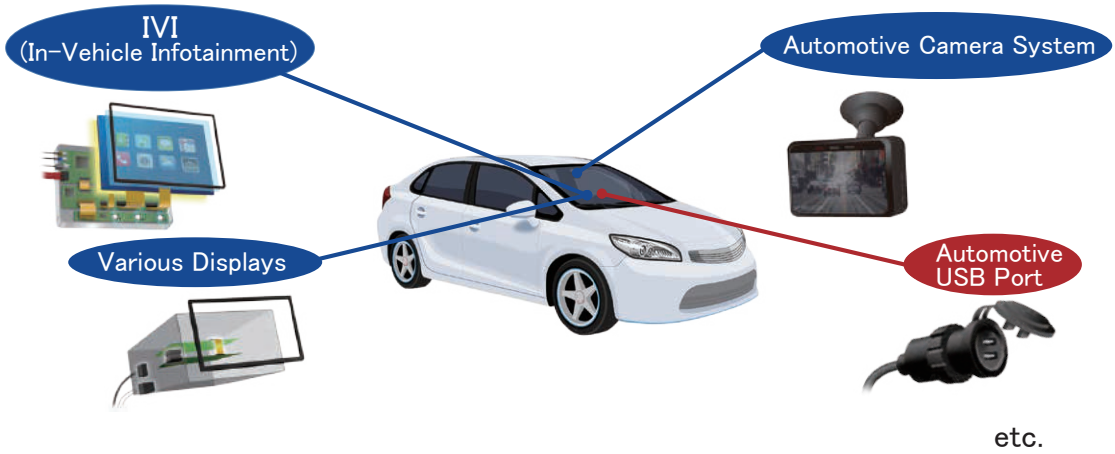


3. Multi-port Receptacles, plus High Density Mounting

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.

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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℃
Rated Voltage	30V AC	Storage Temperature (Note 2)	-10 to +60℃

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.

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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)
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

■ Center Terminal

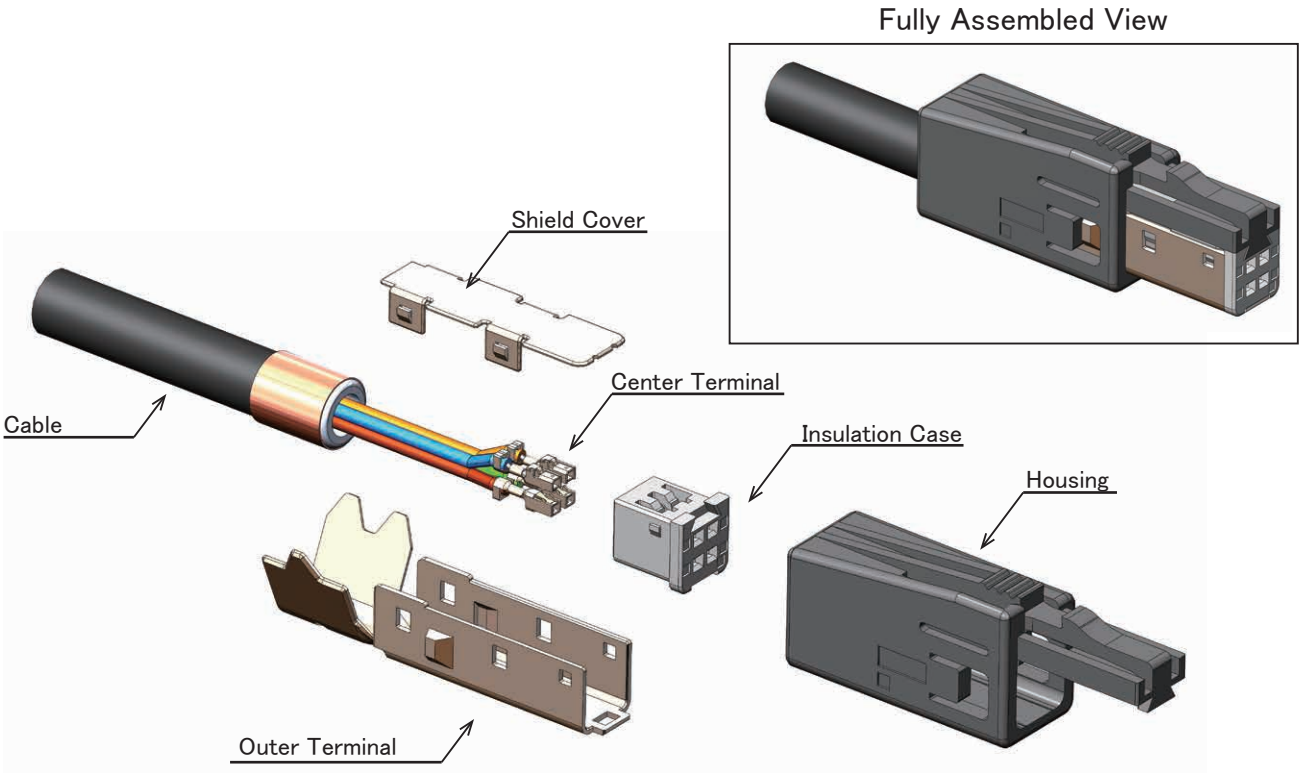
GT32 - 2428 SCF
❶ ❾ ❿

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

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Plug Configuration

The plug consists of 5 components.
(Housing, Insulation Case, Outer Terminal, Shield Cover and Center Terminal)

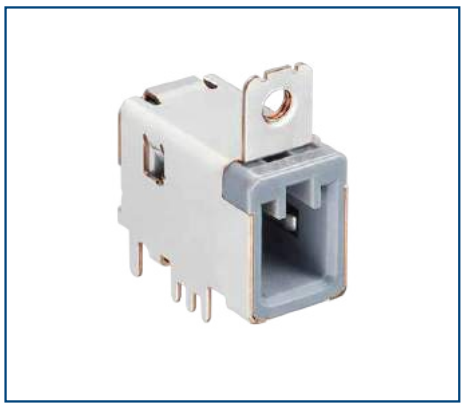


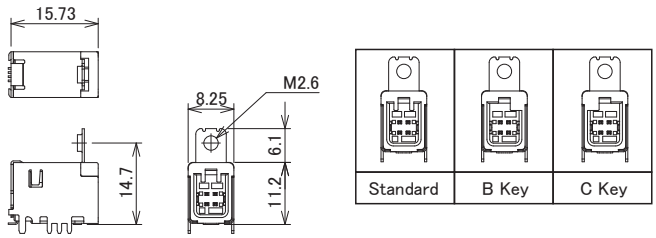
This product is not compatible with the GT32F Series, which is a in-line connector.
Please refer to our website for information on the GT32F series.
https://www.hirose.com/en/product/series/GT32F/

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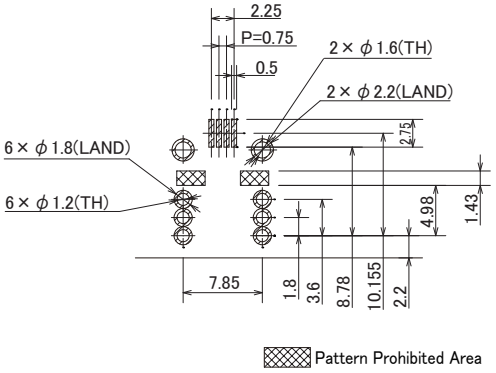
Right Angle Receptacle

M2.6 Flange Mount Design





Recommended PCB Layout
(Recommended PCB Thickness : 1.6mm)

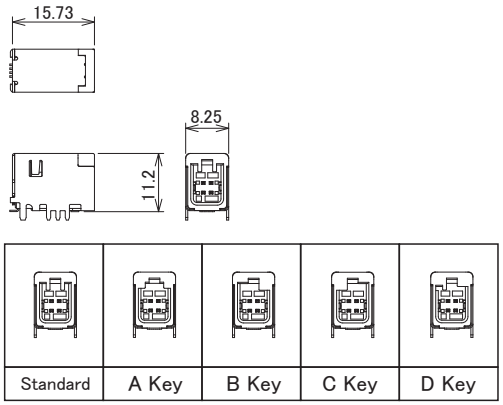


Part No.	HRS No.	Color	Mating Key	Purchase Unit
GT32-4DP-1.5H(30)	CL0782-0038-1-30	Dark Gray	Standard	90pcs per tray
GT32-4DP-1.5H(B)(30)	CL0782-0062-6-30	Green	B Key	
GT32-4DP-1.5H(C)(30)	CL0782-0063-9-30	Blue	C Key	

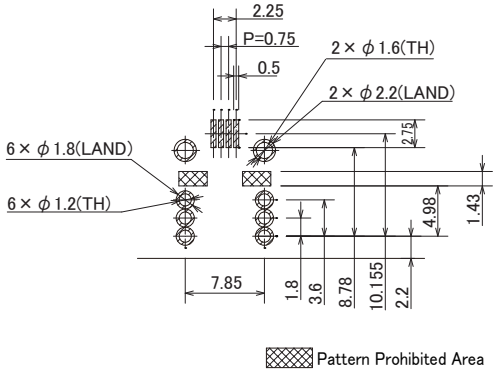
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Non-Flanged Design





Recommended PCB Layout
(Recommended PCB Thickness : 1.6mm)

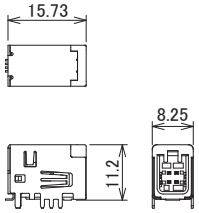


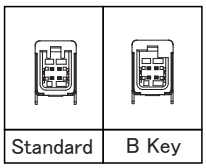
Part No.	HRS No.	Color	Mating Key	Purchase Unit (##) : (11)	Purchase Unit (##) : (12)
GT32-4DP-1.5H(##)	CL0782-0038-1-##	Dark Gray	Standard	90pcs per tray	350pcs per reel
GT32-4DP-1.5H(A)(##)	CL0782-0061-3-##	Brown	A Key		
GT32-4DP-1.5H(B)(##)	CL0782-0062-6-##	Green	B Key		
GT32-4DP-1.5H(C)(##)	CL0782-0063-9-##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

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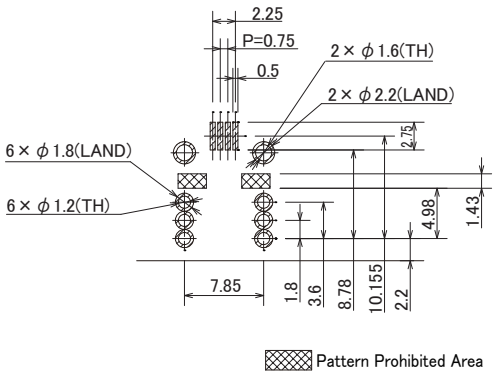
Enhanced Shield Design







Recommended PCB Layout
(Recommended PCB Thickness : 1.6mm)



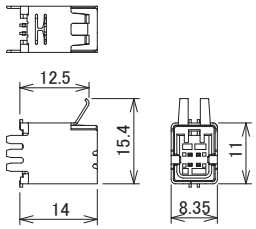
Part No.	HRS No.	Color	Mating Key	Purchase Unit
GT32J-4DP-1.5H(11)	CL0782-0085-0-11	Dark Gray	Standard	540pcs per box
GT32J-4DP-1.5H(B)(11)	CL0782-0086-0-11	Green	B Key	

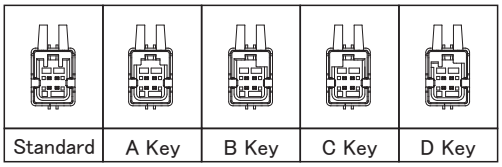
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Straight Receptacle

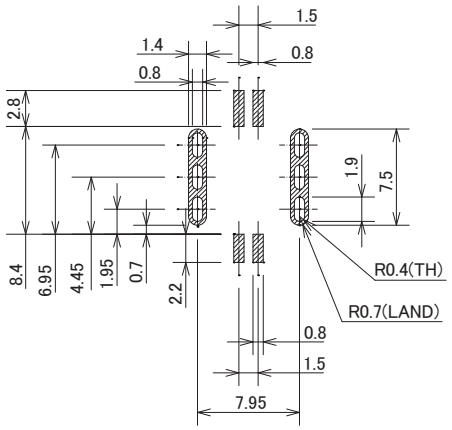
Non-Flanged Vertical Design







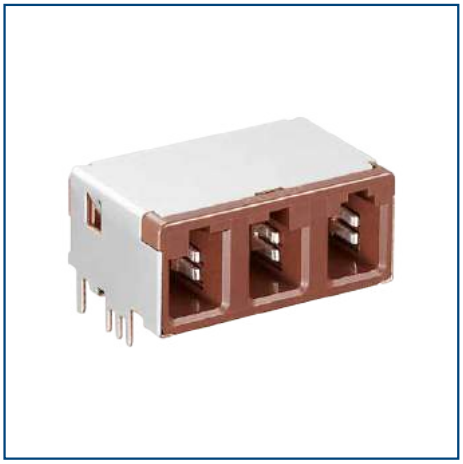
Recommended PCB Layout
(Recommended PCB Thickness : 1.6mm)

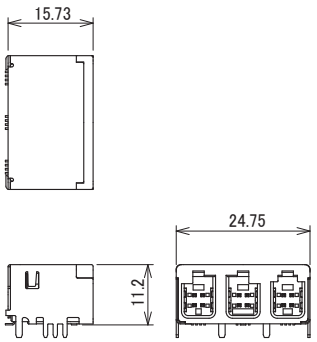


Part No.	HRS No.	Color	Mating Key	Purchase Unit (##) : None	Purchase Unit (##) : (30)
GT32-4DP-1.5V(##)	CL0782-0060-0-##	Dark Gray	Standard	105pcs per tray	300pcs per reel
GT32-4DP-1.5V(A)(##)	CL0782-0065-4-##	Brown	A Key		
GT32-4DP-1.5V(B)(##)	CL0782-0066-7-##	Green	B Key		
GT32-4DP-1.5V(C)(##)	CL0782-0067-0-##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

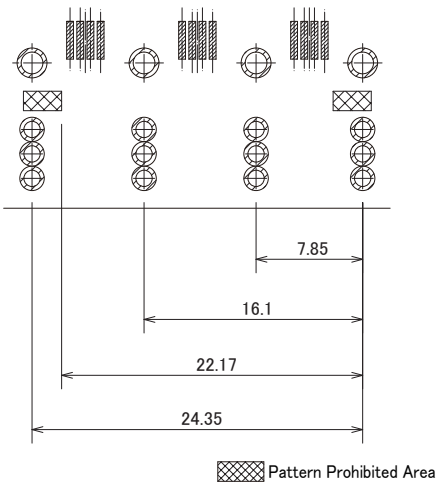
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3 Port Receptacle





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



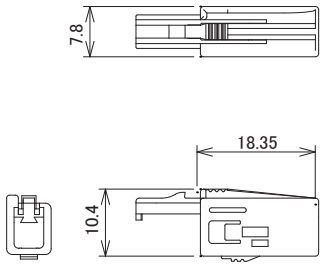
Part No.	HRS No.	Color	Mating Key	Purchase Unit
GT32D-4/4/4DP-1.5HCBA	Under Planning (Note)	Brown	From left to right, CBA Key	-

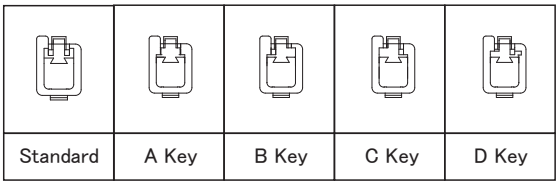
Note : Product without HRS No. is currently being planned for development. Please contact a Hirose representative regarding questions on pin count variation development.

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Plug Housing





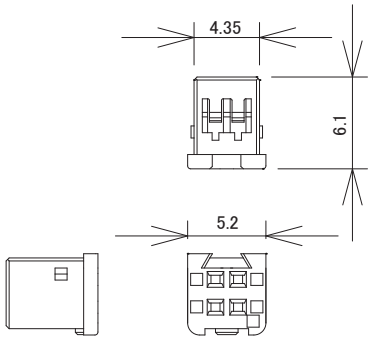


Part No.	HRS No.	Color	Mating Key	Purchase Unit
GT32-4DS-HU	CL0782-0042-9-00	Dark Gray	Standard	100pcs per bag
GT32-4DS-HU(A)	CL0782-0055-0-00	Brown	A Key	
GT32-4DS-HU(B)	CL0782-0056-3-00	Green	B Key	
GT32-4DS-HU(C)	CL0782-0057-6-00	Blue	C Key	
GT32-4DS-HU(D)	CL0782-0058-9-00	Black	D Key	

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Insulation Case

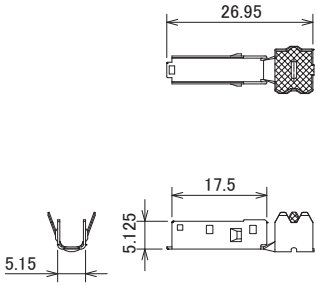




Part No.	HRS No.	Color	Purchase Unit
GT32-4DS-1.5C	CL0782-0039-4-00	Light Gray	100pcs per bag

Outer Terminal



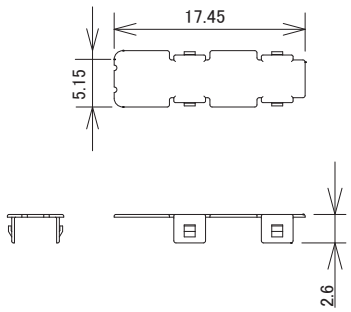


Part No.	HRS No.	Applicable Cable Diameter	Purchase Unit
GT32-4DS-5CF	CL0782-0040-3-00	ϕ 4.8 to 5.0	100pcs per bag

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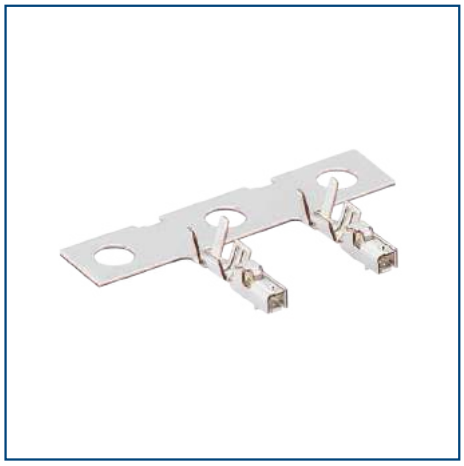
Shield Cover

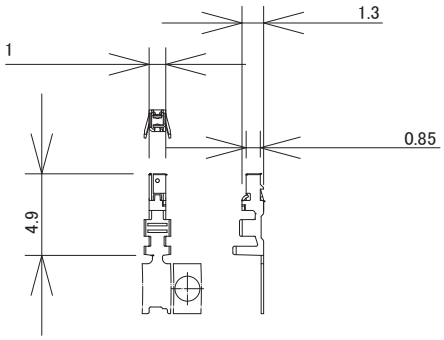




Part No.	HRS No.	Purchase Unit
GT32-4DS-SC	CL0782-0041-6-00	100pcs per bag

Center Terminal



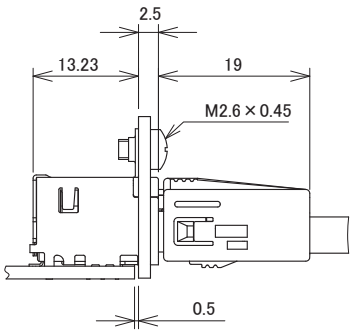


Part No.	HRS No.	Applicable Cable	Purchase Unit
GT32-2428SCF	CL0782-0007-8-00	Wire Size : 24 to 28 AWG Cable Jacket Outer Diamater : ϕ 0.8 to 1.0	10,000pcs per reel

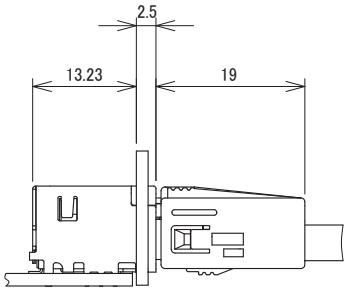
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Mated Diagram

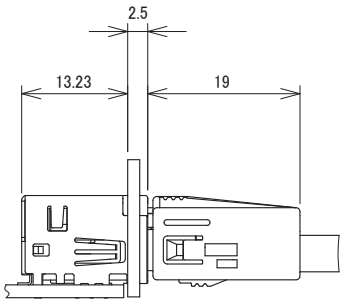
Right Angle (Flange Mount Design) to Plug Connection



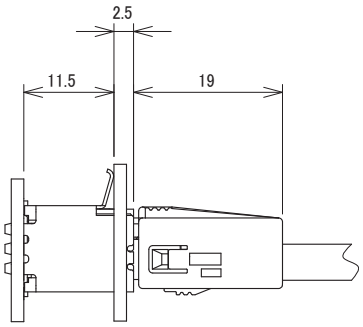
Right Angle (Non-Flanged Design) to Plug Connection



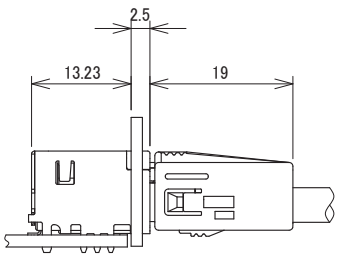
Right Angle (Enhanced Shield Design) to Plug Connection



Straight Receptacle to Plug Connection



3 Port Receptacle to Plug Connection



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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

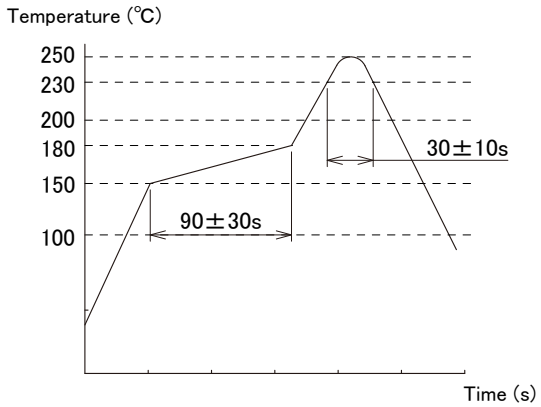
Note 2 : This tool uses the GT32-2428SCF only when inserting it into Insulation Case.
Please note that this tool can not be used for other Contact or Insulation Cases.

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	 【Conditions】 1. Peak Temperature : 250℃ Peak 2. Reflow Temperature/Time : 230℃ Min. 20 to 40 sec. 3. Preheat Temperature : 150 to 180℃ 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 ℃ , Soldering Time : 2 seconds Max.
Precautions	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.

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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.

HIROSE ELECTRIC CO.,LTD. 2-6-3,Nakagawa Chuoh,Tsuzuki-Ku,Yokohama-Shi 224-8540,JAPAN
https://www.hirose.com

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