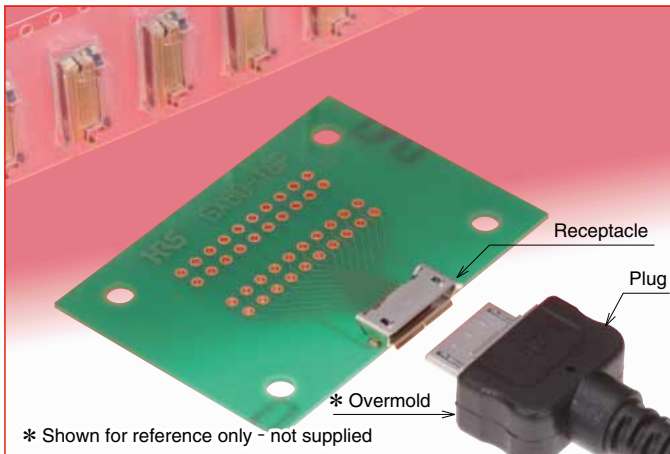
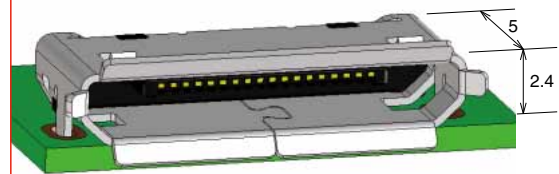


0.4 mm Pitch, Space-saving Interface Connectors

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

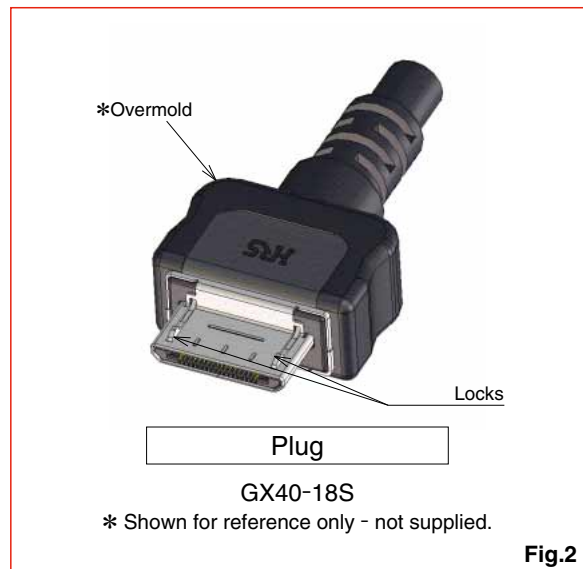
Increased distance from the edge of the metal shell to the front of the contacts offers circuit protection from electrostatic discharge.(Fig.3)

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.



*Overmold

Locks

Plug

GX40-18S

* Shown for reference only - not supplied.

Fig.2

ESD protection



Despite its miniature size the long distance from the metal shell edge to the front of the contacts provides protection from electrostatic discharge.

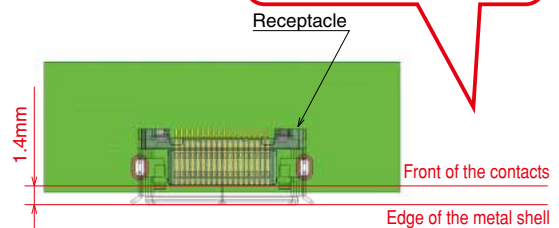


Fig.3

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 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		

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

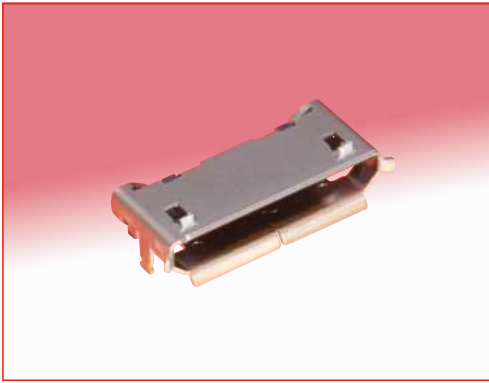
GX60 - 18 P
① ② ③

●Plug

GX40 - 18 S
① ② ③

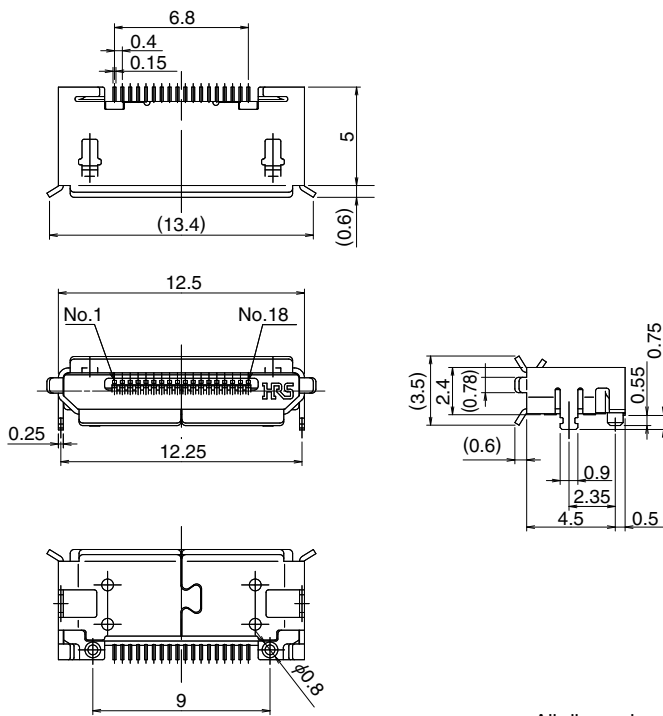
① Series name: GX60 (Receptacles) GX40 (Plugs)
② Number of contacts : 18
③ Contacts type P: Male S: Female

Receptacle



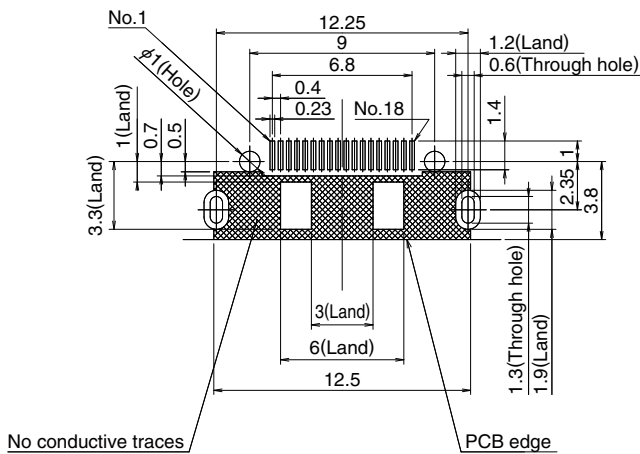
Part No.	HRS No.	Packaging	RoHS
GX60-18P	247-0001-3	1,500 pcs/reel	○

Note : Order by number of reels.



All dimensions: mm

Recommended PCB mounting pattern



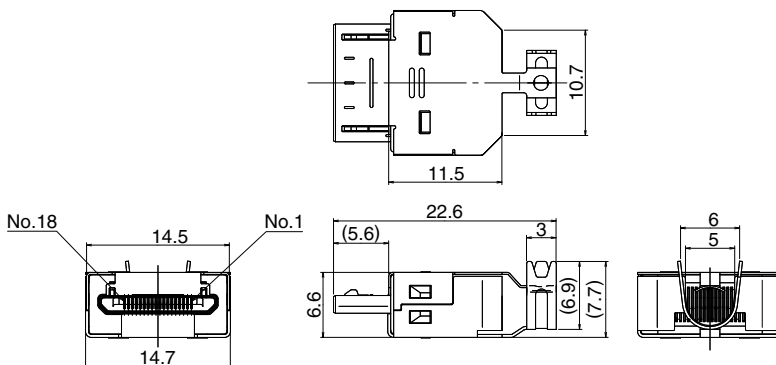
All dimensions: mm

■ Plug



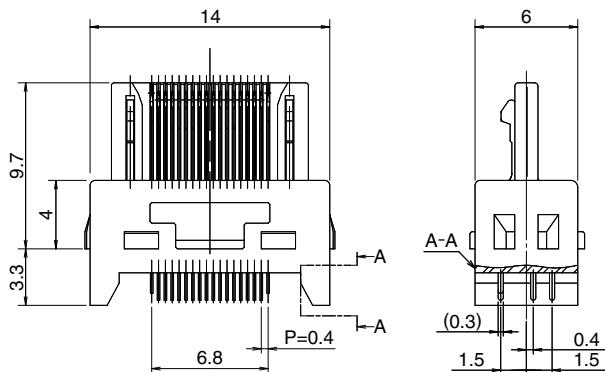
Part No.	HRS No.	Packaging	RoHS
GX40-18S	247-0002-6	1	○

● Assembled components - Supplied non-terminated, without overmold



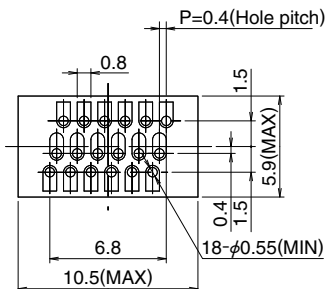
All dimensions: mm

● Assembly (insulator/ contact/lock)

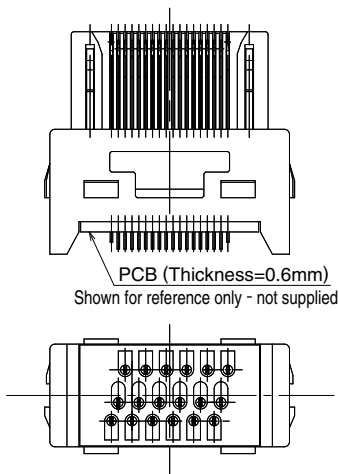


All dimensions: mm

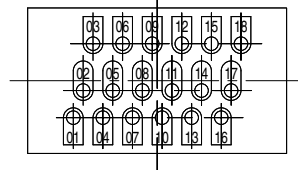
◆ Recommended PCB mounting pattern (Thickness=0.6mm)



◆ PCB installed



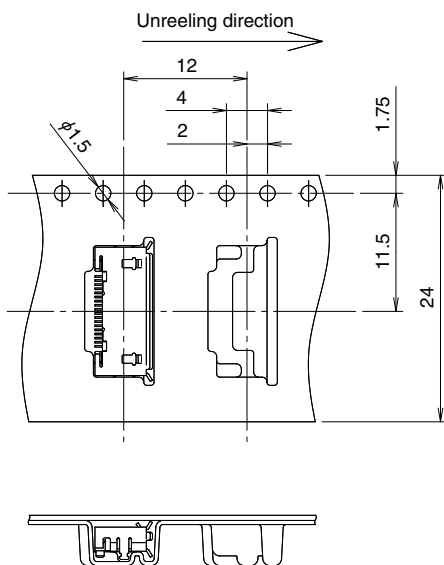
◆ Contact Number Identification



All dimensions: mm

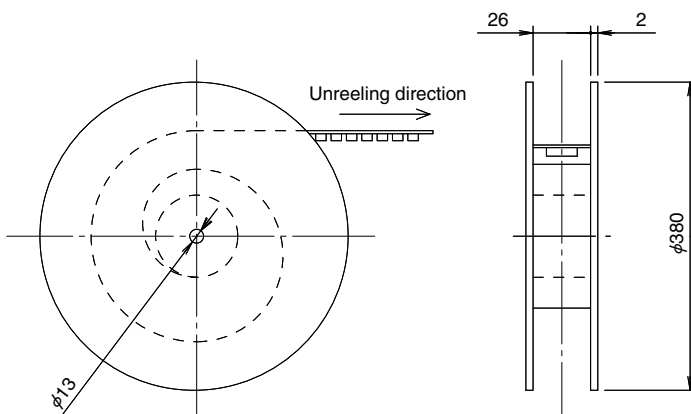
◆ Packaging Specifications

● Embossed carrier tape dimensions

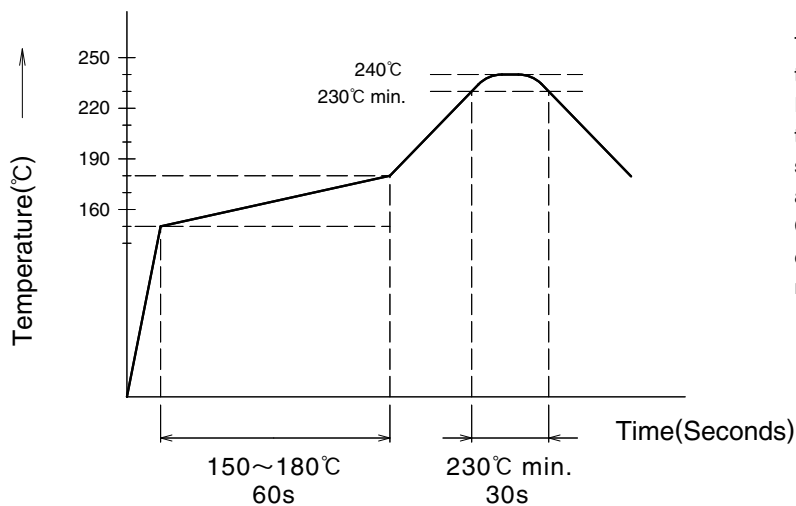


Note : Tape and reel packaging (1,500 pcs/reel).
Order by number of reels.

● 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.

USA:

HIROSE ELECTRIC (U.S.A.), INC. Headquarters
 2688 Westhills Court, Simi Valley, CA 93065-6235
 Phone : +1-805-522-7958
 Fax : +1-805-522-3217
<http://www.hiroseusa.com>

USA:

HIROSE ELECTRIC (U.S.A.), INC. San Jose Office
 3255 Scott Boulevard, Building 7, Suite 101
 Santa Clara, CA 95054
 Phone : +1-408-253-9640
 Fax : +1-408-253-9641
<http://www.hiroseusa.com>

USA:

HIROSE ELECTRIC (U.S.A.), INC. Detroit Office (Automotive)
 37677 Professional Center Drive, Suite #100C
 Livonia, MI 48154
 Phone : +1-734-542-9963
 Fax : +1-734-542-9964
<http://www.hiroseusa.com>

THE NETHERLANDS:

HIROSE ELECTRIC EUROPE B.V.
 Hogehillweg #8 1101 CC Amsterdam Z-O
 Phone : +31-20-6557460
 Fax : +31-20-6557469
<http://www.hiroseeurope.com>

GERMANY:

HIROSE ELECTRIC EUROPE B.V. German Branch
 Herzog-Carl-Strasse 4 D-73760 Ostfildern
 (Scharnhauser Park)
 Phone : +49-711-4560-02-1
 Fax : +49-711-4560-02-299
<http://www.hirose.de>

GERMANY:

HIROSE ELECTRIC EUROPE B.V. Nuernberg Office
 Muggenhofer Str. 136 90429 Nuernberg
 Phone : +49-911 32 68 89 63
 Fax : +49-911 32 68 89 69
<http://www.hirose.de>

UNITED KINGDOM:

Hirose Electric Europe BV (UK Branch)
 4 Newton Court, Kelvin Drive, Knowlhill,
 Milton Keynes, MK5 8NH
 Phone : +44-1908 202050
 Fax : +44-1908 202058

CHINA:

HIROSE ELECTRIC (SHANGHAI) CO., LTD.
 1601, Henderson Metropolitan, NO.300, East Nanjing
 Road, Huangpu District, Shanghai, China 200001
 Phone : +86-21-6391-3355
 Fax : +86-21-6391-3335
<http://www.hirose-china.com.cn>

CHINA:

HIROSE ELECTRIC (SHANGHAI) CO.,LTD. BEIJING BRANCH
 A1001, Ocean International Center, Building 56# East 4th
 Ring Middle Road, ChaoYang District, Beijing, 100025
 Phone : +86-10-5165-9332
 Fax : +86-10-5908-1381
<http://www.hirose-china.com.cn>

CHINA:

HIROSE ELECTRIC TECHNOLOGIES (SHENZHEN) CO., LTD.
 Room 09-13, 19/F, Office Tower Shun Hing Square, Di Wang Commercial Centre,
 5002 Shen Nan Dong Road, Shenzhen City, Guangdong Province, 518008
 Phone : +86-755-8207-0851
 Fax : +86-755-8207-0873
<http://www.hirose-china.com.cn>

HONG KONG:

HIROSE ELECTRIC HONGKONG TRADING CO., LTD.
 Room 1001, West Wing, Tsim Sha Tsui Centre, 66
 Mody Road, Tsim Sha Tsui East, Kowloon, Hong Kong
 Phone : +852-2803-5338
 Fax : +852-2591-6560
<http://www.hirose-hongkong.com.hk>

TAIWAN:

HIROSE ELECTRIC TAIWAN CO., LTD.
 103 8F, No.87, Zhengzhou Rd., Taipei
 Phone : +886-2-2555-7377
 Fax : +886-2-2555-7350
<http://www.hirose-taiwan.com.tw>

KOREA:

HIROSE KOREA CO., LTD.
 1261-10, Jeoungwhang-Dong, Shihung-City,
 Kyunggi-Do 429-450
 Phone : +82-31-496-7000,7124
 Fax : +82-31-496-7100
<http://www.hirose.co.kr>

SINGAPORE:

HIROSE ELECTRIC SINGAPORE PTE. LTD.
 10 Anson Road #26-1, International Plaza
 079903, Singapore
 Phone : +65-6324-6113
 Fax : +65-6324-6123
<http://www.hirose-singapore.com.sg>

INDIA:

HIROSE ELECTRIC SINGAPORE PTE. LTD Delhi Liaison Office
 Suite No. 606 5th Floor SB Tower 1A/1 Sector
 16 A Filmcity Noida 201301 Uttar Pradesh-India
 Phone : +91-120-4804917
 Fax : +91-120-4804949
<http://www.hirose.com/sg/>

INDIA:

HIROSE ELECTRIC SINGAPORE PTE. LTD. Bangalore Liaison office
 Unit No.03, Ground Floor, Explorer Building International Tech
 Park Whitefield Road, Bangalore 560066 Karnataka, India
 Phone : +91-80-4120 1907
 Fax : +91-80-4120 9908
<http://www.hirose-singapore.com.sg>

MALAYSIA:

HIROSE ELECTRIC SINGAPORE PTE. LTD (Representative office)
 1-10-07, Suntech @ Penang Cybercity (1164),Lintang
 Mayang Pasir 3,11950, Bayan Baru, Penang, Malaysia.
 Phone : +604-619-2564
 Fax : +604-619-2574
<http://www.hirose.com/sg/>



HIROSE ELECTRIC CO.,LTD.

2-6-3,Nakagawa Chuoh,Tsuzuki-Ku,Yokohama-Shi 224-8540,JAPAN
 TEL: +81-45-620-3526 Fax: +81-45-591-3726
<http://www.hirose.com>
<http://www.hirose-connectors.com>