

8P Special Purpose Plugs and Receptacles

Application

Applications:

Special purpose plugs and receptacles listed in this section are for use in non-hazardous areas, where environmental or application considerations require non-standard plugs and receptacles. Included in this section are ARK-trol® plugs and receptacles (RPC and RPE).

ARK-trol Plugs and Receptacles:

- Are used with a wide range of equipment requiring a variety of contact configurations under conditions of hard usage and exposure to rigorous environments.
- Two basic non-hazardous types:
 - RPC – circuit breaking power connectors;
 - RPE – control circuit, power and welding connectors.
- One hazardous type: RPX – "Time Slot" delayed action connectors.

RPC – A variety of configurations (with a maximum of five-poles) are available for one and three-phase circuits. Electrical range is 30, 60, 100, 200 amperes at a maximum of 600 VAC.

RPE – A wider range of configurations are available, including options with up to 39 pins.

Both types are available (either as standard or as option) with solder well terminals for high reliability, or crimp or pressure terminals for ease of installation. Listings on the following pages show complete assemblies with mating plugs and components.

RPX – Available in similar configurations as the RPC line, but can be used in areas which are hazardous.

RPC Circuit Breaking Power Connectors RPE Control Circuit and Power Connectors Non-hazardous Areas

Applications:

ARK-trol RPC circuit breaking power connectors and RPE control circuit power connectors are used:

- With a wide variety of portable electrical equipment
- For connection of devices ranging from simple lighting units, power tools, and similar portables requiring only a power supply circuit, to sophisticated control and instrumentation assemblies requiring disconnect
- Under conditions of hard usage and where exposed to dust, dirt, water, corrosion and chemical attack, providing high reliability and trouble-free service
- Indoors or outdoors in non-hazardous areas of petroleum refineries, chemical and petrochemical plants, manufacturing plants, military installations and similar locations
- On machine tools and similar equipment

Features:

- All ARK-trol connectors have the same properties, characteristics and environmental capabilities outlined under "Compliances"

Construction:

- All ARK-trol plug, receptacle and cord connector shell parts are of high-strength impact extruded aluminum, hard coated with a high density anodize finish. The resultant assemblies are lightweight, extremely strong, free from surface defects and flaws, and with superior resistance to abrasion, corrosion and chemical attack.
- "Tri-Disc" insert assemblies consist of two rigid insulators with a silicone rubber wafer between to provide a cushioning action against mechanical damage and to effect a positive seal against penetration by water, moisture, dust, gas and other undesirable matter. Assembly of the inserts compresses the silicone wafer to seal against the inner wall of the plug or receptacle shell, and around each individual contact.
- ARK-trol insulating material is of high dielectric and mechanical strength with low moisture absorption and excellent resistance to arc tracking. Socket contacts are each enclosed in a separate chamber in the silo insulator. Arcs formed while making or breaking a circuit are quickly snuffed out in the chambers.
- Contacts are removable and, for ease of installation, are snapped into the insert assemblies after wire termination. Termination methods employed are solder, crimp and pressure. Solder well contacts are standard and are furnished unless otherwise specified. Crimp

contacts are available in all sizes and configurations. Pressure contacts, due to increased terminal area, are available only in certain assemblies as shown in the listings.

- For cable strain relief and watertight seal, plugs and cord connector receptacles are provided with gland nut and tapered neoprene bushing.
- Contacts are removable and, for ease of installation, are snapped into the insert assemblies after wire termination. Termination methods employed are solder, crimp and pressure. Solder well contacts are standard and are furnished unless otherwise specified. Crimp contacts are available in all sizes and configurations. Pressure contacts, due to increased terminal area, are available only in certain assemblies as shown in the listings.
- For cable strain relief and watertight seal, plugs and cord connector receptacles are provided with gland nut and tapered neoprene bushing.

Positive Polarization:

- Polarization of ARK-trol connectors is such that plugs and receptacles cannot be mated incorrectly.
- Insert assemblies must be correctly aligned and will fit plug and receptacle shells in one position only, because of a raised key on the inner wall of the shells.
- Seven keys on the inner wall of the receptacle and seven mating keyways on the outer diameter of the plug shell are spaced so that the plug and receptacle can be mated in one position only. One key and one keyway are larger than the other six as a guide to rapid connection, easily performed under adverse field conditions – even in total darkness.

Interchangeability:

- Shell components and insert assemblies in each diameter are interchangeable. Both male and female basic shells will accept either pin or socket inserts. This feature permits the use of both plug and receptacle in either an energized or de-energized condition.

Grounding:

- Grounded connectors have pin and socket contacts with integral grounding straps which press against the inner wall of plug, receptacle and cord connector shells, effectively bonding the shells to the grounding contacts.
- Grounding socket contacts are longer than current carrying contacts to make first and break last, assuring a positive ground before circuits are energized and after circuits are de-energized.

Standard Materials:

- Back boxes and adapters – copper-free aluminum
- Plug, receptacle and cord connector shells – impact extruded aluminum
- Insulation – diallyl phthalate (DAP)
- Insulation – fiberglass-reinforced polyester material
- Sealing wafer – silicone rubber
- Contacts – hard drawn copper

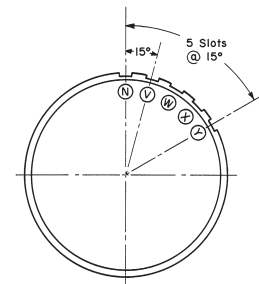
Standard Finishes:

- Copper-free aluminum – natural
- Impact extruded aluminum – hard coat anodized
- Diallyl phthalate – natural (blue)
- Fiberglass-reinforced polyester material – natural (red)
- Silicone – natural (grey)
- Copper – silver plated

Options:

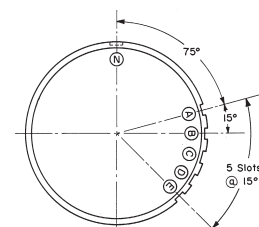
- Alternate polarities – ungrounded connectors. Standard polarity is position "N" shown below. Alternate positions "V", "W", "X" or "Y" can be furnished. To order, substitute for the letter "N" in the listed Cat. No., the letter for the desired polarization.

Example: RPC217-127-SO1N-ARE23 with polarity "X" becomes RCP217-127-SO1X-ARE23.



- Alternate polarities – grounded connectors. Standard polarity is position "A" shown below. Alternate positions "B", "C", "D" or "E" can be furnished. To order, substitute for the letter "A" in the listed Cat. No., the letter for the desired polarization.

Example: RPC217-127-SO2A-ARE23 with polarity "D" becomes RPC217-127-SO2D-ARE23.



RPC Circuit Breaking Power Connectors RPE Control Circuit and Power Connectors Non-hazardous Areas

Options (continued):

- Crimp type contacts – available on all assemblies with solder well contacts. To order, add letter "T" to Cat. No., immediately following polarity letter.

Examples: RPC217-127-S01N-ARE23 and RPC217-127-S02A-ARE23 except with crimp contacts would be ordered as RPC217-127-S01NT-ARE23 and RPC217-127-S02AT-ARE23 respectively.

- Alternate cable strain relief methods for plugs and connectors:

Stainless steel wire mesh cord grip. To order, add letter "K" to first section of Cat. No.

Example: RPC117-150-P01N with wire mesh grip would be ordered as RPCK117-150-P01N.



Adapter for use with liquid tight/rigid conduit. To order, add letters "LT" to first section of catalog number.

Example: RPC117-150-P01N with liquid tight/conduit adapter would be ordered as RPCLT117-150-P01N.

Electrical Rating Ranges:

- Voltage – 250, 480 and 600VAC
- Frequency – 50* to 400 hertz
- See listings for specific ratings

Ampere Ratings:

- Ratings given in the table at right are applicable to RPC circuit breaking power connectors and RPE control connectors, as indicated.
- RPC connectors are capable of making or breaking circuits at the full rated load indicated in the table on the listing pages.
- Contact assemblies of RPE connectors have the current carrying capabilities shown in the table, as defined by applicable military specifications (MS) and NEC requirements, for circuits not made or broken under load. It should be noted that these non-interrupting ampere ratings exceed the NEC rating of the corresponding wire size.

Contact Size AWG	RPC Circuit Breaking Connectors NEC Rating	RPE Connectors Non-Interrupting Ampere Rating	
		MS(AN)	NEC
#16		22	16
#12	20A	41	30
#10	30A	57	40
#4	60A	135	90
1 / 0	100A	250	160
4 / 0	200A	335	225

Certifications and Compliances:

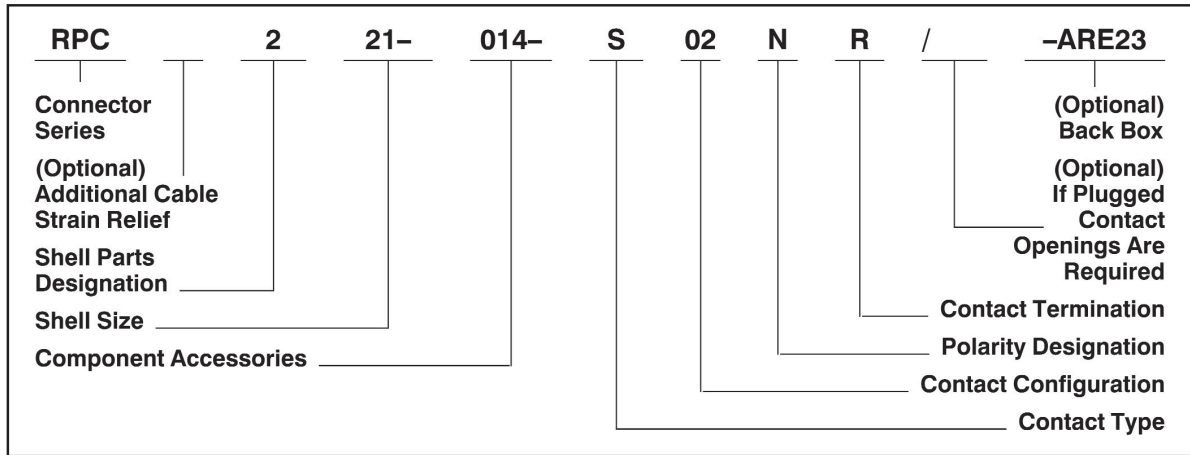
Properties	Characteristics
Industrial use	excludes dust, lint, fibers and flying, oil seepage and coolant seepage – meets J.I.C. Standard
Driptight	excludes falling moisture or dirt – materials unaffected by condensation
Weather resistant (weatherproof)	performs normally in outdoor areas
Watertight	excludes water by hose spray or stream
Dust-tight	excludes dust, but performs normally if dust is accidentally enclosed during disconnect
Chemical resistance	high resistant to alkalis, strong caustics, acids, petroleum base and organic solvents
Pressure	300 psi external – 200 psi internal

Compliance with Military Specifications

Environment	Performance Data
Corrosion resistance	salt spray 300 days. MIL-STD-810E
Temperature	-80°F to 275°F, meeting requirements of MIL-STD-810E
Air leakage	exceeds Class E specification MIL-STD-810E
Dust resistance	exceeds requirements of MIL-STD-810E
Shock resistance	50G exceeds MIL-STD-810E
Vibration	exceeds 20G, method II, MIL-STD-810E
Humidity & moisture	exceeds Class E specification MIL-STD-810E
ANSI/UL Standard	498

*For use on system less than 60 hertz the receptacles, plugs and connectors are for disconnect use only.

Catalog Numbering System



Connector Series:

RPC – circuit breaking
 RPE – for disconnect use only
 RPX – hazardous (gasoline or equivalent hazards)

Additional Cable Strain Relief (Optional):

K = Wire mesh cord grip
 LT = Liquidtight/conduit connection

Shell Parts Designation:

- 0 = No shell part required
- 1 = Plug shell
- 2 = Receptacle
- 3 = Cord connector
- 4 = Connector handle body only
- 5 = Plug shell (long)
- 6 = Receptacle (long)
- 7 = Cord connector (long)

Shell Size:

Inside Diameter measured in X/16" (017, 021, 033, 041, i.e., 017 shell size = ¹⁷/₁₆"

Component Accessories:

This code indicates the combination of shell parts to fit your application; e.g., 014 = square flanged receptacle with insert retaining nut and dust cap; 150 = plug handle body, bushing, and clamping nut for cable with a diameter of .250 to .625.

Contact Type:

P = Pin (male)
 S = Socket (female)

Contact Configuration:

This assigned code indicates the actual configuration of the contacts (pin and socket) in the insert assembly for a particular shell size. This is based upon electrical ratings (amperage and voltage) and the number of contacts required. It does not indicate the number of contacts in the configuration.

Polarity Designation:

N = Standard position – ungrounded
 V, W, X or Y = Alternate positions – (ungrounded)
 A = Standard position – grounded
 B, C, D or E = Alternate positions – (grounded)

Contact Termination:

Blank = Solder well (standard unless noted)
 R = Pressure (See complete ordering information that follows for availability)
 T = Crimp (available in all configurations)

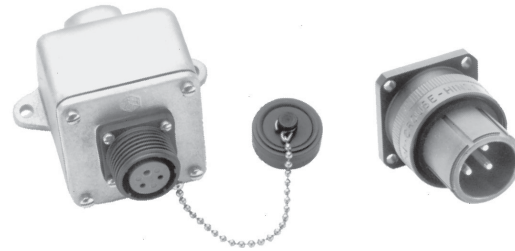
Plugged Contact Openings (Optional):

This option allows greater flexibility, allowing for unique wiring requirements. The number following the slash indicates the total number of contacts that will be supplied (including ground contact, if applicable); all other openings in the insert assembly will be plugged.

Back Boxes (Optional):

See page 1445 for back box information.

RPC Circuit Breaking Power Connectors With Solder Well Terminal†



Square Flanged Receptacle,
Dust Cap and Back Box
Cat. # (For Surface
Mounting)†*

Motor Plug with
Dust Cap Cat. #

	Circuit Description	Volts (VAC)	Contact Size	Shell Size	Hub Size (In.)	Square Flanged Receptacle, Dust Cap and Back Box Cat. # (For Surface Mounting)†*	Motor Plug with Dust Cap Cat. #
20 Amps							
Grounded	4w, 5p	480	#12	017	3/4 1	RPC217 014 S09A ARE23 RPC217 014 S09A ARE33	RPC117 157 P09A
Ungrounded	5w, 5p	480	#12	017	3/4 1	RPC217 014 S08N ARE23 RPC217 014 S08N ARE33	RPC117 157 P08N
30 Amps							
Grounded	2w, 3p	480	#10	017	3/4 1	RPC217 014 S02A ARE23 RPC217 014 S02A ARE33	RPC117 157 P02A
	3w, 4p	480	#10	017	3/4 1	RPC217 014 S04A ARE23 RPC217 014 S04A ARE33	RPC117 157 P04A
	4w, 5p	480	#10	021	3/4 1	RPC221 014 S17A ARE23 RPC221 014 S17A ARE33	RPC121 157 P17A
Ungrounded	3w, 3p	480	#10	017	3/4 1	RPC217 014 S01N ARE23 RPC217 014 S01N ARE33	RPC117 157 P01N
	4w, 4p	480	#10	017	3/4 1	RPC217 014 S03N ARE23 RPC217 014 S03N ARE33	RPC117 157 P03N
	5w, 5p	480	#10	021	3/4 1	RPC221 014 S16N ARE23 RPC221 014 S16N ARE33	RPC121 157 P16N
60 Amps							
Grounded	3w, 4p	600	#4	033	1/4 1/2	RPC233 014 S08A ARE46 RPC233 014 S08A ARE56	RPC133 157 P08A
	4w, 5p	480	#4	033	1/4 1/2	RPC233 014 S09A ARE46 RPC233 014 S09A ARE56	RPC133 157 P09A
Ungrounded	4w, 4p	600	#4	033	1/4 1/2	RPC233 014 S05N ARE46 RPC233 014 S05N ARE56	RPC133 157 P05N
	5w, 5p	480	#4	033	1/4 1/2	RPC233 014 S06N ARE46 RPC233 014 S06N ARE56	RPC133 157 P06N

**RPC Circuit Breaking Power Connectors
With Solder Well Terminals†**



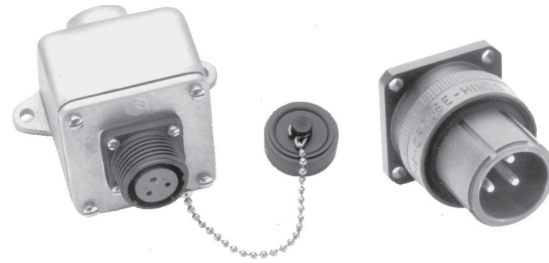
Cable Diameter Range	Cord Connector Cat. #§	Plug Cat. #§
.250 to .625 .625 to .875	RPC317 160 S09A RPC317 161 S09A	RPC117 150 P09A RPC117 151 P09A
.250 to .625 .625 to .875	RPC317 160 S08N RPC317 161 S08N	RPC117 150 P08N RPC117 151 P08N
.250 to .625 .625 to .875	RPC317 160 S02A RPC317 161 S02A	RPC117 150 P02A RPC117 151 P02A
.250 to .625 .625 to .875	RPC317 160 S04A RPC317 161 S04A	RPC117 150 P04A RPC117 151 P04A
.625 to 1.000 1.000 to 1.187	RPC321 161 S17A RPC321 395 S17A	RPC121 151 P17A RPC121 387 P17A
.250 to .625 .625 to .875	RPC317 160 S01N RPC317 161 S01N	RPC117 150 P01N RPC117 151 P01N
.250 to .625 .625 to .875	RPC317 160 S03N RPC317 161 S03N	RPC117 150 P03N RPC117 151 P03N
.625 to 1.000 1.000 to 1.187	RPC321 161 S16N RPC321 395 S16N	RPC121 151 P16N RPC121 387 P16N
.875 to 1.375 1.375 to 1.625 1.625 to 1.875	RPC333 163 S08A RPC333 396 S08A RPC333 397 S08A	RPC133 153 P08A RPC133 388 P08A RPC133 389 P08A
.875 to 1.375 1.375 to 1.625 1.625 to 1.875	RPC333 163 S09A RPC333 396 S09A RPC333 397 S09A	RPC133 153 P09A RPC133 388 P09A RPC133 389 P09A
.875 to 1.375 1.375 to 1.625 1.625 to 1.875	RPC333 163 S05N RPC333 396 S05N RPC333 397 S05N	RPC133 153 P05N RPC133 388 P05N RPC133 389 P05N
.875 to 1.375 1.375 to 1.625 1.625 to 1.875	RPC333 163 S06N RPC333 396 S06N RPC333 397 S06N	RPC133 153 P06N RPC133 388 P06N RPC133 389 P06N

†Solder well terminals provided as standard. Crimp contacts are optionally available, add suffix T to catalog number. Example: RPC217-014-S09AT-ARE23.
‡For square flanged receptacle *without* dust cap, change the middle three digits of the catalog number from 014 to 127. Example: RPC217-127-S09A-ARE23.
*For square flanged receptacle with dust cap for panel mounting, delete the last digits of the catalog number specifying the backbox. Example: RPC217-014-S09A.
§For plugs and cord connectors:
Liquidtight/Conduit Adapter –
To order with adapter, add letters "LT" to first section of catalog number. Example: RPCLT317-160-S09A.
Additional Cable Strain Relief Options –
• Stainless steel wire mesh grip – To order, add letter "K" to first section of catalog number. Example: RPCK317-160-S09A.

Note: RPC with pressure terminals are also available, see pages 1438–1441.



**RPC Circuit Breaking Power Connectors
With Solder Well Terminals†**



	Circuit Description	Volts (VAC)	Contact Size	Shell Size	Hub Size (In.)	Square Flanged Receptacle, Dust Cap and Back Box Cat. # (For Surface Mounting)†*	Motor Plug Cat. #	
100 Amps	Grounded	4w, 5p	600	1/8	041	1 1/2 2	RPC641 014 S04A AJ57 RPC641 014 S04A AJ67	RPC541 157 P04A
	Ungrounded	5w, 5p	600	1/8	041	1 1/2 2	RPC641 014 S02N AJ57 RPC641 014 S02N AJ67	RPC541 157 P02N
200 Amps	Grounded	3w, 4p	480	3/8	041	2 2 1/2	RPC641 014 S10A AJ68 RPC641 014 S10A AJ78	RPC541 157 P10A

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RPC Circuit Breaking Power Connectors With Solder Well Terminals†



†Solder well terminals provided as standard. Crimp contacts are optionally available, add suffix T to catalog number. Example: RPC217-014-S09AT-ARE23.

‡For square flanged receptacle *without* dust cap, change the middle three digits of the catalog number from 014 to 127. Example: RPC217-127-S09A-ARE23.

*For square flanged receptacle with dust cap for panel mounting, delete the last digits of the catalog number specifying the backbox. Example: RPC217-014-S09A.

§For plugs and cord connectors:

Liquidtight/Conduit Adapter –

To order with adapter, add letters "LT" to first section of catalog number. Example: RPCLT317-160-S09A.

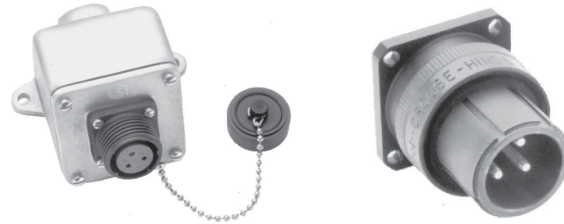
Additional Cable Strain Relief Options –

- Stainless steel wire mesh grip – To order, add letter "K" to first section of catalog number. Example: RPCK317-160-S09A.

Cable Diameter Range	Cord Connector Cat. #§	Plug Cat. #§
1.375 to 1.875	RPC741 164 S04A	RPC541 154 P04A
1.875 to 2.062	RPC741 398 S04A	RPC541 390 P04A
2.062 to 2.250	RPC741 399 S04A	RPC541 391 P04A
1.375 to 1.875	RPC741 164 S02N	RPC541 154 P02N
1.875 to 2.062	RPC741 398 S02N	RPC541 390 P02N
2.062 to 2.250	RPC741 399 S02N	RPC541 391 P02N
1.375 to 1.875	RPC741 164 S10A	RPC541 154 P10A
1.875 to 2.062	RPC741 398 S10A	RPC541 390 P10A
2.062 to 2.250	RPC741 399 S10A	RPC541 391 P10A

Note: RPC with pressure terminals are also available, see pages 1438–1441.

RPC Circuit Breaking Power Connectors With Pressure Terminals



	Circuit Description	Volts (VAC)	Contact Size	Shell Size	Hub Size (In.)	Square Flanged Receptacle, Dust Cap and Back Box Cat. # (For Surface Mounting)■‡	Motor Plug Cat. #
30 Amps							
Grounded	2w, 3p	600	#10	021	¾ 1	RPC221 014 S04AR ARE23 RPC221 014 S04AR ARE33	RPC121 157 P04AR
Ungrounded	3w, 3p	600	#10	021	¾ 1	RPC221 014 S02NR ARE23 RPC221 014 S02NR ARE33	RPC121 157 P02NR
60 Amps							
Grounded	3w, 4p	600	#4	033	1¼ 1½	RPC233 014 S08AR ARE46 RPC233 014 S08AR ARE56	RPC133 157 P08AR
	4w, 5p	480	#4	033	1¼ 1½	RPC233 014 S09AR ARE46 RPC233 014 S09AR ARE56	RPC133 157 P09AR
Ungrounded	4w, 4p	600	#4	033	1¼ 1½	RPC233 014 S05NR ARE46 RPC233 014 S05NR ARE56	RPC133 157 P05NR
	5w, 5p	480	#4	033	1¼ 1½	RPC233 014 S06NR ARE46 RPC233 014 S06NR ARE56	RPC133 157 P06NR

For alternate polarizations, see page 1431, "Options" section.

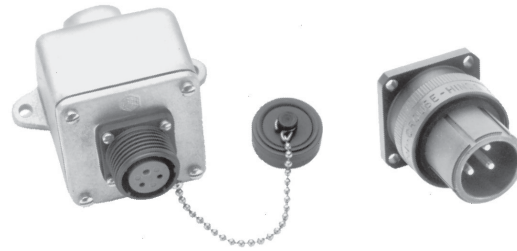
RPC Circuit Breaking Power Connectors With Pressure Terminals



Cable Diameter Range	Cord Connector Cat. #*	Plug Cat. #*
.250 to .625	RPC321 160 S04AR	RPC121 150 P04AR
.625 to 1.000	RPC321 161 S04AR	RPC121 151 P04AR
.250 to .625	RPC321 160 S02NR	RPC121 150 P02NR
.625 to 1.000	RPC321 161 S02NR	RPC121 151 P02NR
.875 to 1.375	RPC333 163 S08AR	RPC133 153 P08AR
1.375 to 1.625	RPC333 396 S08AR	RPC133 388 P08AR
1.625 to 1.875	RPC333 397 S08AR	RPC133 389 P08AR
.875 to 1.375	RPC333 163 S09AR	RPC133 153 P09AR
1.375 to 1.625	RPC333 396 S09AR	RPC133 388 P09AR
1.625 to 1.875	RPC333 397 S09AR	RPC133 389 P09AR
.875 to 1.375	RPC333 163 S05NR	RPC133 153 P05NR
1.375 to 1.625	RPC333 396 S05NR	RPC133 388 P05NR
1.625 to 1.875	RPC333 397 S05NR	RPC133 389 P05NR
.875 to 1.375	RPC333 163 S06NR	RPC133 153 P06NR
1.375 to 1.625	RPC333 396 S06NR	RPC133 388 P06NR
1.625 to 1.875	RPC333 397 S06NR	RPC133 389 P06NR

■ For square flanged receptacle *without* dust cap, change the middle three digits of the catalog number from 014 to 127. Example: RPC221-127-S04AR-ARE23.
 ‡For square flanged receptacle with dust cap for panel mounting, delete the last digits of the catalog number specifying the backbox. Example: RPC221-014-S04AR.
 *For plugs and cord connectors:
Liquidtight/Conduit Adapter –
 To order with adapter, add letters "LT" to first section of catalog number. Example: RPCLT321-160-S04AR.
Additional Cable Strain Relief Options –
 • Stainless steel wire mesh grip – To order, add letter "K" to first section of catalog number. Example: RPCK321-160-S04AR.

RPC Circuit Breaking Power Connectors
With Pressure Terminals



	Circuit Description	Volts (VAC)	Contact Size	Shell Size	Hub Size (In.)	Square Flanged Receptacle, Dust Cap and Back Box Cat. # (For Surface Mounting)■‡	Motor Plug Cat. #	
100 Amps	Grounded	4w, 5p	600	1/0	041	1 1/2 2	RPC641 014 S04AR AJ57 RPC641 014 S04AR AJ67	RPC541 157 P04AR
	Ungrounded	5w, 5p	600	1/0	041	1 1/2 2	RPC641 014 S02NR AJ57 RPC641 014 S02NR AJ67	RPC541 157 P02NR

For alternate polarizations, see page 1431, "Options" section.

RPC Circuit Breaking Power Connectors With Pressure Terminals



Cable Diameter Range	Cord Connector Cat. #*	Plug Cat. #*
1.375 to 1.875	RPC741 164 S04AR	RPC541 154 P04AR
1.875 to 2.062	RPC741 398 S04AR	RPC541 390 P04AR
2.062 to 2.250	RPC741 399 S04AR	RPC541 391 P04AR
1.375 to 1.875	RPC741 164 S02NR	RPC541 154 P02NR
1.875 to 2.062	RPC741 398 S02NR	RPC541 390 P02NR
2.062 to 2.250	RPC741 399 S02NR	RPC541 391 P02NR

■ For square flanged receptacle *without* dust cap, change the middle three digits of the catalog number from 014 to 127. Example: RPC221-127-S04AR-ARE23.

‡For square flanged receptacle with dust cap for panel mounting, delete the last digits of the catalog number specifying the backbox. Example: RPC221-014-S04AR.

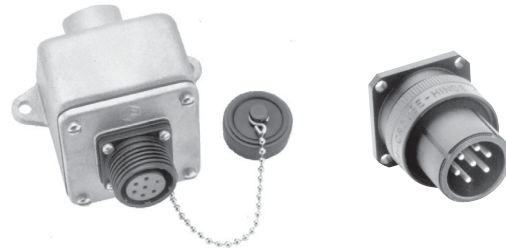
*For plugs and cord connectors:

Liquidtight/Conduit Adapter –
To order with adapter, add letters "LT" to first section of catalog number. Example: RPCLT321-160-S04AR.

Additional Cable Strain Relief Options –

- Stainless steel wire mesh grip – To order, add letter "K" to first section of catalog number. Example: RPCK321-160-S04AR.



**RPE Control Circuit and Power Connectors
With Solder Well Terminal†**


Circuit Description	Contact Size	Amps	Volts (VAC)	Shell Size	Hub Size (In.)	Square Flanged Receptacle, Dust Cap and Back Box Cat. # (For Surface Mounting)‡*	Motor Plug Cat. #
Control							
6w, 7p	#12	20	480	017	¾ 1	RPE217 014 S06A ARE23 RPE217 014 S06A ARE33	RPE117 157 P06A
7w, 7p	#12	20	480	017	¾ 1	RPE217 014 S05N ARE23 RPE217 014 S05N ARE33	RPE117 157 P05N
12w, 12p	#16	16	250	017	¾ 1	RPE217 014 S07N ARE23 RPE217 014 S07N ARE33	RPE117 157 P07N
18w, 19p	#12	20	250	021	¾ 1	RPE221 014 S08A ARE23 RPE221 014 S08A ARE33	RPE121 157 P08A
19w, 19p	#12	20	250	021	¾ 1	RPE221 014 S09N ARE23 RPE221 014 S09N ARE33	RPE121 157 P09N
38w, 39p	#12	20	250	033	1¼ 1½	RPE233 014 S19A ARE46 RPE233 014 S19A ARE56	RPE133 157 P19A
39w, 39p	#12	20	250	033	1¼ 1½	RPE233 014 S17N ARE46 RPE233 014 S17N ARE56	RPE133 157 P17N

RPE Control Circuit and Power Connectors With Solder Well Terminals



Cable Diameter Range	Cord Connector Cat. #§	Plug Cat. #§
.250 to .625 .625 to .875	RPE317 160 S06A RPE317 161 S06A	RPE117 150 P06A RPE117 151 P06A
.250 to .625 .625 to .875	RPE317 160 S05N RPE317 161 S05N	RPE117 150 P05N RPE117 151 P05N
.250 to .625 .625 to .875	RPE317 160 S07N RPE317 161 S07N	RPE117 150 P07N RPE117 151 P07N
.625 to 1.000 1.000 to 1.187	RPE321 161 S08A RPE321 395 S08A	RPE121 151 P08A RPE121 387 P08A
.625 to 1.000 1.000 to 1.187	RPE321 161 S09N RPE321 395 S09N	RPE121 151 P09N RPE121 387 P09N
.875 to 1.375 1.375 to 1.625	RPE333 163 S19A RPE333 396 S19A	RPE133 153 P19A RPE133 388 P19A
.875 to 1.375 1.375 to 1.625	RPE333 163 S17N RPE333 396 S17N	RPE133 153 P17N RPE133 388 P17N

†Solder well terminals provided as standard. Crimp contacts are optionally available, add suffix T to catalog number. Example: RPE633-014-S24N-AJ57.

‡For square flanged receptacle *without* dust cap, change the middle three digits of the catalog number from 014 to 127. Example: RPE633-127-S24N-AJ57.

*For square flanged receptacle with dust cap for panel mounting, delete the last three digits of the catalog number specifying the backbox. Example: RPE633-014-S24N.

§For plugs and cord connectors:

Liquidtight/Conduit Adapter –

To order with adapter, add letters "LT" to the first section of the catalog number. Example: RPELT733-396-S24N.

Additional Cable Strain Relief Options –

- Stainless steel wire mesh grip – To order, add letter "K" to first section of the catalog number. Example: RPEK733-396-S24N.

8P RPC and RPE Connectors

Accessories



For #16 Through #10 Contacts:

The RPE017-440 crimping tool has been designed to crimp a wide range of solid and stranded type conductors. The crimping head is adjusted and sealed at the factory. The tool automatically crimps and gauges all size contacts without readjustment.



Contact Removal Tools:

The contact removal tool extracts the contact from the insert assembly without complete disassembly of the connector.

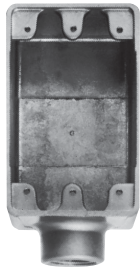
Cat #	Description
RPE017 402T	for use with #16 contacts.
RPE017 403T	for use with #12 contacts.
RPE017 404T	for use with #10 contacts.

Dust Caps: For Receptacles For RPC or RPE Series



Cat. #	Description
RPE017 009	
RPE021 009	Dust Cap w/Eyelet for Receptacle
RPE033 009	
RPE041 009	

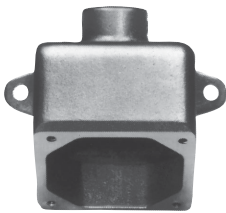
For Mounting RPC and RPE Square Flanged Receptacles



FS Back Box

Back Boxes FS and FSC

Hub Size in.	FS† Cat. #	FSC† Cat. #
1/2	FS1 SA	FSC1 SA
3/4	FS2 SA	FSC2 SA
1	FS3 SA	FSC3 SA



ARE Back Box

ARE‡

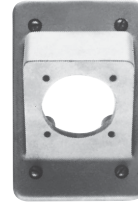
Hub Size in.	Cat. #	Rating
1/2	ARE13	30A
3/4	ARE23	
1	ARE33	
1	ARE36	60A
1 1/4	ARE46	
1 1/2	ARE56	



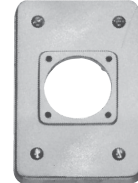
AJ Black Box

AJ‡

Hub Size in.	Cat. #	Rating
1	AJ37	60A and 100A
1 1/4	AJ47	
1 1/2	AJ57	
2	AJ67	
1 1/2	AJ58	200A
2	AJ68	
2 1/2	AJ78	



45° Angle adapter



Flat adapter

Adapters

Shell Sizes of Square Flanged Receptacles

45° Angle		Flat	
017 Cat. #	021 Cat. #	017 Cat. #	021 Cat. #
RPE017 156	RPE021 156	RPE017 141	RPE021 142

Shell Sizes of Square Flanged Receptacles

Flat			
017 Cat. #	021 Cat. #	033 Cat. #	041 Cat. #
RPE017 143	RPE021 144		
		RPE033 145	RPE041 146

Shell Sizes of Square Flanged Receptacles

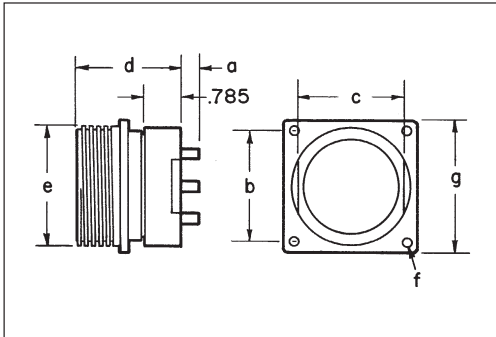
Flat	
033 Cat. #	041 Cat. #
RPE033 145	RPE041 146
	RPE041 147

† Any of the FS or FD single gang, two gang tandem or multiple gang boxes with individual cover openings may be used with these adapters. For listings, dimensions and other details refer to Section 3F.

‡ Other AR and AJ back boxes may be used with these adapters. For listings, dimensions and other details refer to Section 1P.

8P ARK-trol® Electrical Connectors

RPC Circuit Breaking Power Connectors
 RPE Control Circuit and Power Connectors
 Dimensions (Inches)

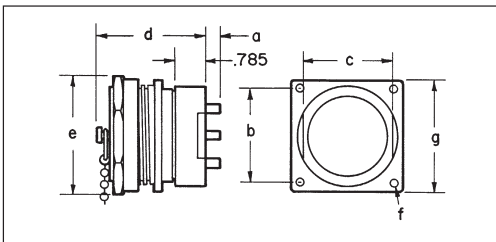


Square Flanged Receptacle

Shell Type and Size	b	c	d	e	f	g
217	1.375	1.317	2.165	1.562	.190	1.750
221	1.750	1.692	2.165	2.000	.190	2.250
233	2.375	2.317	2.165	2.625	.214	2.875
241	2.813	2.817	2.165	3.187	.250	3.438
633	2.375	2.317	2.915	2.625	.214	2.875
641	2.813	2.817	2.915	3.187	.250	3.438

a Contact for AWG Wire

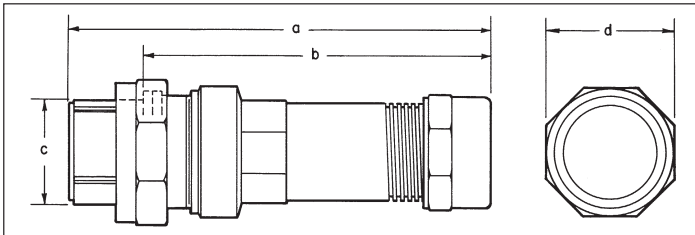
0.1875	#16, #12, #10
0.250	#4
0.375	1/8
0.500	1/4



Square Flanged Receptacle with Dust Cap

Shell Type and Size	b	c	d	e	f	g
217	1.375	1.317	2.812	1.927	.190	1.750
221	1.750	1.692	2.812	2.468	.190	2.250
233	2.375	2.317	2.812	3.145	.214	2.875
241	2.813	2.817	2.812	3.754	.250	3.438
633	2.375	2.317	3.552	3.145	.214	2.875
641	2.813	2.817	3.552	3.754	.250	3.438

Dimension a – same as above



Plug

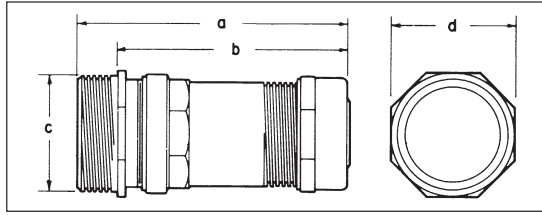
Shell Type and Size	a†	b†	c	d
117	5.033	4.133	1.270	1.921
121	5.090	4.190	1.675	2.468
133	6.093	5.193	2.295	3.140
141	6.653	5.753	2.800	3.750
533	6.843	5.193	2.295	3.140
541	7.403	5.753	2.800	3.750

† These dimensions are approximate and vary with cable size.

ARK-trol® Electrical Connectors

8P

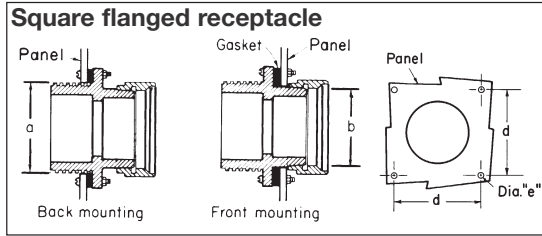
RPC Circuit Breaking Power Connectors RPE Control Circuit and Power Connectors Dimensions (Inches)



Cord Connector Receptacle

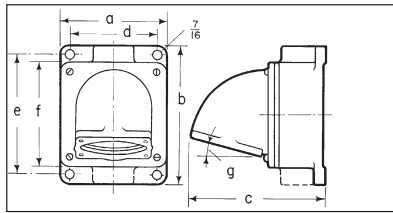
Shell Type and Size	a†	b†	c	d
317	5.033	4.116	1.562	1.812
321	5.090	4.173	1.885	2.300
333	6.093	5.176	2.625	3.140
341	6.653	5.736	3.187	3.730
733	6.843	5.176	2.625	3.140
741	7.403	5.736	3.187	3.730

† These dimensions are approximate and vary with cable size.



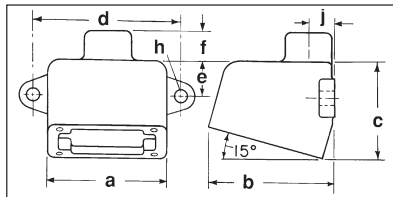
Panel Mounting Methods

Shell Size	Back Mounting			Front Mounting		
	a	d	e	b	d	e
017	1 ¹⁹ / ₃₂	1 ³ / ₈	3 ¹ / ₁₆	1 ¹⁷ / ₃₂	1 ³ / ₈	3 ¹ / ₁₆
021	2 ¹ / ₃₂	1 ³ / ₄	3 ¹ / ₁₆	1 ³¹ / ₃₂	1 ³ / ₄	3 ¹ / ₁₆
033	2 ²¹ / ₃₂	2 ³ / ₈	7 ¹ / ₃₂	2 ²¹ / ₃₂	2 ³ / ₈	7 ¹ / ₃₂
041	3 ⁷ / ₃₂	2 ¹³ / ₁₆	1 ¹ / ₄	3 ⁷ / ₃₂	2 ¹³ / ₁₆	1 ¹ / ₄



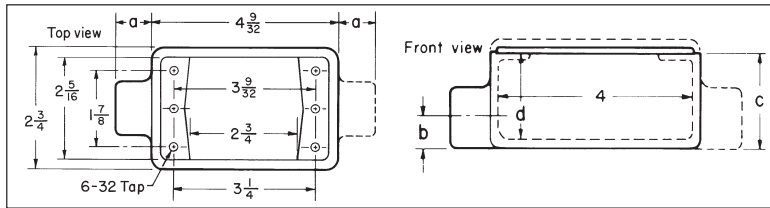
AJ Back Boxes

Form	Size	a	b	c	d	e	f	g
C and D	3/4, 1, 1 1/4, 1 1/2	5 7/8	8	7 1/16	4 7/8	7	5 7/8	15°
C and D	2	5 7/8	8	8	4 7/8	7	5 7/8	15°
E	1 1/2, 2, 2 1/2	8	10 3/4	9 7/8	6 3/4	9 1/2	8	45°



ARE Back Boxes

Form	Size	a	b	c	d	e	f	h dia.
B	1/2	3 3/8	3 3/8	2 3/4	4 1/4	1	27/32	1 1/32
B	3/4	3 3/8	3 3/8	2 3/4	4 1/4	1	27/32	1 1/32
B	1	3 3/8	3 3/8	2 3/4	4 1/4	1	31/32	1 1/32
C	1	4 1/4	4 11/16	4 11/16	5 1/4	1 5/8	15/16	3/8
C	1 1/4	4 1/4	4 11/16	4 11/16	5 1/4	1 5/8	1	3/8
C	1 1/2	4 1/4	4 11/16	4 11/16	5 1/4	1 5/8	1 1/16	3/8



FS/FSC Boxes

Series	Hub Size	a	b	c	d
FS	1/2	7/8	5/8	1 1/8	1 11/16
	3/4	7/8	3/4	1 1/8	1 11/16
	1	1	7/8	1 1/8	1 11/16