

Ruggedized

Train Line Connectors

Demanding Transportation Applications

Winchester Interconnect designs and manufactures train line connectors, cable assemblies, and integrated junction boxes. With industry-standard connectors and customizable solutions, let Winchester help with your most challenging applications.



27 Point Series

Passenger Rail & Freight



CPA-27 Jumpers

Ganged, Multiport 50 Ohm and 75 Ohm interconnects in multiple micro-miniature and sub-miniature interfaces as well as power, signal, and combinations of these types.



CPA-27 Jumper (COMM)

Subminiature high-frequency connectors with push-on interface used in PCB-to-PCB or Cable-to-PCB applications.



CPA-27 Jumper (MU)

The MU jumpers are found on freight trains where only traction and dynamic brake signals are needed.

MU's are used:

- Locomotives are coupled together
- Cab car and locomotives
- Locomotives or power cars are placed at opposite ends of train

CPA-27EJ Safety Ejector Handle

Safely remove 27 Point jumpers from hard to reach areas. Plug jumpers can be ordered with an ejector lever to allow ease of removal from receptacles. By utilizing a heavy-duty cam action ejector, there are no springs that wear, corrode or freeze.

27 Point Train Line Assembly Specs

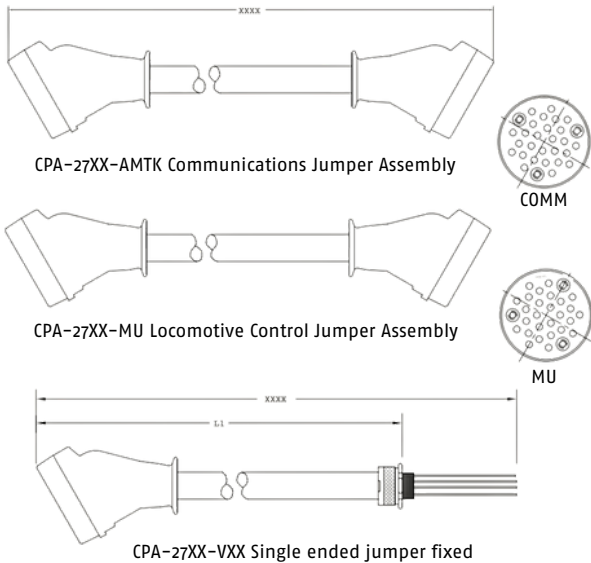
- Operating 74 VDC nominal voltage (ungrounded)
- Tolerant to flying debris, water and ice at up to 125 mph
- Temperature range: -40F to 140F (-40C to 60C)
- Relative humidity: 5% to 100%
- Receptacle housing and jumper head material aluminum alloy
- Manufactured to meet:
 - AAR-S-512
 - APTA RP-E-019-99
- Intermateable with other major brands
- Each assembly is 100% tested for IR and hipot

27 Point Series

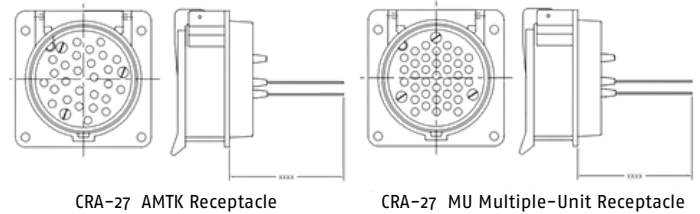
Passenger Rail & Freight

CPA Jumper Assembly

Plug Assembly with Female Contacts



Receptacles with Male Contacts



27 Point Performance Specifications

- Operating Temperature: -40°F to 140°F (-40°C to 60°C)
- Electrical Rating: 30 amps 600V
- Dielectric Strength: 1000 volts RMS
- Housing Material: Aluminum alloy
- Contact Mating Force: 54+/-10lbs

Cover Kits & Accessories



CRA-H-2L-XX-K Cover Kit with Latch

Replace any 27 Point cover in the color of your choice and include a latch for jumper assembly support.



CPA-42S-K Socket Contact Kit

Replacement socket contact with grommet.

CRA-42S-V01 Pin Contact Kit

Replacement pin contact with grommet.

Cable & Wire Protection for Longer Usage

All 27 Point wired assemblies feature grommets for each contact to prevent water intrusion and contaminants from entering into the cable and wires. Individual contact with grommet are highly recommended for field replacement.

CRA-42BS Multi-Contact Band

Reduce downtime without replacing the entire pin contact with the field-replaceable multi-contact band. The unique multi-contact design provides reliable electrical engagement.



CRA-H-2-Kit Standard Cover Kit

Replace standard 27 point covers easily without replacing the entire receptacle housing.

CB 2-Pole Battery Chargers

Locomotive

Charge up locomotive batteries with Winchester's battery chargers. Designed to assure trouble-free battery charging and air conditioning standby service for railroad passenger cars and made to last with corrosion-resistant cast aluminum housing and electrical insulation between contacts and housing for watertight encapsulation.

Available in 3 different configurations to adapt to your locomotive battery wiring:

2-Pole Coaxial

2-Pole Coaxial Reverse Polarity

2-Pole Parallel

Electrical Specifications

- Tolerates high AC test for 1 minute of 1000 VAC
- Rated for 200 amperages, 250 VAC (125 VDC) RMS
- Failure rate of less than or equal to 0.005 failure per locomotive year (F/LY) over its lifetime
- Pin contacts are self-aligning



CB11/CB12 – 2 Pole Coaxial

- Dead pin front on battery charger plug
- Ground contact breaks last when unmating



CB11/CB12 – 2 Pole Coaxial Reverse Polarity

- Dead pin front on battery charger plug
- Ground contact breaks last when unmating
- Plug, receptacle and insert assembly marked in red color



CBCP – 2 Pole Parallel

- CBCP connectors are indexed so the battery charging cables cannot be mated in reversed position.

480V Head End Power Series



480V HEP Train Line Assembly Specs

- Operating voltage: 480 VAC 3-phase (ungrounded)
- Operating amperage: 60 Hz ASTM Class M copper wire stranded cables
- Tolerant to flying debris, water, and ice at up to 125 mph
- Temperature range: -40F to 140F (-40C to 60C)
- Relative humidity: 5% to 100%
- Compliant to:
 - Amtrak D77-24
 - APTA RP-E-015-99
 - APTA RP-E-016-99
 - APTA RP-E-018-99

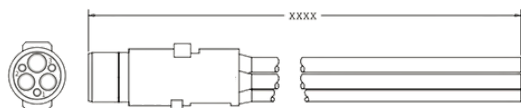


MRA-H Receptacle Housings

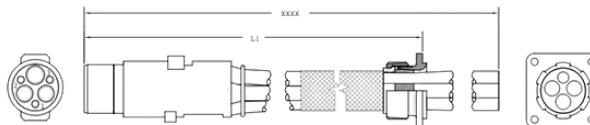
Our housing receptacles are constantly exposed to extreme weather. That's why they are made of aluminum alloy and use polyester powder paint. Find them on locomotives, rail cars, and wayside equipment.

480V Head End Power Series

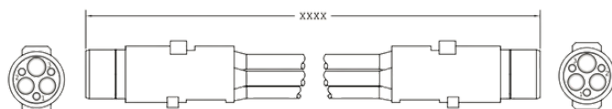
MPA Series Jumper Assembly – Plug Assembly with Female Contacts



MPA-1 Single ended jumper assembly (fixed)

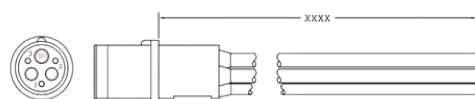


MPA-1SR Single ended jumper assembly (fixed with strain relief)

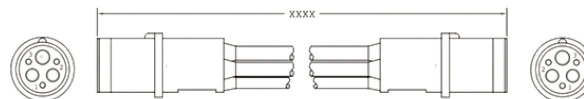


MPA-2 Double ended jumper assembly (portable)

MRA Series – Receptacle Assembly with Male Contacts

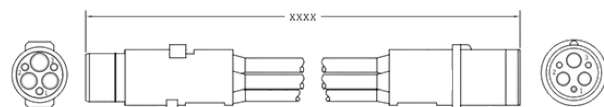


MRA-1 Single ended (fixed)



MRA-2 Double ended (portable)

MPRA Series Jumper Assembly – Plug/Receptacle Assembly with Female/Male Contacts



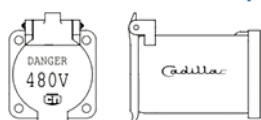
MPRA-2 Double ended jumper assembly (portable)

MPA/MRA-MPRA Performance Specifications:

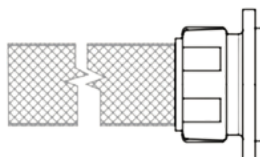
Amtrak D77-24 & APTA RP-E-016-99

- Operating temperatures: -40°F to 140°F (-40°C to 60°C)
- Electrical rating:
 - Power Contacts: 600 VAC, 400 amperes
 - Control contacts: 600 VAC, 40 amperes
- Dielectric strength: 2000 V rms
- Connector body material: DuPont Hypalon Rubber
- Mating/unmating forces: 70 lbs. maximum – 30 lbs. minimum
- Contact shock: Mated connector pairs shall withstand a 6' drop onto a concrete surface
- Watertightness & weather proofness: The mating of cable assemblies should provide a connection which is weatherproof when exposed to the conditions described in APTA RP-E-016-99 Section 4.5.

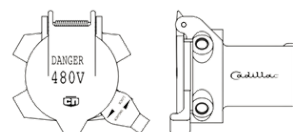
Receptacle Housings



MRA-H Receptacle housing



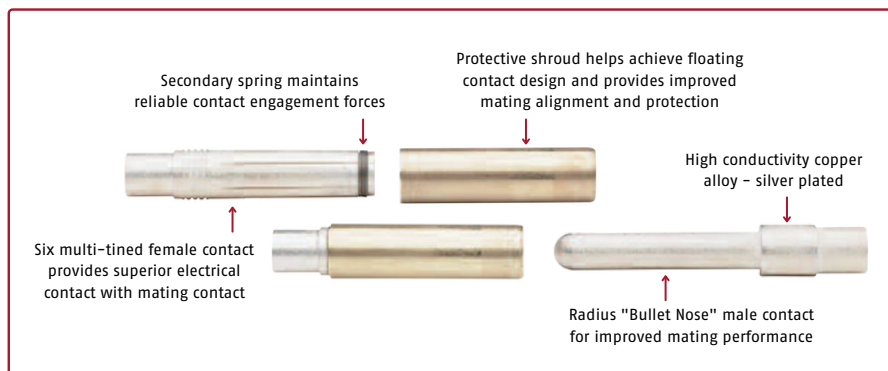
MPA-SR Cable attaching device for strain relief



MRA-BH 480V Breakaway housing

480V Head End Power Series

480V HEP Power Contact



Control Circuit Adapter MRR-AMTK

Use when you have two double-ended plug jumpers and need to close the loop on the end of a train.



MRA-H-3 Standard Receptacle Cover

Our housing receptacles are constantly exposed to extreme weather. That's why they are made of aluminum alloy and use polyester powder paint. Find them on locomotives, rail cars and wayside equipment.



MRA-H-3L Raised Latch Receptacle Cover

Order just the cover for your replacement needs and fits any 480V receptacle housing.



Breakaway Receptacle Housing MRA-BHAW

Lock-in and prevent jumper assemblies from being pulled out from a receptacle housing with the breakaway housing.



Portable Control Loop Jumper MPA-2-XXX-Y-V79

Use this jumper to close the loop on your locomotive.



Locking Clamp HSMRA-7

Keep large-diameter jumpers mated with the new locking clamp.

480V Head End Power Series



Standard Cover Kit MRA-H-V37

A standard replacement cover kit with cover, spring, pin, gasket, and clips is available.



Raised Latch Cover Kit MRA-H-3L-K

A replacement cover kit with the raised latch, pin, gasket, o-ring, and clips is available.



Cable O-Ring MPA-4-OR

Order a replacement o-ring by itself to use with the raised latch cover.



Cable Strain Relief MPA-SR

Attach this strain relief on a single-ended jumper to where you need it.



Field Repairable Receptacle Connector MRA-R-A

A repairable receptacle connector head in red with pin contacts is available for use with existing 480V jumper cables.



Field Repairable Plug Connector MPA-R-A-Y

A repairable plug connector head in yellow with socket contacts is available for use with existing 480V jumper cables.



Field Repairable 480V Series

A low pressure version of our overmolded 480V train line series is available for quick in-field installation and is recommended for testing and non-passenger use.