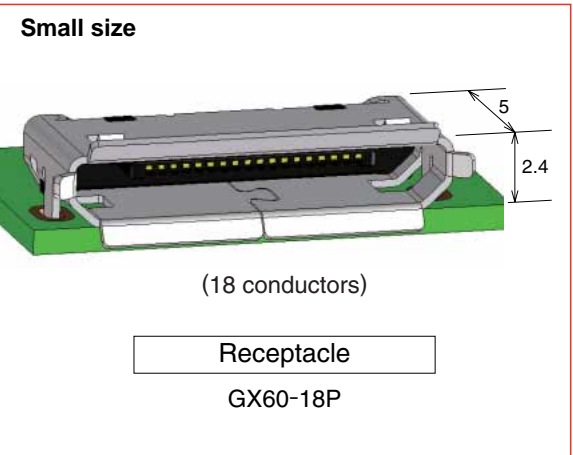
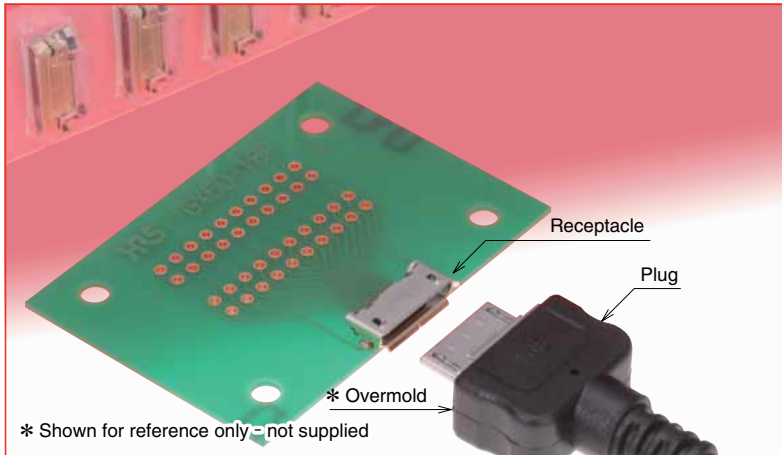




0.4 mm Pitch, Space-saving Interface Connectors

GX Series



Overview

Developed as input/output connectors for use in portable devices requiring reliable high durability connection.

Features

1. Small size

With a width of 5 mm and 2.4 mm height above the mounting surface the connectors may be used in applications where board and volume space is restricted.

2. Strong construction

Single piece shell increases the board retention and resists rotational forces encountered in demanding consumer environment

3. High durability

Unique lock latches will maintain high retention force (plug with corresponding receptacle) up to 10,000 cycles, confirming fully mated condition with a distinctive tactile "click" sensation.

4. ESD protection

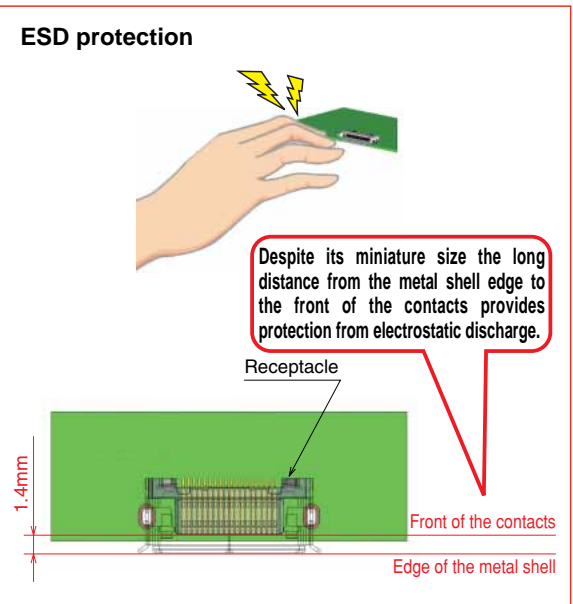
Increased distance from the edge of the metal shell to the front of the contacts offers circuit protection from electrostatic discharge.

5. RoHS compliant

All components and materials comply with the requirements of EU Directive 2002/95/EC

Applications

DSC, PDA, notebook computers, mobile phones and other portable devices requiring high durability interface connectors.



GX Series 0.4 mm Pitch, Space-saving Interface Connectors

■ Specifications

Ratings	Current rating	0.5 A (1 A / contact, each contact at the end, 2 contacts only)	Operating temperature range	-30°C to +80°C Note 1
	Voltage rating	30 V AC	Storage temperature range	-40°C to +85°C Note 2

Item	Specification	Conditions
1. Contact resistance	60 mΩ max.	100 mA DC
2. Insulation resistance	100 MΩ min.	100 V DC
3. Withstanding voltage	No flashover or insulation breakdown	100 V AC / 1 minute
4. Durability	Contact resistance: 100 mΩ max. No damage cracks or parts dislocation.	10,000 cycles
5. Shock	No electrical discontinuity of 1 μs or longer. No damage, cracks or parts dislocation.	Acceleration of 490m/s ² , 11 ms duration, sine half-wave, 3 cycles, 3 axis
6. Vibration	No electrical discontinuity of 1 μs or longer. No damage, cracks or parts dislocation.	Frequency: 10 to 55 Hz, single amplitude of 0.75 mm, 3 directions for 2 hours
7. Temperature cycle	Contact resistance: 100 mΩ max. No damage, cracks or parts dislocation.	Temperature: -55°C → +15°C to 35°C → +85°C → +15°C to 35°C Time: 30min. → 2min. to 3min. → 30min. → 2min. to 3 min. 5 cycles
8. Humidity	Insulation resistance: 100 mΩ min. Insulation resistance: 10 MΩ min.	96 hours at a 40 ±3°C, RH of 90 to 95%, then leave for 1 to 2 hours at normal temperature and humidity
9. Heat resistance	Contact resistance: 100 mΩ max.	96 ±4 hours at +85 ±2°C
10. Cold resistance	Contact resistance: 100 mΩ max.	96 ±4 hours at -40 ±3°C
11. Salt spray test	Contact resistance: 100 mΩ max.	48 hours at a concentration of 5% ±1%, and humidity of 85 ±3°C

Note 1. Includes temperature raise caused by current flow.

Note 2. The term "storage" refers to products stored for long period, prior to mounting and use.

■ Materials

● Receptacle

Part	Material	Finish	Remarks
Insulator	Synthetic resin	Color: Black	UL94V-0
Contacts	Copper alloy	Gold plated	—————
Shell	Stainless steel	Selective gold plated	—————

● Plug

Part	Material	Finish	Remarks
Insulator	Synthetic resin	Color: Black	UL94V-0
Contacts	Copper alloy	Gold plated	—————
Shells	Stainless steel	Nickel plated	—————
Lock	Stainless steel	—————	—————

■ Ordering information

● Receptacle

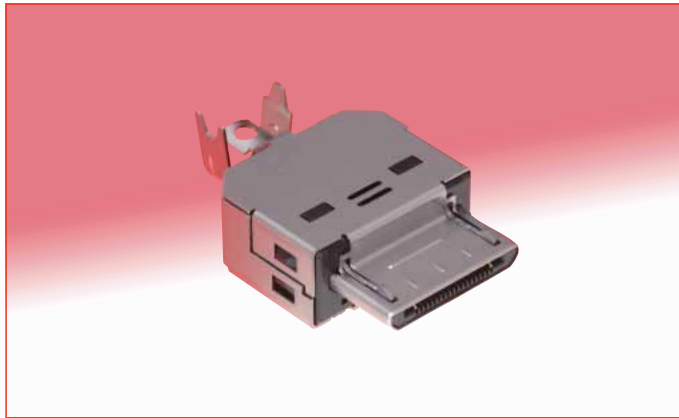
GX60 - 18 P
 ① ② ③

● Plug

GX40 - 18 S
 ① ② ③

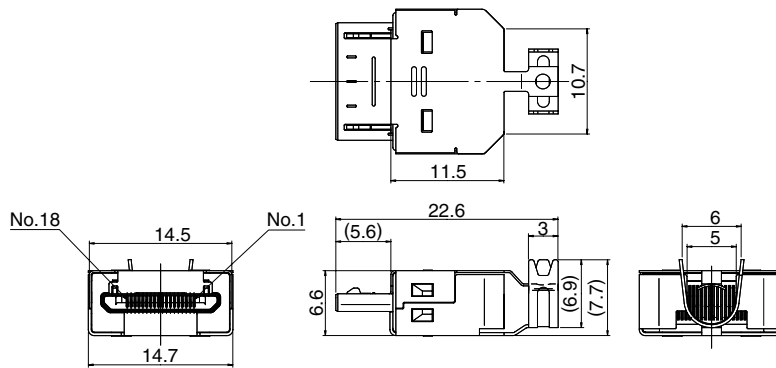
① Series name: GX60 (Receptacles) GX40 (Plugs)
② Number of contacts : 18
③ Contacts type P: Male S: Female

Plug



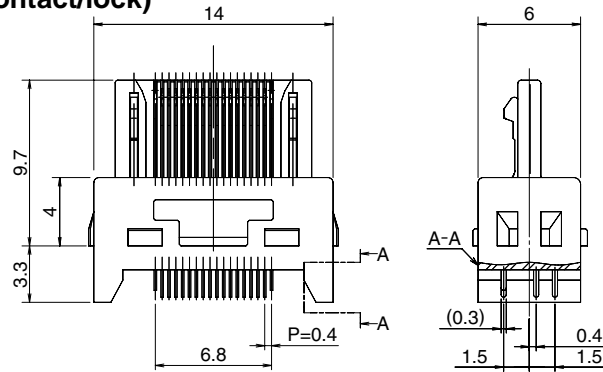
Part Number	CL No.	RoHS
GX40-18S	247-0002-6	YES

Assembled components - Supplied non-terminated, without overmold



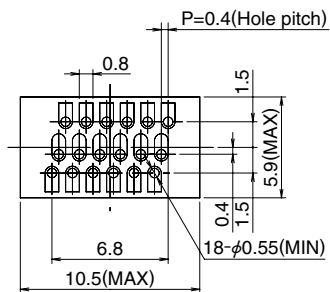
All dimensions: mm

Assembly (insulator/ contact/lock)

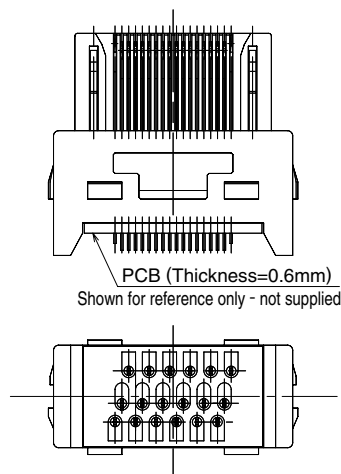


All dimensions: mm

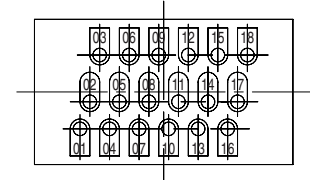
Recommended PCB mounting pattern (Thickness=0.6mm)



PCB installed



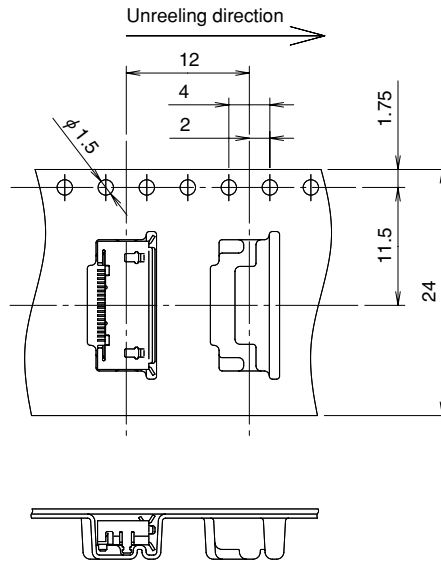
Contact Number Identification



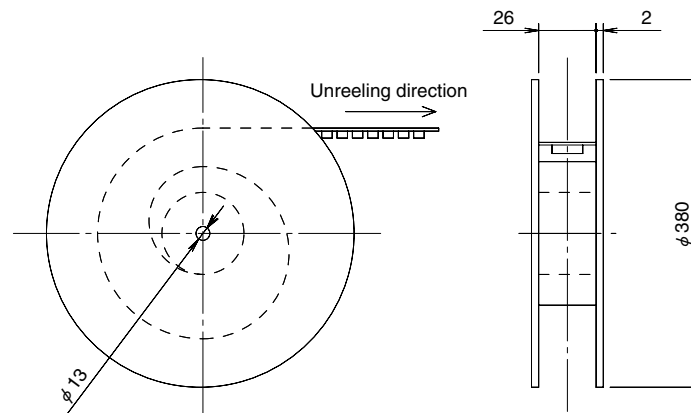
All dimensions: mm

■ Packaging Specifications

● Embossed carrier tape dimensions

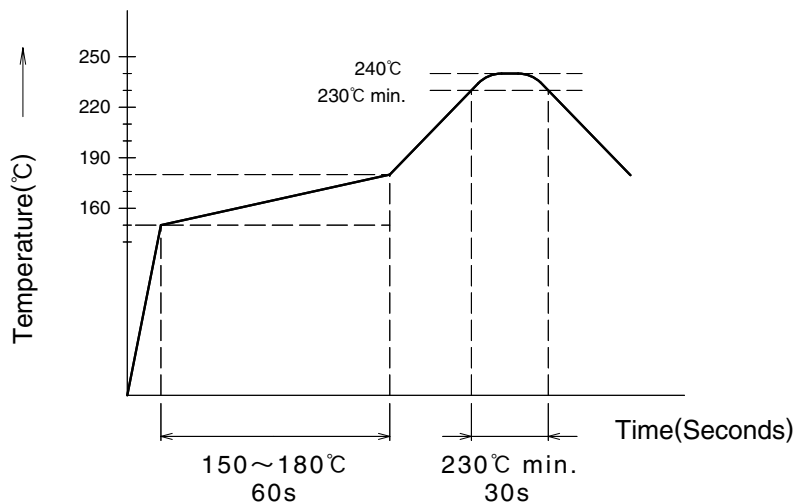


● Reel Dimensions



◆ Recommended reflow temperature profile - receptacles

● Using lead-free solder paste.



● HRS test condition

- Solder composition : Paste, 96.5%Sn/3.0%Ag/0.5%Cu
- Test board : Glass epoxy 35mm×50mm×0.8mm thick

The temperature profiles are based on the above conditions.

In individual applications the actual temperature may vary, depending on solder paste type, volume / thickness and board size / thickness. Consult your solder paste and equipment manufacturer for specific recommendations.