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

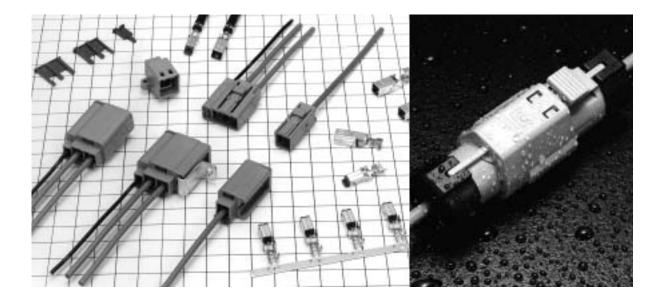
SAE/USCAR-19

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

GT5 Series

— Connectors for coaxial cables —

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



Features

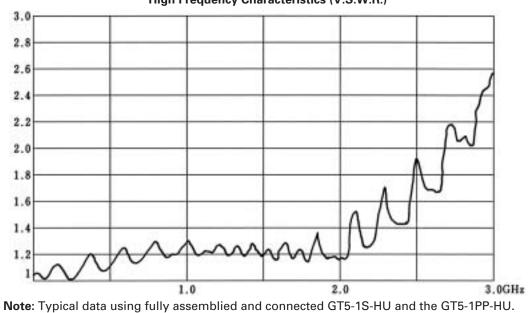
- USCAR Standard titled "Square Outer Conductor (SAE/USCAR-19)" excludes Water Proof type (GT5W)
- Cost efficient termination
 - Highly efficient and reliable single motion "Twin Crimp[®]" termination allows high volume production with semi-automatic equipment.
- Space-saving Design
- Lock-release latching system
- Shock / vibration resistant electrical connections
- Verification of the full contact insertion
- Color and polarizing variations
- Excellent High Frequency Performance Refer to V.S.W.R. data on the following pages.

Applications

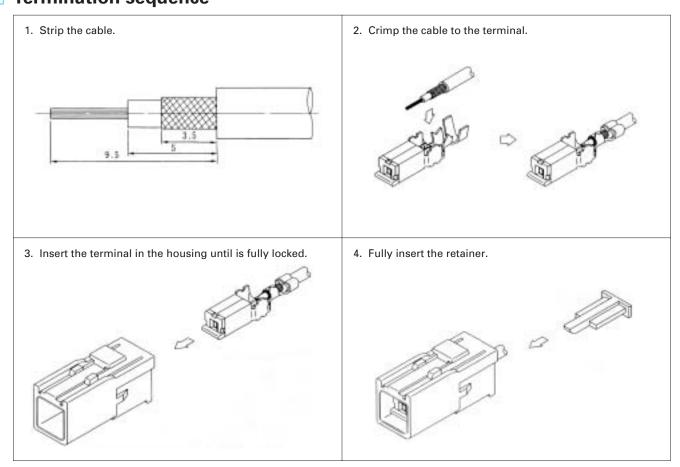
In-car communication, car sensors (temperature, pressure), automotive audio systems, GPS antenna systems, RACS antenna audio/video antenna systems, CRT displays, medical and measuring instrumentation, variety of communication equipment, office automation equipment, LAN systems.

*"Twin Crimp"is a registered trade mark of Hirose Electric.

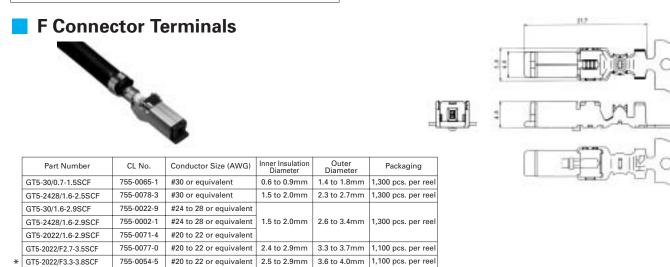
Test Data (Using 1.5D-2V Type cable)



Termination sequence



Terminals for coaxial shielded cable

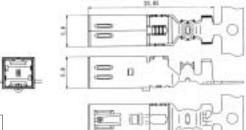


*	GT5-30/3.3-5SCF	755-0016-6	#30 or equivalent						
*	GT5-2428/F3.3-5SCF	755-0012-5	#24 to 28 or equivalent	2.5 to 2.9mm	4.6 to 5.0mm	1,100 pcs. per reel			
*	GT5-2022/F3.3-5SCF	755-0034-8	#20 to 22 or equivalent				Part	Material	Finish
*	GT5-30/F4-5SCF	755-0020-3	#30 or equivalent				Insulator	PBT	Color: Dark gray
*	GT5-2428/F4-5SCF	755-0024-4	#24 to 28 or equivalent	3.0 to 3.6mm	4.6 to 5.0mm	1,100 pcs. per reel	Crimp terminals	Phosphor bronze	Tin plating
*	GT5-2022/F4-5SCF	755-0036-3	#20 to 22 or equivalent				Outer terminals	Brass	Tin plating
Nc	Note: Producte marked with an actarick (*) indicate polyothylang form insulation								

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

M Connector Terminals



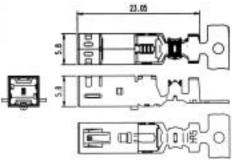


	Part Number	CL No.	Conductor Size (AWG)	Inner Insulation Diameter	Outer Diameter	Packaging
	GT5-30/0.7-1.5PCF	755-0017-9	#30 or equivalent	0.6 to 0.9mm	1.4 to 1.8mm	900 pcs. per reel
	GT5-30/1.6-2.9PCF	755-0021-6	#30 or equivalent			
	GT5-2428/1.6-2.9PCF	755-0001-9	#24 to 28 or equivalent	1.5 to 2.0mm	2.6 to 3.4mm	900 pcs. per reel
	GT5-2022/1.6-2.9PCF	755-0094-0	#20 to 22 or equivalent			
	GT5-2022/F2.7-3.5PCF	755-0076-8	#20 to 22 or equivalent	2.4 to 2.9mm	3.3 to 3.7mm	900 pcs. per reel
*	GT5-2022/F3.3-3.8PCF	755-0053-2	#20 to 22 or equivalent	2.5 to 2.9mm	3.6 to 4.0mm	900 pcs. per reel
*	GT5-30/F3.3-5PCF	755-0015-3	#30 or equivalent			
*	GT5-2428/F3.3-5PCF	755-0011-2	#24 to 28 or equivalent	2.5 to 2.9mm	4.6 to 5.0mm	900 pcs. per reel
*	GT5-2022/F3.3-5PCF	755-0033-5	#20 to 22 or equivalent			
*	GT5-30/F4-5PCF	755-0019-4	#30 or equivalent			
*	GT5-2428/F4-5PCF	755-0023-1	#24 to 28 or equivalent	3.0 to 3.6mm	4.6 to 5.0mm	900 pcs. per reel
*	GT5-2022/F4-5PCF	755-0035-0	#20 to 22 or equivalent			

Part	Material	Finish
Insulator	PBT	Color: Dark gray
Crimp terminals	Brass	Tin plating
Outer terminals	Brass	Tin plating

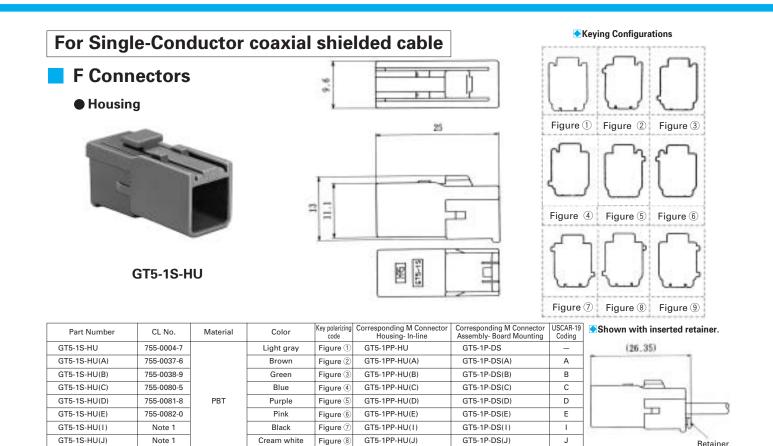
Note: Products marked with an asterisk (*) indicate polyethylene foam insulation.

Low-insertion M Connector Terminals Mark Har



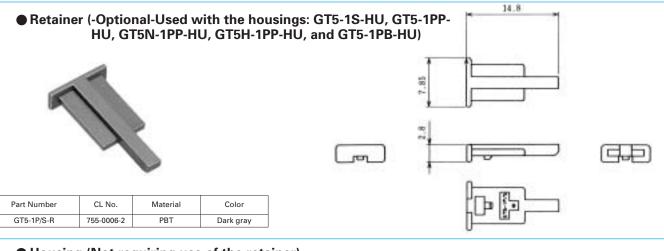
Part Number	HRS No.	Conductor Size (AWG)	Inner Insulation Diameter	Outer Diameter	Packaging	_
GT5L-30/0.7-1.5PCF	755-0068-0	#30 or equivalent	0.6 to 0.9mm	1.4 to 1.8mm	900 pcs. per reel	
GT5L-30/1.6-2.9PCF	755-0067-7	#30 or equivalent				1
GT5L-2428/1.6-2.9PCF	755-0066-4	#24 to 28 or equivalent	1.5 to 2.0mm	2.6 to 3.4mm	900 pcs. per reel	
GT5L-2428/1.6-2.5PCF	755-0079-6	#24 to 28 or equivalent				

Part	Material	Finish
Insulator	PBT	Color: Dark gray
Crimp terminals	Brass	Tin plating
Outer terminals	Brass	Tin plating



Note 1 Terminal extraction tool: GT-PO(A), Note 1: concept only

GT5-1S-HU(K)



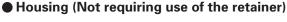
GT5-1PP-HU(K)

Pastel orange

Figure (9)

GT5-1P-DS(K)

к

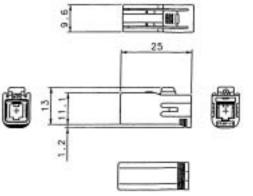




GT5R-1S/HU

CL No. Material Part Number Color GT5R-1S-HU PBT 755-0047-0 Light gray

Terminal extraction tool: GT-PO(A)

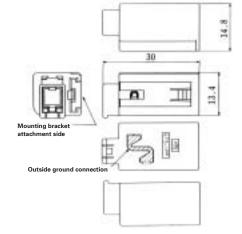


Retainer

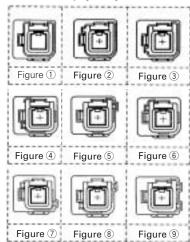
M Connectors

Housing

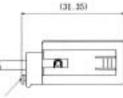




Keying Configurations



Shown with inserted retainer.



Retainer

Part Number	CL No.	Corresponding F Connector Housing	Color	Key polarizing code	USCAR-19 Coding
GT5-1PP-HU	755-0005-0	GT5-1S-HU	Light Gray	Figure ①	-
GT5-1PP-HU(A)	755-0039-1	GT5-1S-HU(A)	Brown	Figure 2	A
GT5-1PP-HU(B)	755-0040-0	GT5-1S-HU(B)	Green	Figure ③	В
GT5-1PP-HU(C)	755-0103-9	GT5-1S-HU(C)	Blue	Figure ④	С
GT5-1PP-HU(D)	755-0104-1	GT5-1S-HU(D)	Purple	Figure (5)	D
GT5-1PP-HU(E)	755-0105-4	GT5-1S-HU(E)	Pink	Figure 6	E
GT5-1PP-HU(1)	Note 1	GT5-1S-HU(I)	Black	Figure ⑦	I
GT5-1PP-HU(J)	Note 1	GT5-1S-HU(J)	Cream white	Figure (8)	J
GT5-1PP-HU(K)	Note 1	GT5-1S-HU(K)	Pastel orange	Figure (9)	К

14.3

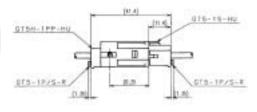
Part	Material	Finish
Housing	PBT	Color: Dark gray
Ground terminal	Phosphor bronze	Tin plating

* Refer to pages 32 and 34 for panel brackets used with in-line connectors. * Terminal extraction tool: GT-PO(A) Note 1: concept only



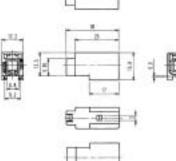
Part Number	CL No.	Color	Corresponding F Connector Housing
GT5H-1PP-HU (10)	755-0093-7 10	Light Gray	GT5-1S-HU
GT5H-1PP-HU (41)	755-0093-7 41	Blue	GT5R-1S-HU

Fully mated connector assemblies.



• Housing (For use with N type mounting bracket)

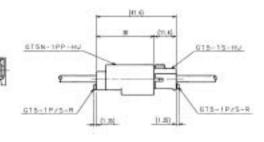




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m

Fully mated connector assemblies.

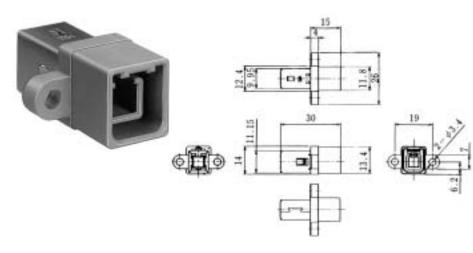


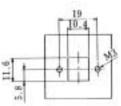
Part Number	CL No.	Color	Corresponding F Connector Housing
GT5N-1PP-HU	1PP-HU 755-0090-9 Light (GT5-1S-HU
	755-0090-9	Light Gray	GT5R-1S-HU

Housings

[Panel mounting, enhanced shielding configuration]

Recommended Panel Cut-out



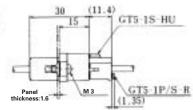


Mounted and fully mated connector assemblies

GT5-1P/S-R

(1,35)

Panel thickness:1.6

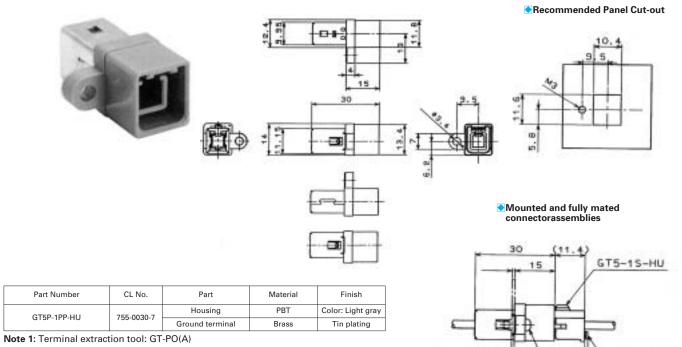


Part Number	CL No.	Part	Material	Finish
GT5A-1PP-HU	755-0025-7	Housing	PBT	Color: Light gray
GT5A-TFF-HU		Ground terminal	Brass	Tin plating

Note 1: Terminal extraction tool: GT-PO(A)

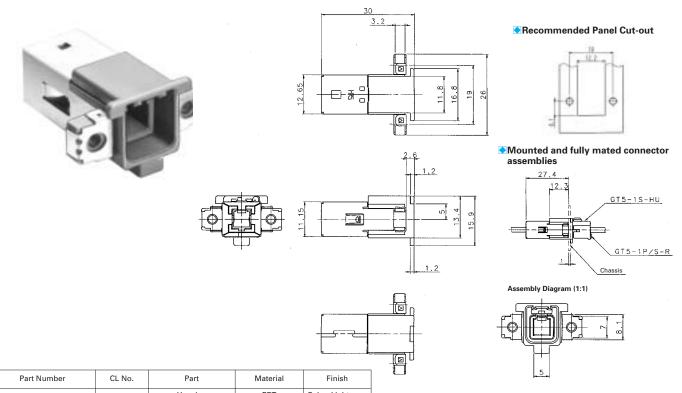
Note 2: Retainer is optional.

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



Note 2: Retainer is optional.

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

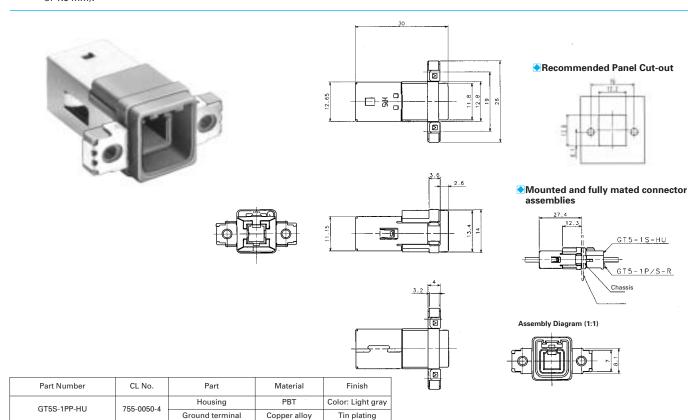


CTER 1PP HU	GT5B-1PP-HU 755-0051-7		PBT	Color: Light gray		
GI5B-IPP-HU	/55-0051-7	Ground terminal	Copper alloy	Tin plating		
Note 1: Terminal extraction tool: GT-PO(A) with nominal diameter 3L-6 (for a board						

thickness of 1.6 mm).

Note 2: Retainer is optional.

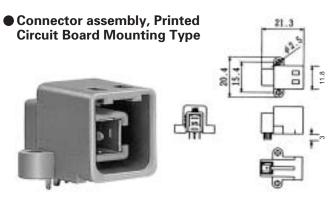
Note 3: Use mounting screws of M3 with nominal diameter 3L-6 (for a panel thickness of 1.6 mm).



Note 1: Terminal extraction tool: GT-PO(A) with nominal diameter 3L-6 (for a board thickness of 1.6 mm).

Note 2: Retainer is optional.

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



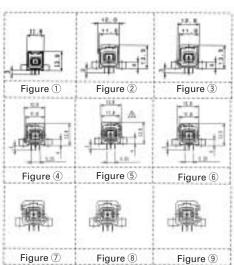
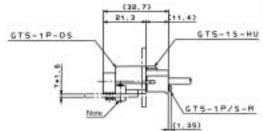
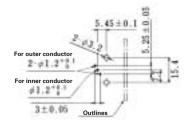


Diagram of Mated Connector in Use





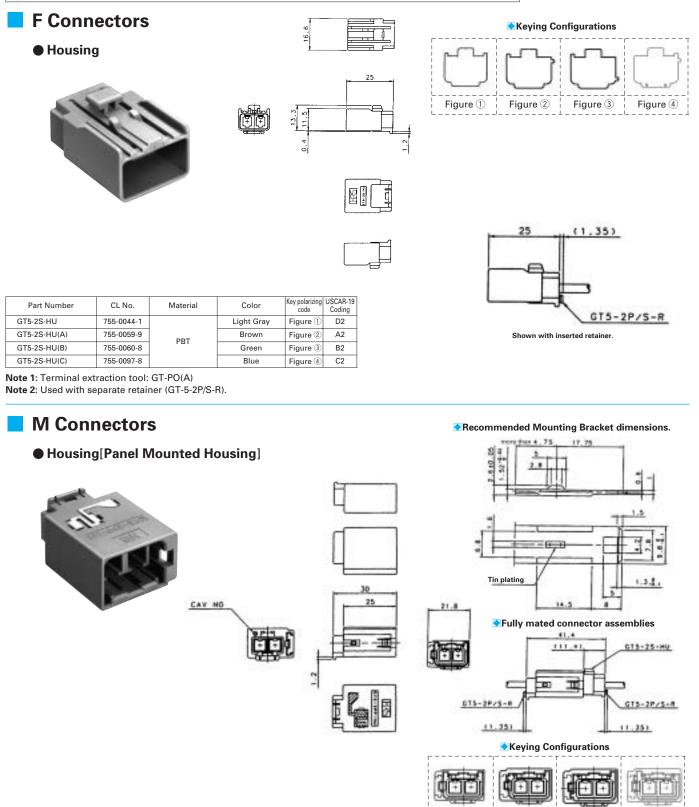


Part	Material	Finish
Housing	PBT	-
0.65 x 1.1 Terminals	Brass	Tin plating
Insulator	PBT	Dark gray
Outer terminals	Phosphor bronze	Tin plating

Part Number	CL No.	Color	Key polarizing code	M Connector-Board Type	Corresponding F Connector Housing
GT5-1P-DS	755-0007-5	Light Gray	Figure ①	GT5-1P-DS	GT5-1S-HU
GT5-1P-DS(A)	755-0041-3	Brown	Figure 2	GT5-1P-DS(A)	GT5-1S-HU(A)
GT5-1P-DS(B)	755-0042-6	Green	Figure 3	GT5-1P-DS(B)	GT5-1S-HU(B)
GT5-1P-DS(C)	755-0083-3	Blue	Figure ④	GT5-1P-DS(C)	GT5-1S-HU(C)
GT5-1P-DS(D)	755-0084-6	Purple	Figure (5)	GT5-1P-DS(D)	GT5-1S-HU(D)
GT5-1P-DS(E)	755-0085-9	Pink	Figure 6	GT5-1P-DS(E)	GT5-1S-HU(E)
GT5-1P-DS(I)	Note 2	Black	Figure 7	GT5-1P-DS(I)	GT5-1S-HU(I)
GT5-1P-DS(J)	Note 2	Cream white	Figure (8)	GT5-1P-DS(J)	GT5-1S-HU(J)
GT5-1P-DS(K)	Note 2	Pastel orange	Figure (9)	GT5-1P-DS(K)	GT5-1S-HU(K)

Note1 : Use mounting screws of M3 with nominal diameter 3L-6 (for a board thickness of 1.6 mm).
Note2: concept only

Two-position type-Each Single-Conductor coaxial cable

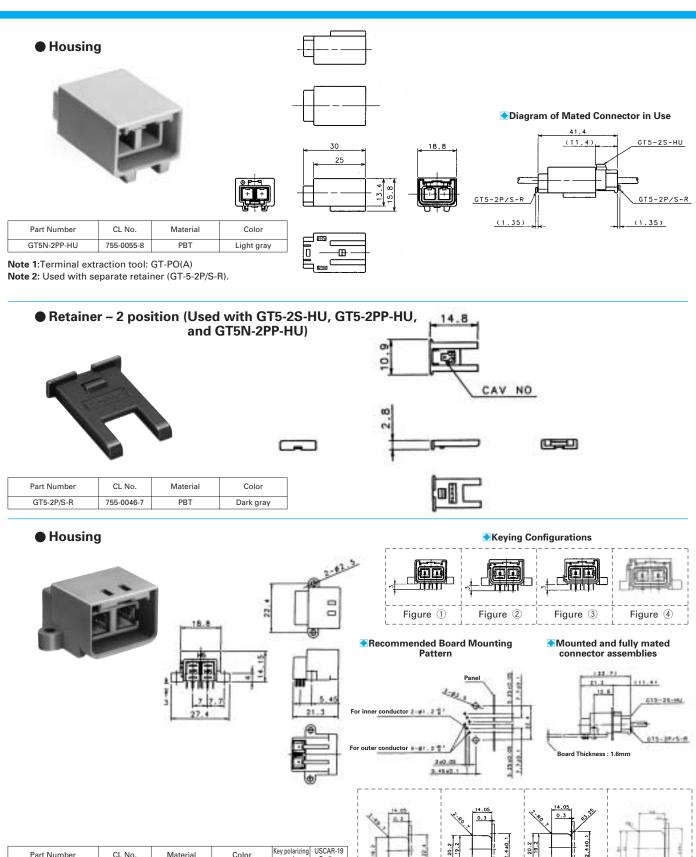


Part Number	CL No.	Color	Key polarizing code
GT5-2PP-HU	755-0045-4	Light Gray	Figure ①
GT5-2PP-HU(A)	755-0063-6	Brown	Figure 2
GT5-2PP-HU(B)	755-0064-9	Green	Figure 3
GT5-2PP-HU(C)	-	Blue	Figure ④

izing			Figure ①	Figure 2
1		<u> </u>		
2	Part	Material	Finish	
3	Housing	PBT	-	
• ④	Ground terminal	Phosphor bronze	Tin plating	

Note: Used with separate retainer (GT-5-2P/S-R). Coding D2 at USCAR-19 is GT5-2PP-HU. Figure ④

Figure 3



3.

GT5-2P-DS (A)

GT5-2P-DS (D)

1.5

GT5-2P-DS (C)

3

Recommended Panel Cut-out

GT5-2P-DS (B)

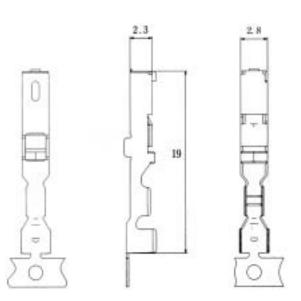
Fait Nulliber	CLINU.	Wateria	COIOI	code	Coding
GT5-2P-DS	755-0043-9		Light Gray	Figure ①	D2
GT5-2P-DS(A)	755-0061-0	PBT	Brown	Figure ②	A2
GT5-2P-DS(B)	755-0062-3	FDI	Green	Figure ③	B2
GT5-2P-DS(C)	-		Blue	Figure ④	C2

Note: Use mounting screws of M3 with nominal diameter 3L-6 (for a board thickness of 1.6 mm). Coding D2 at USCAR-19 is GT5-2P-DS.

Power Supply Terminals (For use with combination type assemblies: GT5-2/1S-HU, GT5-2/1P-DS, GT5-2/1PP-HU, GT5N-2/1PP-HU)

F Connector Terminals



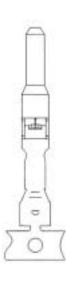


Part Number	CL No.	Material	Finish	Conductor Size (AWG)	Outer Diameter	Packaging
GT7-2022SCF	757-0001-1	Copper alloy Tin plating	#20 to 22	1.4 to 2.4mm	5,000	
GT7A-2022SCF	757-0003-7	Copper alloy	rin plating	#20 to 22	2.6 to 3.1mm	3,000

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







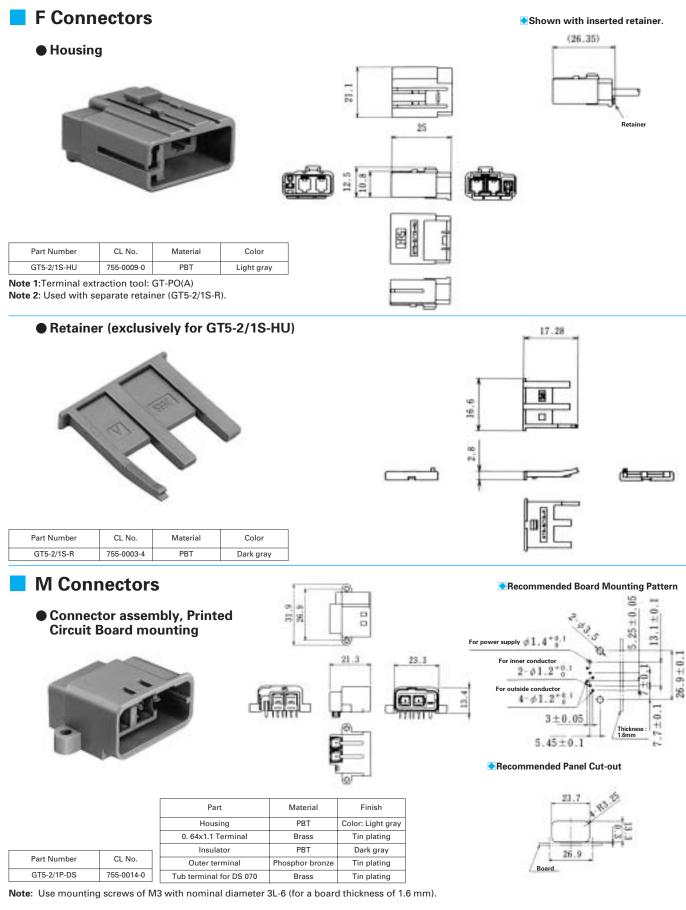
2.8

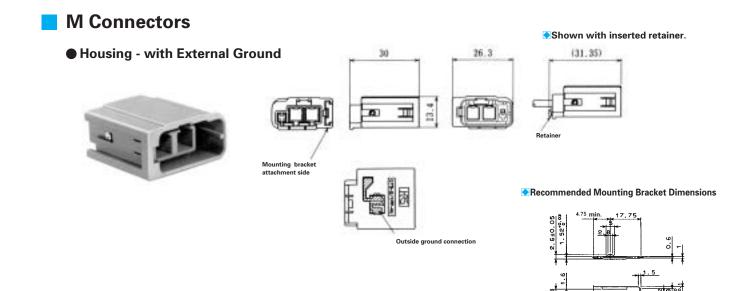
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Part Number	CL No.	Material	Finish	Outer Diameter	Packaging
GT7-2022PCF	757-0002-4	Brass	Tin plating	1.4 to 2.4mm	5,000
GT7A-2022PCF	757-0004-0	Diass	i in plating	2.6 to 3.1mm	3,000

Note 1: Sold by the reel. (See above table for number of Packaging.) **Note 2**: This component is used only with applicable HRS housings.

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





Part Number	CL No.	Part	Material	Finish
GT5-2/1PP-HU	755-0008-8	Housing	PBT	Color: Light gray
013-2/111-110	/ 33-0008-8	Ground terminal	Phosphor bronze	Tin plating

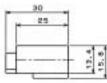
Note 1: Terminal extraction tool: GT-PO(A)

Note 2: Used with separate retainer (GT5-2/1PP-R).

Housing - without External Ground



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Tin plating finish



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Part Number	CL No.	Material	Color		
GT5N-2/1PP-HU	755-0013-8	PBT	Light gray		

755-0010-0

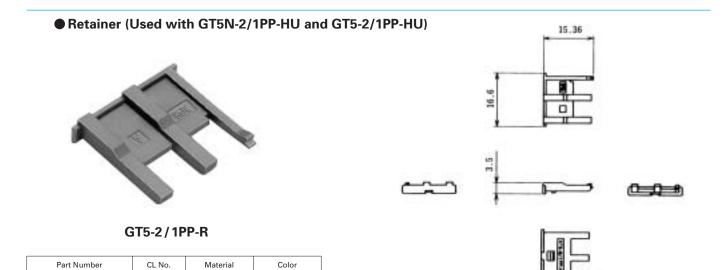
PBT

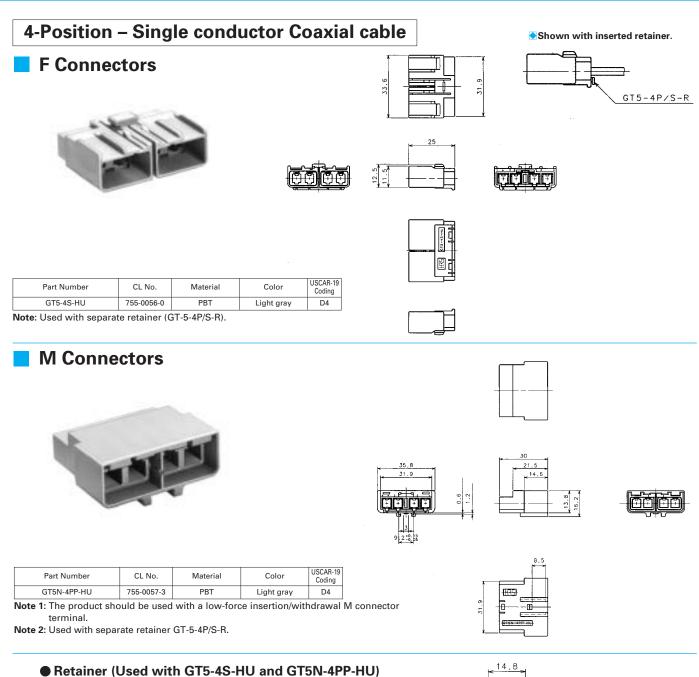
Dark gray

Note 1: Terminal extraction tool: GT-PO(A)

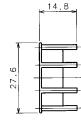
GT5-2/1PP-R

Note 2: Used with separate retainer GT5-2/1PP-R and mounting bracket GT-BK or GT-BK (01).







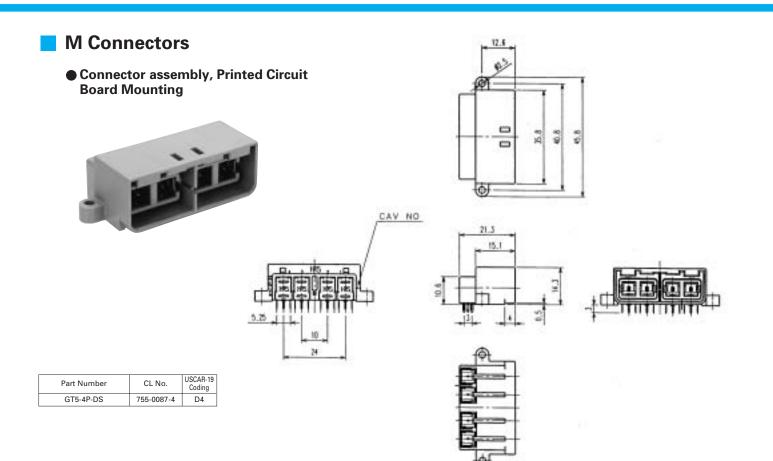


2.8

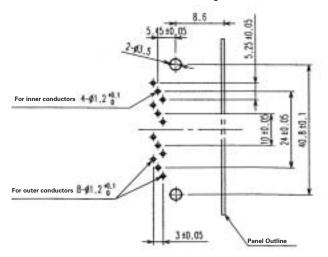


Pa	rt Number	CL No.	Material	Color
G	T5-4P/S-R	755-0058-6	PBT	Dark gray

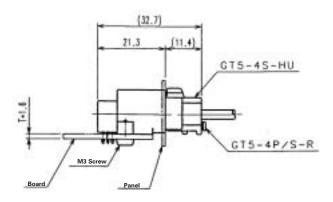




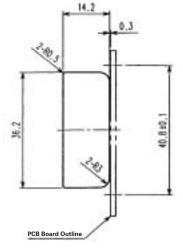
Recommended Board Mounting Pattern



Recommended Board and Panel installation







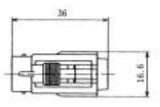
Single Conductor Coaxial Cable - Waterproof Type

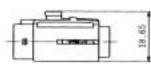
F Connectors

Housing



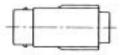






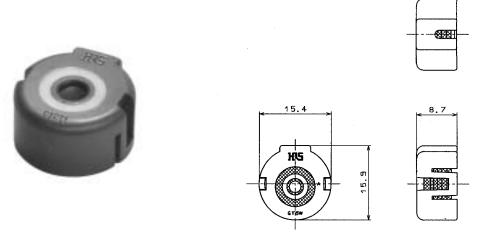


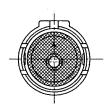
Part Number	CL No.	Material	Color
GT5W-1S-HU	755-0027-2	PBT	Light gray



Note: Specific retainer is determined by the type of the cable used.

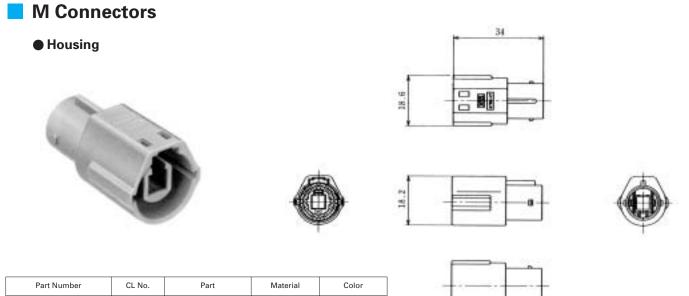
Retainer (Used with GT5W-1P-HU, GT5JW-1PP-HU, GT5W-1S-HU and GT5W-1P-HU)



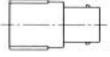


Part Number	CL No.	Material	Color
GT5W-1P/S-R	755-0028-5	PBT	Dark gray
GT5W-TF/S-N	755-0028-5	Silicon rubber Compound	Dark gray

Note: Outer diameter of the cable must be within 2.9 to 3.4 mm. Consult nearest HRS representative for other diameters.



Part Number	CL No.	Part	Material	Color
GT5W-1P-HU	755-0026-0	Housing	PBT	Light gray
G15W-IF-H0	755-0020-0	Connector seal	Silicon rubber	White



Note: Use correct retainer.

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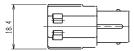
Housing - Bracket Mounting



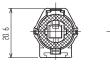
Recommended Bracket Dimensions

16

8



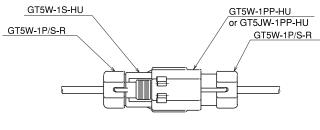
C (MRS) (mmm) 20. 5

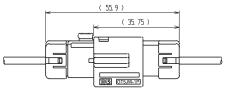






Mounted and fully mated connector assemblies



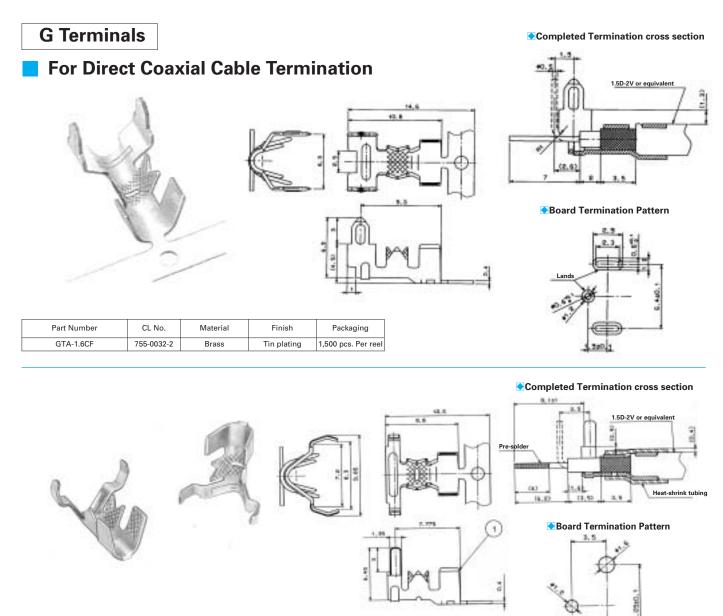


Part Number	CL No.	А	В	Part	Material	Color
GT5W-1PP-HU	755-0070-1	1.5	1.3	Housing	PBT	Light gray
GT5JW-1PP-HU	755-0069-2	3.2	3.0	Connector seal	Silicon rubber Compound	White

0.6

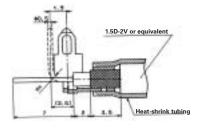
4. 2 5. 8 7.8-01

B _0 1

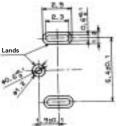


Part Number	CL No.	Material	Finish	Packaging
GTB-1.6CF	755-0049-5	Brass	Tin plating	1,500 pcs. Per reel

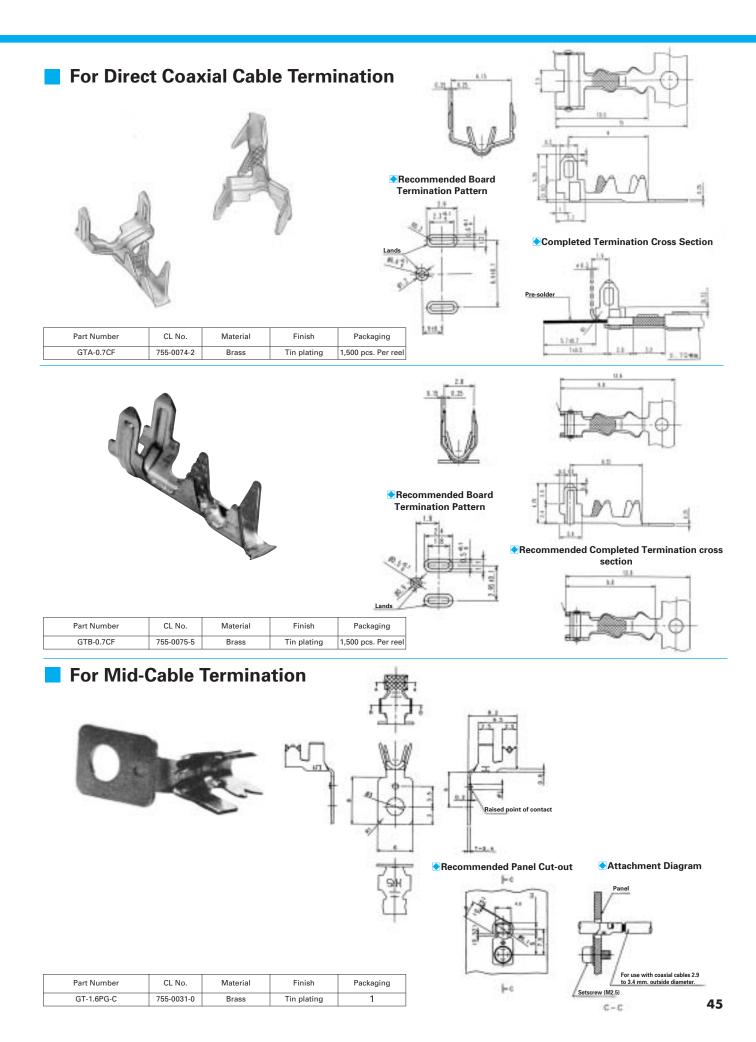
Completed Termination cross section

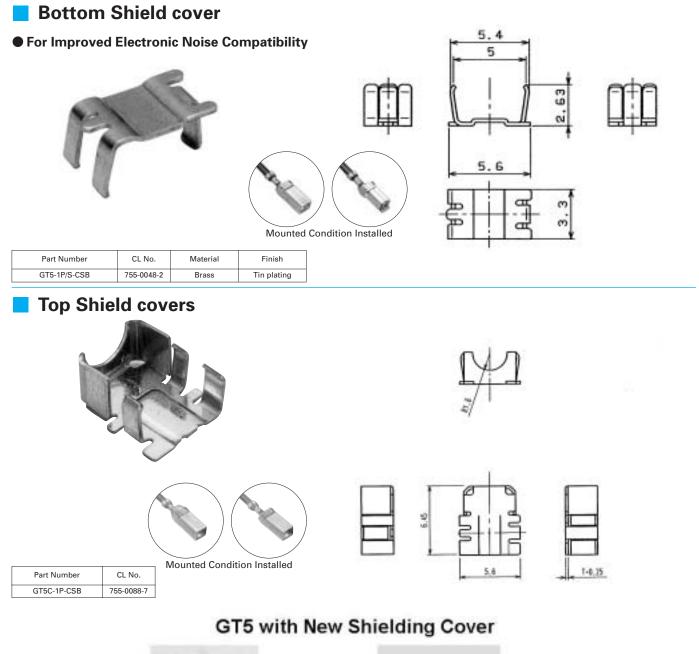


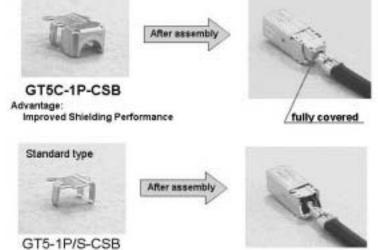
Board Termination Pattern



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				···) { • • • •
Part Number	CL No.	Material	Finish	Packaging	2-4-5







Panel Mounting In-line Bracket



GT-BK GT-BK (01)

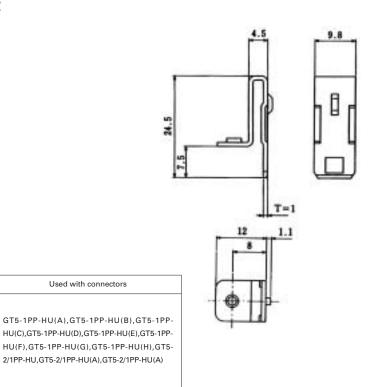
CL No.

751-0039-6

751-0039-6-01

Material

SPCC



Termination Tools

Part Number

GT-BK

GT-BK(01)

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

Finish

Tin plating

Zinc plating

Automatic crimping machine



Specifications

Used with connectors

ltem	Specification	Remarks
Specification	1.5tons	
Stroke length	30mm	
Number of strokes	200spm(50Hz)	200spm(60Hz)
Weight	75kg	
Motor	0.2kW	AC100V
Crimping speed	2000 to 4000pcs. Per day	

Part Number CM-105

* 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.