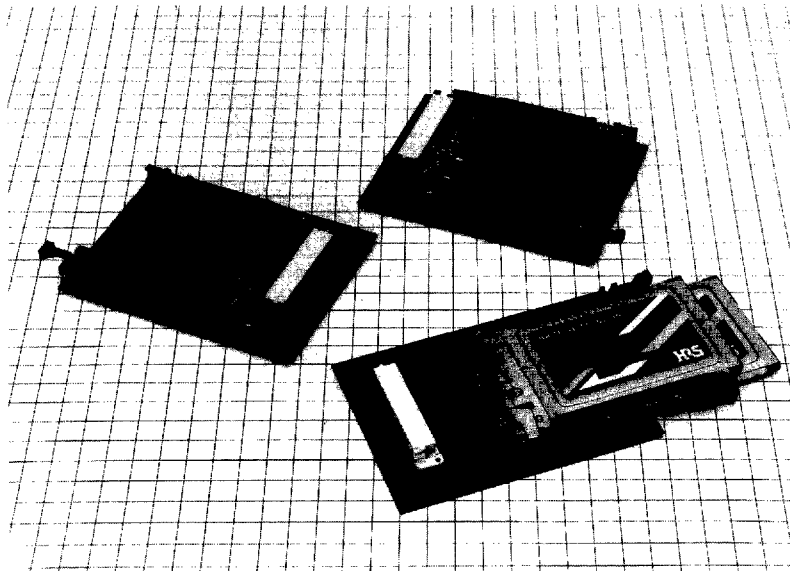


# HRS IC8 SERIES

## JEIDA Ver. 4.2 Compliant Two-slot Connectors For JEIDA/PCMCIA Type III Cards IC8 Series Two-Slot Connectors (for Surface Mounting)

### ■ GENERAL

The IC8 Series of miniature, lightweight, SMT connectors are equipped with two slots of pin connectors for use with JEIDA Ver. 4.2-compliant PC cards and can also be used with JEIDA/PCMCIA type III cards.



### ■ FEATURES

- (1) For ease of operation, the IC8 type is equipped with both left and right eject buttons, and the IC8S type has an eject button on either the left or the right side which reduces the mounting space by about 10%.
- (2) In consideration of the connector width and the ease with which the button can be depressed, the IC8S type is available in two types of button widths (4.5 mm and 7.0 mm).
- (3) The weight has been reduced by about 15% with respect to our existing IC6 Series of products (of the 2-slot dip type).
- (4) With regard to other functions, the product features of our well-received IC6 Series (2-slot dip type) have been transferred to the IC8 Series.
  - Frame ground terminals are furnished for each of the two slots.
  - In addition to a low profile type, a 2.2 mm or 5 mm stand-off type is available which allows parts to be mounted in the area under the connector. (A 4-mm size is also available in the IC8S type.)
- In addition to the standard type, a reverse type is available featuring a reversed direction of card insertion. This type can be used with low voltage cards.
- A dual-edge card ejection mechanism is used to eject the card smoothly.
- (5) A high level of contact reliability has been achieved through the use of a SMT conversion connector developed independently by Hirose Electric so that boards and other parts do not intervene. (Patents pending)
- (6) The connector side is equipped with M2 X 0.4 nuts in four locations which permit a reduction of the number of mounting tasks.
  - ※ (In addition to the regular screw fastening from the bottom surface of the board, a specification of the IC8S type permitting screw fastening from the top surface of the connector is scheduled to be released soon.)

## ■ MATERIALS AND PROCESSING

Item		Material	Processing		Notes
Insulation	Main body	PBT resin	Black		UL94V-0
	SMT portion	PPS resin	Light brown		UL94V-0
Pins	Main body	Brass	Card contact portion	Gold plating	
			SMT contact portion	Solder plating	
	Frame ground pin	Phosphor bronze	Contact portion	Gold plating	
			Other	Nickel plating	
SMT portion		Phosphor bronze	Solder plating		
Fittings of the eject portion		SUS			
Nuts		Steel	Nickel plating		

## ■ ELECTRICAL CHARACTERISTICS

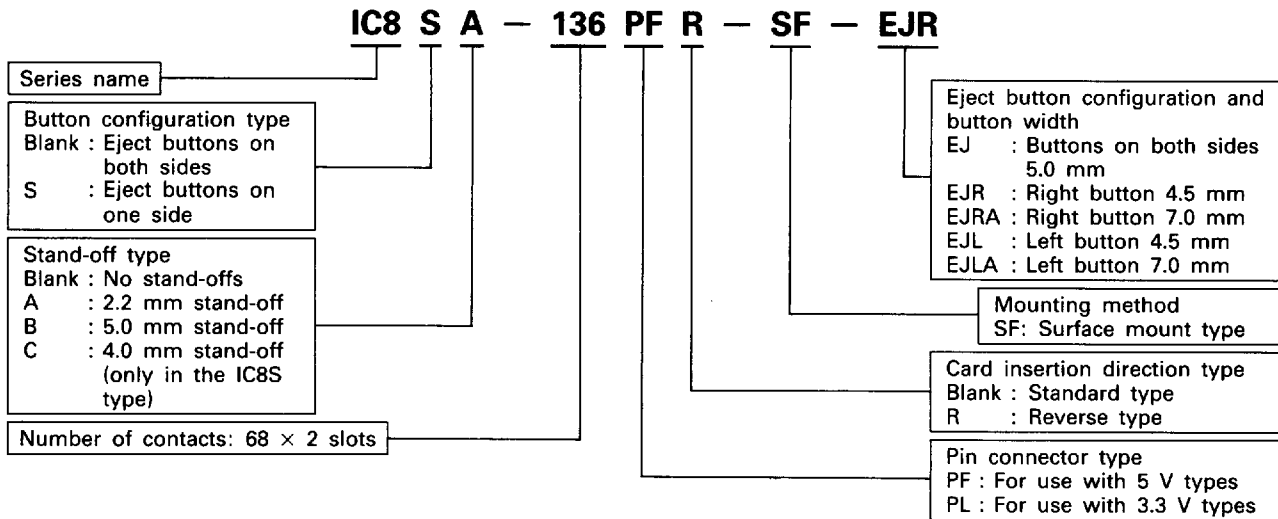
Item	Condition	Rating
Current capacity	Per pin	0.5 A
Withstand voltage	One minute at the rated value	250 V AC (NOTE 1)
Insulation resistance	At 500 V DC	1,000 M $\Omega$ or greater
Contact resistance	At 1 mA DC	80 m $\Omega$ or less (NOTE 2)

NOTE 1: The standard value of the withstand voltage in JEIDA Ver. 4.2 is 500 V AC, but the value for this connector is 250 V AC because of the narrow contact pitch.

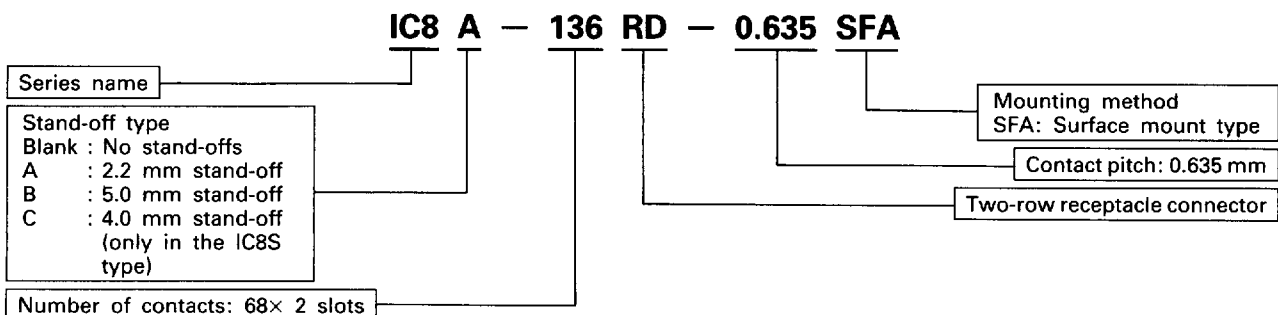
NOTE 2: The standard value of the contact resistance in JEIDA Ver. 4.2 is 40 m $\Omega$  or less, but the value for this connector is 80 m $\Omega$  (including conductor resistance) because the pins are long and the conductor resistance is large.

## ■ STRUCTURE OF THE PRODUCT NUMBER

### ● Main Body

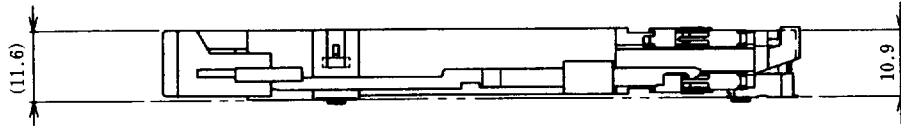


### ● SMT Portion

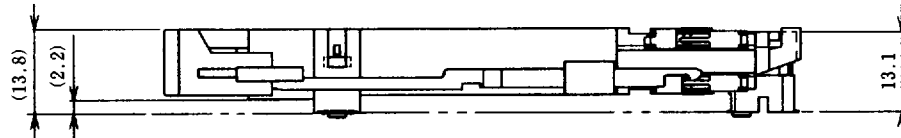


# ◆ Diagram of Completed Mounting Condition

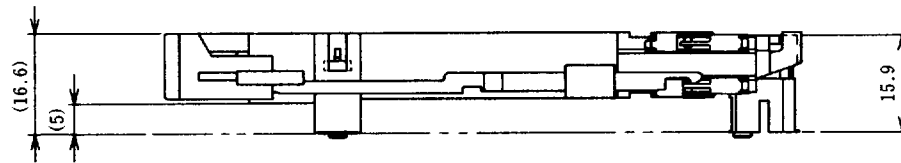
Type without stand-offs



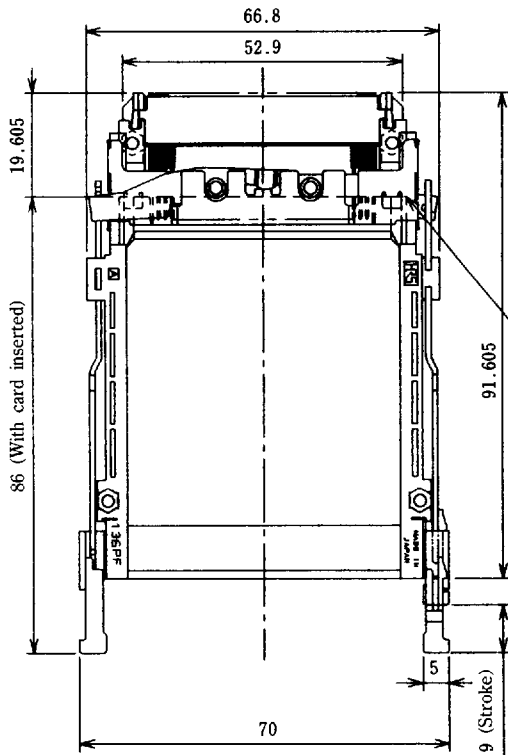
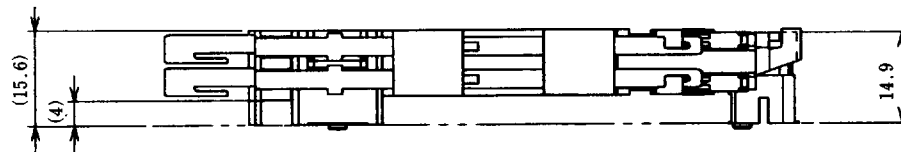
2.2 mm stand-off type



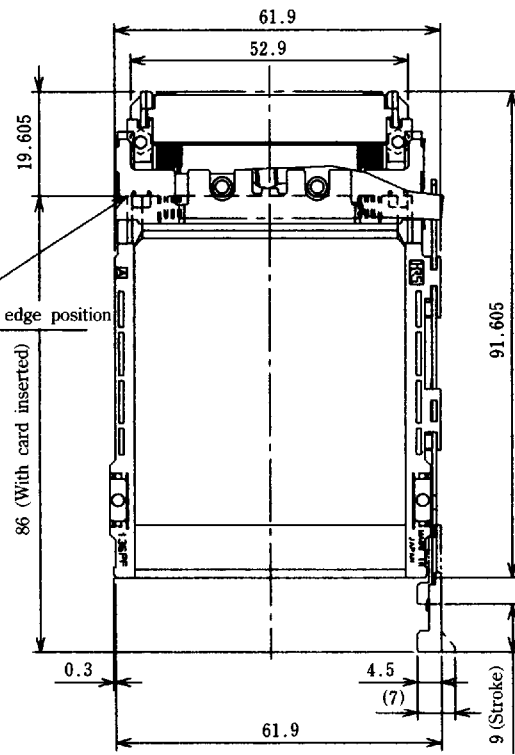
5 mm stand-off type



4 mm stand-off type (only in the IC8S type)



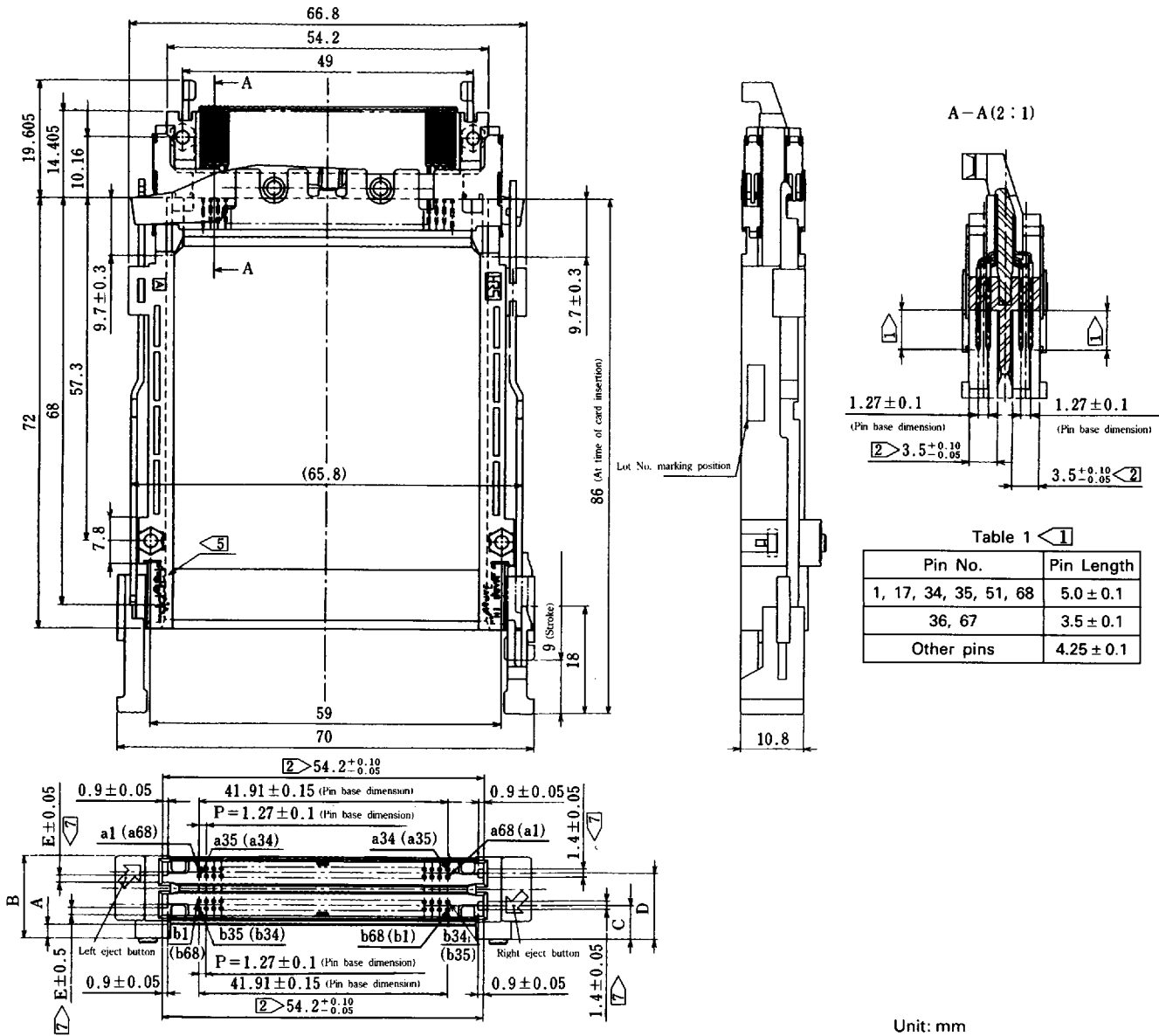
IC8 Type (Eject buttons on both sides)



IC8S Type (Eject button on one side)

# 136-CONTACT PIN CONNECTOR (Main Body)

- Type with eject buttons on both sides
- Standard type, reverse type, and low-voltage type



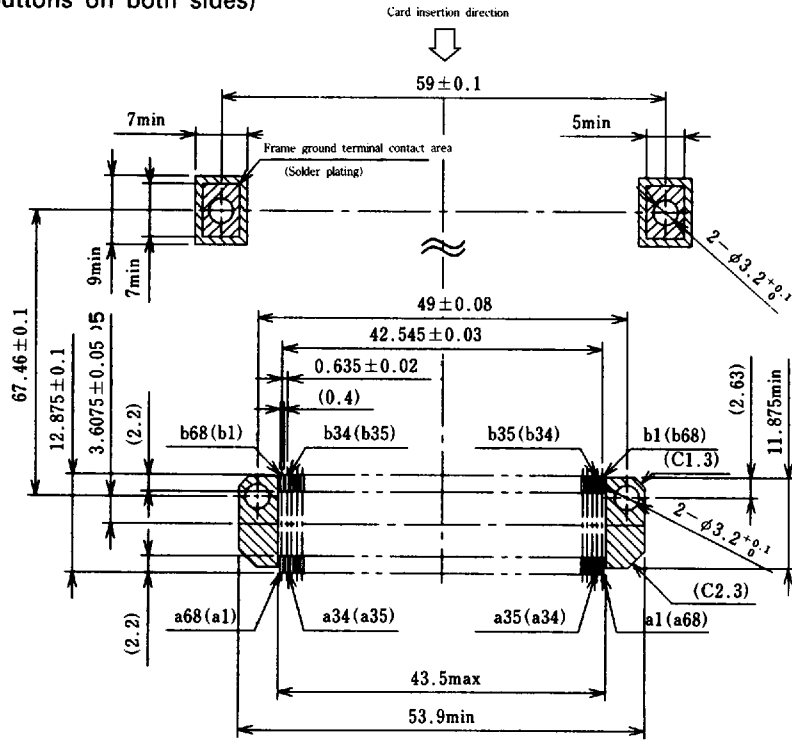
Unit: mm

HRS No.	Product No.	A	B	C	D	E	Power supply voltage type	
	CL640-0601-9	IC8-136PF-SF-EJ	0	11.55	3.45	8.85	1.2	5V
⑤	CL640-0602-1	IC8-136PFR-SF-EJ	0	11.55	3.45	8.85	1.2	5V
	CL640-0603-4	IC8A-136PF-SF-EJ	2.2	13.75	5.65	11.05	1.2	5V
⑤	CL640-0604-7	IC8A-136PFR-SF-EJ	2.2	13.75	5.65	11.05	1.2	5V
	CL640-0605-0	IC8-136PF-SF-EJ	5	16.55	8.45	13.85	1.2	5V
⑤	CL640-0606-2	IC8-136PFR-SF-EJ	5	16.55	8.45	13.85	1.2	5V
⑤	CL640-0613-8	IC8A-136PL-SF-EJ	2.2	13.75	5.65	11.05	2.3	3.3V

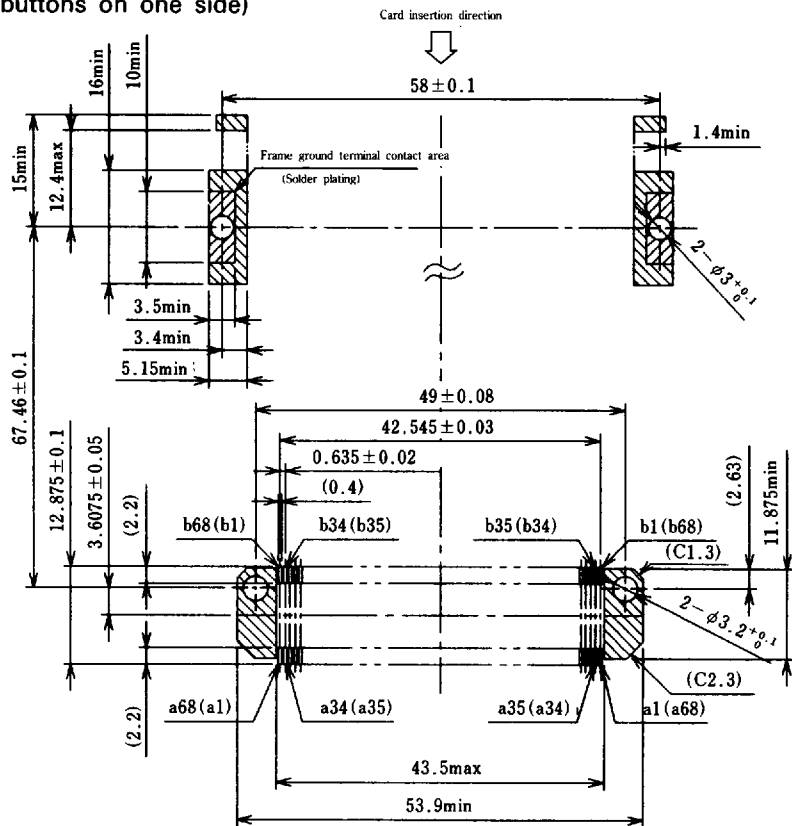
- NOTE:
- ① The lengths of pins on the engagement side are indicated in Table 1.
  - ② The applicable range of indicated dimensions ( $54.2^{+0.10}_{-0.05}$ ,  $3.5^{+0.10}_{-0.05}$ ) are taken as 10 mm from the bottom.
  - ③ The frame ground (FG) terminal is pressed into contact with the ground area of the board with a screw. Employed from the bottom surface of the board, a screw (M2 × 0.4), flat washer, and spring washer are securely tightened to accomplish this.  
(For details, see the screw fastening example on Page 56 of the Mounting Method section.)
  - ④ At the time of card removal, pressing the right eject button serves to eject the card of the lower slot, whereas pressing the left eject button serves to eject the card of the upper slot.
  - ⑤ "136PFR" indicates the reverse type and "136PL" indicates the low voltage type.
  - ⑥ Pin numbers in parentheses ( ) indicates pin numbers of the reverse type.
  - ⑦ The guide groove dimensions of the reverse type are left-right reversed.

# Recommended Pad Pattern Dimensions Diagram (Mounting Surface Side)

IC8 Type (Eject buttons on both sides)



IC8S Type (Eject buttons on one side)



- NOTE 1. Pin numbers in parentheses ( ) indicate the pin numbers of the reverse type.
2. Mounting of parts is not permitted in areas indicated by diagonal shading. Types without stand-offs do not permit the mounting of parts in any area.
3. Suitable board thicknesses are 0.8 mm or greater.