

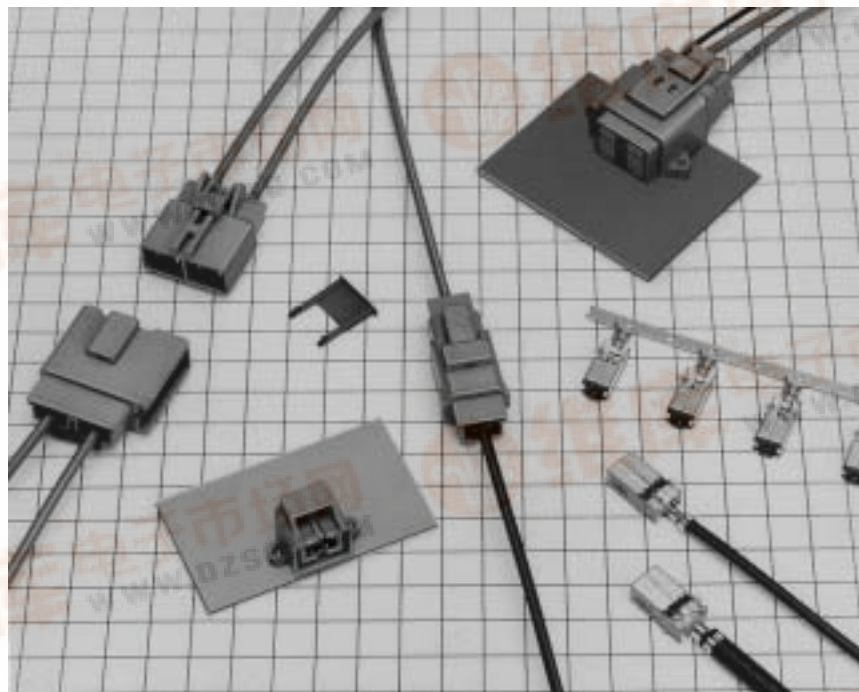
## Coaxial cable connection of Antennas, Sensors, and Communication Trunk Lines

Termination of coaxial cables in automotive, medical and instrumentation applications utilizes a single motion to crimp the center conductor, shield and outer Insulator.

# GT1 Series

### — Connectors for coaxial cables —

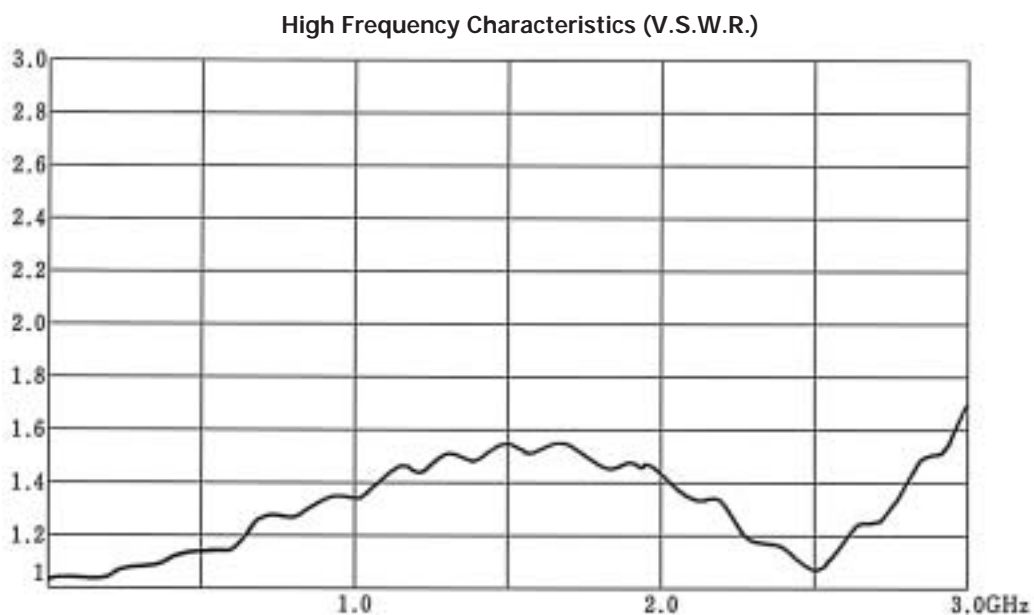
<Several types and configurations: In-line, board mounted, combinations of coaxial cable with signal/power. Multi-position.>



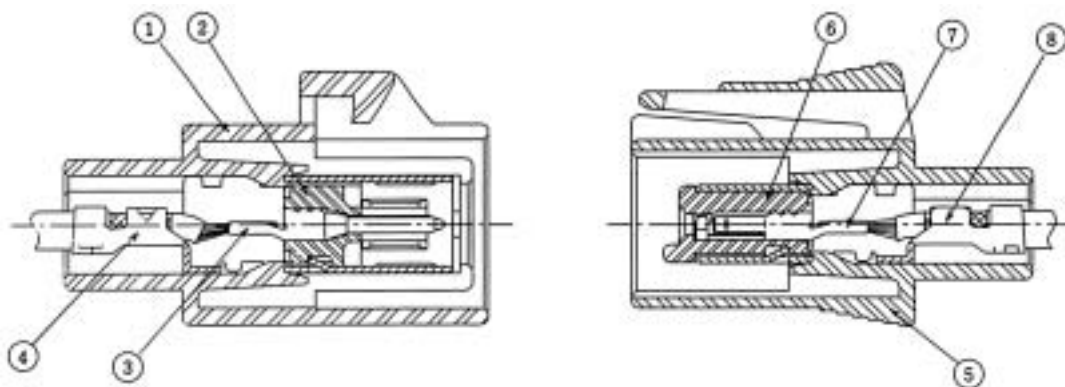
### Features

- **Cost efficient termination**  
Highly efficient and reliable single motion crimp termination allows high volume production with semi-automatic equipment.
- **Lock-release latching system**
- **Shock / vibration resistant electrical connections**
- **Verification of the full contact insertion**
- **Excellent shielding effects.**
- **Excellent High Frequency Performance**  
Refer to V.S.W.R. data on the following pages.

## ◆ Test Data (Using Semi-rigid Cable)



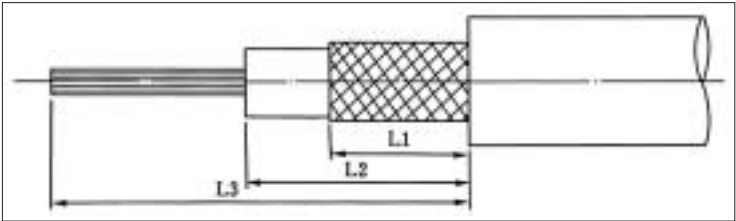
## ◆ Diagram of GT1 In-line Type Structure



	Part Number	Part	Number Used	Material	Finish
1	GT1-1P-HU	Housing	1	PA(UL94V-0)	—
2		Insulator	1	PBT(UL94V-0)	—
3	GT1-1P-2428/1.6C	Crimp terminal	1	Brass	Tin plating
4		Outer terminal	1	Brass	Tin plating
5	GT1-1S-HU	Housing	1	PA(UL94V-0)	—
6		Insulator	1	PBT(UL94V-0)	—
7	GT1-1S-2428/1.6C	Crimp terminal	1	Phosphor bronze	Tin plating
8		Outer terminal	1	Brass	Tin plating

◆ Termination sequence

- Coaxial Cable Terminal Finish Diagram

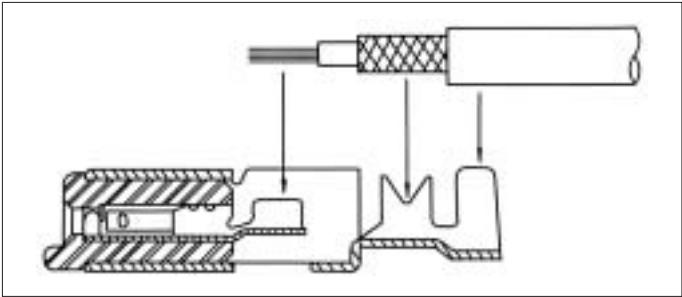


Strip Length

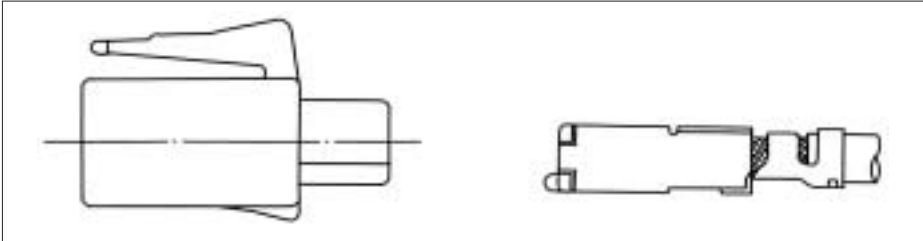
Part Number	CL No.	L1	L2	L3
GT1-1S-2428/1.6C	751-0001-3	3.8	6	10.5
GT1-1P-2428/1.6C	751-0002-6			
GT1-1S-30/1.6C	751-0029-2			
GT1-1P-30/1.6C	751-0030-1			
GT1-1S-2022/2.9C	751-0015-8	4.9	6.8	11.3
GT1-1P-2022/2.9C	751-0014-5			

Part Number	CL No.	L1	L2	L3
GT1-1S-30/2.9C	751-0032-7	4.9	6.8	11.3
GT1-1P-30/2.9C	751-0031-4			
GT1-1S-2428/F5C	751-0033-0			
GT1-1P-2428/F5C	751-0034-2			
GT1-1S-30/F5C	751-0037-0			
GT1-1P-30/F5C	751-0038-3			

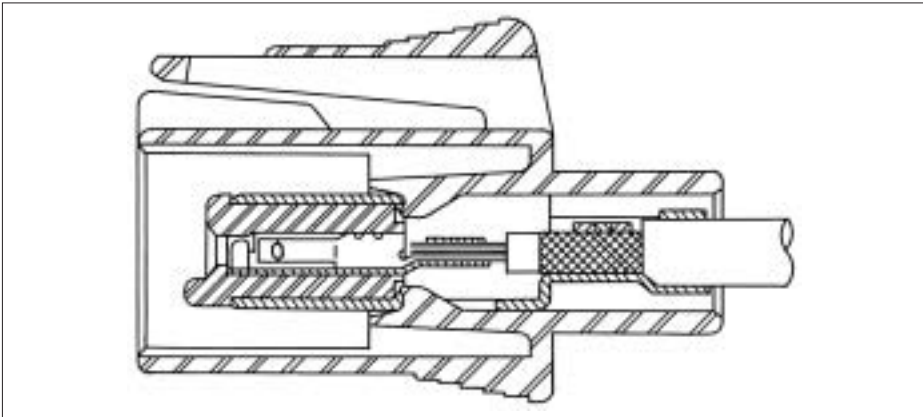
1 Crimp the cable to the terminal.



2 Insert the terminal in the housing until is fully locked.

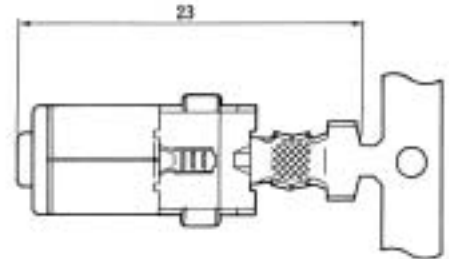
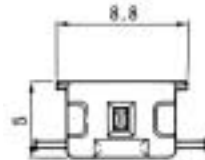


3 Completion

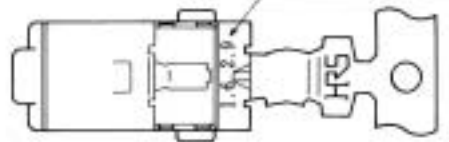


## Terminals for coaxial shielded cable

### F Connector Terminals



Indication of  
Conductor Size (AWG)

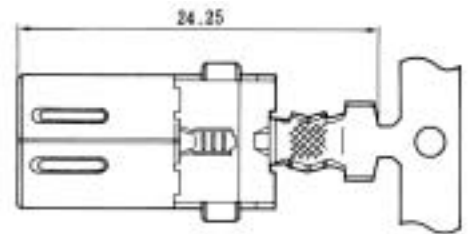
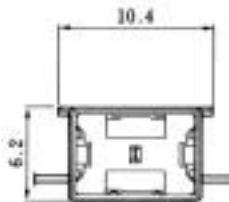


Part Number	CL No.	Conductor Size (AWG)	Inner Insulator Diameter	Outer Diameter	Packaging
GT1-1S-2428/1.6C	751-0001-3	#24 to 28 or equivalent	1.5 to 2.0mm	2.6 to 3.4mm	1,200
GT1-1S-30/1.6C	751-0029-2	#30 or equivalent			
GT1-1S-2022/2.9C	751-0015-8	#20 to 22 or equivalent	2.8 to 3.5mm		
GT1-1S-30/2.9C	751-0032-7	#30 or equivalent			
* GT1-1S-2428/F5C	751-0033-0	#24 to 28 or equivalent	2.5 to 3.5mm	4.6 to 5.0mm	800
* GT1-1S-30/F5C	751-0037-0	#30 or equivalent			
GT1-1S-2428/F4C	751-0046-1	#24 to 28 or equivalent	4.0mm		

Note: Products marked with an asterisk (\*) indicate polyethylene foam insulation.

Item	Material	Finish
Insulator	PBT	Color: Dark gray
Crimp terminal	Brass	Tin plating
Outer terminal	Brass	Tin plating

### M Connector Terminals



Indication of  
Conductor Size (AWG)



Part Number	CL No.	Conductor Size (AWG)	Inner Insulator Diameter	Outer Diameter	Packaging
GT1-1P-2428/1.6C	751-0002-6	#24 to 28 or equivalent	1.5 to 2.0mm	2.6 to 3.4mm	800
GT1-1P-30/1.6C	751-0030-1	#30 or equivalent			
GT1-1P-2022/2.9C	751-0014-5	#20 to 22 or equivalent	2.8 to 3.5mm		
GT1-1P-30/2.9C	751-0031-4	#30 or equivalent			
* GT1-1P-2428/F5C	751-0034-2	#24 to 28 or equivalent	2.5 to 3.5mm	4.6 to 5.0mm	600
* GT1-1P-30/F5C	751-0038-3	#30 or equivalent			
GT1-1P-2428/F4C	751-0047-4	#24 to 28 or equivalent	4.0mm		

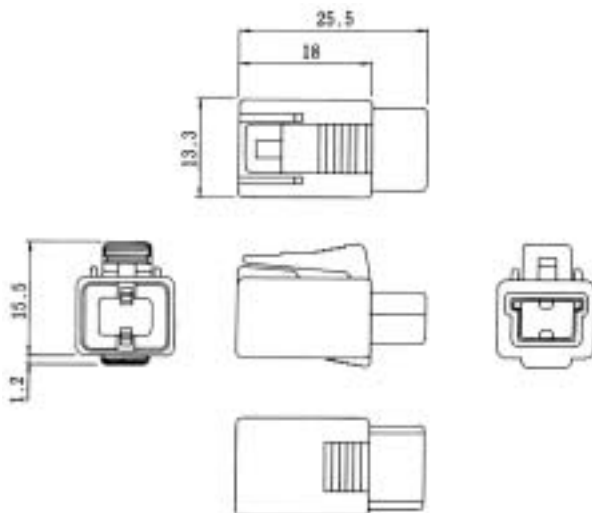
Note: Products marked with an asterisk (\*) indicate polyethylene foam insulation.

Item	Material	Finish
Insulator	PBT	Color: Dark gray
Crimp terminal	Brass	Tin plating
Outer terminal	Brass	Tin plating

For Single-Conductor coaxial shielded cable

F Connectors

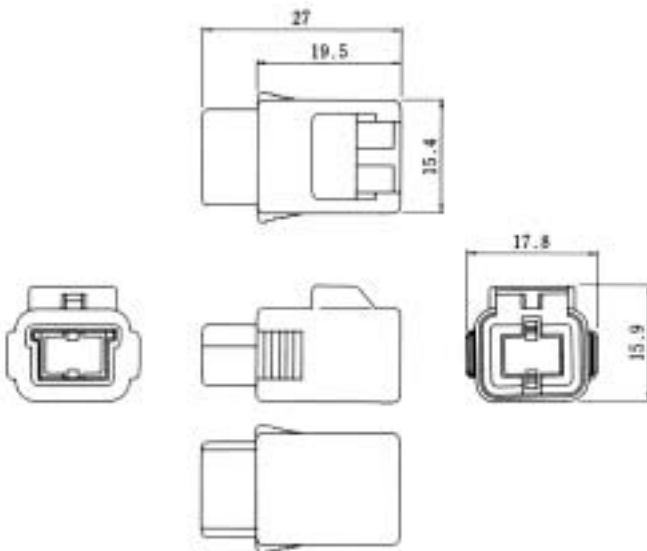
● Housing



Part Number	CL No.	Material	Color
GT1-1S-HU	751-0003-9	PA	Light gray

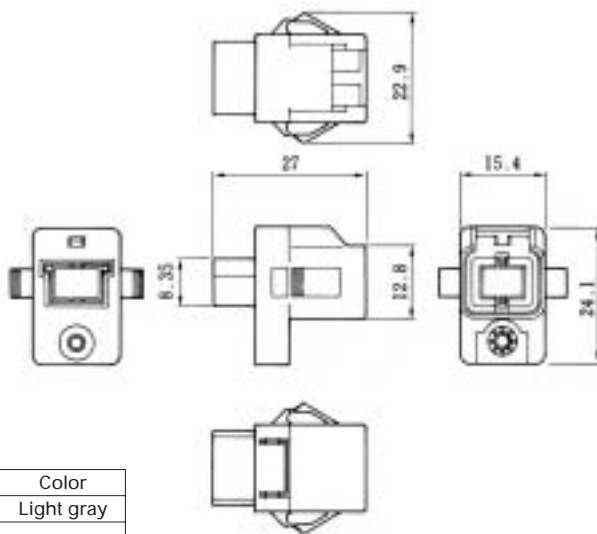
M Connectors

● Housing



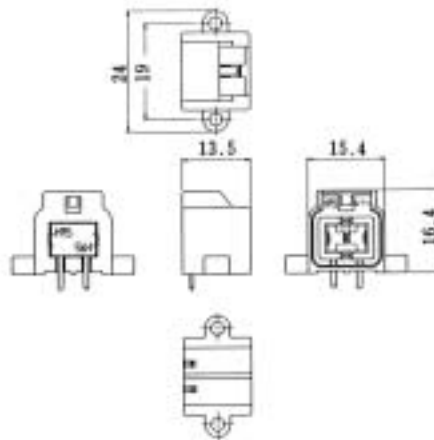
Part Number	CL No.	Material	Color
GT1-1P-HU	751-0004-1	PA	Light gray

● Panel Housing

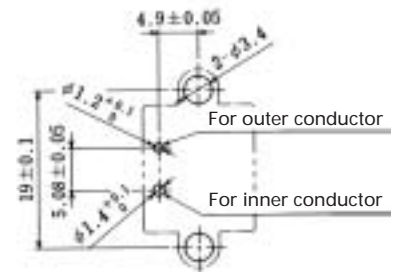


Part Number	CL No.	Item	Material	Finish	Color
GT1-1PP-HU	751-0007-0	Housing	PA	—	Light gray
		Ground plate	Brass	Tin plating	—
		Press fitting nut	Brass	Nickel	—

## ● Printed Circuit Type (Right angle)



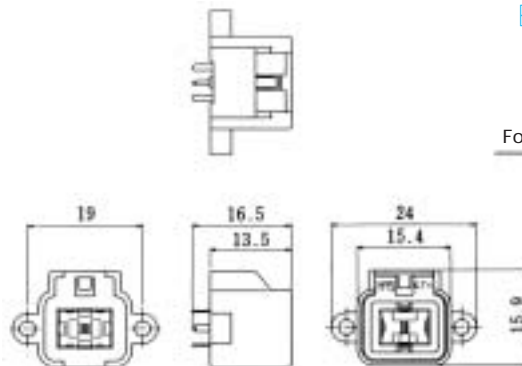
### ◆ Recommended Board Mounting Pattern



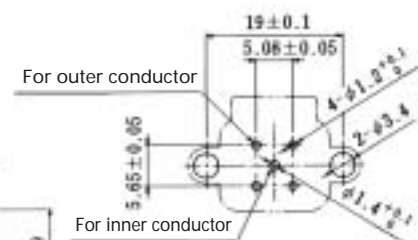
Part Number	CL No.	Item	Material	Finish	Color
GT1-1P-DS	751-0006-7	Housing	PBT	—	Light gray
		Insulator	PBT	—	Dark gray
		0.64X1.1 Terminal	Brass	Tin plating	—
		Outer terminal	Brass	Tin plating	—
		Ground terminal	Stainless	—	—

Use mounting screws of M3 with nominal diameter 3L-6 (for a panel thickness of 0.16mm)

## ● Printed Circuit Type (Straight Dip Type)



### ◆ Recommended Board Mounting Pattern



Part Number	CL No.	Item	Material	Finish	Color
GT1-1P-DSA	751-0005-4	Housing	PBT	—	Light gray
		Insulator	PBT	—	Dark gray
		0.64X1.1 Terminal	Brass	Tin plating	—
		Outer terminal	Brass	Tin plating	—

Use mounting screws of M3 with nominal diameter 3L-6 (for a panel thickness of 0.16mm)



## For Single-Conductor coaxial shielded cable

### F Connectors

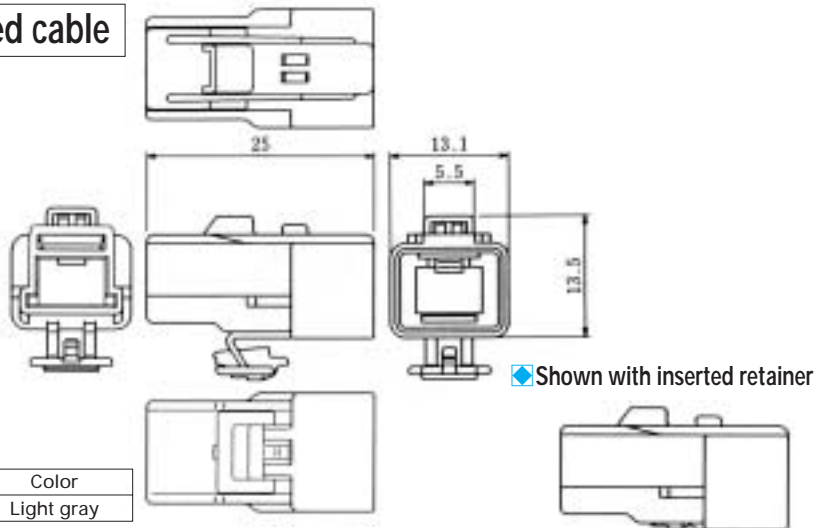
#### ● Housing (Integrated retainer type)



Part Number	CL No.	Material	Color
GT1K-1S-HU	751-0016-0	PBT	Light gray

Note: Mates only with GT1K-1P-DS and GT1K-1PA-DS.

\* Refer to Page 14 for use of the GT1K-1P-HU retainer.



### M Connectors

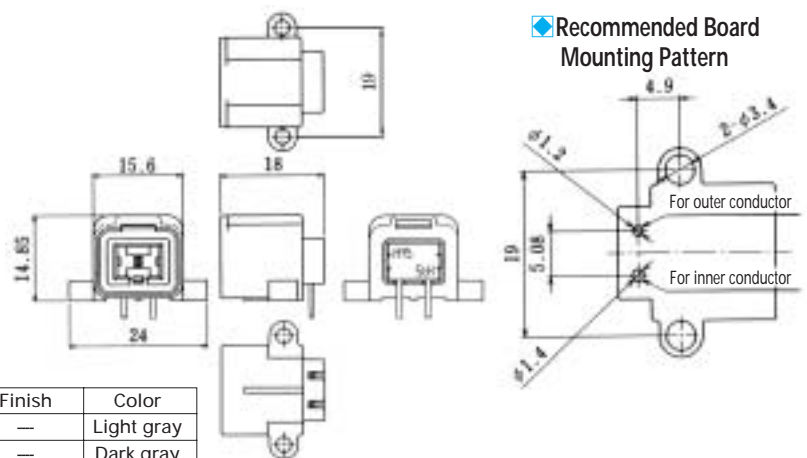
#### ● Printed Circuit Board Type (Right-angle Dip Top Lock Type)



Part Number	CL No.	Item	Material	Finish	Color
GT1K-1P-DS	751-0017-3	Housing	PBT	—	Light gray
		Insulator	PBT	—	Dark gray
		0.64X1.1 Terminal	Brass	Tin plating	—
		Outer terminal	Brass	Tin plating	—
		Cover	Stainless	Nickel	—

Note 1: Mates only with GT1K-1S-HU.

Note 2: Use mounting screws of M3 with nominal diameter 3L-6 (for a panel thickness of 0.16mm)



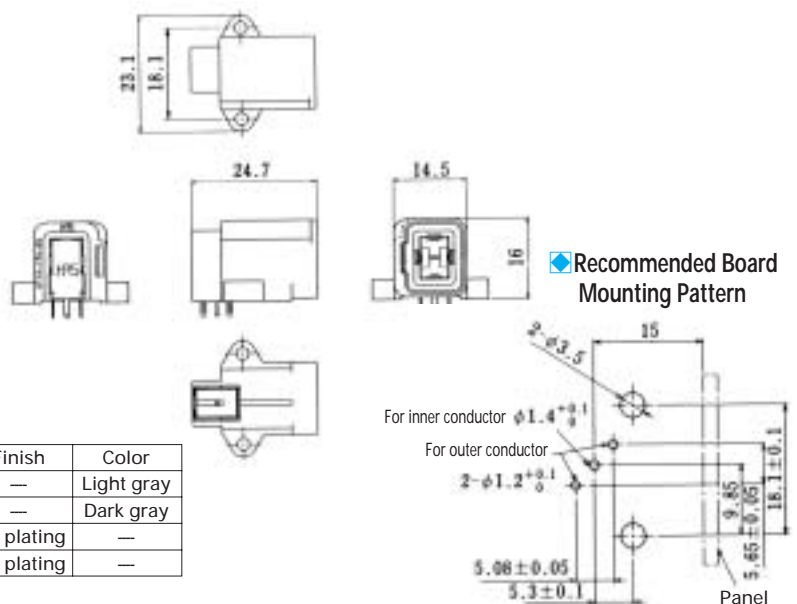
#### ● Printed Circuit Board Type (Right-angle Dip Side Lock Type)



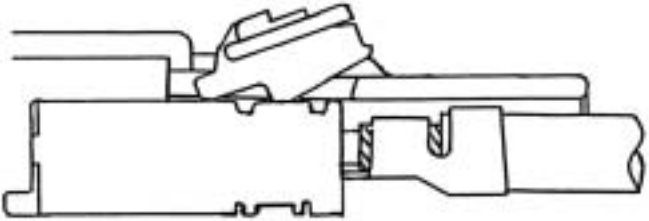
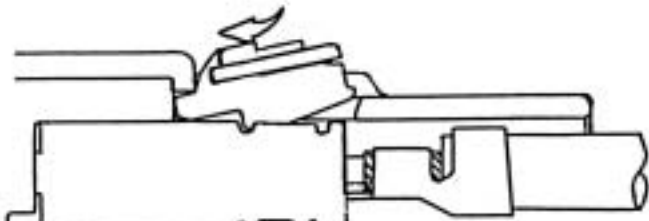
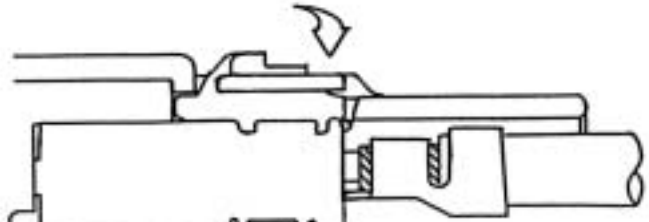
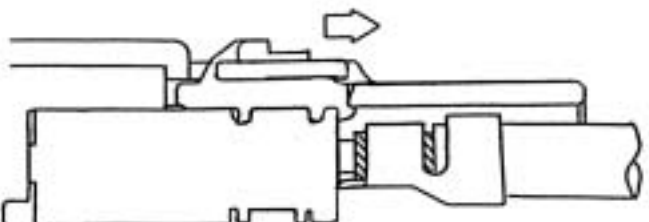
Part Number	CL No.	Item	Material	Finish	Color
GT1K-1PA-DS	751-0035-5	Housing	PBT	—	Light gray
		Insulator	PBT	—	Dark gray
		0.64X1.1 Terminal	Brass	Tin plating	—
		Outer terminal	Brass	Tin plating	—

Note 1: Mates only with GT1K-1S-HU.

Note 2: Use mounting screws of M3 with nominal diameter 3L-6 (for a panel thickness of 0.16mm)



## ◆ Method of Using the GT1K-1S Retainer

<p>a. Insert so that the terminal locking tab is inserted between the top surface of the terminal and the housing.</p>	
<p>b. Push in while changing the angle of the retainer until the front surface comes to a stop.</p>	
<p>c. Press the rear portion of the retainer and snap it into the locked position.</p>	
<p>d. If locking is not complete, press the rear portion of the retainer again while pulling it backward.</p>	

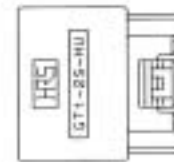
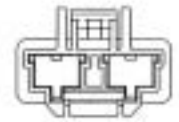
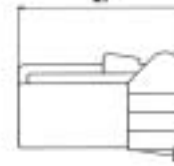
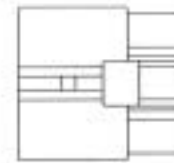
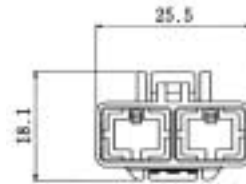
\* Check that all locations are locked.



## Two-position type-Each Single-Conductor coaxial Cable

### F Connectors

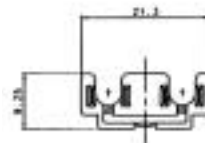
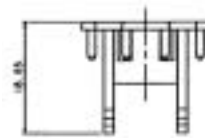
#### ● Housing



Part Number	CL Number	Material	Color
GT1-2S-HU	751-0011-7	PBT	Light gray
GT1-2S-HU( 20 )	751-0011-7-20		Orange
GT1-2S-HU( 21 )	751-0011-7-21		Blue

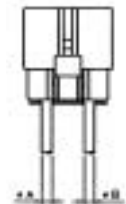
Note: Retainer is optional.

#### ● Retainer (Used with GT1-2S-HU)



A Configuration

◆ Shown with inserted retainer



A Configuration	Part Number	CL No.	Material	Color	Cable Dia.	
					φA	φB
	GT1-2S-33R	751-0045-9	PBT	White	φ3	φ3
	GT1-2S-53R	751-0043-3		Dark gray	φ5	φ3
	GT1-2S-55R	751-0044-6		Light blue	φ5	φ5

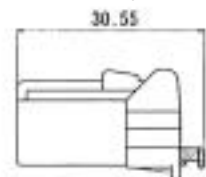
Note 1: This item should be mounted to the GT1-2PP-HU housing after the insertion of terminals.

Note 2: Retainer is optional.

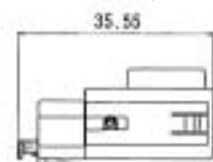
#### ● Retainer (used with GT1-2S-HU and GT1-2PP-HU)



◆ GT1-2S-HU  
Shown with temporarily inserted retainer



◆ GT1-2PP-HU  
Shown with temporarily inserted retainer

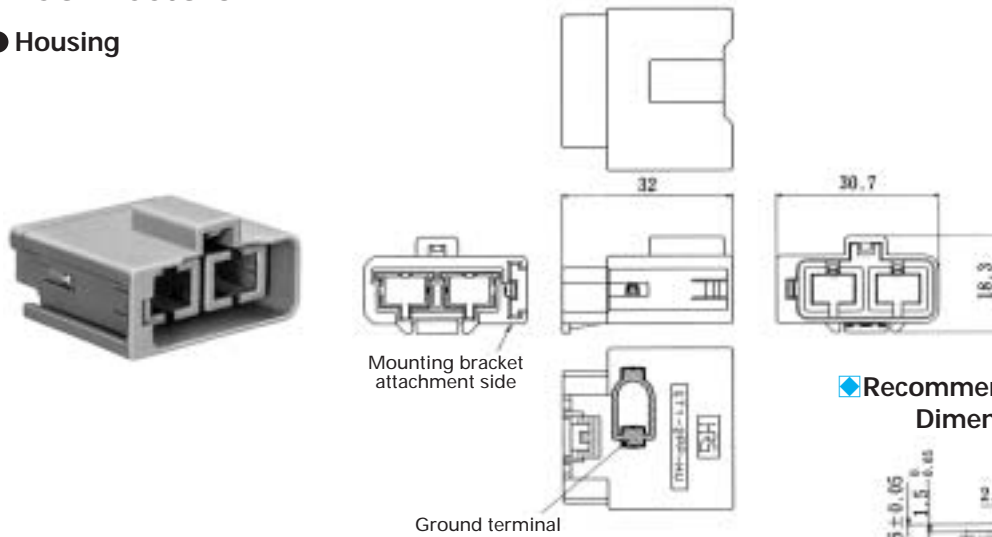


Part Number	CL Number	Material	Color
GT1-2P/S-R	751-0013-2	PBT	Dark gray

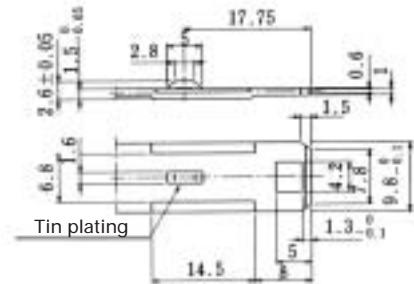
Note: Mount this item after provisional insertion into the housing, or after terminal insertion.

## M Connectors

### ● Housing



### ◆ Recommended Mounting Bracket Dimensions (T=1.5mm)

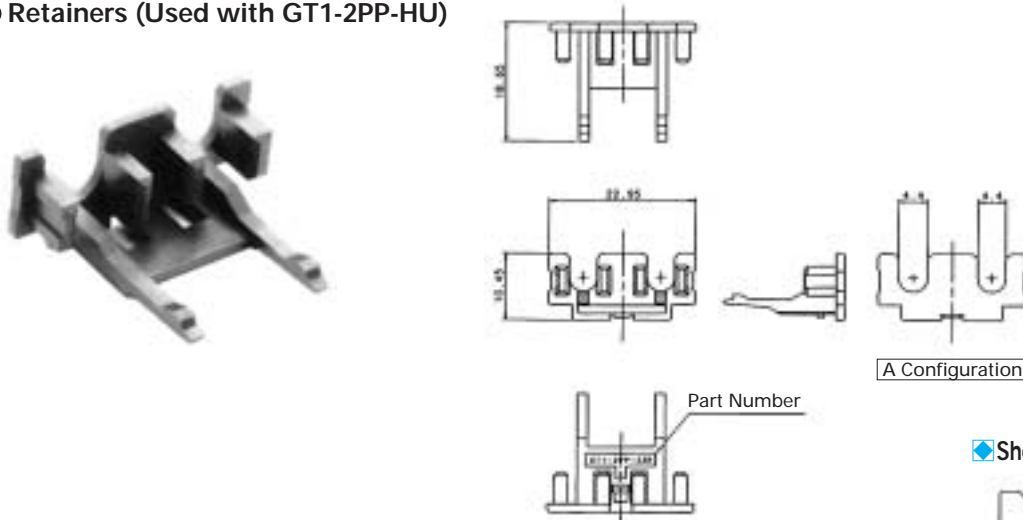


Part Number	CL No.	Color	Remarks
GT1-2PP-HU	751-0010-4	Light gray	With ground terminal
GT1-2PP-HU(10)	751-0010-4-10	Light gray	Without ground terminal
GT1-2PP-HU(20)	751-0010-4-20	Orange	With ground terminal
GT1-2PP-HU(21)	751-0010-4-21	Blue	With ground terminal
GT1-2PP-HU(40)	751-0010-4-40	Orange	Without ground terminal
GT1-2PP-HU(41)	751-0010-4-41	Blue	Without ground terminal

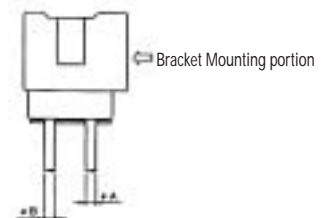
Note: Retainer is optional.

Item	Material	Finish
Housing	PBT	Color: Light gray
		Color: Orange
		Color: Blue
Ground terminal	Brass	Tin plating

### ● Retainers (Used with GT1-2PP-HU)



### ◆ Shown with inserted retainer



A Configuration	Part Number	CL No.	Color	Cable Dia.	
				φA	φB
	GT1-2PP-33R	751-0042-0	White	φ3	φ3
	GT1-2PP-53R	751-0040-5	Dark gray	φ5	φ5
	GT1-2PP-55R	751-0041-8	Light blue	φ5	φ3

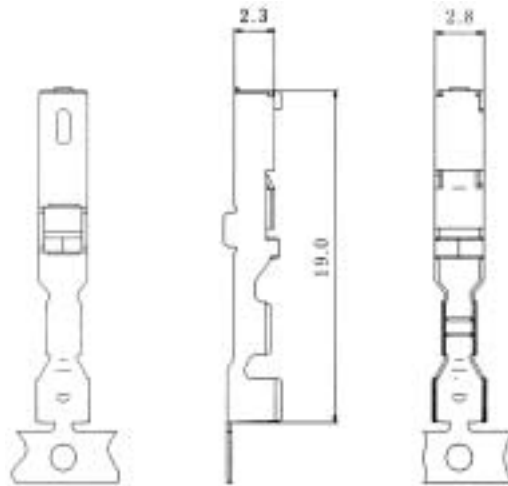
Material	Color
PBT	White
	Dark gray
	Light blue

Note 1: This item should be mounted to the GT1-2PP-HU housing after the insertion of terminals.

Note 2: Retainer is optional.

## Power Supply Terminals

### F Connector Terminals

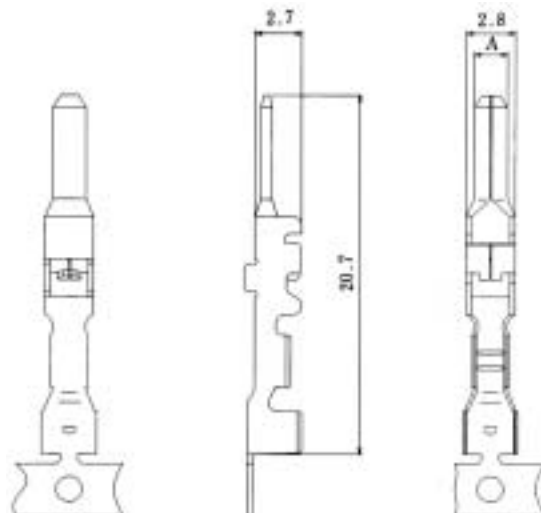


Part Number	CL No.	Conductor Size (AWG)	Inner Insulator Diameter	Dimension A	Packaging	Material	Finish
GT7-2022SCF	757-0001-1	#20 to 22	1.4 to 2.4mm	19	5,000	Copper alloy	Tin plating
GT7A-2022SCF	757-0003-7	#20 to 22	2.6 to 3.1mm		3,000		

Note 1: Sold by the reel. (See above table for number of Packaging.)

Note 2: This component is used only with applicable HRS housings.

### M Connector Terminals



Part Number	CL No.	Conductor Size (AWG)	Inner Insulator Diameter	Dimension A	Packaging	Material	Finish
GT7-2022SCF	757-0001-1	#20 to 22	1.4 to 2.4mm	19	5,000	Copper alloy	Tin plating
GT7A-2022SCF	757-0003-7	#20 to 22	2.6 to 3.1mm		3,000		

Part Number	CL No.	Conductor Size (AWG)	Inner Insulator Diameter	Packaging	Material	Finish
GT7-1618PCF	* Reserved for product expansion	#16 to 18	1.8 to 2.7mm	3,000	Brass	Tin plating
GT7-2022PCF	757-0002-4	#20 to 22	1.4 to 2.4mm	5,000		
GT7A-2022PCF	757-0004-0	#20 to 22	2.6 to 3.1mm	3,000		

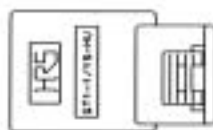
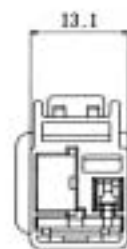
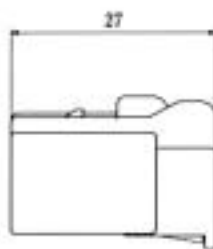
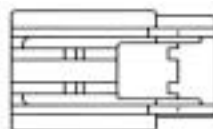
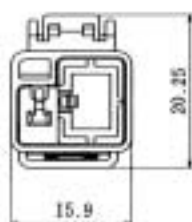
Note 1: Sold by the reel. (See above table for number of Packaging.)

Note 2: This component is used only with applicable HRS housings.

## Combination Type (One Single-Conductor Coaxial Cables + One Power contact)

### F Connectors

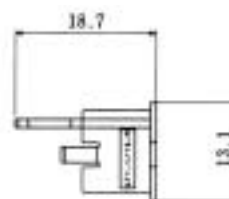
#### ● Housing



Part Number	CL No.	Material	Color
GT1-1/1S-HU	751-0026-4	PBT	Light gray

Note: Retainer is optional.

#### ● Retainer (Used with GT1-1/1S-HU)



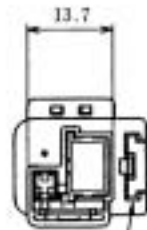
Part Number	CL Number	Material	Color
GT1-1/1S-R	751-0028-0	PBT	Dark gray

Note: Mount this item after provisional insertion into the housing, or after terminal insertion.

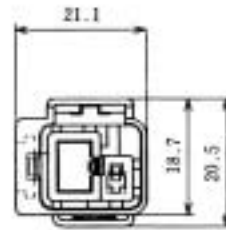
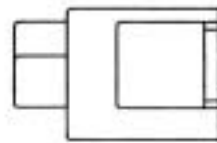


# M Connectors

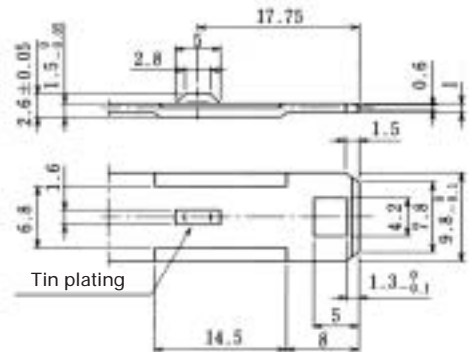
## ● Housing



Mounting bracket attachment side



◆Recommended Mounting Bracket Dimensions (T=1.5mm)

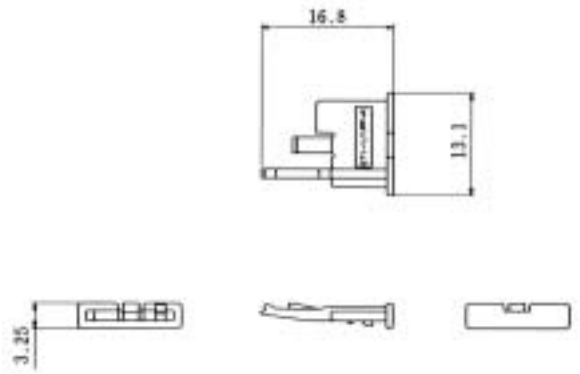


Part Number	CL No.	Mounting bracket attachment side	Remarks
GT1-1/1PP-HU	751-0025-1	1.5mm	With ground terminal
GT1-1/1PP-HU(10)	751-0025-1-10	1.5mm	Without ground terminal
GT1-1/1PP-HU(11)	751-0025-1-11	1.0mm	With ground terminal

Note: Used with separate retainer (GT1-1/1PP-R).

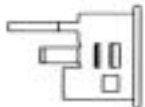
Item	Material	Finish
Housing	PBT	Light gray
Ground terminal	Phosphor bronze	Tin plating

## ● Retainer (exclusively for GT1-1/1PP-HU)



Part Number	CL Number	Material	Color
GT1-1/1PP-R	751-0027-7	PBT	Dark gray

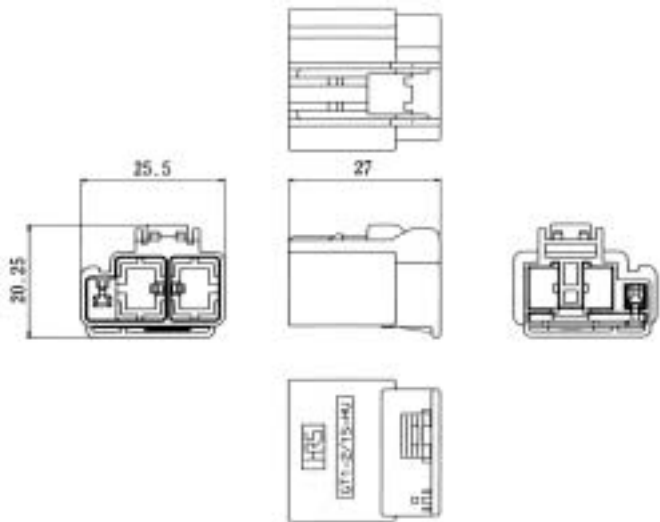
Note: Mount this item after provisional insertion into the housing, or after terminal insertion.



Combination Type (Two Single-Conductor Coaxial Cables + One Power contact)

F Connectors

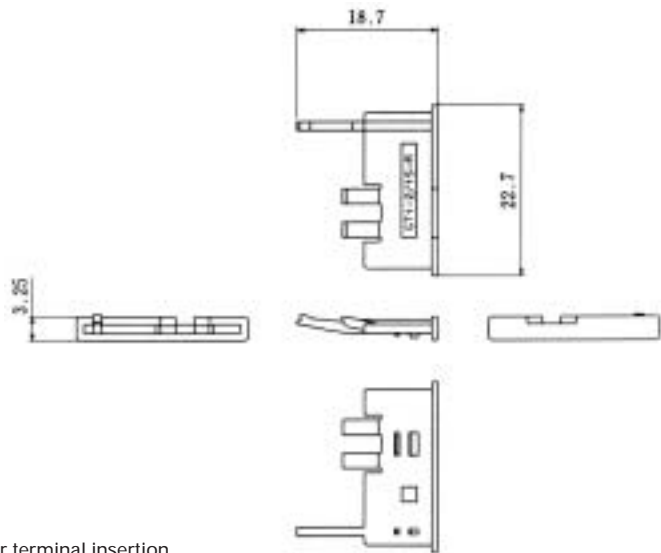
● Housing



Part Number	CL No.	Material	Color
GT1-2/1S-HU	751-0019-9	PBT	Light gray

Note1: Mates only with GT1-2/1PP-DS and GT1-2/1PP-HU.  
Note2: Used with separate retainer (GT1-2/1S-R).

● Retainer (used with GT1-2S-HU and GT1-2PP-HU)

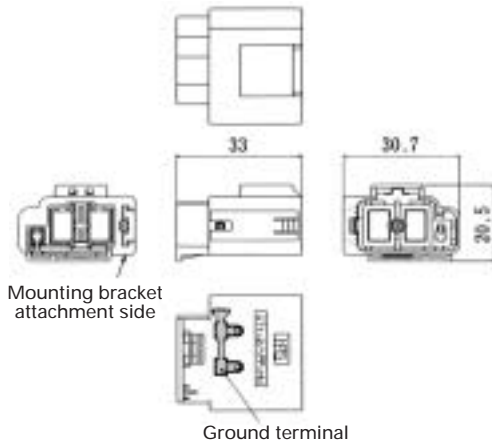


Part Number	CL No.	Material	Color
GT1-2/1S-R	751-0021-0	PBT	Dark gray

Note: Mount this item after provisional insertion into the housing, or after terminal insertion.



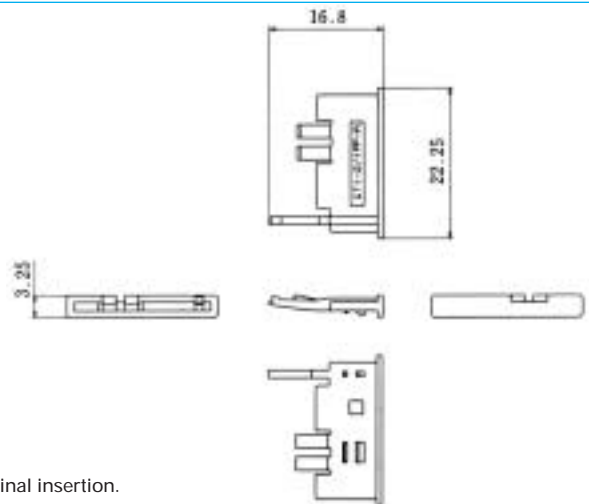
## ● Housing

[illegible]

Item	Material	Finish
Housing	PBT	Light gray
Ground terminal	Phosphor bronze	Tin plating

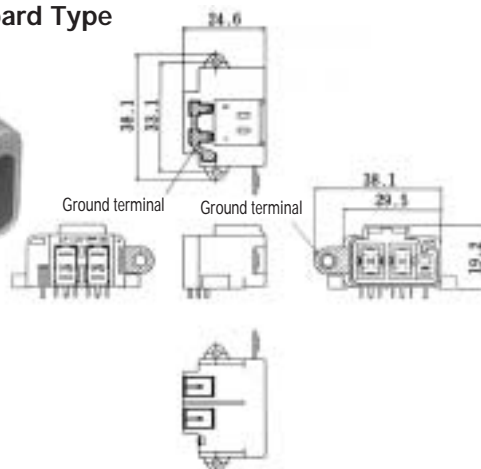
Note2: Used with separate retainer (GT1-2/1PP-R).

● Retainer (used with GT1-2/1PP-HU)

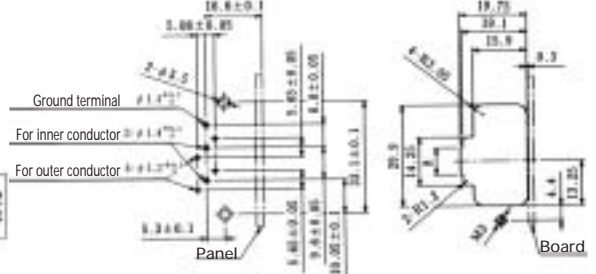


Note: Mount this item after provisional insertion into the housing, or after terminal insertion.

### ● Printed Circuit Board Type



 **Recommended Panel Cut-out**



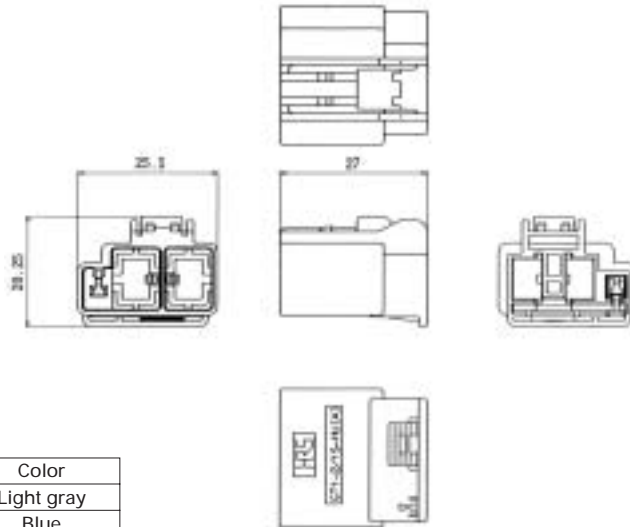
Note1: Mates only with GT1-2/1PP-DS and GT1-2/1PP-HU.



Products Listed Below are of the Combination Type (Two Terminals for Use with Single-Conductor Shielded Cable + One Power Supply Terminal) with Key Positions that Differ from the Products Listed on Previous Pages

## ■ F Connectors

## ● Housing



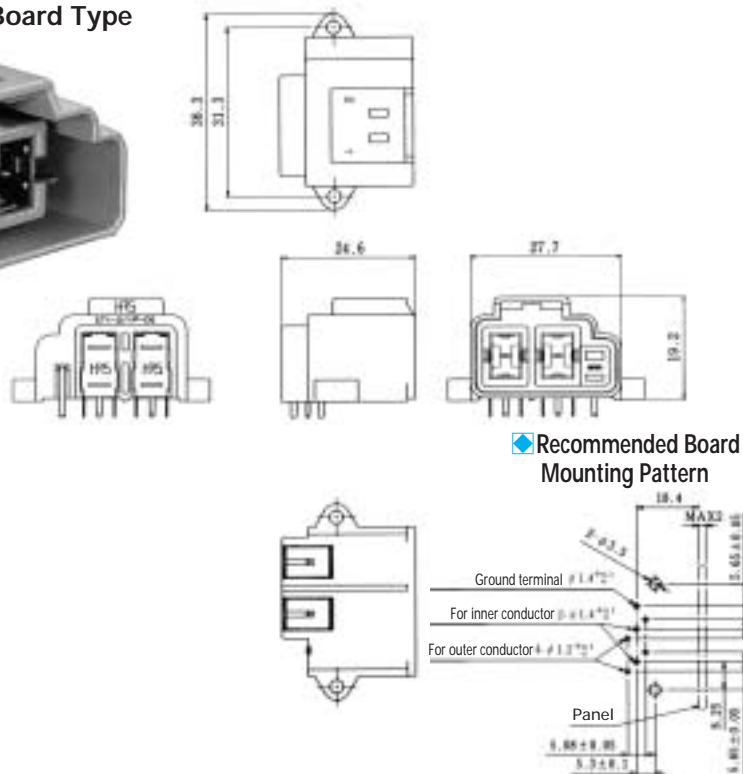
Part Number	CL No.	Material	Color
GT1-2/1S-HU(A)	751-0024-9	PBT	Light gray
GT1-2/1S-HU(A)(21)	751-0024-9-21	PBT	Blue

Note1: Mates only with GT1-2/1P-DS.

Note2: Used with separate retainer.

**■ M Connector**

### ● Printed Circuit Board Type



 Recommended Board Mounting Pattern

 **Recommended Panel Cut-out**

Part Number	CL No.	Color
GT1-2/1P-DS	751-0023-6	Light gray
GT1-2/1P-DS(21)	751-0023-6-21	Blue

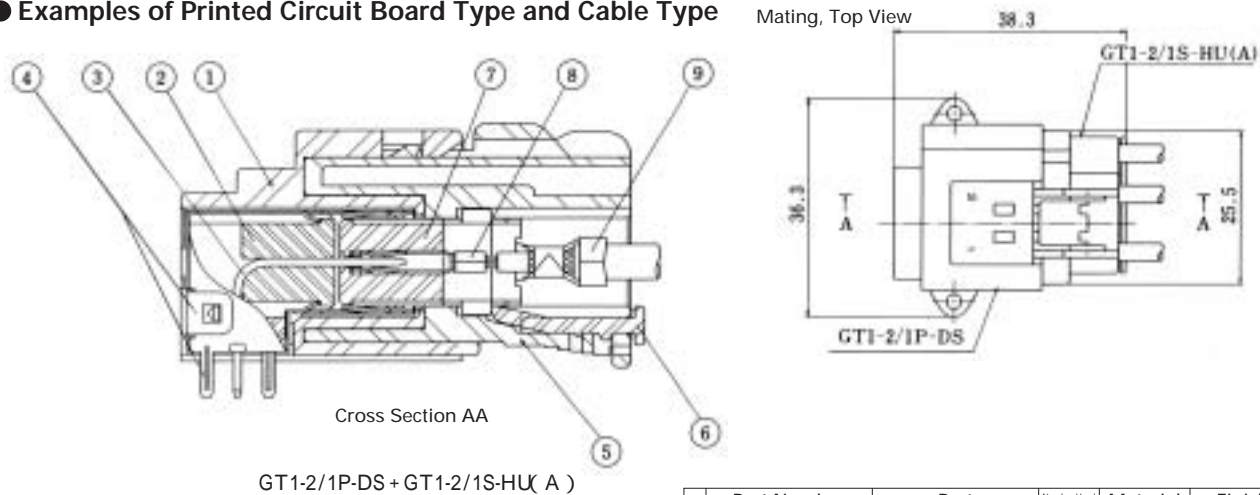
Item	Material	Finish	Color
Housing	PBT	—	Light gray
		—	Blue
0.64X1.1 Terminal	Brass	Tin plating	—
Insulator	PBT	—	Dark gray
Outer terminal	Brass	Tin plating	—
Tub terminal for DS 070	Brass	Tin plating	—

Note1: Mates only with GT1-2/1S-HU(A).

Note 2: Use mounting screws of M3 with nominal diameter 3L-6 (for a panel thickness of 1.6mm)

# ◆ Mating, Cross-Sectional View

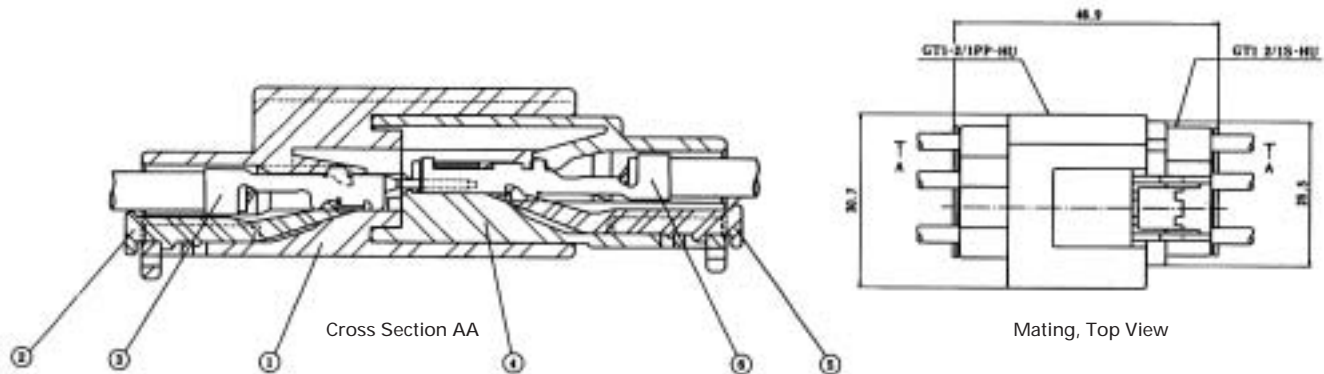
## ● Examples of Printed Circuit Board Type and Cable Type



	Part Number	Part	Number Used	Material	Finish
1	GT1-2/1P-DS	Housing	1	PBT	UL94V-0
2		Insulator	2	PBT	UL94V-0
3		0.64 X 1.1 terminal	2	Brass	Tin plating
4		Outer terminal	2	Brass	Tin plating
5	GT1-2/1S-HU(A)	Housing	1	PBT	UL94V-0
6	GT1-2/1S-HU	Retainer	1	PBT	UL94V-0
7	GT1-1S-2428/1.6C	Insulator	2	PBT	UL94V-0
8		Crimp terminal	2	Phosphor bronze	Tin plating
9		Outer terminal	2	Brass	Tin plating

## ● Example of Cable-to-Cable Type

The coupled, cross-sectional view of the GT7 terminals of the GT1-2/1 Series appears below.



Currently, the GT7 Series terminals are used for the power supply of the GT1 Series combination type.

Part Number	Terminal
GT1-1/1S-HU	GT7-2022SCF、GT7A-2022SCF
GT1-2/1S-HU	
GT1-1/1PP-HU	GT7-2022PCF、GT7A-2022PCF
GT1-2/1PP-HU	

	Part Number
1	GT1-2/1PP-HU
2	GT1-2/1PP-R
3	GT7-2022PCF
4	GT1-2/1S-HU
5	GT1-2/1S-R
6	GT7-2022SCF

## Accessories

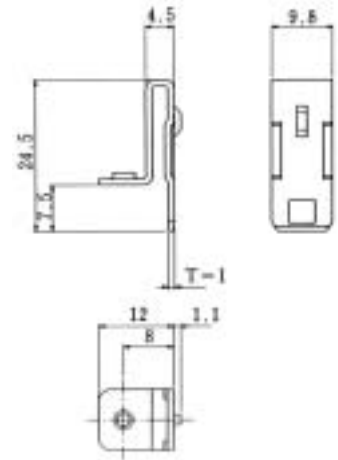
### ● Brackets (for M Connector Housing)



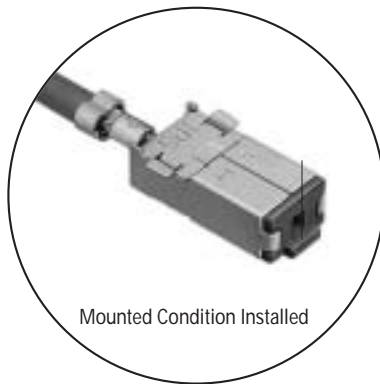
Part Number	CL No.	Material	Finish
GT-BK	751-0039-6	SPCC	Tin plating
GT-BK(01)	751-0039-6-01		Zinc plating

Note 1: This product can be attached to GT1-1PP-HU, GT1-1/1PP-HU, and GT1-2/1PP-HU.

Note 2: Please use the tin plated item when making a ground connection.

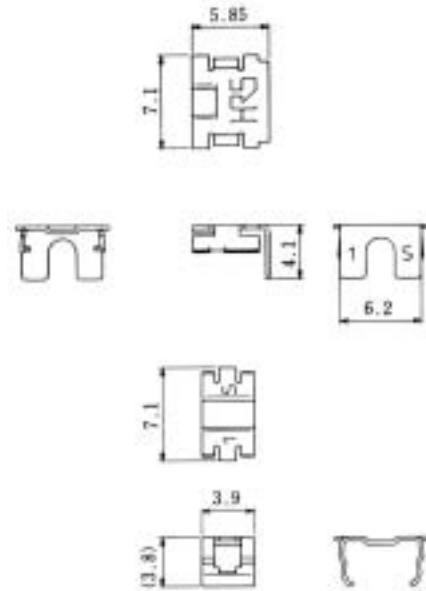


### ● F Terminal Shield Cover



Part Number	CL No.	Item	Material	Finish
GT1-1S-1.6CSB	751-0009-5	Top Shield Cover	SPCC	Tin plating
		Bottom Shield Cover		Zinc plating

Note: This product cannot be used with GT1K-1S-HU.

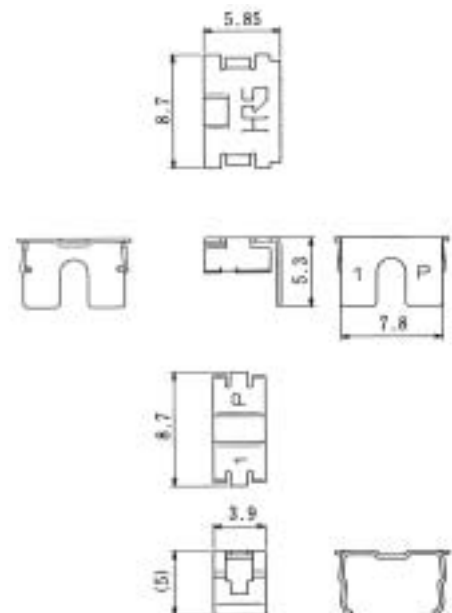


### ● M Terminal Shield Plate



Part Number	CL No.	Item	Material	Finish
GT1-1P-1.6CSB	751-0008-2	Top Shield Cover	Brass	Tin plating
		Bottom Shield Cover		

Note: The product normally has sufficient performance without using the shield plate; however, when used in especially high frequency bands (e.g., 1 GHz and higher), use of the shield plate is recommended so that even higher shielding effectiveness may be obtained.



# Termination Tools

User's manuals are available. Please ask your Hirose Electric account representative.

## Automatic Crimping Machine



Part Number CM-105

### Specifications

Item	Specification	Remarks
Specification	1.5ton	
Stroke Length	30mm	
Number of strokes	200spm(50Hz)	240spm(60Hz)
Weight	75kg	
Motor	0.2kW	AC100V
Crimping speed	2000 to 4000 per day	

## Hand Press



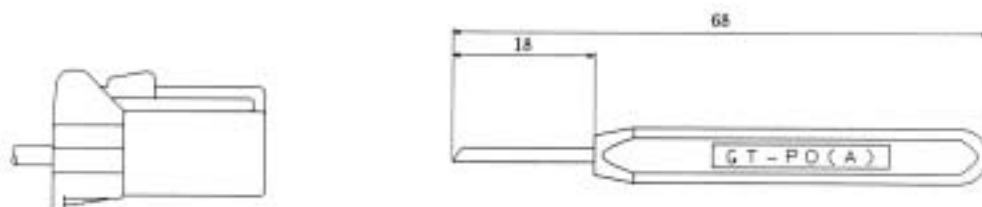
## Hand Tool



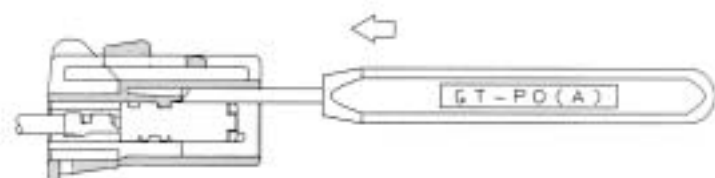
\*Crimp height setting tables are available for each cable type. Please contact your nearest Hirose Electric account representative. Different cables will require different crimp height settings.

## ◆ Terminal Extraction Tool

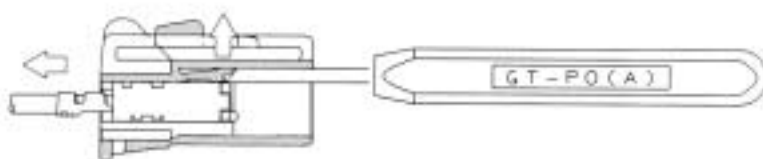
### 1) For one lance



1 Insert the extraction tool from the coupling end.

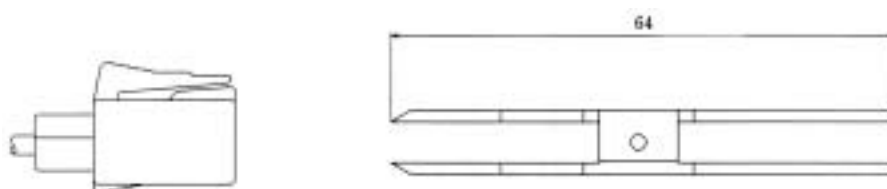


2 Push the lance upward and pull out the terminal.

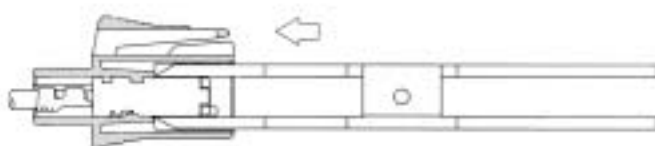


Part Number	CL No.	Used with connectors
GT-PO(A)	780-0006-2	GT1K-1S-HU GT1-2S-HU GT1-2PP-HU GT1-1/1S-HU GT1-1/1PP-HU GT1-2/1S-HU GT1-2/1PP-HU GT1-2/1S-HU(A)

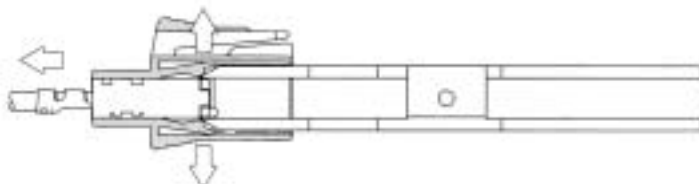
### 2) For two lances



1 Insert the extraction tool from the coupling end.



2 Push and separate both lances and pull out the terminal.



Part Number	CL No.	Used with connectors
GT1-C-PO	902-5020-1	GT1-1S-HU GT1-1P-HU GT1-1PP-HU