

Transportation Products

For Rail & Transit



Amphenol
Industrial

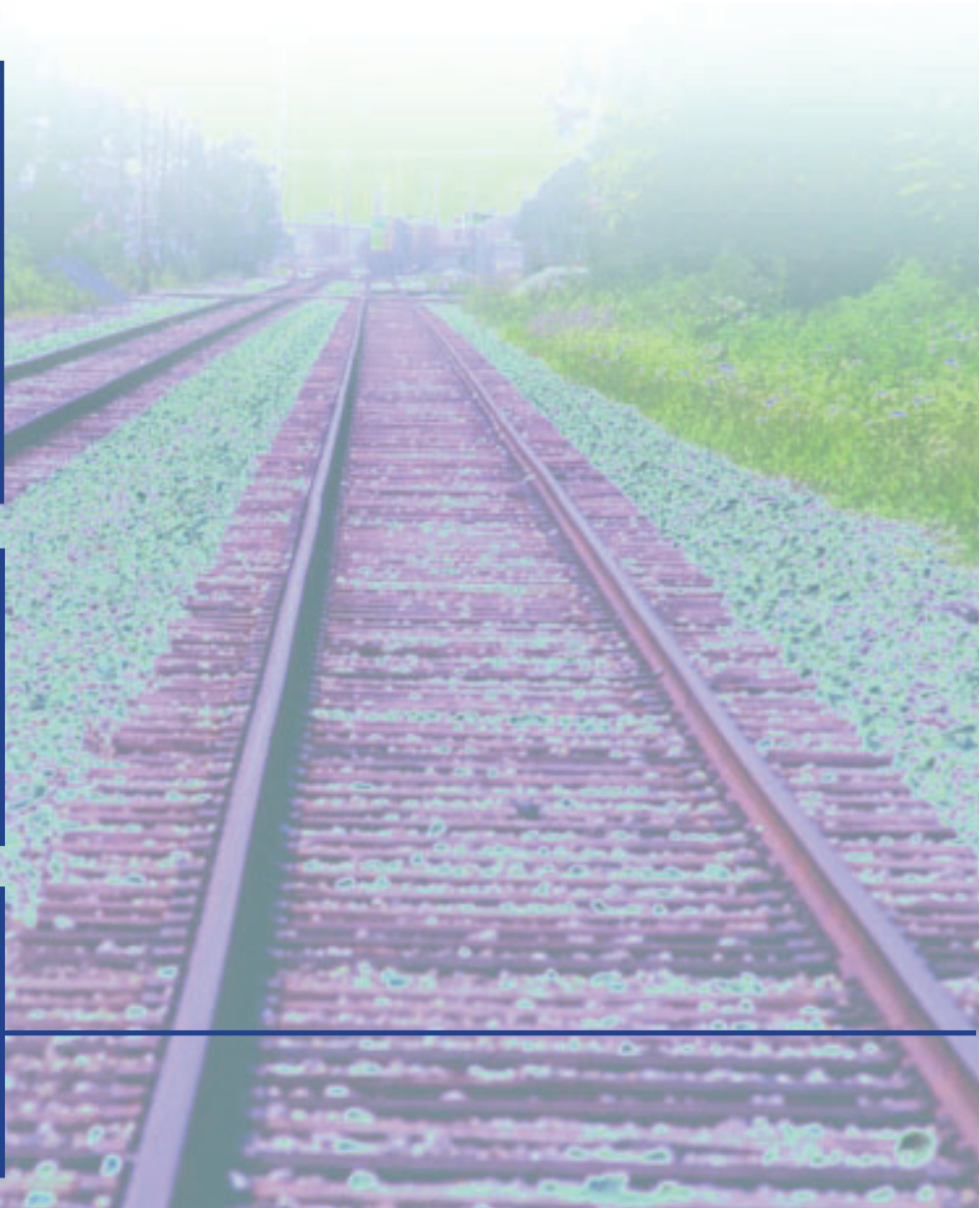
You have been abusing us
for years . . .

Why stop now?

Before the turn of the century, Pyle-National was a major supplier to the railroad industry. First, as a worldwide manufacturer of headlight equipment and now, for over three quarters of a century, as a primary source for electrical connectors. Millions upon millions of miles - the railroads have relied on our connectors for their locomotives and passenger cars. Through some of the most demanding environments, our connectors have delivered reliable performance.

They were engineered to take all the abuse you can give them, and you've done a thorough job. Our connectors have been the choice of consultants and engineers worldwide. We are on the job 24 hours a day, seven days a week keeping people and goods moving. Our engineering and manufacturing facilities offer innovative products designed to meet the needs of the world's mass transit systems, passenger and freight railroads.

Pyle-National offers a broad range of interconnect product lines, including the 27 pole MU and communication jumpers, Trans-power head end power connectors - designed to Amtrak specifications, Quelarc® power connectors, environmentally sealed Star-line®, the new Star-lok™ power and control vehicles connectors, and the GT-series reversed bayonet connectors. Also our innovative new P-lok® offers solutions by design to rail and transit interconnect applications. We are the preferred single source connector company in the world.



Head-end power connectors

Pyle-National's Trans-power® products are 400 amp, 600 volt, noncurrent rupture, head-end power connectors designed with replaceable contacts in an all-molded elastomeric rubber body.

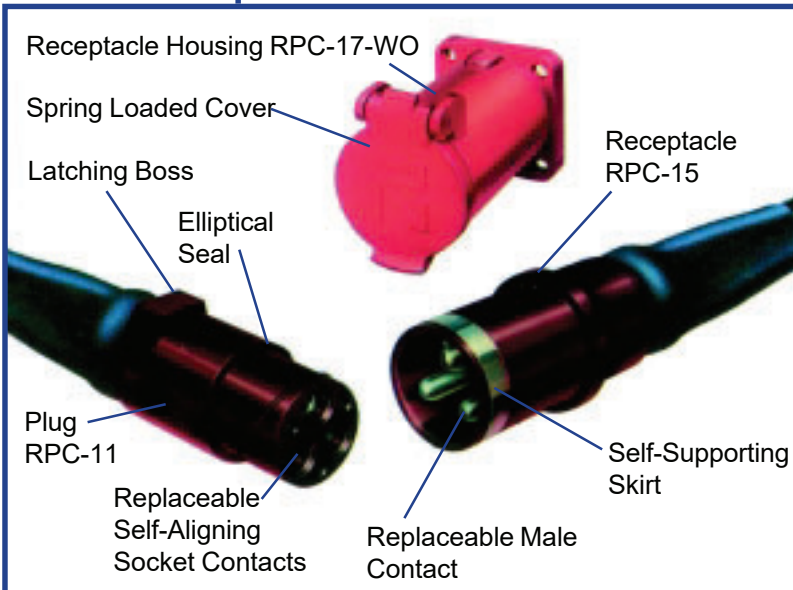
The contacts are separate components each retained in its own cavity and not permanently molded in position. The plug cavities are slightly larger than the contacts, thus permitting self-alignment, which results in substantially lower insertion and extraction forces. Contacts are removable for replacement or repairs if needed.

Pyle's unique elliptical seal permits the escape of entrapped air while mating and also breaks the vacuum created as the plug is unmated. The self-supporting receptacle skirt prevents sagging while mating and permits ease of plug insertion.

Socket contacts feature a unique pressure member design. This design provides uniform pressure for low mating and unmating forces, low voltage drop, consistently low temperature rise, and shock resistance.

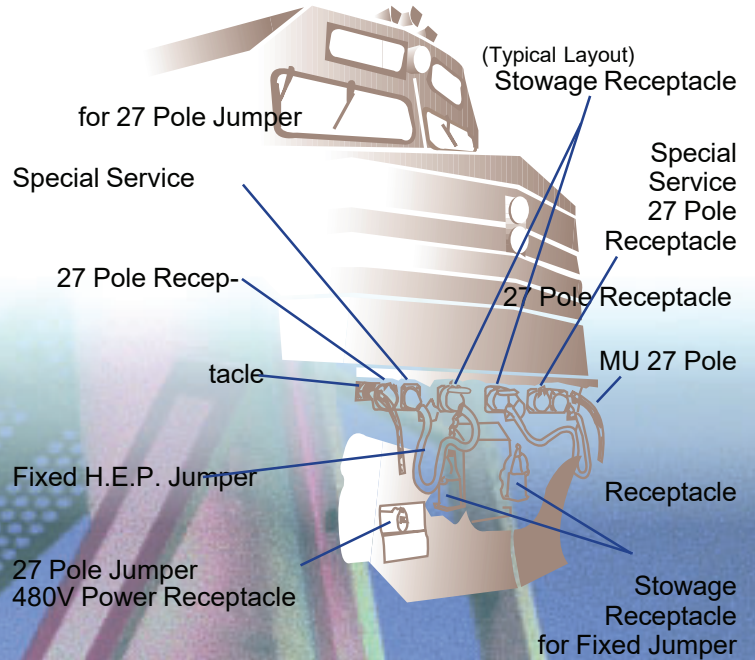
PERFORMANCE AND DESIGN CHARACTERISTICS

Mating and Unmating Forces _____	70 lbs. maximum
Insulation Resistance _____	150 megohms minimum
Dielectric Withstanding Voltage _____	1960 volts rms
Operating Ambient Temperature _____	-57°F to +110°F
Rain Tight _____	Rain tight per U/L Standard
Electrical Rating _____	600 volts rms, 400 Amps
Contact Shock _____	Mated connectors with a 6 foot drop onto concrete with no appreciable change in electrical and mechanical characteristics



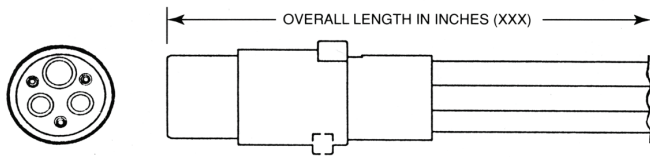
Integral Rubber Molded **Trans-power**[®] head-end power connectors

Continuing our tradition of connector design innovations, Pyle-National presents our integral molded version of Trans-power[®] HEP plugs. This durable molded plug assembly has been designed to Amtrak specifications and is rated 400 amps at 600 volts. This new assembly permits low mating and unmating forces, low voltage drop, and superior shock resistance.

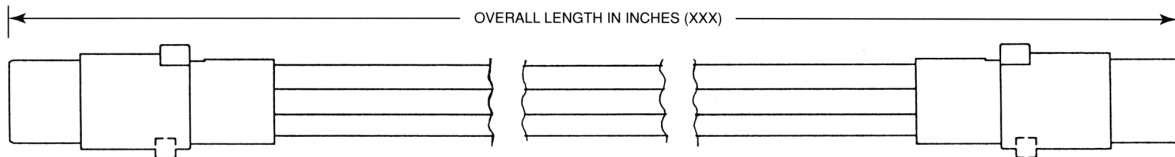


Ordering Information

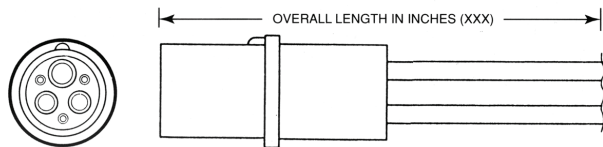
Note: XXX Represents desired length in inches



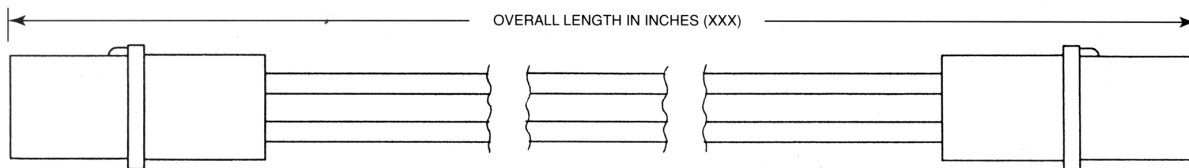
FIXED JUMPER PLUG/CABLE ASSEMBLY - RPC-11-XXX (repairable version) • **RPC-11M-XXX** (integral version)



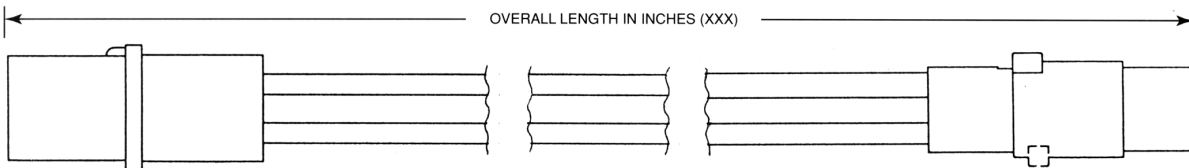
PORTABLE JUMPER PLUG/CABLE ASSEMBLY - RPC-10-XXX (repairable version) • **RPC-10M-XXX** (integral version)



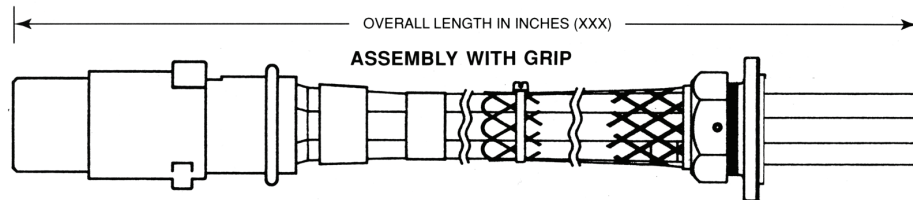
RECEPTACLE CABLE ASSEMBLY - RPC-15-XXX (repairable version)



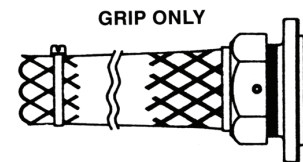
RECEPTACLE/RECEPTACLE JUMPER ASSEMBLY - RPC-12-XXX (repairable version)



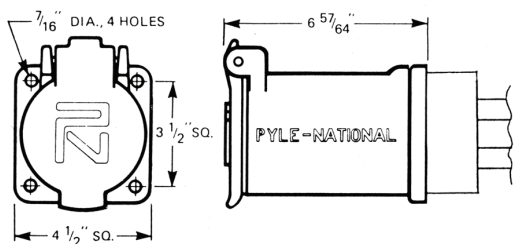
FIXED JUMPER PLUG CABLE ASSEMBLY - RPC-13-XXX (repairable version)



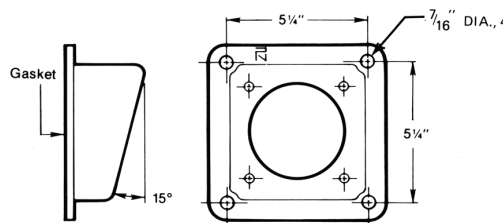
FIXED JUMPER PLUG CABLE ASSEMBLY - RPC-14-XXX (repairable version) • **RPC-14M-XXX** (integral version)



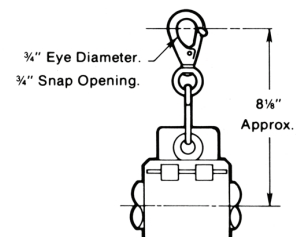
RPC-2124



RECEPTACLE WITH HOUSING - RPC-17-XXX (housing only RPC-17-WO)



Angle Box Adapter RPC-2125



Detachable Hanger RPC-81-CP

27 Pole

Train-line

MU and Communication Receptacles and Jumpers

All Amtrak special service receptacles are modifications of Pyle-National's standard MU (multiple unit 27 pole receptacles). All parts are common to all other 27 pole receptacles except the receptacle housings, which are keyed differently to prevent inter-mating of any other 27 pole jumpers.



Receptacles can be supplied with or without leads. Wire configuration, per Amtrak standards, calls for 1-#10 wire, five shield twisted pairs, and balance #12 wire. Jumpers are keyed differently from all other 27 pole jumpers to prevent mis-mating. Plug housings are painted blue to match the blue painted receptacles. Jumpers for use between locomotives and between locomotives and lead cars have a suffix "LOCO" following AMTR of the jumper part number. This indicates that the wiring circuitry is different than for car to car jumpers and are not electrically interchangeable. SUFFIX L (followed by a number) - Indicates length of leads in inches and housing painted blue. S500 series suffix indicates a deviation from standard. Consult factory for call out.

ORDERING INFORMATION

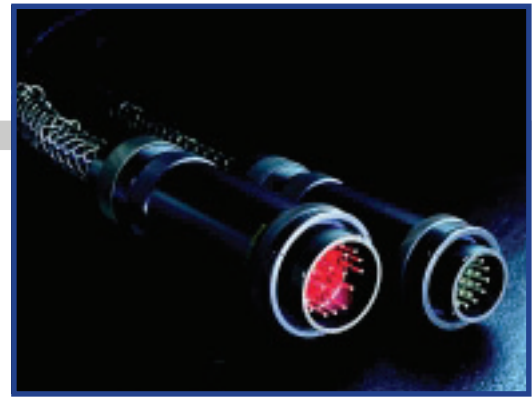
		Standard Car to Car Jumper	Locomotive Jumper	Receptacle
Amtrak Ordering Information	Pyle Number	WWPCJ-2746-AMTR	WWPCJ-2757-AMTR-LOCO	WWRF-27-AMTR-L180
	Amtrak AMMS No.	25 789 0841X	24 808 03177	25 789 07812
Pyle Ordering Information	Pyle Standard No.	WWPCJ-27 XX	WWPCJ-27 XX	WWRF-27†

Notes: XX - Specify desired length in inches
† - For stowage receptacle add: -SR

Star-line® / **NEW** Star-lok™

Connectors

for Transit Application



Both Star-line® and our new Star-lok™ connector systems are field proven products designed to withstand the riggers of extreme applications.

Star-line features our proven threaded coupling system while Star-lok features our new tri-pin spring-loaded bayonet coupling system. This coupling system features a positive locking of the connector plug to the receptacle and is mated by simply pushing the mated halves together. Disconnection is accomplished with a simple 1/8th turn of the coupling ring and pulling the two halves apart. This new coupling system offers many advantages, including blind mating in difficult to reach locations. These workhorse connectors are CSA certified and UL listed or component recognized and environmentally sealed for dependable service. A vast family of shell, hardware, and insert options are available - please consult the factory.

ORDERING INFORMATION

AWG	Star-line Plug with Mechanical Clamp†	Star-line Panel Mounted Receptacles	Star-lok Plug with Mechanical Clamp†	Star-lok Panel Mounted Receptacles
7 #12	ZPLM-Δ12-311PN	ZRLP-12-311SN	SPLM-Δ12-311PN	SRLP-12-311SN
16 #16	ZPLML-Δ16-325PN	ZRLP-16-325SN	SPLML-Δ16-325PN	SRLP-16-325SN
37 #12	ZPLML-Δ12-310PN	ZRLP-20-310SN	SPLML-Δ12-310PN	SRLP-20-310SN
2 #4, 25 #12	ZPLML-Δ20-374PN	ZRLP-20-374SN	SPLML-Δ20-374PN	SRLP-20-374SN
3 #4/0, 3 #12	ZPLML-ΔC24-72PN	ZRLP-C2412-72SN	SPLML-ΔC24-72PN	SRLP-C2412-72SN
58 #12	ZPLML-Δ24-384PN	ZRLP-24-384SN	SPLML-Δ24-384PN	SRLP-24-384SN

For optional strain relief, change "M" to "K" for basket weave grip (example: ZPLM becomes ZPLK for basket weave grip).

Note: For reverse service change "PN" (pin) in part number to "SN" (socket), or "SN" to "PN" (example: ZPLM-1012-311PN to ZPLM-1012-311SN).

OIL-RESISTANT RUBBER GROMMET SELECTION CHART

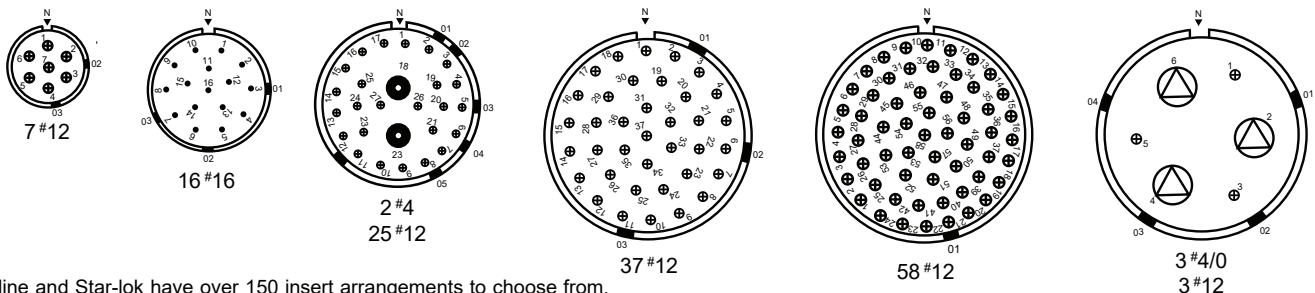
Substitute the number for the Delta in the catalog number of the plug.

Example: ZPLML- 12311 PN for .500 to .625 Dia. Cable changes to ZPLML-1012-311 PN.

Cable Diameter Range	.250 to .375	.375 to .500	.500 to .625	.625 to .750	.750 to .875	.875 to .937	.937 to 1.000	1.000 to 1.125	1.125 to 1.250	1.250 to 1.375	1.375 to 1.437	1.437 to 1.500	1.500 to 1.625	1.625 to 1.750	1.750 to 1.875	1.875 to 1.937	1.937 to 2.000	2.000 to 2.125	2.125 to 2.250	
Numeric Indicator	06	08	10	12	14	15	16	18	20	22	23	24	26	28	30	31	32	34	36	
Accommodating Shell Size	#12			#14				#20 & C20					#24 & C24							

INSERT ARRANGEMENTS*

(Front face of pin and insert shown)



* Star-line and Star-lok have over 150 insert arrangements to choose from. Those shown above are typically used in transit applications throughout the world. See Bulletin SL-300 for complete insert arrangements.

GT-series Connectors



for Transit Application

This new connector features reversed bayonet coupling for secure locking. GT-series connectors are widely utilized for numerous transit applications, including under carriage wiring, brake systems, door openers, speed sensors, wayside

power receptacles, black boxes, controls, and HVACs. When your application calls for quick-coupling connectors with durability and reliability in abusive environments, GT-series is the connector of choice.

ORDERING INFORMATION

GT	<u>C</u>	<u>OO</u>	<u>A</u>	<u>22-28</u>	<u>P</u>	<u>W</u>
	1	2	3	4	5	6

1. Contact Style and Insert Material

C = Crimp CY = Crimp Viton
S = Solder SY = Solder Viton
No designation required for Neoprene components

2. Shell Style

- 00 - Wall Mount Receptacle with Backshell
- 01 - Incline Receptacle
- 02 - Box Mount Receptacle
- 020 - Box Mount Receptacle with Accessory Threads
- 030 - Square Flange Receptacle-Rear Panel Mount
- 05 - Dummy Receptacle
- 06 - Straight Plug
- 06PP - Panel Mount
- 07 - Jam Nut Receptacle - Rear Panel Mount
- 070 - Jam Num Nut Receptacle with Accessory Threads
- 08 - 90° Angle Plug
- TB - Thru-Bulkhead Receptacle

3. Connector Styles & Dimensions

4. Insert Arrangement (See below)

5. Contact Style

P designates pin contacts
S designates socket contacts



6. Alternate Key Position

W, X, Y and Z-

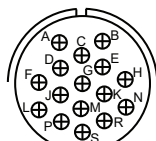
No suffix required for normal position



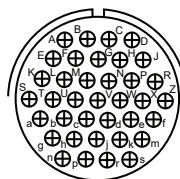
10SL-4
2 #16



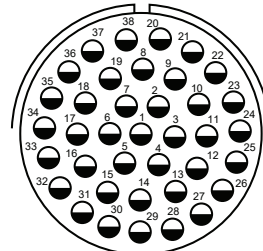
20-15
7 #12



24-5
2 #16



28-21
37 #16



40-AG
38 #12

INSERT ARRANGEMENTS*

(Front face of pin insert shown)

* GT-series connectors feature over 265 cataloged inserts to choose from. Those shown above are typically used in transit applications throughout the world. See bulletin TL-301 for complete arrangements.

Quelarc® and P-lok®



The Quelarc® circuit breaking 30, 60, and 100 ampere, 600 VAC power connector is used for portable and detachable electrical equipment. Quelarc plugs and receptacles are built to withstand the most severe operating conditions and have been proven by years of dependable service. They offer extraordinary long-insulating paths that provide uninterrupted service in the presence of dampness or current carrying dust. The partitions between the male contacts increase the length of

insulating surfaces to prevent arcing from pole to pole and from pole to ground. Compound circuit breaking arc chambers insure complete snuffing and cooling while the plug is still engaged with the receptacle housing. The many substantial construction features of this line of plugs and receptacles provide a safe operation.



Key features of the P-lok® connector series include strong machined metal construction and environmental sealing. Sine's P-lok coupling system provides a positive lock of the plug to the receptacle shell with a simple one-handed push of the receptacle and the release a one-handed pull of the coupling ring to separate the interconnect. P-lok offers a wide array of contact, insert, and hardware configurations. This allows flexibility in components for specific applications. P-lok is ideal for industrial and commercial interconnect use, proven in the field many times over.



Product Overview



A-Line Series - A low profile, quick mate, bayonet coupling system, environmental, electrical control, and signal connector. Designed for commercial and industrial applications.



V-Line Series - Heavy-duty, multi-pin, metal shell, attachable electrical connectors designed for commercial and industrial control and signal applications. One-piece five-keyed shell, coupling nut, cable adapter, gland, and clamp nut are constructed of high grade machined aluminum.



97 Series/MIL-C-5015 - A medium heavy weight, low cost, general duty and non-environmental connector. Both offer a variety of five mounting styles and nineteen shell sizes. These connectors also feature solder or crimp termination. UL and CSA certified.



R-Line Series - A DIN43652 Rectangular Style Industrial Connector. Features heavy die-cast aluminum housings that are manufactured in either top or side entry designs. Connector housings feature positive locking latches for rapid mating of the plug and receptacle.



MIL-C-26482 - A medium size cylindrical connector featuring quick bayonet coupling, crimp, solder, or printed circuit board termination. It offers seven mounting styles and ten shell sizes.



MIL-C-38999 - A lightweight connector featuring high contact density, quick positive coupling, and environmental resistance.



AC Threaded - Latest development in the MIL-C-5015 family. This connector features black zinc alloy plating and is available in five shell styles and nine shell sizes. Rated to 500 mating cycles minimum.



AC-B Bayonet - A rugged connector featuring reverse bayonet coupling. This connector features black zinc alloy plating and a variety of backshell options.

Amphenol Industrial

AMPHENOL CORPORATION

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