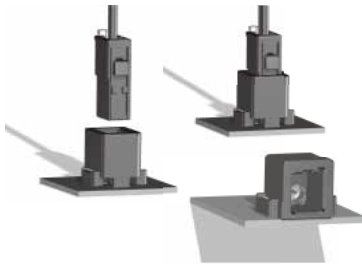
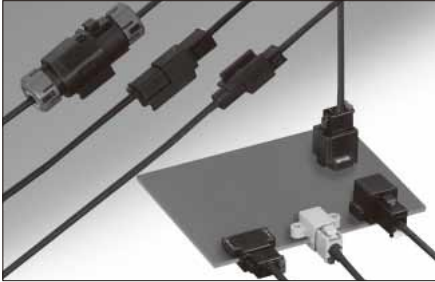


GT16G Series

— 6 GHz Compatible Antenna Connector —

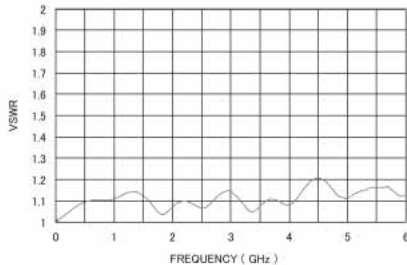


■ Features

- **Excellent high frequency performance**
V.S.W.R. is 1.5 or less (DC to 6 GHz)
- **Satisfies rigorous test conditions for automotive devices.**
- **Robust lock design provides a tactile click.**
-Lock strength : 98N Min.
- **Many variations**
 - Board connectors :
SMT type, mid-mount type, lead reflow type
 - In-line connectors :
Retainer-less type, double latching type, bracket type, waterproof type
- **RoHS compliant**
- ◆ **Applications**
Automotive WiFi/Bluetooth, V2X, DSRC, etc.

■ High Frequency Performance

- **Excellent high frequency performance with a V.S.W.R. of 1.5 or less in all frequencies between DC and 6 GHz.**
- **Proven track record as connector for automotive ETC and automotive WiFi/Bluetooth.**



*Data taken based on GT16GH-1P-DSA and GT16G-1SHU(24).

■ Product Specifications

Ratings	Rated current : 1A		Rated voltage : 250V AC	
	Operating temperature range : -30°C to 105°C		Storage temperature range : -40°C to 105°C	
Item	Specifications		Conditions	
1. Insulation Resistance	100MΩ min		Measured at 500V DC	
2. Withstanding Voltage	There shall be no flashover or dielectric breakdown.		650V AC applied for 1 minute.	
3. Contact resistance	Center contact : 30mΩ max, Outer contact : 60mΩ max		Measured at 1A DC	
4. High Frequency Characteristics	V.S.W.R. is 1.5 or less		Measured in a range between 0 and 6 GHz, Characteristic impedance: 50Ω	
5. Heat resistance	Center contact : 60mΩ max, Outer contact : 120mΩ max		105°C for 300 hours	
6. Low temperature resistance	Center contact : 60mΩ max, Outer contact : 120mΩ max		-40°C, 120 hours	
7. Vibration resistance	There shall be no electrical discontinuity of 10 μs or more.		Frequency : 20-200Hz, Acceleration : 43.1m/s ² in 3 directions for 3 hours.	
8. Humidity resistance	Insulation resistance : 100MΩ min		Left unattended at a temperature of 60°C, and humidity of 90 to 95% for 96 hours.	
9. Temperature cycles	Center contact : 60mΩ max, Outer contact : 120mΩ max. There shall be no damage, cracks or loosened parts.		Temperature -40°C → Room temperature → 105°C → Room temperature Time : 30 min → 5 min → 30 min → 5 min, 1000 cycles	
10. Mating durability	Center contact : 60mΩ max, Outer contact : 120mΩ max		30 mating cycles (insertion/extraction)	
11. Solder heat resistance	There shall be no deformation or excessive play of contacts or other parts.		-Reflow : Perform twice at the specified temperature profile. -Soldering iron : 350°C, 10 sec max.	

Product Number Structure

Refer to the chart below to determine product specifications from the product number.

Board Connector/In-line Connector

GT 16G * - 1 P - H

① ② ③ ④ ⑤ ⑥

① Series name : GT	⑤ Contact type Board connector P : Pin header In-line connector S : Socket P : In-line plug PP : In-line plug with bracket P/S : Available for both male and female
② Series No : 16C, 16G, 5W	⑥ Product type Board connector H : Right angle DSA : Straight In-line connector HU : Housing R : Retainer
③ Series Sub No : Serial No.	
④ Pin-count : 1	

Center Contact/Outer Contact

GT 16G * - 2428 SCF

① ② ③ ④ ⑤

① Series name : GT	⑤ Type category/Packaging type Center SCF : Socket crimp contact/reel PCF : Plug crimp contact/reel Outer shell SC : Socket crimp contact/piece PC : Plug crimp contact/piece
② Series No : 16G	
③ Series Sub No : Serial No..	
④ licable wire Center 2428 : AWG# 24 to 28 Outer/1.6-2.9 : 1.5D-2W or equivalent	

Insulator/Contact Ferrule/Outer Ferrule

GT 16G - SC

① ② ③

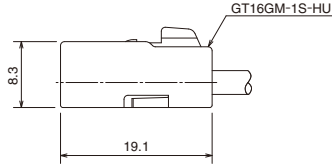
① Series name : GT	③ Part name SC : Female insulator PC : Male insulator FR : Contact ferrule 1.5 DHQS : Outer Ferrule
② Series No : 16G	

GT16G Series Mating Table

F Connector	M Connector	
GT16GM-1S-ASSY (Retainer-less type)	SMT type	GT16GMP-1P-H(55)
	Board mid-mount type	GT16GM-1P-H(55)
	In-line type	GT16GM-1P-ASSY
	In-line bracket type	GT16GMN-1PP-ASSY
GT16G-1S-ASSY GT16GT-1S-ASSY (Double latch type)	SMT type	GT16GD-1P-H(55)
		GT16GT-1P-H(55)
		GT16GH-1P-H
	Board mid-mount type	GT16G-1P-H(55)
		GT16GL-1P-H(55)D
		GT16GRL-1P-H(55)
Lead reflow type	GT16GH-1P-DSA	
In-line bracket type	GT16GT-1PP-ASSY	
GT16GW-1S-ASSY	Waterproof in-line type	GT16GW-1P-ASSY

■ Harness Connector

● GT16GM-1S-ASSY



*Uses two insulators per termination.

■ Housing/Insulator

Part	Housing	Insulator
Part No.	GT16GM-1S-HU	GT16G-SC
HRS No.	766-0033-9	766-0023-5
Material	PBT	PBT
Color	Black	Natural
Sales unit	1	1
RoHS	○	○
Dimensions		

■ Center Contact/Outer Contact

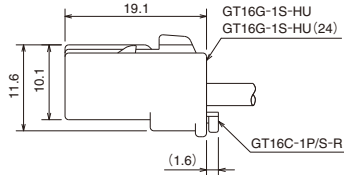
Part	Center Contact	Outer Contact
Part No.	GT16G-2428SCF	GT16GM-/1.6-2.9SC
HRS No.	766-0022-2	766-0025-0
Material	Phosphor bronze	Phosphor bronze
Finish	Tin plating	Tin plating
Applicable wire	AWG#24~28	1.5D-2W or equivalent
Sales unit	10,000 pcs/reel	1
RoHS	○	○
Dimensions		

■ Contact Ferrule/Outer Ferrule

Part	Contact Ferrule	Outer Ferrule
Part No.	GT16G-FR	GT16G-1.5DHQS
HRS No.	766-0028-9	766-0027-6
Material	Phosphor bronze	Phosphor bronze
Finish	Tin plating	Tin plating
Sales unit	1	1
RoHS	○	○
Dimensions		

Jul. 1, 2022 Copyright 2022 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

●GT16G-1S-ASSY



*Uses two insulators per termination.

■Housing/Insulator/Retainer

Part	Housing		Insulator	Retainer
Part No.	GT16G-1S-HU	GT16G-1S-HU(24)	GT16G-SC	GT16C-1P/S-R
HRS No.	766-0026-3	766-0026-3-24	766-0023-5	766-0011-6
Material	PBT	PBT	PBT	PBT
Color	Light gray	Black	Natural	Dark gray
Sales unit	1	1	1	1
RoHS	○	○	○	○
Dimensions				

■Center Contact/Outer Contact

Part	Center Contact	Outer Contact
Part No.	GT16G-2428SCF	GT16G-/1.6-2.9SC
HRS No.	766-0022-2	766-0024-8
Material	Phosphor bronze	Phosphor bronze
Finish	Tin plating	Tin plating
Applicable wire	AWG#24~28	1.5D-2W or equivalent
Sales unit	10,000 pcs/reel	1
RoHS	○	○
Dimensions		

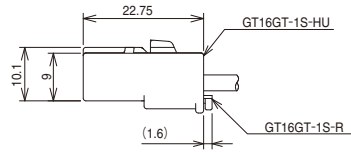
■Contact Ferrule/Outer Ferrule

Part	Contact Ferrule	Outer Ferrule
Part No.	GT16G-FR	GT16G-1.5DHQS
HRS No.	766-0028-9	766-0027-6
Material	Phosphor bronze	Phosphor bronze
Finish	Tin plating	Tin plating
Sales unit	1	1
RoHS	○	○
Dimensions		

Jul. 1, 2022 Copyright 2022 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

GT5 GT13 GT16 GT19 FH65 FH40 FH35 FH67

●GT16GT-1S-ASSY



*Uses two insulators per termination.

■Housing/Insulator/Retainer

Part	Housing	Insulator	Retainer
Part No.	GT16GT-1S-HU	GT16G-SC	GT16GT-1S-R
HRS No.	766-0098-4	766-0023-5	766-0099-7
Material	PBT	PBT	PBT
Color	Black	Natural	Natural
Sales unit	1	1	1
RoHS	○	○	○
Dimensions			

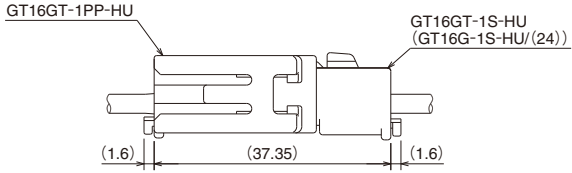
■Center Contact/Outer Contact

Part	Center Contact	Outer Contact
Part No.	GT16G-2428SCF	GT16G-/1.6-2.9SC
HRS No.	766-0022-2	766-0024-8
Material	Phosphor bronze	Phosphor bronze
Finish	Tin plating	Tin plating
Applicable wire	AWG#24~28	1.5D-2W or equivalent
Sales unit	10,000 pcs/reel	1
RoHS	○	○
Dimensions		

■Contact Ferrule/Outer Ferrule

Part	Contact Ferrule	Outer Ferrule
Part No.	GT16G-FR	GT16G-1.5DHQS
HRS No.	766-0028-9	766-0027-6
Material	Phosphor bronze	Phosphor bronze
Finish	Tin plating	Tin plating
Sales unit	1	1
RoHS	○	○
Dimensions		

●GT16GT-1PP-ASSY



*Uses two insulators per termination.

■Housing/Insulator/Retainer

Part	Housing	Insulator	Retainer
Part No.	GT16GT-1PP-HU	GT16G-PC	GT16C-1P/S-R
HRS No.	766-0049-9	766-0047-3	766-0011-6
Material	PBT	PBT	PBT
Color	Black	Natural	Dark gray
Sales unit	1	1	1
RoHS	○	○	○
Dimensions			

■Center Contact/Outer Contact

Part	Center Contact	Outer Contact
Part No.	GT16G-2428PCF	GT16G-/1.6-2.9PC
HRS No.	766-0046-0	766-0048-6
Material	Brass	Phosphor bronze
Finish	Tin plating	Tin plating
Applicable wire	AWG#24~28	1.5D-2W or equivalent
Sales unit	10,000 pcs/reel	1
RoHS	○	○
Dimensions		

■Contact Ferrule/Outer Ferrule

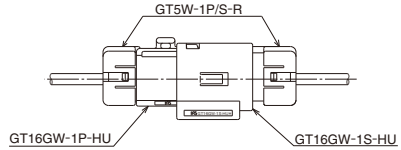
Part	Contact Ferrule	Outer Ferrule
Part No.	GT16G-FR	GT16G-1.5DHQS
HRS No.	766-0028-9	766-0027-6
Material	Phosphor bronze	Phosphor bronze
Finish	Tin plating	Tin plating
Sales unit	1	1
RoHS	○	○
Dimensions		

Jul. 1, 2022 Copyright 2022 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

GT5 GT13 GT16 GT19 FH65 FH40 FH35 FH67

●GT16GW-1P-ASSY

●GT16GW-1S-ASSY



*Uses two insulators per termination.

■Housing/Insulator/Retainer

Part	Housing		Insulator		Retainer
Part No.	GT16GW-1P-HU	GT16GW-1S-HU	GT16G-PC	GT16G-SC	GT5W-1P/S-R
HRS No.	766-0077-4	766-0076-1	766-0047-3	766-0023-5	755-0028-5
Material	PBT	PBT/ Silicon rubber	PBT	PBT	PBT/ Silicon rubber
Color	Black	Black/White	Natural	Natural	Dark gray/ Right blue
Sales unit	1	1	1	1	1
RoHS	○	○	○	○	○
Dimensions					

■Center Contact/Outer Contact

Part	Center Contact		Outer Contact	
Part No.	GT16G-2428PCF	GT16G-2428SCF	GT16G-/1.6-2.9PC	GT16G-/1.6-2.9SC
HRS No.	766-0046-0	766-0022-2	766-0048-6	766-0024-8
Material	Brass	Phosphor bronze	Phosphor bronze	Phosphor bronze
Finish	Tin plating	Tin plating	Tin plating	Tin plating
Applicable wire	AWG#24~28	AWG#24~28	1.5D-2W or equivalent	1.5D-2W or equivalent
Sales unit	10,000 pcs/reel	10,000 pcs/reel	1	1
RoHS	○	○	○	○
Dimensions				

■Contact Ferrule/Outer Ferrule

Part	Contact Ferrule	Outer Ferrule
Part No.	GT16G-FR	GT16G-1.5DHQS
HRS No.	766-0028-9	766-0027-6
Material	Phosphor bronze	Phosphor bronze
Finish	Tin plating	Tin plating
Sales unit	1	1
RoHS	○	○
Dimensions		

Jul.1.2022 Copyright 2022 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

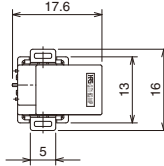
GT5 GT13 GT16 GT19 GT21 GT36 GT43 GT17 GT32 GT25 KM37 ZS05 ZS05/2 HH-200 ZS04W T2323L FX26 DF40 DF40GL RH28K FH32K FH65 FH40 FH63 FH67

Board connector

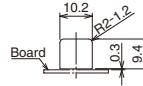
- SMT type (On Board)
- ◆ GT16GMP-1P-H (55)



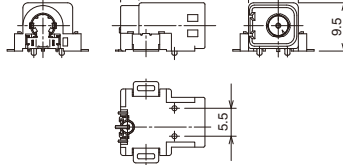
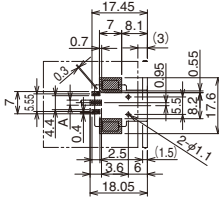
◆ Dimensions



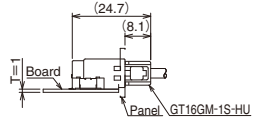
◆ Recommended Panel Dimensions



◆ Recommended Board Dimensions



◆ Mated Connector



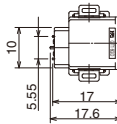
Note : Adjust dimension A of the microstrip line to satisfy 50Ω characteristic impedance.

Part No.	HRS No.	Part	Material	Finish or color	Sales unit	RoHS
GT16GMP-1P-H(55)	766-0052-3 55	Housing	PPS	Black	200 pcs/reel	○
		Center Terminal	Phosphor bronze	Tin plating		
		Outer terminal	Phosphor bronze	Tin plating		
		Insulators L, R	PPS	Natural		
		Shield plate	Phosphor bronze	Tin plating		
		Retention tab	Brass	Tin plating		

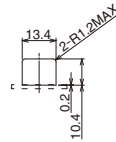
◆ GT16GD-1P-H (55)



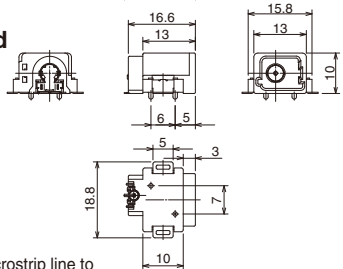
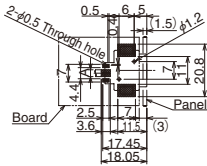
◆ Dimensions



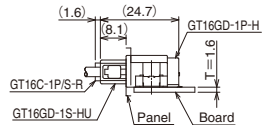
◆ Recommended Panel Dimensions



◆ Recommended Board Dimensions



◆ Mated Connector



Note : Adjust dimension A of the microstrip line to satisfy 50Ω characteristic impedance.

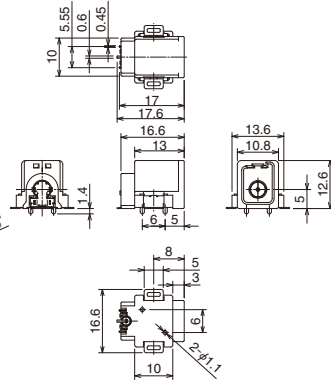
Part No.	HRS No.	Part	Material	Finish or color	Sales unit	RoHS
GT16GD-1P-H(55)	766-0044-5 55	Housing	PPS	Black	200 pcs/reel	○
		Center Terminal	Phosphor bronze	Tin plating		
		Outer terminal	Phosphor bronze	Tin plating		
		Insulators L, R	PPS	Natural		
		Shield plate	Phosphor bronze	Tin plating		
		Retention tab	Brass	Tin plating		

GT5
 GT13
 GT16
 GT19
 GT21
 GT36
 GT43
 GT17
 GT32
 GT25
 KM37
 ZE05
 ZG052
 HH-200
 ZG04W
 T2023L
 EK26
 DF40
 DF40GL
 RH28K
 FH32K
 FH65
 FH40
 FH63
 FH67

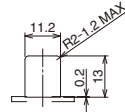
◆GT16GT-1P-H (55)



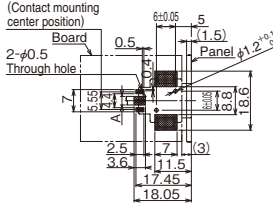
◆Dimensions



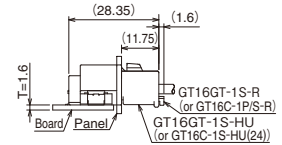
◆Recommended Panel Dimensions



◆Recommended Board Dimensions



◆Mated Connector



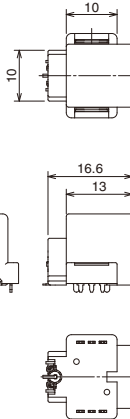
Note : Adjust dimension A of the microstrip line to satisfy 50Ω characteristic impedance.

Part No.	HRS No.	Part	Material	Finish or color	Sales unit	RoHS
GT16GT-1P-H(55)	766-0104-5 55	Housing	PPS	Black	200 pcs/reel	○
		Center Terminal	Phosphor bronze	Tin plating		
		Outer terminal	Phosphor bronze	Tin plating		
		Insulators L, R	PPS	Natural		
		Shield plate	Phosphor bronze	Tin plating		
		Retention tab	Brass	Tin plating		

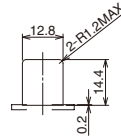
◆GT16GH-1P-H (Fixing Pin: Lead Reflow type)



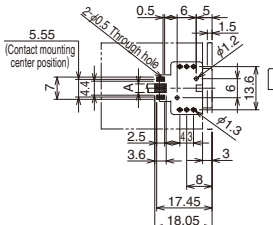
◆Dimensions



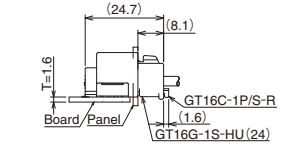
◆Recommended Panel Dimensions



◆Recommended Board Dimensions



◆Mated Connector



Note : Adjust dimension A of the microstrip line to satisfy 50Ω characteristic impedance.

Part No.	HRS No.	Part	Material	Finish or color	Sales unit	RoHS
GT16GH-1P-H	766-0118-0	Housing	PPS	Black	200 pcs/reel	○
		Center Terminal	Phosphor bronze	Tin plating		
		Outer terminal	Phosphor bronze	Tin plating		
		Insulators L, R	PPS	Natural		
		Shield plate	Phosphor bronze	Tin plating		
		Retention tab	Brass	Tin plating		

Jul.1.2022 Copyright 2022 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

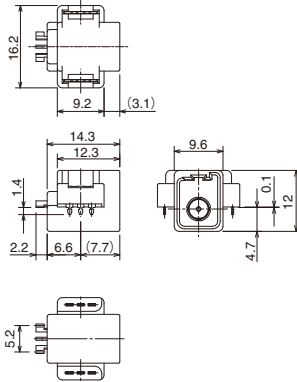
GT5
GT13
GT16
GT19
GT21
GT36
GT43
GT17
GT32
GT25
KM37
ZE05
ZE05J2
HM-200
ZE04W
T2023K
FX26
DF40
DF40GL
RH28K
FH2K
FH65
FH40
FH63
FH67

Jul.1.2022 Copyright 2022 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

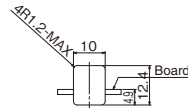
◆GT16GL-1P-H(55)D (Fixing Pin: Lead Reflow type)



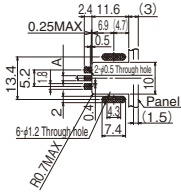
◆Dimensions



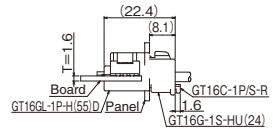
◆Recommended Panel Dimensions



◆Recommended Board Dimensions



◆Mated Connector



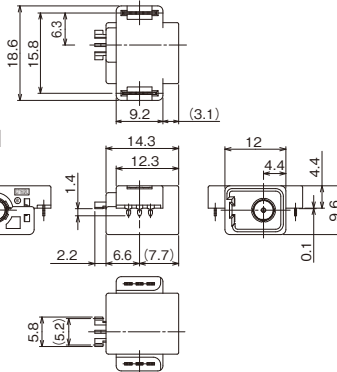
Note : Adjust dimension A of the microstrip line to satisfy 50Ω characteristic impedance.

Part No.	HRS No.	Part	Material	Finish or color	Sales unit	RoHS
GT16GL-1P-H(55)D	766-0103-2 55	Housing	PPS	Black	200 pcs/reel	○
		Center Terminal	Phosphor bronze	Tin plating		
		Outer terminal	Phosphor bronze	Tin plating		
		Insulators	PPS	Natural		
		Metal reinforcement	Brass	Tin plating		

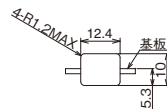
◆GT16GRL-1P-H (55) (Fixing Pin: Lead Reflow type)



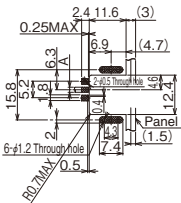
◆Dimensions



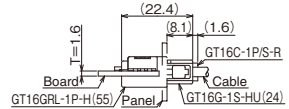
◆Recommended Panel Dimensions



◆Recommended Board Dimensions



◆Mated Connector



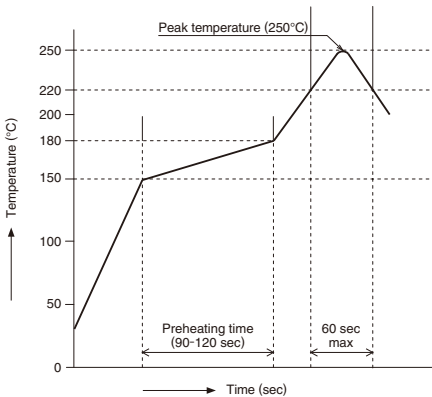
Note : Adjust dimension A of the microstrip line to satisfy 50Ω characteristic impedance.

Part No.	HRS No.	Part	Material	Finish or color	Sales unit	RoHS
GT16GRL-1P-H(55)	766-0101-7 55	Housing	PPS	Black	200 pcs/reel	○
		Center Terminal	Phosphor bronze	Tin plating		
		Outer terminal	Phosphor bronze	Tin plating		
		Insulators	PPS	Natural		
		Metal reinforcement	Brass	Tin plating		

GT5
GT13
GT16
GT19
GT21
GT36
GT43
GT17
GT32
GT25
KM32
ZE05
ZG052
HHW300
ZG04W
12032K
FX26
DF40
DF40GL
RH28K
FH2K
FH65
FH40
FH63
FH67

Jul.1.2022 Copyright 2022 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

◆Precautions for use

<p>1. Recommended temperature profile</p>	 <p>[Conditions] 1. Peak temperature : 250°C 2. Heating unit : 220°C min, 60 sec max. 3. Preheating unit : 150 to 180°C for 90 to 120 sec 4. Number of cycles : 2 cycles max</p> <p>Note 1 : Temperatures show the surface temperature of the board near the connector lead part. Note 2 : If nitrogen reflow is used, mount the product at an oxygen concentration of no less than 1,000 [ppm]. Please contact us if your concentration will be below 1,000 [ppm].</p>
<p>2. Recommended hand soldering conditions</p>	<p>Soldering iron temperature : 340 ± 10°C Soldering time : 3 sec max</p>
<p>3. Recommended screen thickness : Aperture ratio (pattern area ratio)</p>	<p>Thickness : 0.15mm aperture ratio : 100%</p>
<p>4. Cleaning</p>	<p>Cleaning is not recommended. If the product must be cleaned, make sure to evaluate the outcome of its cleaning before use. (Cleaning may alter its mating/un-mating characteristics or resistance to environmental elements.)</p>
<p>5. Precautions</p>	<ul style="list-style-type: none"> ■ Be careful not to mate or un-mate the product without mounting it on the board This may cause damage or deform the contacts. ■ Make sure not to support the board only by the connector. Implement other means to hold the board in place. ■ Be careful not to apply excessive prying forces when mating or un-mating as doing so may result in damage ■ Do not apply flux when hand soldering as this will cause flux wicking on the connector.

●Crimping Tools

Applicable Connector		GT16GM-1S-ASS GT16G-1S-ASSY GT16GT-1S-ASSY GT16GW-1S-ASSY	GT16GM-1P-ASSY GT16GMN-1PP-ASSY GT16GT-1PP-ASSY GT16GW-1P-ASSY
Process 1.	Cable termination	Schleuniger MP257, etc.	Schleuniger MP257, etc.
2.	Center contact crimping	Crimping machine unit 105C type + AP105-GT16G-2428S	Crimping machine unit 105C type + AP105-GT16G-2428P
3.	Cable forming	Shield forming tool GT16G-1.5DHQS/CF-MD	Shield forming tool GT16G-1.5DHQS/CF-MD
4.	Inserting the outer ferrule	Outer ferrule insertion tool GT16G-1.5DHQS/PR-MD	Outer ferrule insertion tool GT16G-1.5DHQS/PR-MD
5.	Inserting the contact ferrule	Contact ferrule insertion tool GT16G-FR/PR-MD	Contact ferrule insertion tool GT16G-FR/PR-MD
6.	Attaching the insulator	Manual work	Manual work
7.	Inserting the outer shell	Insulator pushing tool GT16G-SC/PR-MD	—
8.	Caulking the outer shell	Hand press HOS-7 + GT16G-1.6-2.9S/CK-MP	Hand press HOS-7 + GT16G-1.6-2.9S/CK-MP
9.	Mounting the housing (retainer)	Manual work	Manual work
10.	Inspection	Inspection of high frequency characteristics Inspection of continuity/withstanding voltage Visual inspection	Inspection of high frequency characteristics Inspection of continuity/withstanding voltage Visual inspection

Please refer to our cable termination procedure manual for performing terminations.