Small I/O connectors for AC adapters

RP34 Series



Features

1. Superior mating operability

A snap-and-lock style allows easy mating/ unmating.

2. Cable direction is variable

The three-position, right-angled plug makes it possible to arrange the cable to the left or right, offering flexible wiring options depending on your requirement.

3. Sequential contact mating

Designed with sequential contact mating, one pin makes contact with its counterpart sooner than the others and establishes a securely grounded connection.

4. Easy plug assembly

A snap-together case eliminates the need for screws to fasten the case and helps provide for a quick plug assembly.

5. Variations

Items	
Number of contacts	3 or, 4
Connector type	Plug : Straight, right angle
Connector type	Receptacle : Right angle
Plug termination version	Crimp
Receptacle termination version	PCB dip
Receptacle mounting method	PCB dip

Datinga	Rated current	ЗA	Operat	ing temperature range	-10 to +60°C	
Ratings	Rated voltage	AC30V, DC42V	Storage	e temperature range	-10 to +60°C	
Items		Specifications			Conditions	
1. Contact resistance	30mΩ max			Measured at DC 1A		
2. Insulation resistance	1,000MΩ min	1,000MΩ min			,	
3. Withstanding voltage	No flashover or dielectric breakdown.			AC 150V for 1 minute		
4. Vibration resistance	No electrical discontinuity for $10\mu s$ or longer.			10 to 55Hz/cycle, amplitude : 0.75mm, 3 axis directions, 2 hours each		
5. Shock resistance	No electrical discontinuity for $10\mu s$ or longer.			Acceleration : 490m/s ² , duration : 11ms, 3 axis directions, 3 cycles each		
6. Mating Cycles	Contact resistar	nce : 60mΩ max.		1,000 times		
7. Temperature cycle	Insulation resist	ance : 100MΩ min.		-55℃ : 30 minutes → Normal temperature : 10 to 15 minutes → 85℃ : 30 minutes→ Normal Temperature 10 to 15 minutes, left for 5 cycles		
8. Moisture resistance	Insulation resist 10MΩ min (at hi 100MΩ min (wh	gh humidities).		Temperature : 40℃, rel 96 hours	lative humidity : 90 to 95%, left for	

Materials / Finish

Product Specifications

Ite	Items		Finish	Remarks
	Exterior, insulator	Polycarbonate resin		UL94V-0
Plug	Clamp	Brass		
	Bushing	Vinyl chloride resin		
	Exterior, insulator	PBT resin		UL94V-0
Receptacle		Steel	Tin plating	
	Male contact	Brass	Silver plating	
Crimped female contact	Female contact	Phosphor bronze	Silver plating	



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.

Connector



Shall size . The shall size is the	outer diameter of the mating end of the plug.
_	
8Shell type	
SP : Straight plug	
P : Right-angled plug	
R : Receptacle	
4 Number of contacts :	
Ontact form	
P : Male contact	
S : Female contact	
Ontact termination method :	
C : Crimp contact termination	
DL : Right-angled dip method	

Crimp contact

RP34	- SC -	2	1	2
1	8	9	10	0

Ontact type : SC = Crimped female contact	
Ontact packaging types :	
1 : Loose piece contacts	
2 : Reel contacts	
OApplicable wire :	
1 : For 18 to 22 AWG	
2 : For 24 to 28 AWG	

Straight plug







RP34-8SP-3SC(71)

(This figure is a representative example.)

Part No.	HRS No.	No. of contacts	А	Remarks
RP34-8SP-3SC(71)	113-5049-1 71	0	0.6	
RP34-8SP-3SCD(71)	113-5061-7 71	3	9.6	Mating key dependent type
RP34-8SP-4SC(71)	113-5097-4 71	4	11	

Note : Cable clamping force, cable rotation force, and other aspects may differ depending on the cable construction. We reccomend that you verify the suitability of the cable assembly before use or production.

Right-angled plug







(This figure is a representative example.)

Part No.	HRS No.
RP34-8P-3SC(71)	113-5041-0 71

Note : Cable clamping force, cable rotation force, and other aspects may differ depending on the cable construction. We recommend that you verify the suitability of the cable assembly before use or production.

Receptacle







RP34-8R-3PDL

(This figure is a representative example.)

Part No.	HRS No.	No. of contacts	A	В	Remarks
RP34-8R-3PDL	113-5042-2	2	10	44	
RP34-8R-3PDLD	113-5066-0	3	10		Mating key dependent type
RP34-8R-4PDL	113-5098-7	4	11	12	

Contact (female contact)



Part No.	HRS No.	В	С	Applicable wire size	Remarks
RP34-SC-212	113-5043-5	1.6	2.1	18 to 22 AWG	Reel contacts
RP34-SC-112	113-5076-4	1.6	2.1	18 to 22 AWG	Loose piece contacts
RP34-SC-222	113-5100-7	1.2	1.35	24 to 28 AWG	Reel contacts
RP34-SC-122	113-5102-2	1.2	1.35	24 to 28 AWG	Loose piece contacts

Note : Loose piece contacts are packaged 100 pcs/pack and reel contacts are available on 10,000 piece reel. Please order in full quantity packs or reels.

Dip post arrangement for PCB layout





Remarks 1. The applicable PCB thickness is between 0.8 and 1.6mm.

- 2. A machining tolerance of ± 0.05 is recommended for the PCB layout.
- 3. The above figure shows the PCB side of the rack into which contact dip posts will be inserted.
 - "▼" mark indicates the plug interface mating side.

Termination procedure

Straight plug



Rightangle plug



Operation procedure—straight plug

- 1. First, pass the prepared cable through the bushing, and then crimp and terminate the contacts.
- 2. Assemble the crimped and terminated contacts into the contact holes of the S-insulation P case.
- At this time, please make sure that the crimped contacts are securely engaged onto the contact holes of the S-insulation P case by lightly pulling on the cable.
- 3. Crimp and fix the metal fitting for clamping with the applicable tool (RP34-TC-01).
- 4. Assemble the S-insulation P case, metal fitting for clamping, and bushing onto the cord tube (A). The S-insulation P case can be assembled in two ways, at 180° opposing angles. Please make sure to select the orientation that is suitable for your purpose.
- 5. Finally, assemble the remaining cord tube (B). The assembly has been completed.

Operation procedure—right-angled plug

 The right-angled plugs can be assembled in the same manner as the straight plugs, and the S-insulation P case can be assembled to the cord tube in one of two positions. 180° opposite each other. Please make sure to select the orientation that is suitable for your purpose.

Applicable tools

Туре	Items	Part No.	HRS No.	Applicable contact	Applicable wire size
	Automatic crimping press	CM-105C	901-0001-0		
Machine crimping	Applicator	AP105-RP34-1	901-2025-2	RP34-SC-212	18 to 22 AWG
chinping	Applicator	AP105-RP34-2	901-2034-3	RP34-SC-222	24 to 28 AWG
Ca	able crimping tool	RP34-TC-01	150-0074-1		
Extraction tool		RP34-SC-TP	150-0072-6		



Cable crimping tool (RP34-TC-01) (The handle shape shown above is a representative example.)



Automatic crimping press (Type CM-105C)

Type RP34L

Product Specifications

Datinga	Rated	current	5A (when using 18 AWG)	Ope	rating temperature range	–25°C to +85°C	
Ratings	Rated	l voltage	AC30V, DC42V	Stora	age temperature range	−10°C to +60°C	
Items			Specifications		Condit	tions	
1. Contact resis	stance	30mΩ max			Measured at DC 1A		
2. Insulation resistance		1,000MΩ m	nin.		Measured at DC 100V		
3. Withstanding voltage	g	No flashover or dielectric breakdown.			AC 150V for 1 minute		
4. Vibration pro	oof	No electrical discontinuity 10μ s or longer.		10 to 55Hz, half amplitude : 0.75mm, 3 axis directions, 2 hours each			
5. Temperature	e cycle	Insulation resistance : $100M\Omega$ min		-55°C : 30 minutes → Normal temperature : 10 to 15 minutes → $+85$ °C : 30 minutes → Normal Temperature : 10 to 15 minutes, 5 cycles			
6. Corrosion resistance		No corrosio	on that affects performance.		Left in 5% salt water solution for 48 hours		
7. Mating Cycle	es	Contact res	sistance : 60mΩ max		5,000 times		

Materials / Finish

Items		Material	Finish	Remarks	
Receptacle— (2position)	Metal fitting	Phosphor bronze	Solder plating		
	Insulator	Polyamide resin	Black	UL94HB	
(200311011)	Contact	Brass	Palladium plating		
Plug— (2 position)	Exterior	Vinyl chloride resin	Disali	UL94V-0	
	Insulator	Polyamide resin	Black	UL94HB	
(2 00311011)	Contact	Phosphor bronze	Silver plating		
	Metal fitting	Phosphor bronze	Solder plating		
Receptacle— (3 position)	Insulator	PPS resin	Black	UL94V-0	
(5 position)	Contact	Brass	Palladium plating		
	Exterior	Polycarbonate resin			
Plug— (3 position)		Vinyl chloride resin	Black	UL94V-0	
	Insulator	PPS resin			
	Contact	Phosphor bronze	Palladium plating		

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.

$\frac{\text{RP34L}}{10} - \frac{5}{2} \frac{\text{PA}}{10} - \frac{2}{10} \frac{\text{SC}}{10} \frac{(****)}{10}$

Series name : RP34L	G Contact type		
Oshell : Indicates the shell form.	PD : Male contact (dip)		
OType	SC : Female contact (crimped)		
Receptacle : R	6 Cable length : (****) may vary depending on		
Straight plug : PA	the cable.		
Right-angled plug : LP			
Number of contacts : Shows the number.2 or 3 contacts.			



Crimp contact



Applicable tools

RP34L-SC1-212(01)

Туре		Part No.	HRS No.	Applicable contact	Applicable cables
Manual crimping tools		HT-102/RP34L-SC1-212	150-0210-8	RP34L-SC1-112(01)	18 to 22 AWG
Machine	Automatic crimping press	CM-105C	901-0001-0		
crimping	Applicator	AP105-RP34L-SC1-212	901-2043-4	RP34L-SC1-212(01)	18 to 22 AWG
Cable c	rimping tool	RP34-TC-01	150-0074-1		<i>φ</i> 4
Extraction tool		RP6-SC-TP	150-0039-0		

Assembly procedure (3 position plug)

113-5151-8 01

Straight plug



Right angle



- 1. First pass the prepared cable through the bushing, and then crimp and terminate the contacts.
- 2. Assemble the crimped and terminated contacts into the contact holes of the S-insulation P case. At this time, please make sure that the crimped contacts are securely engaged onto the contact holes of the S-insulation P case by lightly pulling the cable. If you find an erroneous wiring, insert the extractor (RP6-SC-TP) from the mating side to pull out the contact from the termination side, and then reassemble.
- 3. Crimp the metal fitting for clamping with the applicable tool (RP34-TC-01).
- 4. Align and assemble the protrusion of the S-insulation P case to the round hole of the cord tube (B).
- 5. Attach the mating section of the metal fitting for clamping to the recess of the cord tube (B), and then assemble the bushing and metal fitting for clamping onto the cord tube (B).
- 6. Assemble the cord tube (A) onto the cord tube (B). At this time, please make sure that the four tabs of the cord tube (B) rest on the angled hole of the cord tube (A).
- 1. Right-angled plugs can be assembled in the same manner as the straight plugs.

Precautions

 To prevent damage to the connector after mounting, make sure that it is supported with a panel or another substrate. This will prevent any type of excessive load or force on the connector. For 2 position type, please support the external shell of the receptacle. For 3 position type, please support the external shell of the plug. See page 3 for details on recommended panel dimensions.



2. When mated together, do not apply a load of 30 N or more on the cable in the direction indicated by the arrows. Please note that an excessive tensile stress may break the connectors.



- 3. This product series uses silver plated contacts. Silver reacts easily to exposure to sulfur gas so the below conditions may cause tarnishing.
 - ·Dusty environments
 - •Area with a high concentration area of gases such as sulfur dioxide gas, hydrogen sulfide gas, nitrogen dioxide gas and so on. Example; In close proximity to factory exhaust, automotive emissions, etc.
 - · Close to heaters, or in other areas marked by extreme temperature differences or high humidity.
 - ·Close to rubber products includes rubber adhesives.
 - The Electrical connection is not affected by tarnishing on a silver surface due to the wiping effect of the contact pins.

Storage

Packing state; Packed in original packing or equivalent container

Temperature -10 to +60℃

Humidity 85% Max

(It is recommended that the product be stored in an area of normal level of temperature and humidity, and free of any temperature fluctuation)

HRS g

Please use this products within 6 months of delivery.

(After 6 month, please check the solderbility before use)

"Storage" means long-term storage of the unused products in sealed packaging, prior to assembly to PCB.

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