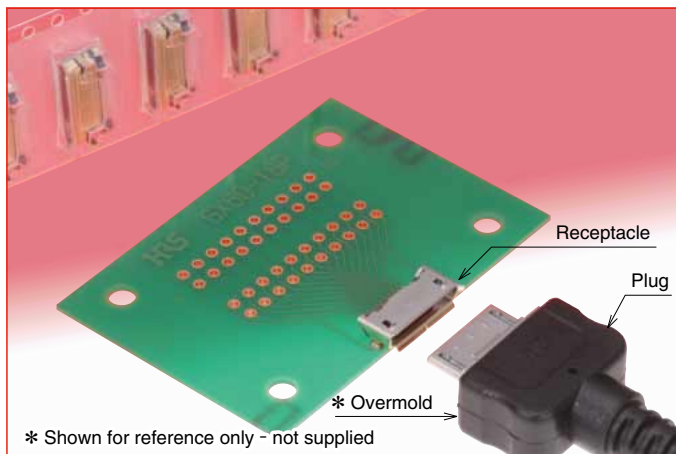
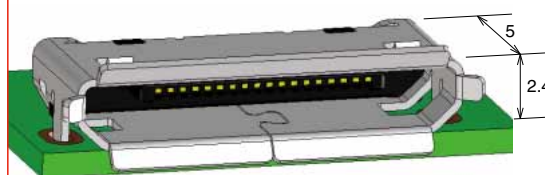


# 0.4 mm Pitch, Space-saving Interface Connectors

## GX Series



### Small size



(18 conductors)

Receptacle

GX60-18P

Fig.1

### 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.(Fig.1)

#### 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.(Fig.2)

#### 4. ESD protection

Increased distance from the edge of the metal shell to the front of the contacts offers circuit protection from electrostatic discharge.(Fig.3)

#### 5. RoHS compliant

All materials and substances used to produce this product comply with RoHS standards.

### Applications

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

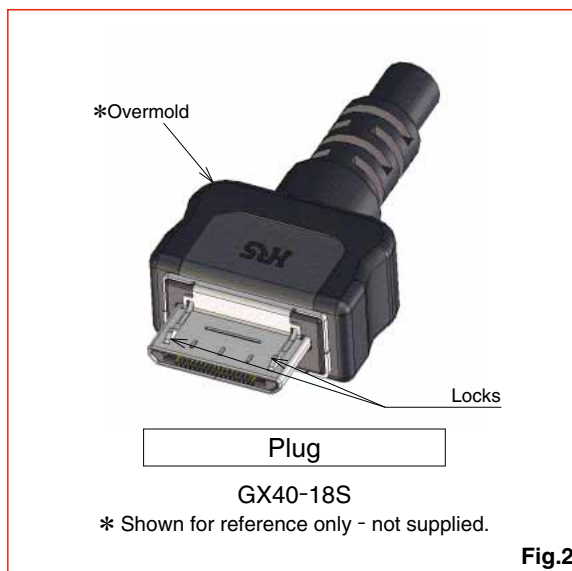


Fig.2

### ESD protection

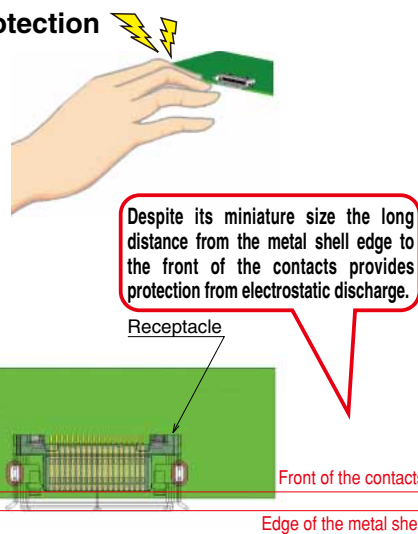


Fig.3

## 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
	Voltage rating	30 V AC	Storage temperature range	-40°C to +85°C
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 <sup>2</sup> , 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→+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	

## 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

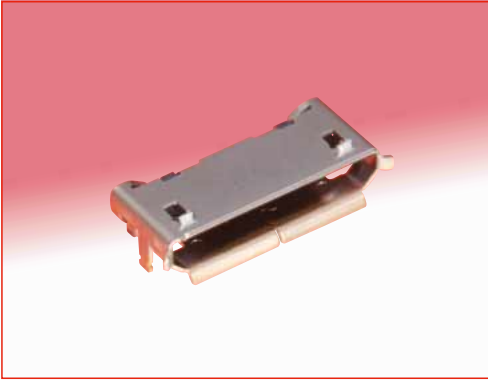
GX60 - 18 P  
①                      ②      ③

### ●Plug

GX40 - 18 S  
①                      ②      ③

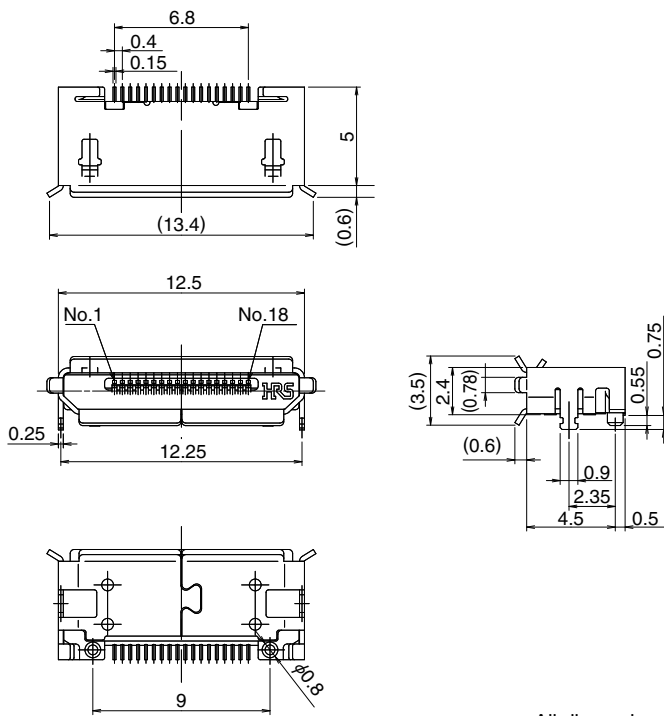
① Series name: GX60 (Receptacles) GX40 (Plugs)
② Number of contacts : 18
③ Contacts type P: Male S: Female

## Receptacle



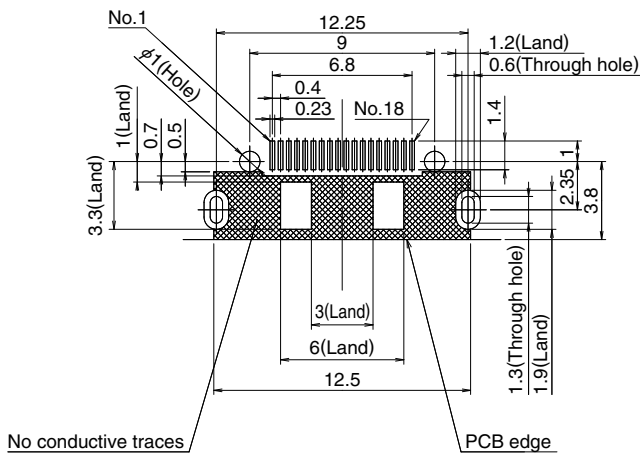
Part No.	HRS No.	Packaging	RoHS
GX60-18P	247-0001-3	1,500 pcs/reel	○

Note : Order by number of reels.



All dimensions: mm

## Recommended PCB mounting pattern



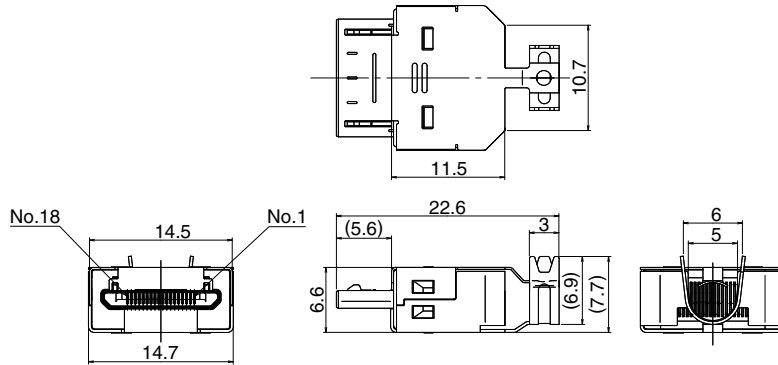
All dimensions: mm

■ Plug



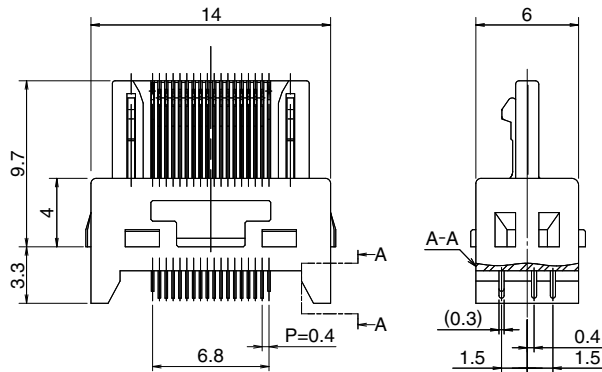
Part No.	HRS No.	Packaging	RoHS
GX40-18S	247-0002-6	1	○

● Assembled components - Supplied non-terminated, without overmold



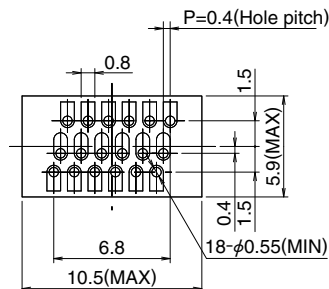
All dimensions: mm

● Assembly (insulator/ contact/lock)

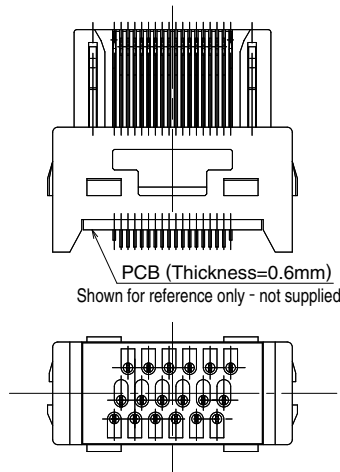


All dimensions: mm

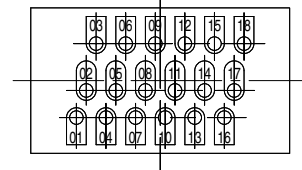
◆ Recommended PCB mounting pattern (Thickness=0.6mm)



◆ PCB installed



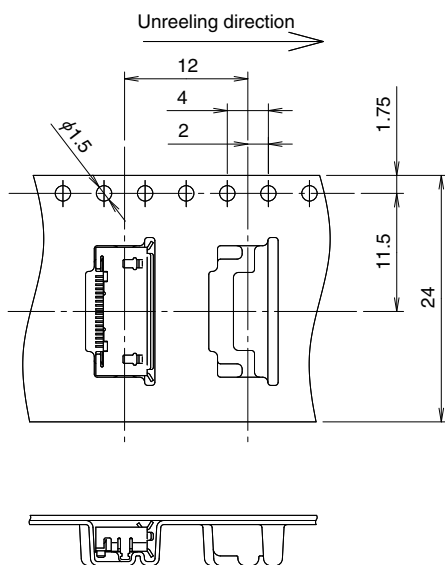
◆ Contact Number Identification



All dimensions: mm

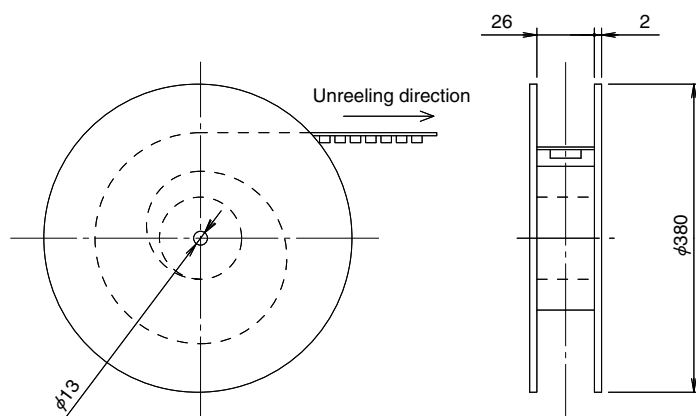
## ◆ Packaging Specifications

### ● Embossed carrier tape dimensions

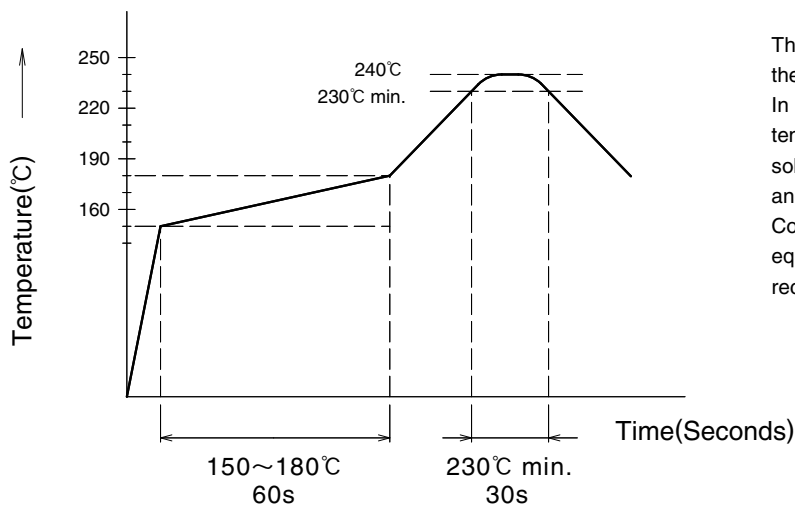


Note : Tape and reel packaging (1,500 pcs/reel).  
Order by number of reels.

### ● Reel Dimensions



## ◆ Recommended Solder Reflow Profile



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.

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