

ST Series

# Interface Connectors for Portable Terminal Devices



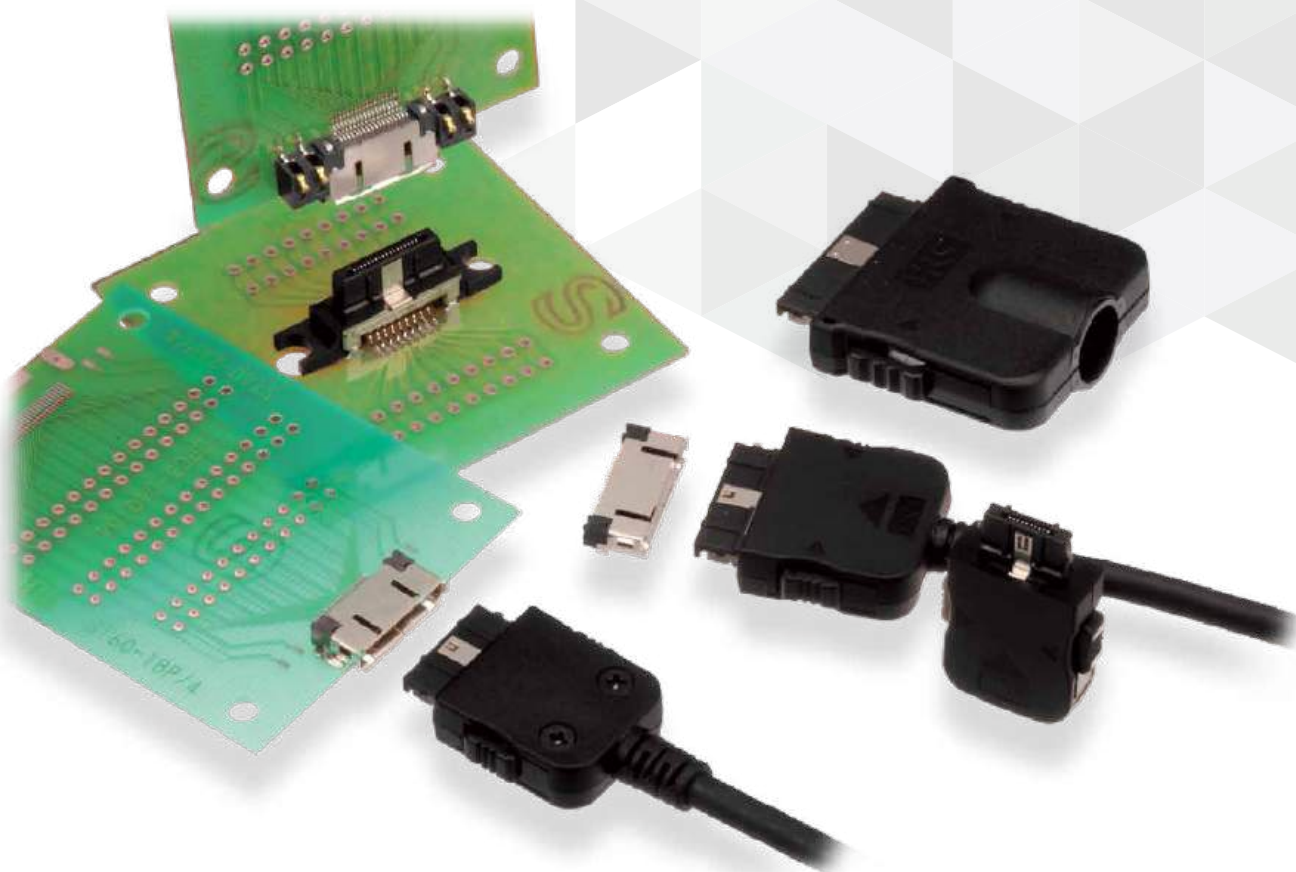
Light Weight



Low Profile



Space Saving



Product Page  
<https://www.hirose.com/en/product/series/ST>

Feb. 2026

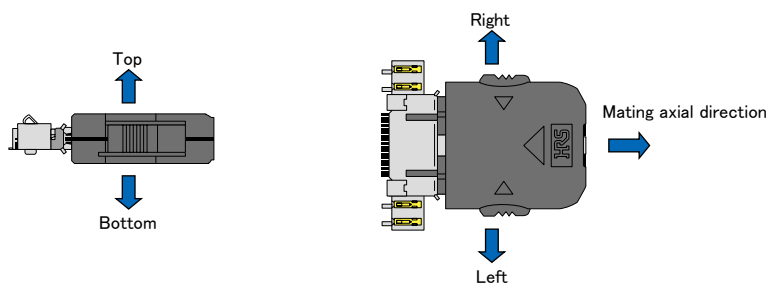
## Overview

The ST Series interface connectors are specifically designed for use as Input/Output (I/O) connectors on portable information devices. They feature a unique structure with high strength which resists deformation and helps to prevent improper mating. 3.0 mm height and 0.5 mm contact pitch connector prevents EMI as well. The ST Series can be used in wide range of applications such as DSC, PDA, laptop PCs, cellular phones, etc.

## Features

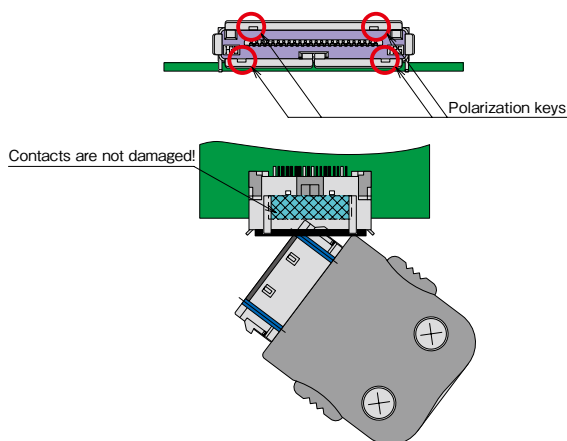
### 1. Strong locking mechanism

To assure continuous reliability of the connection in an unpredictable consumer environment, mated connectors will withstand pull force of 49N Max. applied in any direction.



### 2. Prevention against reversed or angle insertion

Multiple polarization keys will not allow incorrect insertion of the mating plug. In addition, contacts will not be damaged when the user attempts to insert only the corner of the mating plug because the receptacle signal portion does not touch the plug.

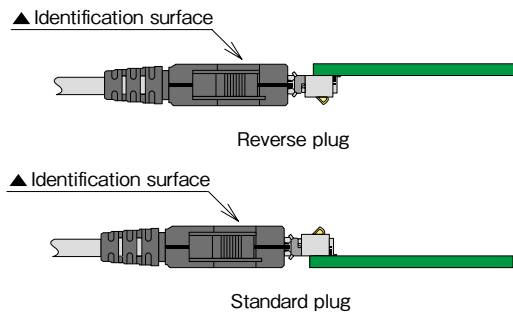


### 3. Optimal I/F for Small Devices

Plugs are 8 mm thick and 20 mm long (including covers), which is appropriate for small devices. Receptacles feature the low height of 3 mm and the contact pitch of 0.5 mm. Their small size saves valuable space and contributes to a smaller device set.

## 4. Multiple Variations

A wide variations is available for supporting different types of peripheral devices. Examples include shielded plugs for data communication, non-shielded plugs for power charge, reversed plug types as shown in Fig and cradle type connectors.



Plug variations

## 5. Cable Options

This connector uses a solder type termination, which allows you to apply flexible cable types.

### Applications

Digital Still Cameras, Personal Digital Assistance, Notebook computers, Cellular phones, Smart phones and other portable devices requiring high reliability small size input/output connection.

### Product Specifications

|                        |         |                                |              |
|------------------------|---------|--------------------------------|--------------|
| Rated Current (Note 1) | 0.5A    | Operating Temperature (Note 2) | -30 to +80°C |
| Rated Voltage          | 100V AC | Storage Temperature            | -40 to +85°C |

Note 1: Up to 1A can be supplied to any of the 4 pos.

Note 2: Includes temperature rise caused by current flow.

| Characteristic                  | Specification                                                                                   | Conditions                                                                                                              |
|---------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Contact Resistance              | 60m $\Omega$ Max.                                                                               | 100mA DC                                                                                                                |
| Insulation Resistance           | 1,000M $\Omega$ Min.                                                                            | 250V DC                                                                                                                 |
| Dielectric Withstanding Voltage | No flashover or insulation breakdown.                                                           | 350V AC/ 1 minute                                                                                                       |
| Mating/un-mating forces         | Mating: 29.4N Max.                                                                              | With corresponding connector.                                                                                           |
| Durability(mating/un-mating)    | Contact resistance: 100m $\Omega$ Max.                                                          | 10,000 cycles                                                                                                           |
| Shock Resistance                | No electrical discontinuity of 10 $\mu$ sec. Max.                                               | Acceleration of 490 m/s <sup>2</sup> , 11 ms duration, sine half-wave waveform, 3 cycles in each of the 3 axis.         |
| Temperature Cycle               | Contact resistance: 100m $\Omega$ Max.<br>Insulation resistance: 1,000M $\Omega$ Min.           | Temperature : -55°C → +5°C to +35°C → +85°C → +5°C to +35°C<br>Time (Minutes): 30 → 5 → 30 → 5<br>5 cycles              |
| Salt Spray                      | No corrossions                                                                                  | 5 ± 1% salt water solution at 35 ± 3°C for 48 hours, after washing without salt, leave for 24 hours at room temperature |
| Lock Strength                   | Fully inserted and locked corresponding connector.<br>No physical damage or electrical failure. | Pull force: 49N Max. applied in each of the 4 axis.                                                                     |
| Vibration Resistance            | No electrical discontinuity of 10 $\mu$ sec. Max.                                               | Frequency: 10 to 55 Hz, single amplitude of 0.75mm, 2 hours, 3 axis.                                                    |

## Materials / Finish

### ● Receptacle and cradle

| Component | Material                                 | Finish                    | Remarks |
|-----------|------------------------------------------|---------------------------|---------|
| Insulator | Thermoplastic compound, glass reinforced | Color: Black              | UL94V-0 |
| Contacts  | Copper alloy                             | Contact area: Gold plated | -       |
| Shield    | Stainless steel                          | Tin alloy plating         | -       |

### ● Plug

| Component | Material                                 | Finish                    | Remarks |
|-----------|------------------------------------------|---------------------------|---------|
| Insulator | Thermoplastic compound, glass reinforced | Color: Black              | UL94V-0 |
| Contacts  | Copper alloy                             | Contact area: Gold plated | -       |
| Shield    | Stainless steel                          | -                         | -       |
| Cover     | Thermoplastic compound, glass reinforced | -                         | UL94V-0 |

## Product Number Structure

Refer to the chart below when determining the product specifications from the product number.  
Please select from the product numbers listed in this catalog when placing orders.

### ■ Receptacle

**ST 60 - 18 P (30)**

① ② ④ ⑤ ⑦

### ■ Plug

**ST 40 X - 18 S - CVR (30)**

① ② ③ ④ ⑤ ⑥ ⑦

### ■ Cradle

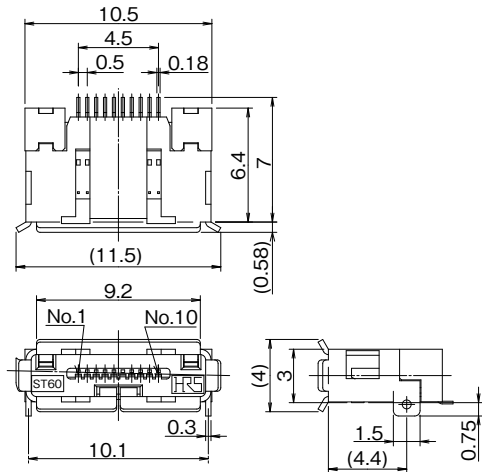
**ST 80 X - 18 S (30)**

① ② ③ ④ ⑤ ⑦

|                    |                                                                     |                  |                                                                                                                    |
|--------------------|---------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------------------------------------|
| ① Series Name      | ST                                                                  | ④ Number of Pos. |                                                                                                                    |
| ② Termination Type | 60: Right angle SMT<br>40: Solder type<br>80: Cradle, vertical, SMT | ⑤ Contact Type   | P: Male contact (Receptacle)<br>S: Female contact (Plug)                                                           |
| ③ Shield           | X: With shield<br>Blank: Without shield                             | ⑥ Plug Type      | CV: Standard type, for top PCB mount<br>CVR: Reverse type, for bottom PCB mount<br>CV1: For larger diameter cables |
|                    |                                                                     | ⑦ RoHS Compliant | (30)                                                                                                               |

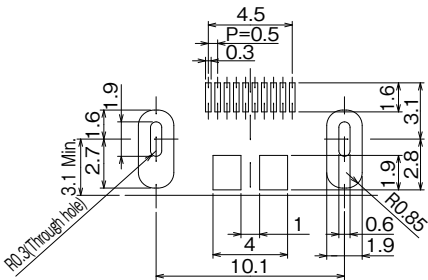
Receptacle

● 10 pos.

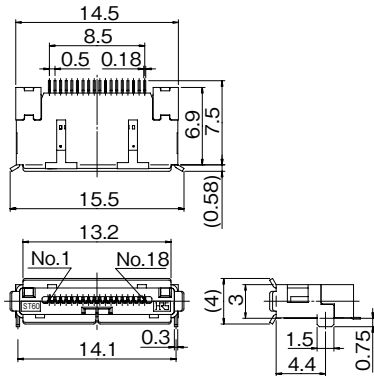


| Part No.     | HRS No.          | RoHS                  |
|--------------|------------------|-----------------------|
| ST60-10P(30) | CL0241-0022-5-30 | <input type="radio"/> |

■ Recommended PCB mounting pattern(from attachment side)

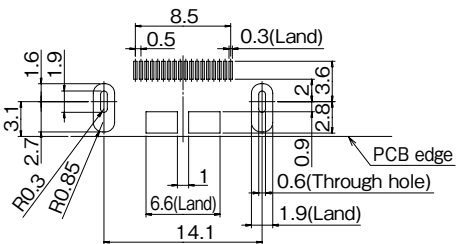


● 18 pos.

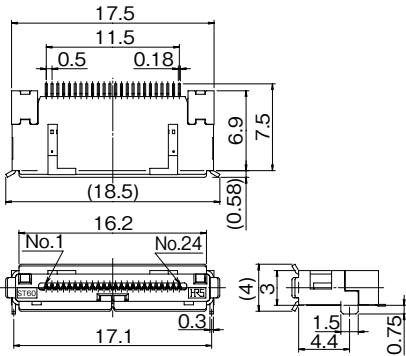
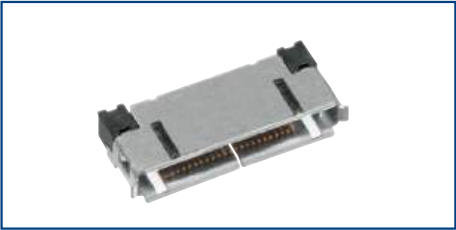


| Part No.     | HRS No.          | RoHS                  |
|--------------|------------------|-----------------------|
| ST60-18P(30) | CL0241-0011-9-30 | <input type="radio"/> |

■ Recommended PCB mounting pattern(from attachment side)

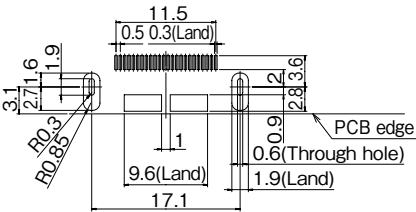


● 24 pos.

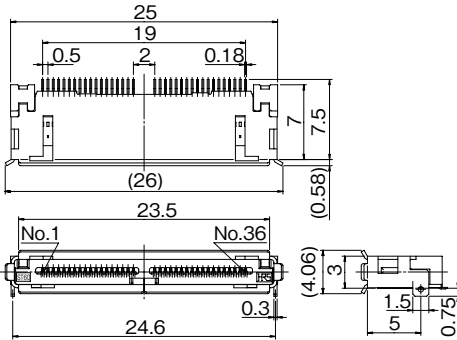
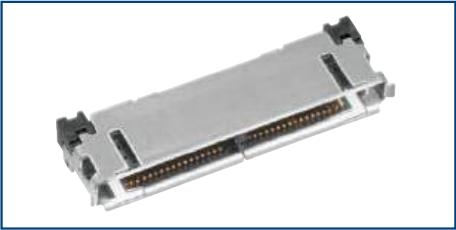


| Part No.     | HRS No.          | RoHS |
|--------------|------------------|------|
| ST60-24P(30) | CL0241-0003-0-30 | ○    |

■ Recommended PCB mounting pattern(from attachment side)

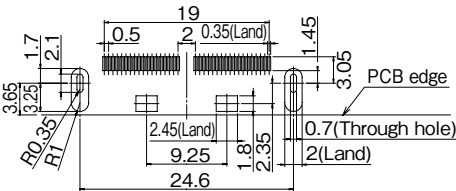


● 36 pos.



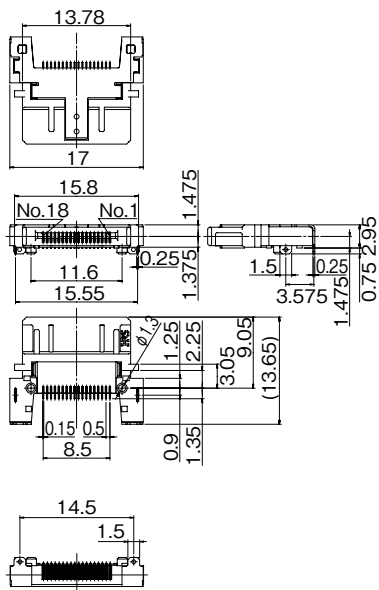
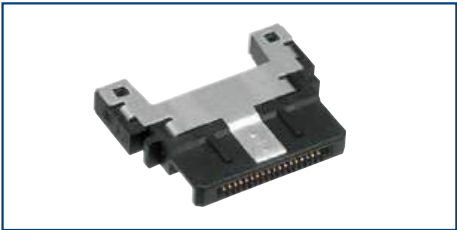
| Part No.     | HRS No.          | RoHS |
|--------------|------------------|------|
| ST60-36P(30) | CL0241-0033-1-30 | ○    |

■ Recommended PCB mounting pattern(from attachment side)



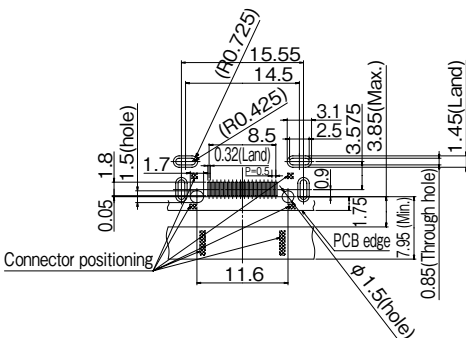
Cradle

● 18 pos. (Horizontal type)

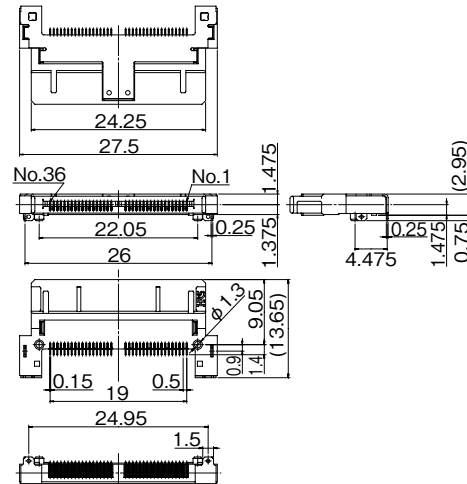
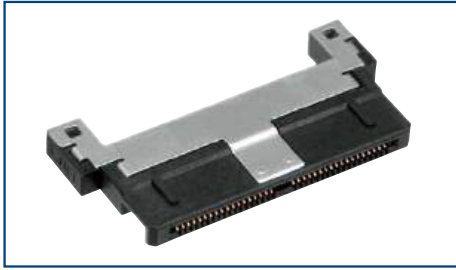


| Part No.      | HRS No.          | RoHS |
|---------------|------------------|------|
| ST60X-18S(30) | CL0241-0028-1-30 | ○    |

■ Recommended PCB mounting pattern(from attachment side)

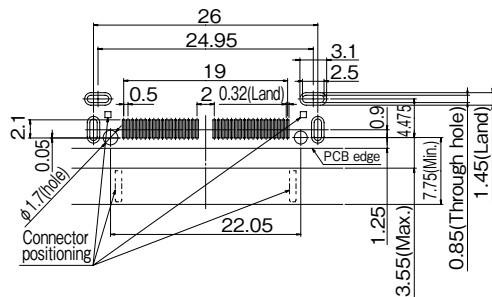


- 36 pos. (Horizontal type)

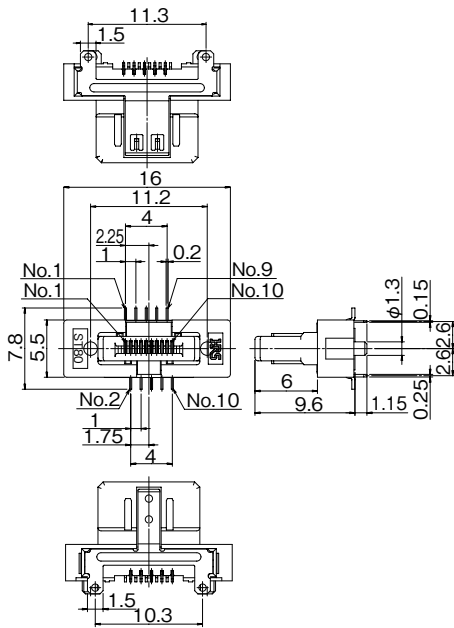
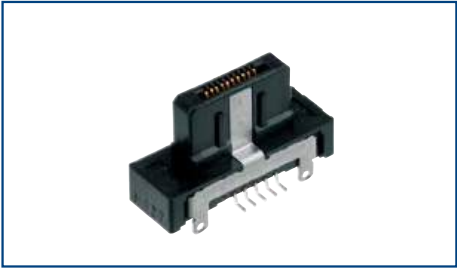


| Part No.      | HRS No.          | RoHS |
|---------------|------------------|------|
| ST60X-36S(30) | CL0241-0035-7-30 | ○    |

■ Recommended PCB mounting pattern(from attachment side)

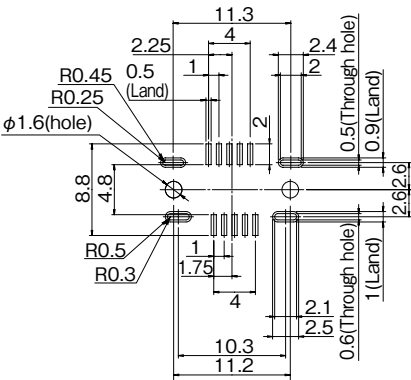


● 10 pos. (Vertical type)

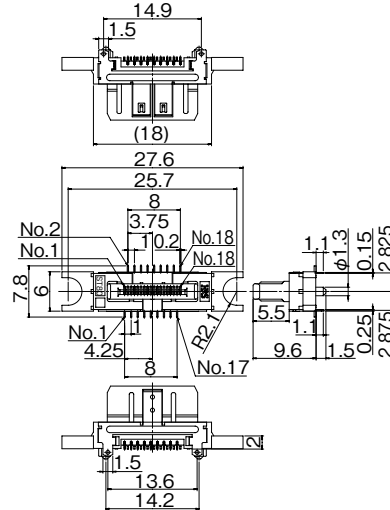
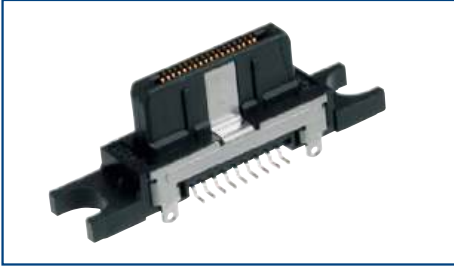


| Part No.      | HRS No.          | RoHS                  |
|---------------|------------------|-----------------------|
| ST80X-10S(30) | CL0241-0030-3-30 | <input type="radio"/> |

■ Recommended PCB mounting pattern(from attachment side)

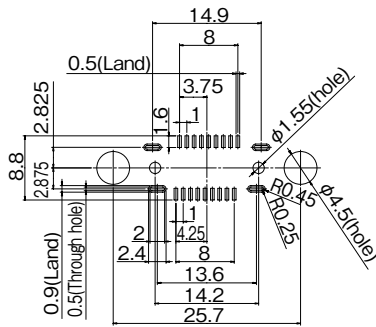


- 18 pos. (Vertical type)

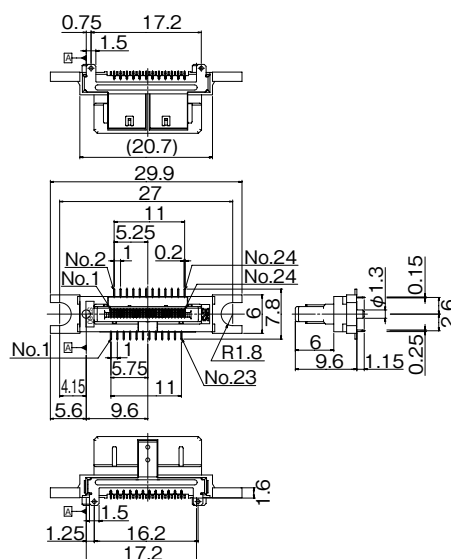
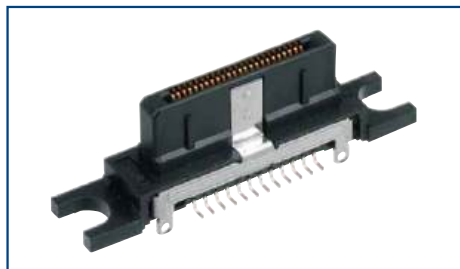


| Part No.      | HRS No.          | RoHS |
|---------------|------------------|------|
| ST80X-18S(30) | CL0241-0020-0-30 | ○    |

### ■ Recommended PCB mounting pattern(from attachment side)



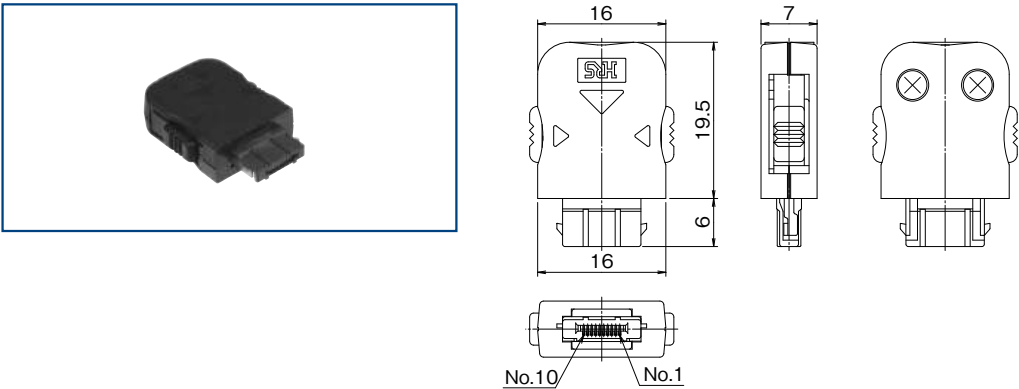
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| Part No.      | HRS No.          | RoHS |
|---------------|------------------|------|
| ST80X-24S(30) | CL0241-0037-2-30 | ○    |

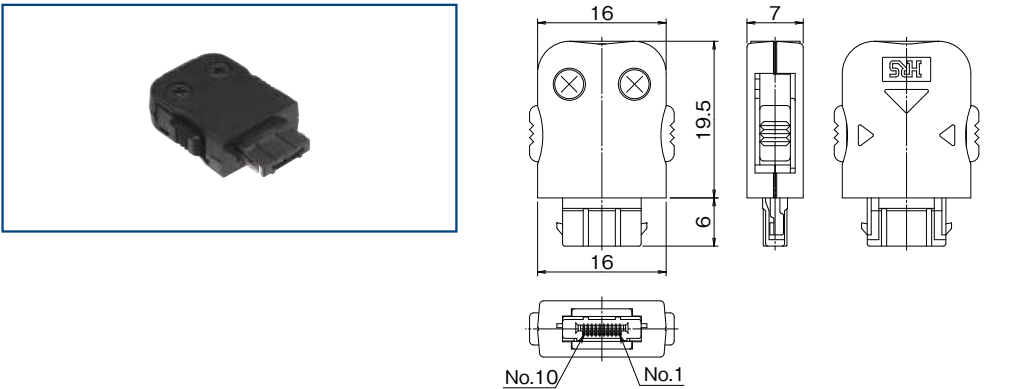
Plug

● 10 pos. (Non-shielded type)



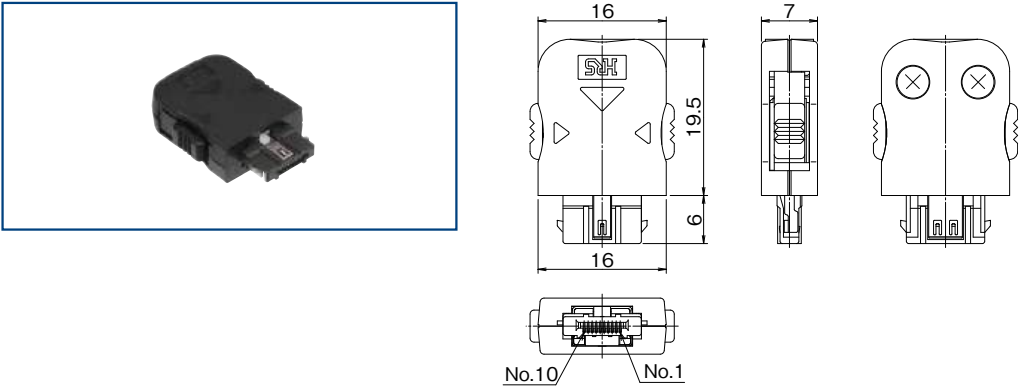
| Part No.        | HRS No.          | RoHS |
|-----------------|------------------|------|
| ST40-10S-CV(30) | CL0241-0021-2-30 | ○    |

● 10 pos. (Reverse, non-shielded type)



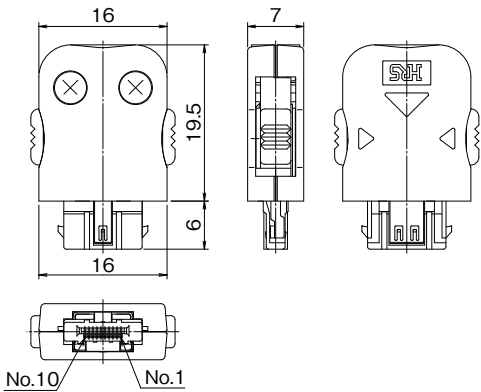
| Part No.         | HRS No.          | RoHS |
|------------------|------------------|------|
| ST40-10S-CVR(30) | CL0241-0040-7-30 | ○    |

● 10 pos. (Shielded type)



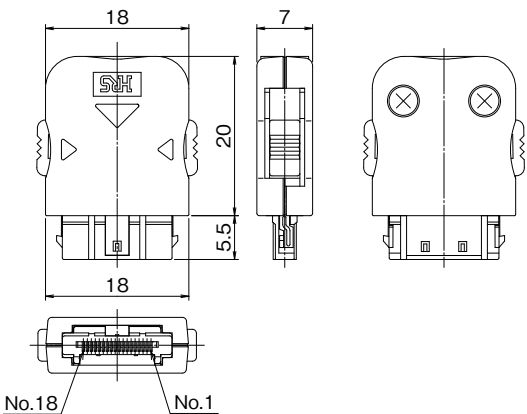
| Part No.         | HRS No.          | RoHS |
|------------------|------------------|------|
| ST40X-10S-CV(30) | CL0241-0041-0-30 | ○    |

● 10 pos. (Reverse, shielded type)



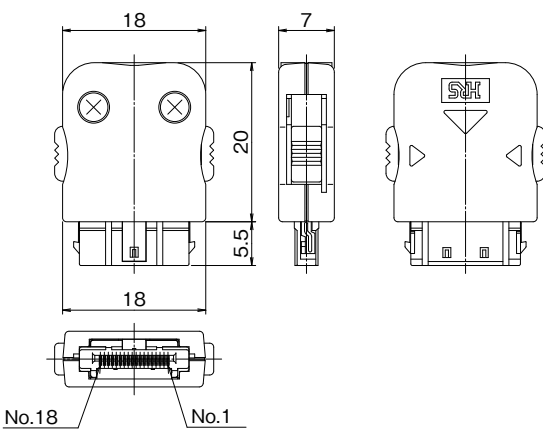
| Part No.          | HRS No.          | RoHS |
|-------------------|------------------|------|
| ST40X-10S-CVR(30) | CL0241-0029-4-30 | ○    |

● 18 pos. (Shielded type)



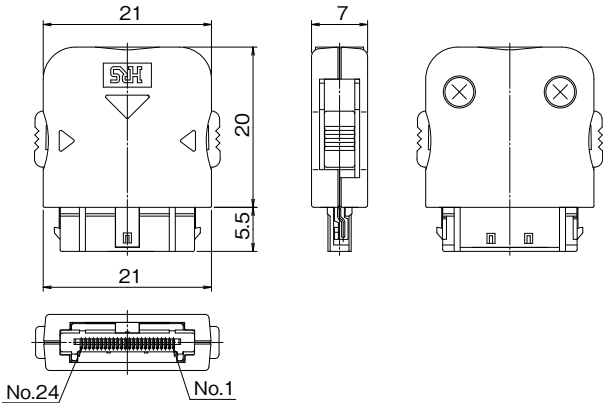
| Part No.         | HRS No.          | RoHS |
|------------------|------------------|------|
| ST40X-18S-CV(30) | CL0241-0012-1-30 | ○    |

● 18 pos. (Reverse, shielded type)



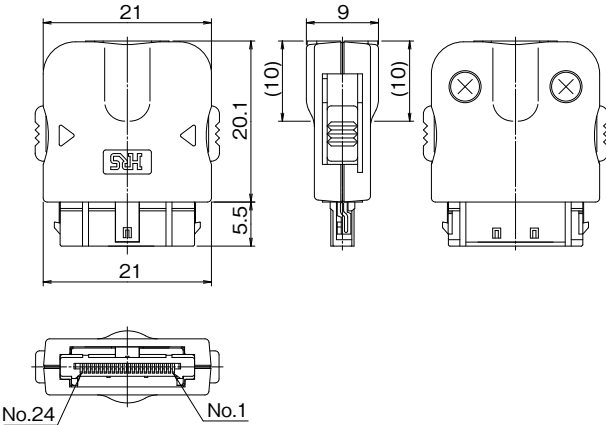
| Part No.          | HRS No.          | RoHS |
|-------------------|------------------|------|
| ST40X-18S-CVR(30) | CL0241-0016-2-30 | ○    |

● 24 pos. (Shielded type)



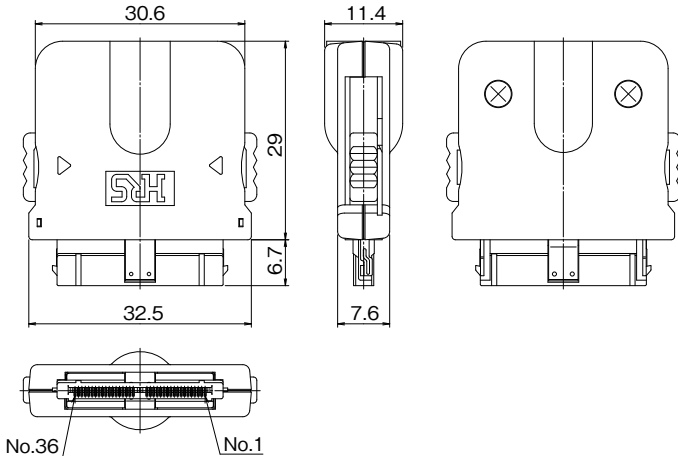
| Part No.         | HRS No.          | RoHS |
|------------------|------------------|------|
| ST40X-24S-CV(30) | CL0241-0004-3-30 | ○    |

● 24 pos. (For larger diameter cables)



| Part No.          | HRS No.          | RoHS |
|-------------------|------------------|------|
| ST40X-24S-CV1(30) | CL0241-0023-8-30 | ○    |

● 36 pos. (Shielded type)

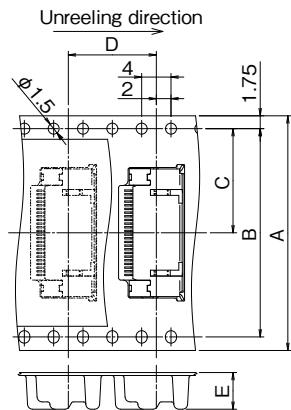


| Part No.         | HRS No.          | RoHS |
|------------------|------------------|------|
| ST40X-36S-CV(30) | CL0241-0034-4-30 | ○    |

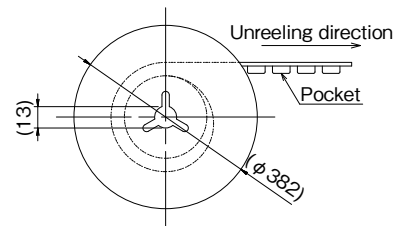
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## Packaging Specification

### ● Embossed Carrier Tape Dimensions

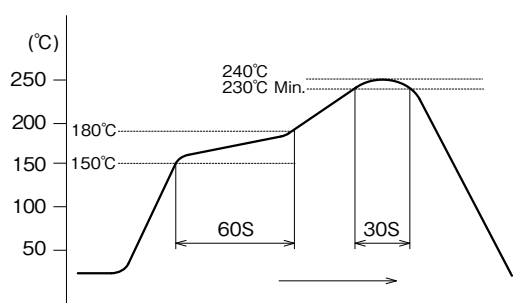


### ● Reel Dimensions



| Part No.       | A  | B    | C    | D  | E    | Purchase Unit     |
|----------------|----|------|------|----|------|-------------------|
| ST60-10P (30)  | 24 | -    | 11.5 | 12 | 5    | 1,500pcs per reel |
| ST60-18P (30)  | 24 | -    | 11.5 | 12 | 5    | 1,500pcs per reel |
| ST60-24P (30)  | 32 | 28.4 | 14.2 | 12 | 5    | 1,500pcs per reel |
| ST60-36P (30)  | 44 | 40.4 | 20.2 | 12 | 5    | 1,500pcs per reel |
| ST80X-10S (30) | 24 | -    | 11.5 | 16 | 12.2 | 400pcs per reel   |
| ST80X-18S (30) | 44 | 40.4 | 20.2 | 16 | 12.7 | 400pcs per reel   |
| ST80X-24S (30) | 44 | 40.4 | 20.2 | 16 | 12.7 | 400pcs per reel   |
| ST60X-18S (30) | 32 | 28.4 | 14.2 | 20 | 4.95 | 900pcs per reel   |
| ST60X-36S (30) | 44 | 40.4 | 20.2 | 20 | 4.85 | 900pcs per reel   |

## Recommended Temperature Profile



This measurement is performed on the contact lead section.  
The temperature profile may vary due to external conditions such as the type of cream solder, manufacturer, and board size.  
Please contact the solder manufacturer for their specifications.

## While Taking into Consideration

Specifications mentioned in this catalog are reference values.

When considering to order or use this product, please review the Drawing and Product Specifications sheets.

Use an appropriate cable when using the connector in combination with cables.

If considering usage of a non-specified cable, please contact your sales representative.

If assembly process is done by jigs & tools which are not identified by Hirose, the warranty of the product may be affected.

If considering usage for below mentioned applications, please contact your sales representative.

In cases where the application will demand a high level of reliability, such as automotive, medical instruments, public infrastructure, aerospace/defense etc. Hirose must review before assurance of reliability can be given.

**HIROSE****HIROSE ELECTRIC CO.,LTD.**2-6-3 Nakagawa Chuoh, Tsuzuki-Ku, Yokohama-Shi 224-8540, JAPAN  
<https://www.hirose.com>

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