



High Voltage Couplers • Up to 35 Kva



From our original 8-pitch housing to the industries best no thread connectors; we have a high voltage (HV) connector that will fit your needs. All TJB HV couplers feature a durable aluminum housing with a solid polyester insulator plate and your choice of EP rubber or 100% virgin molded PTFE insulating tubes. Our unique cable entrance allows TJB couplers to meet IP 67 standards for dust and water exclusion even when the cable is out of round or under sized. With contacts tested to 800A DC and able to accommodate conductor sizes as small as #10 and as large as 500MCM with a cable diameter of 3.75" means no matter what your use case is, our HV couplers will fit your needs.



WHY PAY MORE FOR PTFE?

PTFE has many properties that make the lifetime ownership costs lower than rubber in most situations:

- **NONSTICK** means coupler cleaning requires little more than a damp cloth.
- **INERT** there are very few chemicals that can react with or damage PTFE, so acidic mine environments do not decrease coupler life.
- **HYDROPHOBIC** PTFE does not absorb water like rubber so dielectric strength is not compromised in damp environments.
- **RIGIDITY** the stiffness of PTFE requires less cable training to maintain contact alignment during installation.
- **NO TRACKING** tracking is caused by the slow breakdown of an insulator due to high voltage exposure; while you may see a black path form on PTFE insulators, from arcing on dirt, the black path is **NON-conductive** and simple cleaning will bring the insulator back to 100% usability.



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CHOOSING A THREAD PITCH

NO-THREAD. Since TJB introduced the first no-thread couplers they have grown in popularity and are the most frequently ordered closure type. The no-thread connectors have become so popular because they solve almost all the issues associated with other closure types. No-thread couplers use a pin and slot design that goes from open to closed in as little as 90 degrees. Detents at the end of the slot provide a positive indication of coupler closure and also prevent decoupling due to vibration. Unlike conventional threads the TJB no-thread design is self-cleaning, avoiding the prolonged downtime and damaged parts resulting from jammed threads. Kits to convert TJB and NON-TJB couplers to no-thread are available and take only a few minutes to install.

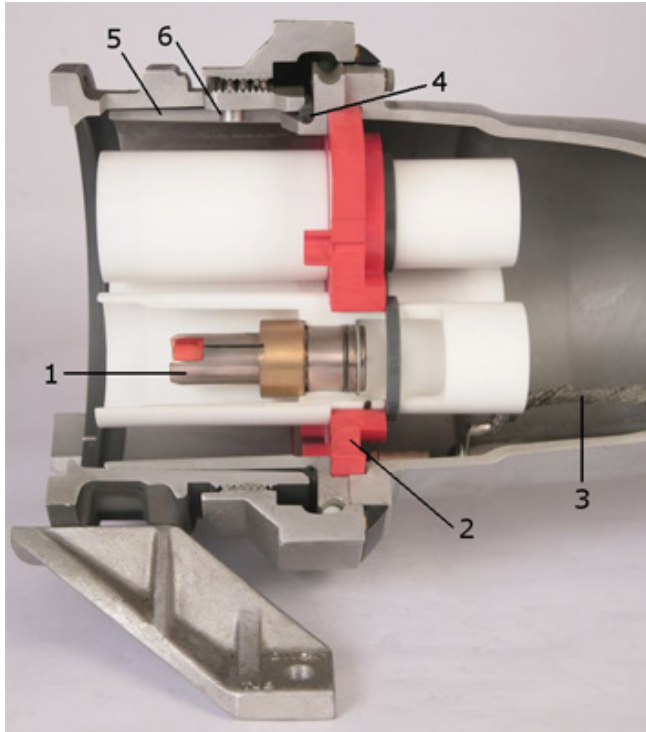


4-PITCH. 4-Pitch is the best option when a threaded coupler is required, with a blunt start and a double thread design, TJB 4-pitch couplers virtually eliminate the possibility of cross threading and thread roll over while also decreasing the number of turns required to mate the couplers. All TJB HV couplers come with a ball bearing mounted floating nut. The ball bearings reduce the intrinsic drag and provide a longer wear life in frequently coupled connectors. The floating nut also allows for the plug to be inserted into the socket before the threads are engaged enabling faster connections and decreasing the likelihood of insulator damage.



8-PITCH. 8-Pitch is only recommended to legacy operations where conversion to 4-pitch or no-thread is not an option. While not an ideal connection type TJB has taken several steps to reduce the problems that can occur with 8-pitch couplers. The plug nuts on 8-pitch couplers are fitted with a stainless steel thread to prevent galling, and as with the 4-pitch a blunt start thread provides cross threading protection and creates a more durable first thread.

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STANDARD FEATURES

THAT SET US APART FROM THE COMPETITION

- TJB phase and ground contacts are made of solid copper and silver plated to resist corrosion. Male contacts have split noses and contain a silicone button that expands when heated, ensuring high contact pressure under heavy loads without increasing the force required to connect and disconnect the couplers.
- Solid polyester insulating plate allows for a double O-ring seal to eliminate water seepage and increase the stability of the ground and ground check contacts.
- Aluminum housing is grounded internally with a tinned copper braid to guarantee high conductivity and provide greater flexibility reducing installation effort.
- A beveled edge on the plug cover and socket body mate to create a dust and water tight seal independent of the threads, precluding leakage as the threads age and wear.
- Overlapping metal housings allow for coupler engagement by hand with no special tools and no risk of damage. It also allows couplers to be more compact and provides shielding to the user during coupling and uncoupling.
- A pin on the female housing aligns with a slot on the male housing preventing out of phase connections and providing rotational alignment.

TJB CABLE ENTRANCE

A cone shaped rubber molding is placed over the opening of the end-bell with an end casting acting as a bead lock to maintain the seal. The point of the cone is molded or trimmed to fit the specified cable size. The elasticity of the material is enough to prevent water and dust intrusion but an additional hose clamp is provided to to increase the seal pressure. The advantage of this method is that it allows for a tight seal on out of spec, out of round, and even flat cable. Stress relief is provided by two solid aluminum clamps sized for your cable and bolted to the end casting. The clamps deliver evenly distributed pressure on the circumference of the cable and flared ends on the cable side of the clamp remove the possibility of





High Voltage Couplers Coupler Selection Guide

COUPLER SELECTION GUIDE

SAMPLE CATALOG NUMBER

S F L N T ??

HOUSING TYPE

P = Plug (Rotating Nut/Collar)
S = Socket (External Thread)

MOUNTING

L = Line/Cable Mounted
G = Gear/Box Mounted

CLOSURE TYPE

F = Fine Thread (8 Pitch)
C = Coarse Thread (4 Pitch)
N = No Thread (4 Pitch)

CONTACT GENDER

M = Male
F = Female

INSULATOR

H = Hard Rubber
T = PTFE

Standard couplers include: one ground check, dust cover, threaded phase contacts, ground contacts and shield terminating materials where applicable.

OPTIONAL FEATURES

- 1A - Set screw contacts
- 1B - 500mcm phase contacts
- 2A - 8kv interlock cover
- 2B - 15kv interlock cover
- 2C - 15kv & 25kv ptfе interlock cover
- 3/3A - Kirklock with cover
- 3B - Padlock provision
- 4/4A/4B - Additional ground checks
- 5 - Large end bell for cable over 3
- 5A - Large bell for cable under 3
- 5B - Large bell w/extension for cable over 3
- 5C - Large bell w/extension for cable under 3
- 6 - Four hole foot
- 8A - Fiber optic exit gland
- 9/9A - Hard anodized and/or epoxy paint

25 KV AVAILABLE
Refer to Factory



High Voltage Drawings

PDF drawing files shown below are "hyperlinked" to download from the SMS Connectors website at www.smsconnectors.com.

PLEASE NOTE: BEST RESULTS ARE OBTAINED BY DOWNLOADING THIS CATALOG PDF FILE.

Should you experience the following hyperlinks ineffective from within a web browser, right click with your mouse (Control + mouse click on Mac) to prompt the dialog prompt to save this file to you computer.

[PMG-CH.pdf](#)

[PMG-CT5D.pdf](#)

[PMG-CT.pdf](#)

[PMG-FH4.pdf](#)

[PMG-FH5D.pdf](#)

[PMG-FH.pdf](#)

[PMG-FT.pdf](#)

[PMG-NH4.pdf](#)

[PMG-NH.pdf](#)

[PMG-NT.pdf](#)

[PML-CH5.pdf](#)

[PML-CH.pdf](#)

[PML-CT5.pdf](#)

[PML-CT.pdf](#)

[PML-FH4.pdf](#)

[PML-FH.pdf](#)

[PML-FT.pdf](#)

[PML-NH1A.pdf](#)

[PML-NH5.pdf](#)

[PML-NH.pdf](#)

[PML-NT5.pdf](#)

[PML-NT.pdf](#)

[SFG-CH2B.pdf](#)

[SFG-CH4.pdf](#)

[SFG-CH6.pdf](#)

[SFG-CH.pdf](#)

[SFG-CT2B.pdf](#)

[SFG-CT2C.pdf](#)

[SFG-CT.pdf](#)

[SFG-FH2A.pdf](#)

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[SFL-NT5.pdf](#)

[SFL-NT.pdf](#)



High Voltage Parts

CONTACTS

| | |
|----------------|--|
| B100Y-COMP | Male Phase and Ground, includes two #173 and one #228 |
| B100Y-6-COMP | Threaded Male Phase Contact. Includes one #173 and one #228 |
| B100Y-6-8-COMP | Threaded Male Phase Contact Assembly for 500 MCM |
| B100Y-6-9-COMP | Male Phase with Set Screws |
| B100Y-9-COMP | Male Ground Contact with Set Screws |
| 101-COMP | Contact - Female Phase - Copper includes two #173 and one #228 |
| 101-8-COMP | Female Phase Contact Assembly for 500 MCM |
| 101-6-COMP | Contact-Female Phase-Threaded Copper includes one #173 and one #228 |
| 101-6-9-COMP | Female Phase with Set Screws |
| 102 | Spacer-Male Non-Threaded Phase Contact |
| 129 | Contact - Male Interlock Ground |
| 130 | Contact - Female Interlock Ground |
| 135 | Ground Check Solder Pot |
| 137 | Contact - Female Interlock Ground Check |
| 140 | Contact - Male Interlock Ground Check |
| 143-COMP | Contact - Male Ground - Copper includes two #173 retaining rings and one #228 O-ring |
| 143-9-COMP | Female Ground Contact Set Screws |
| 144 | Spacer - Female Non Threaded Phase Contact |
| 173 | 1-1/4" Retaining Ring |
| 173S | Stainless Steel 1-1/4" Retaining Ring |
| 228 | Contact Compound Seal |
| 240-COMP | Male Contact Nut Phase |
| 241-COMP | Female Contact Nut Phase |

CLAMPS

| | |
|-----------------------|--|
| 120A - (Specify Size) | Cable Clamp (to 3" Cable Diameter); Specify size |
| 121A - (Specify Size) | Cable Clamp (3.01" to 4.25" cable diameter) specify size |

COVERS

| | |
|------------|--|
| 113A-COMP | Socket Dust Cover - 8P includes #169 O-ring |
| 113D-COMP | Socket Dust Cover - 4P includes #169 O-ring |
| 113DI-COMP | Socket Cover - 4P-Interlock includes #169 O-ring |
| 113I-COMP | Socket Cover - 8P Interlock includes #169 O-ring |
| 215-COMP | No-Thread Socket Dust Cover includes #169 O-ring |
| 116A-COMP | Plug Dust Cover 8P |
| 116C-COMP | Plug Dust Cover - includes three #185-R pins |
| 116D-COMP | Plug Dust Cover - 4P-Q |

MISC.

| | |
|---------|--|
| 123 | Cable Seal (to 3" cable diameter) |
| 126P | Neoprene Gasket - Plug Switchgear Flange |
| 126S | Neoprene Gasket - Socket Switchgear Flange |
| 131 | Waterseal Gasket |
| 138A | Cable Seal, C2 type (to 4.25" jacket diameter) |
| 151 | Extruded Dust Seal |
| 184-SET | Nylon Balls Set |
| 206 | Neoprene Gasket for BCE |
| 227 | Insulator Compound Seal |
| 244-3 | Contact Wrench - FOR THREADED CONTACTS |
| 200B | Degreasing Solvent - includes 2 oz. Solvent wiping cloth and Abrasive Paper |
| 200C | Silicone Lube |
| 216-B15 | Stress Relief Tape - 3/4 x 15' roll |
| 219-B2 | Kit: Materials for 3/c "Stress Relief" tape type termination, cable size through 4/0 8KV includes stress control, HV insulating and PVC tape |



High Voltage Parts

ASSEMBLIES

| | |
|--------------|--|
| 109B/COMP | Socket Body - 8P includes one #131 waterseal gasket |
| 109C/COMP | Socket Body - No-Thread-includes 3 #185-R pins and 1 #131 water-seal gasket |
| 109D/COMP | Socket Body - 4P includes one #131 waterseal gasket |
| 110 | Socket Foot, 1 piece type |
| 110AR | Socket Foot, Right |
| 110AL | Socket Foot, Left |
| 111C1-COMP | End Bell (to 3" Cable Diameter) |
| 111C2-COMP | End Bell (to 4.25" Cable Diameter) |
| 112A | End Casting-C1 Type (to 3" Cable Diameter) |
| 112AS/COMP | End Casting - Split C1 Type (to 3" Cable Diameter) |
| 114A-COMP | Plug Body includes #169 O-ring |
| 118-COMP | Plug Switchgear Flange includes one #131 waterseal gasket |
| 122-COMP | Socket Switchgear Flange |
| 128P-COMP | Interlock Plate - 8KV plug includes 1 #130 and 1 #137 (For couplers with MALE phase contacts) |
| 128S-COMP | Interlock Plate - 8KV socket incl. 1 #129 and 1 #140 (For couplers with FEMALE phase contacts) |
| 128-9-COMP | Interlock Plate - Polyester includes plate only (order contacts separately) |
| 132-AL/COMP | Threaded Ring - ALUMINUM THREADS, includes dust seal #151 |
| 132-SS/COMP | Threaded Ring - 8P with stainless insert includes dust seal #151 |
| 132-OSS/COMP | Threaded Ring with stainless insert non-TJB |
| 132D/COMP | Threaded Ring - 4P includes dust seal #151 |
| 139A | End Casting, C2 type (to 4.25" jacket diameter) |
| 139AS/COMP | End Casting, Split C2 type (to 4.25" jacket diameter) |
| 139B | End Casting, C2 type (to 3.00" jacket diameter) |
| 139BS/COMP | End Casting, C2 type (to 3.00" jacket diameter) |
| 152 | BCE Flange (to 3" cable diameter) |
| 153 | BCE Flange (to 4.25" cable diameter) |
| 193P-COMP | Interlock Plate - 15KV plug includes 1 #130 and 1 #137 (For couplers with MALE phase contacts) |
| 193S-COMP | Interlock Plate - 15KV socket incl. 1 #129 & 1 #140 (For couplers with FEMALE phase contacts) |
| 211F | Housing Adaptor with Foot Lugs |
| 217THD/COMP | No-Thread Ring includes #151 dust seal |

REVERSERS

| | |
|-----------|--------------------------------|
| CCCR-FS1T | Female coupler reverser 8P TFE |
| CCCR-FS2T | Female coupler reverser NT TFE |
| CCCR-FS3T | Female coupler reverser 4P TFE |
| CCCR-MP1T | Male coupler reverser 8P TFE |
| CCCR-MP2T | Male coupler reverser NT TFE |
| CCCR-MP3T | Male coupler reverser 4P TFE |

CONVERSION KITS

| | |
|----------|--|
| CTP | 4-P Plug conversion kit |
| CTS | 4-P Socket conversion kit |
| CTS110LR | 4-P Socket conversion kit with feet |
| FTP | 8-P Plug conversion kit with aluminum ring |
| FTPSTAF | 8-P Plug and Socket conversion kit with feet and aluminum ring |
| FTS110LR | 8-P Socket conversion kit with feet |
| NTPSTF | NT Plug and Socket conversion kit with feet |
| NTP | No-Thread Conversion Kit for Plug |
| NTS | No-Thread Conversion Kit for Socket |
| NTPST | No-Thread Conversion Kit for Plug and Socket TJB |

INSULATORS

| | |
|------------|-------------------------------------|
| 200-104BHS | Female Hard Tube Insulator Assembly |
| 200-105BHS | Male Hard Tube Insulator Assembly |



High Voltage Parts

| | |
|----------|--|
| 300-104S | Female Teflon Insulator Assembly |
| 300-105S | Male Teflon Insulator Assembly |
| 522/COMP | Male Ground Check Assembly for Solid Insulator |
| 523/COMP | Female Ground Check Assembly for Solid Insulator |
| 520 | Insulator O-ring |

HARDWARE

| | |
|----------|--|
| 167 | 3/8-16 x 3" Hex Head Machine Screw |
| 168 | 3/8-16 Hex Lock Nut |
| 169 | O-ring |
| 170 | 1/8" x 1/2" Roll Pin |
| 171D | 2-1/2' attaching cable for Cover |
| 172 | 5/16-18 x 7/8" Hex Head Capscrew |
| 173 | 1-1/4" Retaining Ring |
| 173S | Stainless Steel 1-1/4" Retaining Ring |
| 174A | 1/4-20 x 1-3/4" Hex Head Capscrew |
| 177 | 1/4-20 Hex Brass Jam Nut |
| 178 | 7/16" Retaining Ring |
| 179A | Solderless Terminal #10-12 |
| 179B | Solderless Terminal #8 |
| 180 | 3" Ground Check Insulating Tube |
| 181 | 1/4"-20 x 5/8" Hex Head Capscrew |
| 182 | 1/4"-20 x 1" Hex Head Capscrew |
| 183 | 1/4"-20 x 1-1/4" Hex Head Capscrew |
| 185J | Autalign Pin |
| 185-R | No-Thread Pin - Rolling Type (each) |
| 186A | Plug 132, 132D or 217THD |
| 187 | SS Seal Clamp (to 3.00" jacket) |
| 187A | SS Seal Clamp (3" to 4.25" jacket) |
| 190A | 5/16" Lockwasher |
| 190-COMP | 5/16-18 x 5/8" Ground Screw and Lockwasher |
| 191 | Ground Strap with Terminal (Includes 190 & 190A) |
| 199 | #2 x 3/16 Drive Screw |
| 202 | 1/4" Lockwasher |
| 204 | 1/4"-20 x 1 Flat Head Machine Screw |
| 207P | 1/4"-20 x 1/2 Button Head Socket Capscrew |
| 517 | 7/16 Ground Check Retaining Ring |
| 519 | Ground Check O-Ring |
| 520 | Insulator O-Ring-Solid Insulator |
| 560 | 1/4"-20 Slim Hex Steel Lock Nut |
| 561 | 1/4"-20 x 1-1/4 Button Head Socket Capscrew |
| 562 | 1/4"-20 x 2 Fillister Head Socket Capscrew |
| 574 | Retaining Ring-PTFE Tube |

COMPOUND KIT

| | |
|-------|--|
| 74-8 | Epoxy compound for filling phase tubes only |
| 75-12 | Re-enterable compound for filling phase tubes only |
| 77-0 | For filling entire end bell cavity |

REPLACEMENT THREADED NUT, PLUG BODY AND O-RING ASSEMBLY

| | |
|-------|--------------------------------|
| 91 | 8 pitch stainless steel thread |
| 091A | 8 pitch aluminum thread |
| 091-2 | No-Thread |
| 091-3 | 4 pitch thread |



High Voltage Parts

INTERLOCK COVERS: ASSEMBLY COMPLETE WITH CONTACTS

For Model: Catalog Number

8 PITCH THREAD 8KV

| | |
|----------|------|
| SFL, SFG | #092 |
| SML, SMG | #093 |
| PFL, PFG | #094 |
| PML, PMG | #095 |

NO THREAD 8KV

| | |
|----------|--------|
| SFL, SFG | #092-2 |
| SML, SMG | #093-2 |
| PFL, PFG | #094-2 |
| PML, PMG | #095-2 |

4 PITCH THREAD 8KV

| | |
|----------|--------|
| SFL, SFG | #092-3 |
| SML, SMG | #093-3 |
| PFL, PFG | #094-3 |
| PML, PMG | #095-3 |

8 PITCH THREAD 15KV

| | |
|----------|------|
| SFL, SFG | #096 |
| SML, SMG | #097 |
| PFL, PFG | #098 |
| PML, PMG | #099 |

NO THREAD 15KV

| | |
|----------|--------|
| SFL, SFG | #096-2 |
| SML, SMG | #097-2 |
| PFL, PFG | #098-2 |
| PML, PMG | #099-2 |

4 PITCH THREAD 15KV

| | |
|----------|--------|
| SFL, SFG | #096-3 |
| SML, SMG | #097-3 |
| PFL, PFG | #098-3 |
| PML, PMG | #099-3 |

15KV WITH PTFE CUPS

| | |
|----------------------|--------|
| SFL, SFG - 8 PITCH | #396 |
| SFL, SFG - NO THREAD | #396-2 |
| SFL, SFG - 4 PITCH | #396-3 |

BCE FLANGE MOUNT CLAMPS

| | |
|---------|--|
| BCE-150 | FOR CABLE UP TO 1.5" IN DIAMETER |
| BCE-175 | FOR CABLE 1.51-1.75" IN DIAMETER |
| BCE-200 | FOR CABLE 1.76-2.00" IN DIAMETER |
| BCE-225 | FOR CABLE 2.01-2.25" IN DIAMETER |
| BCE-250 | FOR CABLE 2.26-2.50" IN DIAMETER |
| BCE-275 | FOR CABLE 2.51-2.75" IN DIAMETER |
| BCE-300 | FOR CABLE 2.76-3.00" IN DIAMETER |
| BCE-325 | FOR CABLE 3.01-3.25" IN DIAMETER |
| BCE-350 | FOR CABLE 3.26-3.50" IN DIAMETER |
| BCE-375 | FOR CABLE 3.51-3.75" IN DIAMETER |
| 265 | BCE FLANGE ADAPTER PLATE WITH 8-5/8" BOLT CIRCLE |



Coupler Options



1A • SET SCREW CONTACTS

Set screw contacts remove the need to solder the cable into the contacts. The cable is secured using two preinstalled bronze Allen head set screws. These contacts are often used for on-site cable installations and they maintain all the standard features and carry the same amp rating as the solder contacts.



1B • 500MCM PHASE CONTACTS

To maintain a proper wall thickness 530MCM contacts require a larger cable end contact than our standard contact. TJB 530MCM contacts fit the standard insulators and have no limitations regarding compatibility. The larger contacts are made with the same silver plated solid copper construction and are fixed in the insulators in the same manner as the standard contacts.



2A • 8KV INTERLOCK COVER

Also called a shorting cover an interlock cover connects the ground and ground check when the cover is in place and allows other outputs on the circuit to be energized without tripping the ground check monitor. Use suffix 2B for 15KV covers.



2B • 15KV INTERLOCK COVER

Also called a shorting cover an interlock cover connects the ground and ground check when the cover is in place and allows other outputs on the circuit to be energized without tripping the ground check monitor. The 15KV cover has a built in rubber insulator to fully enclose the phases in insulating material.



2C • 15KV & 25KV PTFE INTERLOCK COVER

Also called a shorting cover an interlock cover connects the ground and ground check when the cover is in place and allows other outputs on the circuit to be energized without tripping the ground check monitor. The PTFE interlock covers are similar to our rubber 15KV covers but with all the advantages of PTFE, including being an easy to clean hydrophobic material, is not reactive in acidic environments, and does not track when exposed to high electrical stress. Specify 15 or 25KV when ordering cover separately.



3/3A • KIRKLOCK WITH COVER

A Kirklock is a brand of lock that is used as a mechanical interlock to prevent couplers from being opened or covers from being removed when the power is on. All Kirklock equipped couplers come with a dust cover (suffix 3) or an optional weatherproof cover (suffix 3A). Locks can be keyed alike or differently and serial numbers are tracked so future orders can be matched or differentiated.



3B • PADLOCK PROVISION

The padlock provision enables the user to use a standard padlock (not included) to either lock the cover in place or to lock two couplers together. Padlock devices can be used as a self-managed interlock system or for security.



Coupler Options



4/4A/4B • ADDITIONAL GROUND CHECKS

Additional ground checks provide for redundancy in the ground check system. TJB high voltage couplers come standard with one ground but can accommodate two (suffix 4), three (suffix 4A), or four (suffix 4B) total ground checks. In all configurations every ground check makes contact after the phase and ground contacts and breaks contact before the phase and ground contacts, ensuring that there is never an improper signal path.



5 • LARGE END BELL FOR CABLE OVER 3"

Cable over 3" diameter requires the use of our large end bell and cable entrance. Our large end bell is approximately 2" taller than our standard bell and has a larger cable opening resulting in a larger interior volume.

5A • LARGE BELL FOR CABLE UNDER 3"

Our standard will fit cable up to 3" in diameter, but if you need more room we also offer our large end bell with clamps to fit cable sizes smaller than 3".



5B • LARGE BELL W/EXTENSION FOR CABLE OVER 3"

When you have large cable and you want a lot of interior bell space we can provide an additional 4.75" extension with our large end bell. The extension is made of solid aluminum to match the sturdiness of the rest of the coupler housing and attaches with six 1/4-20 bolts to ensure a sturdy water tight fit.

5C • LARGE BELL W/EXTENSION FOR CABLE UNDER 3"

Occasionally when adding multiple extra features to the coupler there is a desire for as much space as possible even with a smaller cable size. For those cases we offer our large bell with a 4.75" extension and clamps that can be sized for even the smallest cables. The extension is made of solid aluminum to match the sturdiness of the rest of the coupler housing and attaches with 6 1/4-20 bolts to ensure a sturdy water tight fit.



6 • FOUR HOLE FOOT

Our standard feet mount the coupler with 2 bolts and are designed to reduce weight and facilitate easier coupler movement, when extra mounting security is preferred we also offer a single piece four hole foot and as the name implies mounts the coupler using 4 bolts. The larger foot attached to the coupler using the same bolts as the standard feet and can be added after the initial sale with no modifications.



8A • FIBER OPTIC EXIT GLAND

For cable with an included fiber optic line that needs to connect to a panel mounted connector or another connector outside of the coupler we can supply an exit gland in the end bell. The exit gland is a compression fitting with a rubber gasket sized to your specific fiber optic cable. We also include a plug sized for the exit gland to maintain a water tight seal even if the fiber optic cable is not in use.



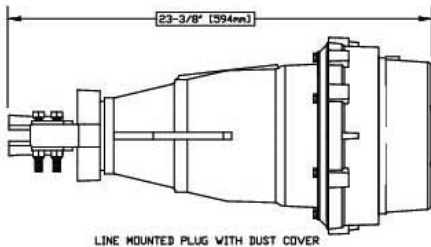
9/9A • HARD ANODIZED AND/OR EPOXY PAINT

Our heavy duty aluminum housings are built to withstand almost all exposure conditions, but there are instances where even more protection is called for. In port operations where couplers are often submerged in or exposed to heavy amounts of salt water it is worthwhile to protect the coupler housing with either a hard anodized (suffix 9), or epoxy paint (suffix 9A) coating to extend the service life of the external parts.

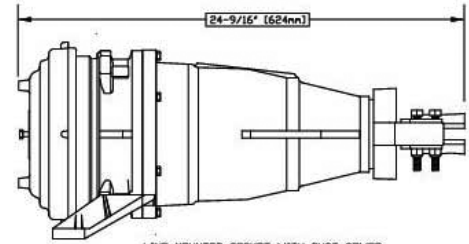


Coupler Dimensions

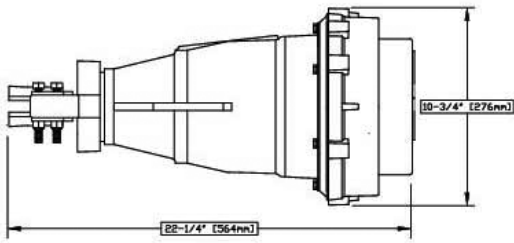
TJB HIGH VOLTAGE LINE MOUNTED NO-THREAD COUPLER DIMENSIONS



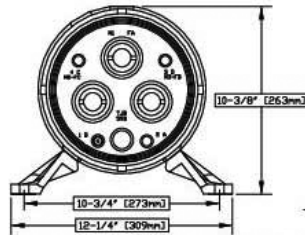
LINE MOUNTED PLUG WITH DUST COVER



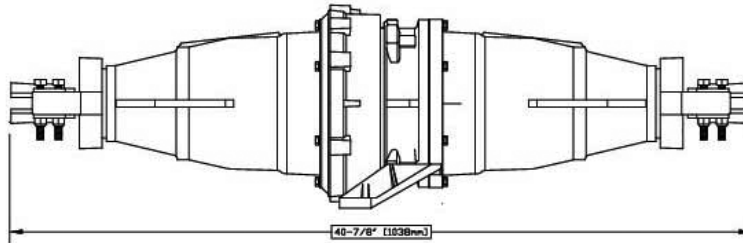
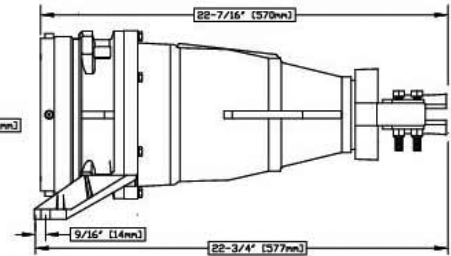
LINE MOUNTED SOCKET WITH DUST COVER



LINE MOUNTED PLUG



LINE MOUNTED SOCKET

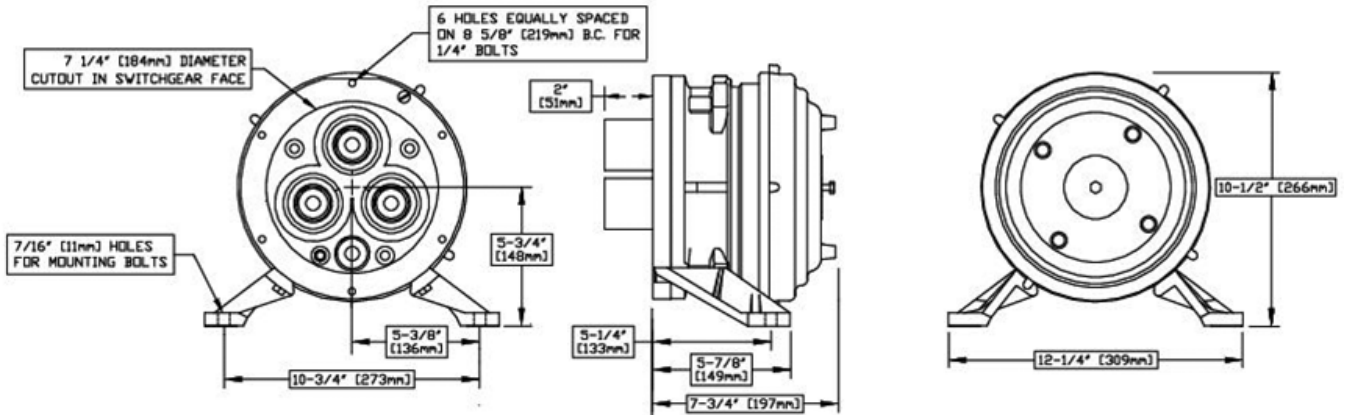


CONNECTED LINE MOUNTED PLUG AND SOCKET

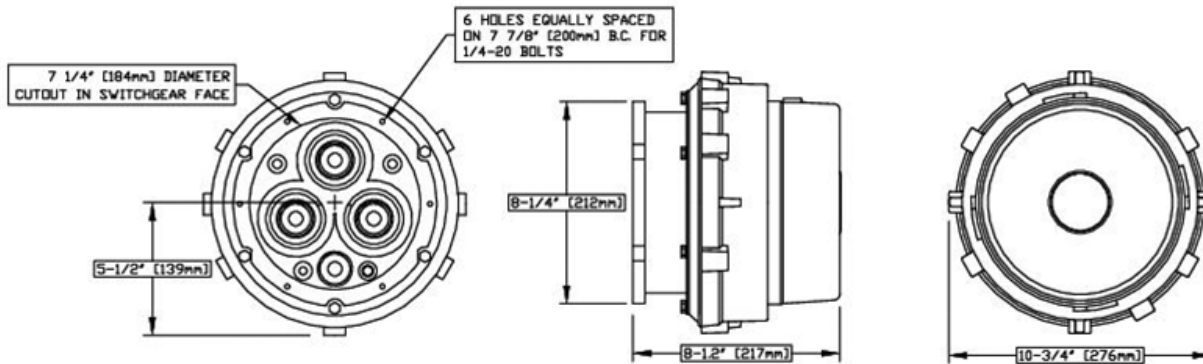


Coupler Dimensions

TJB SOCKET SWITCHGEAR MOUNTED COUPLER DIMENSIONS



TJB PLUG SWITCHGEAR MOUNTED COUPLER DIMENSIONS



PLM • Cable Coupler Selection Guide

PORTABLE CABLE SYSTEMS COUPLERS/PLUGS-RECEPTACLES CABLE COUPLERS IDENTIFICATION & APPLICATION

Basic nomenclature identifies the metallic shell (Plug or Socket) first, the type of contact (Male or Female) second. For switchgear or other non-cable mounted units, the letter G suffix designation is added. Example of the PLM Catalog number system is as listed:

- PMG 415A** Plug, male contacts, switchgear mount, with ground check contact.
- PML 415A** Plug, male contacts, line mount, with ground check contact.
- SFL 415A** Socket, female contacts, line mount, with ground check contact.
- SFG 415A** Socket, female contacts, switchgear mounted, with ground check contact.

PLM CABLE COUPLER SELECTION GUIDE

| | | | | |
|--|--|--|---|---|
| <p>* Thread</p> <p>*Q Prefix PLM Quick Thread style double start Acme thread</p> <p>T Quick Turn Ramp Style</p> <p>B Bolted Quick-Flip</p> <p>X Permissible</p> <p>Blank Standard Thread</p> | <p>Housing</p> <p>S Socket P Plug</p> | <p>Contacts</p> <p>F Female M Male</p> | <p>Mounting</p> <p>G Gear Mount L Line Mount</p> | <p>EXAMPLE</p> <p>Q P M L 4 1 5 A B</p> <p>Quik Thread Plug Male Contacts Line Mount Dura-Tube Insulator One Ground Check Connector Interlock Cover For Plug</p> |
| <p>VOLTAGE CLASS & END BELL SIZE</p> <p>Fiberglass Insulator 475 or 575</p> <p>EPDM Insulator 415 or 515 Dura-Tube</p> <p>Nylon Polymer Insulator 055 X Series Permissible</p> | | <p>Ground Check</p> <p>A One Contact Included AA Two Contacts AAA Three Contacts AAAA Four Contacts</p> | | <p>ADDED FEATURES</p> <p>-B Interlock contacts in cover for plug -BB Interlock contacts in cover for socket -C Kirklock sockets only -D Pan skid mount -L Insulation in plug cover -N Non-interchangeable amperage or voltage index -P Padlock provision socket -R Insulation in socket cover -TF Teflon Insulator -Z Beryllium contacts</p> |
| <p>To Order, Provide:</p> <ol style="list-style-type: none"> Conductor sizes of phase, ground wires, and ground check wire. Overall cable diameter. | | | | |

Applications

- Extending Portable Cables
- Mine Power Centers
- Electric Shovels, Drills, Draglines
- Tunneling Machines
- Transformer Connections
- Barge, Ship-Dock Applications
- Turbine Generators
- Motor Disconnect 600V-15kV to 500 Amp
- Filling Compounds

Features

- Corrosion-Resistant Aluminum
- Electrically Tested Insulator
- Silver-Plated Copper Contacts
- Ground Check System
- Portable Cable Connections
- Switchgear or Equipment Mounting
- Standard Cover Included
- FSD Terminations Included
- Interlock Covers Available

Benefits

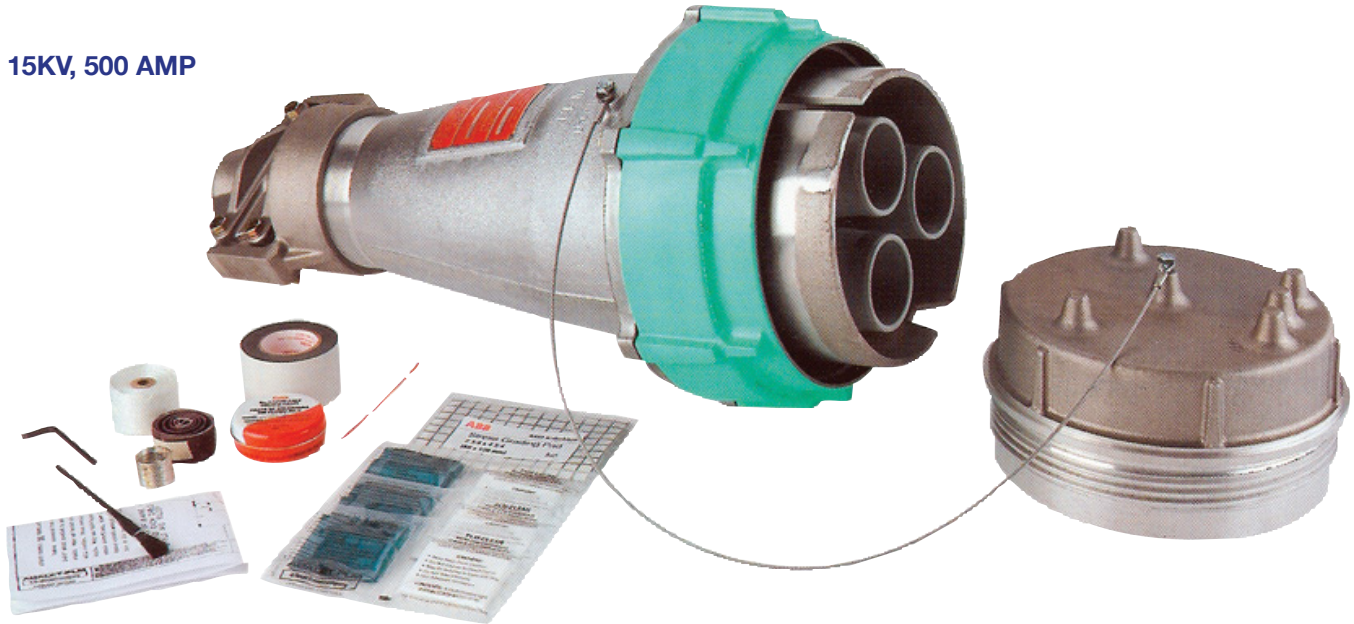
- Physical, Electrical Protection
- Quick, Connect-Disconnect
- Provides Proper Phase Alignment
- Longer Coupler Life
- Entirely Watertight
- Easy Installation

Compliance

- Pennsylvania Bureau of Deep Mine Safety

PLM • 415/515 Series Cable Couplers (Standard EPDM Insulators)

15KV, 500 AMP



OPTIONS AVAILABLE AT ADDITIONAL COST

| Catalog Number Suffix | Additional Options |
|-----------------------|---|
| -A | Ground check circuit contact (1) included |
| -AA | Two ground check circuit contacts |
| -B | Cover interlock for plug |
| -BB | Cover interlock for socket |
| -C | Kirk interlock (key type)-sockets only |
| -E | Electrolytic copper contacts-female |
| -L | Cover/insulator assembly for plug |
| -N | Non-interchangeable amperage or voltage index |
| -P | Padlock provision-socket |
| -R | Cover/insulator assembly for socket |
| -Z | Beryllium contacts-male |
| -TF | Teflon Insulator |

Features

- Corrosion-resistant aluminum
- Rigid, non-breakable EPDM insulators
- 500 Amp contacts
- Portable cable mounting
- Switchgear or equipment mounting
- Standard cover, stress control kit instructions included

Benefits

- Superior electrical and physical protection
- Fewer mating problems
- Quicker installation
- Quick connect-disconnect
- Versatile application

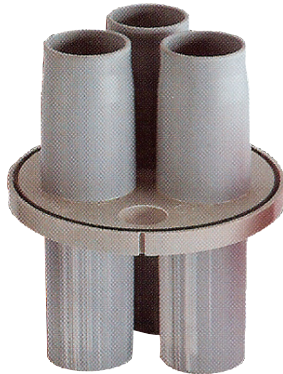
Compound is not included and is not required up to 7,500 volts. Above 7,500 Volts and when compound is required, use COLDPOUR® Compound. Do not use asphalt compound with EPDM style couplers. Compound mandatory for 15kv.

| Catalog Number Standard Threads | Catalog Number ACME Quick-Thread | Catalog Number Quick-Turn | Catalog Number Quick-Flip | Description | Ship Wt. (lbs.) |
|---------------------------------|----------------------------------|---------------------------|---------------------------|--|-----------------|
| SFG 415A PMG 415A | QSFG 415A QPMG 415A | TSFG 415A TPMG 415A | BSFG 415A BPMG 415A | Equipment mounted couplers Socket, Female Contacts Plug, Male Contacts | 34 34 |
| SFL 415A PML 415A | QSFL 415A QPML 415A | TSGL 415A TPML 415A | BSFL 415A BPML 415A | Line-mounted couplers 1.50 - 3.50 O.D. Cables Socket, Female Contacts Plug, Male Contacts | 51 51 |
| SFL 515A PML 515A | QSFL 515A QPML 515A | TSFL 515A TPML 515A | BSFL 515A BPML 515A | 3.50 - 4.50 O.D. Cables Socket, Female Contacts Plug, Male Contacts | 53 53 |

PLM • Electrical Characteristics

415/515 Series Cable Couplers (Standard EPDM Insulators)

15KV, 500 AMP



Electrical Characteristics

- Maximum Voltage Phase-to-Ground
- 1 Minute Dry Withstand AC
- 6 Hour Dry Withstand DC
- 15 Minute Dry Withstand DC
- Corona Extinction level
- Basic Impulse level

No Compound

5.5 KV rms
35.0 KV rms
25.0 KV rms
65.0 KV rms
7.5KV rms
75.0KV crest

With Compound

8.7 KV rms
45.0 KV rms
35.0 KV rms
75.0 KV rms
11.0 KV rms
95.0 KV crest

All tests per IEEE Standard 48-1990

415/515 Series Cable Couplers (Teflon Insulators)

15KV, 500 AMP



Electrical Characteristics

- Maximum Voltage Phase-to-Ground
- 1 Minute Dry Withstand AC
- 6 Hour Dry Withstand AC
- 15 Minute Dry Withstand DC
- Corona Extinction Level
- Basic Impulse Level

No Compound

5.5 KV rms
35.0 KV rms
25.0 KV rms
65.0 KV rms
7.5KV rms
75.0KV crest

With Compound

8.7 KV rms
45.0 KV rms
35.0 KV rms
75.0 KV rms
11.0 KV rms
95.0 KV crest

All tests per IEEE Standard 48-1990

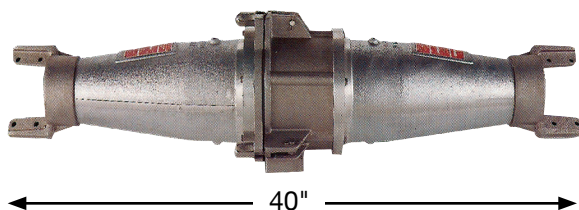
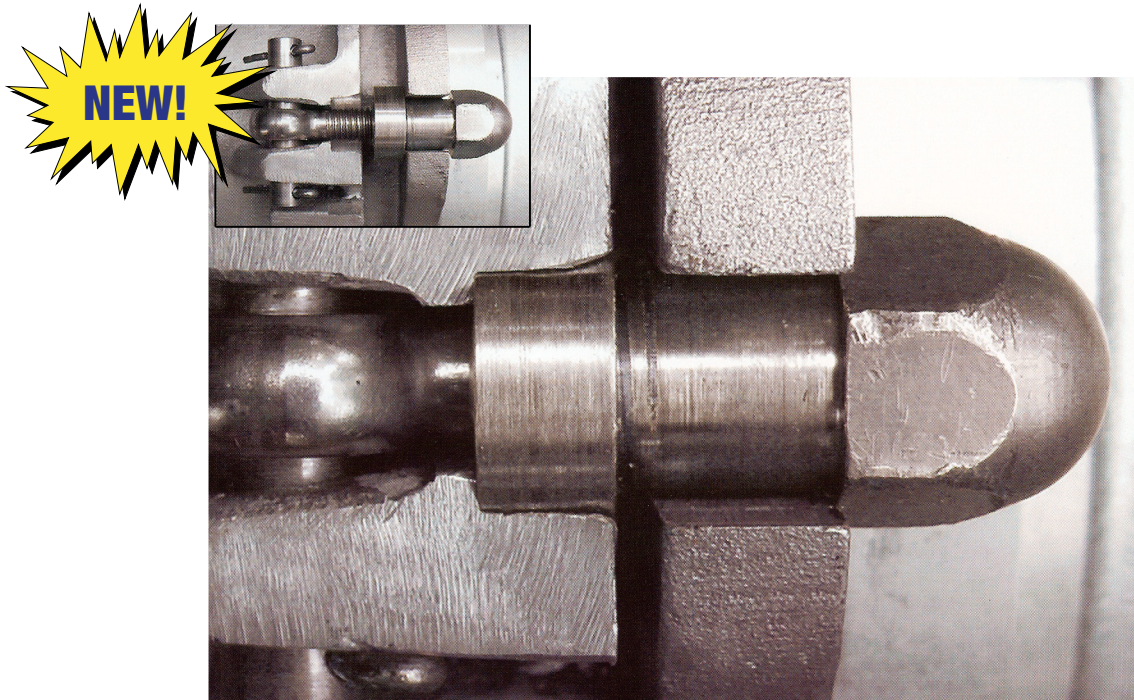
PLM • Connection Options

Quik-Flip Bolted Coupler Connection

PLM's new Quik-Flip connection option is ideal for harsh environments where excessive dirt and other contaminants can seize threads and cause coupler damage. The innovative flip-bolt design utilizes stainless steel bolts that provide a one-second time delay between ground check and phase contact disengagement.

OTHER OPTIONS (AVAILABLE ON 415/515 AND 475/575 SERIES COUPLERS)

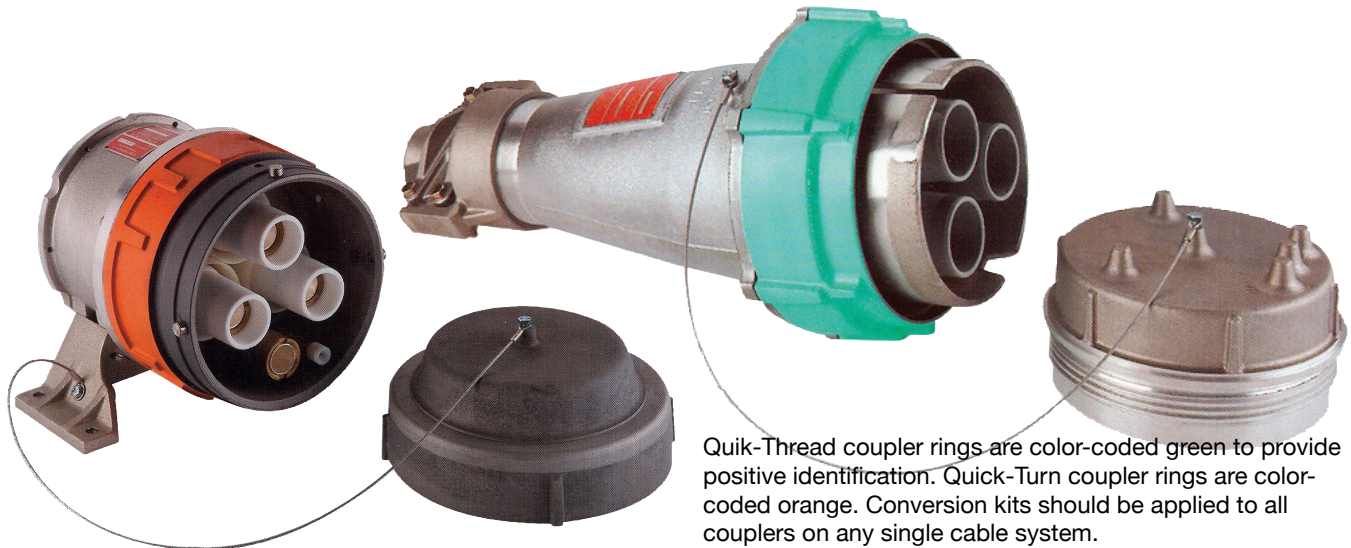
- B-Pitch Thread (standard)
- Quik-Thread Double-Start ACME Thread, (Color-Coded Green. (use prefix "Q" when ordering)
- Quik-Turn Ramp Style Quarter-Turn, Color-coded Orange. (use prefix "T" when ordering)



| Catalog Number Quik-Flip <i>EPDM Insulators</i> | Catalog Number Quik-Flip <i>Teflon Insulators</i> |
|---|---|
| BSFG 415A BPMG 415A | BSFG 415ATF BPMG 415ATF |
| BSFL 415A BPML 415A | BSFL 415ATF BPML 415ATF |
| BSFL 515A BPML 515A | BSFL 515ATF BPML 515ATF |

PLM • Conversion Kits QT

Any cable coupler, line mount or gear mount, may be converted to Quik-Thread, Quik-Turn, or Quik-Flip style. These style couplers will not mate with standard 8 pitch thread couplers; therefore, it is necessary to change the socket body, lock ring, and covers. Select the correct conversion plug or socket kit from the table below. Kits include only the thread parts which must be changed, plus new screws and gaskets.



Quik-Thread coupler rings are color-coded green to provide positive identification. Quik-Turn coupler rings are color-coded orange. Conversion kits should be applied to all couplers on any single cable system.

| Catalog Number Standard Threads | Acme Thread Parts Furnished | Description |
|------------------------------------|---|---|
| QKP-8 TKP-8 BKP-8 | Plug cover and lock ring | Replacement for plug-style couplers. Includes plain cover (without drilling for pilot or ground contacts). |
| QKP-M/F-8 TKP-M/F-8 | Plug cover (drilled for pilot and ground contacts) and left ring | Replacement for plug-style couplers. Includes cover drilled for ground and pilot contacts (male or female), Customer to use existing contacts. |
| QKP-M/F-15 TKP-M/F-15 | Plug cover (drilled for pilot and ground contacts and for cover insulator assembly) and lock ring | Replacement for plug-style couplers. Includes over drilled for ground and pilot contacts (male or female) and for cover insulator assembly. Customer to use existing contacts and cover insulator assembly. |
| QKS-8 TKS-8 BKS-8 | Socket cover and socket body | Replacement for socket-style couplers. Includes over ring to be used with existing cover. Customer to use existing contacts. |
| QKS-M/F-8 TKS-M/F-8 | Socket cover ring and socket body | Replacement for socket-style couplers Includes cover ring to be used with existing cover and cover insulator assembly. Customer to use existing contacts. |
| QKS-M/F-15 TKS-M/F-15 | Socket cover ring and socket body | Replacement for socket-style couplers Includes cover ring to be used with existing cover and cover insulator assembly. Customer to use existing contacts. |

PLM • Accessories

Coupler Contact Insulation (Cleaning Kit)

Compound filling can prevent condensation and provide added protection in wet locations. Asphaltic compounds cannot be used with EPDM insulation's. For those customers who may wish to use compound, ADALET offers a COLDPOUR® compound which does not require heating for installation or removal. Suitable for all couplers. No shrinkage or waste. Approximately 2-hour gel time.

| Catalog Number | Description | Ship Wt. (lbs.) |
|----------------|---|-----------------|
| CP-24 | 1-5/8 gal. 2-part mix for one LINE mount or two GEAR mount couplers, Series 415 or 475 coupler. | 13 |
| CP-50 | 1-7/8 gal. 2-part mix for one LINE mount Series, 515 or 575 coupler. | 14 |
| CP-55 | 2-1/4 gal. 2-part mix for one Suffix-X LINE mount coupler with extended end bell. | 24 |



*Shelf life, 6 mos. Should be installed at normal room temperature.

Coupler Contact Insulation (Cleaning Kit)

Dirt contamination can cause electrical failures. The mating contact insulators can be efficiently cleaned with the PCK100 Cleaning Kit.

Kit consists of 16-oz. aerosol can of non-flammable electrical parts cleaner, bristle brush, two white wiping cloths and polyethylene glove. Ozone-safe spray can contains no fluorocarbons.

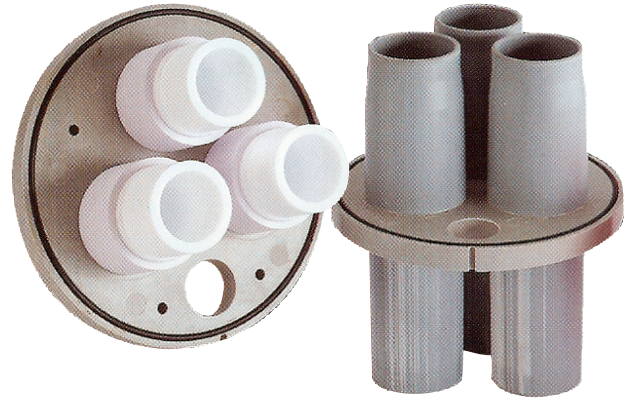
| Catalog Number | Description | Ship Wt. (lbs.) |
|----------------|--------------|-----------------|
| PCK-100 | Cleaning Kit | 1-1/2 |



PLM • Accessories

Replacement Coupler Insulators

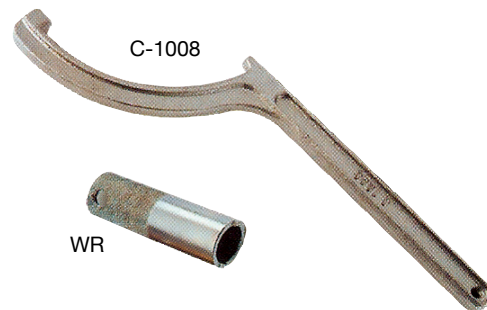
Insulator kits to replace polyester fiberglass and cone seal style insulators. Complete package includes rigid, unbreakable insulator tubes with flame-retardant flange and all necessary conductor and insulation shield terminating material except contacts. May be used with existing PLM Couplers. Add COLDPOUR® for 15kV applications.



| Catalog Number | Description | Ship Wt. (lbs.) |
|----------------|---|-----------------|
| K 415 F | For female line plugs or sockets. | 10 |
| K 415 M | For male line plugs or sockets. | 10 |
| K 415 FG | For female gear-mount plugs or sockets. | 8 |
| K 415 MG | For male gear-mount plugs or sockets. | 8 |

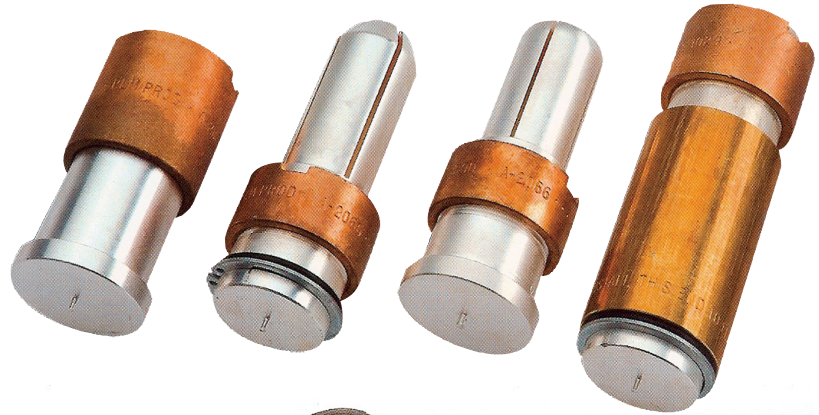
Coupling and Contact Wrenches

| Catalog Number | Description | Ship Wt. (lbs.) |
|----------------|---|-----------------|
| WR | Contact wrench for 415, 515, 475, S75 series. | 1 |
| C-1008 | Coupling wrench (Aluminum) for 415, 515, 475, 575 series. | 1 |
| C-1008-S | Coupling wrench (Steel) for 415, 515, 475, 575 series. | 3 |



PLM • Spare Parts

PLM phase and ground contacts can be modified to meet your specific cable requirements. Simply specify the phase and ground conductor diameter and PLM will machine the parts to your specifications.



PLM couplers and accessories are utilized in some of the world's most extreme environments. PLM offers a full line of spare parts for use in maintaining, rebuilding, or repairing used couplers. All individual coupler parts are available for purchase. Most are in stock (and available for immediate shipment). Contact PLM or your local PLM distributor for price and availability information.



SMS Office Directory

Sales & Technical Support

USA: 618-937-8333
Fax: 847-656-5094

CORPORATE OFFICE

Country Club Road

PO Box 188, West Frankfort, Illinois 62896
Tel: 618-932-2151 • Fax: 618-937-2715

INDIANA

South Illinois St.

PO Box 172, Petersburg, Indiana 47567
Tel: 812-354-9104 • Fax: 812-354-2176

KENTUCKY

2180 Highway 70 West, Central City, Kentucky 42330
Tel: 270-754-9911 • Fax: 270-754-9894

CANADIAN OFFICE - TORONTO

Sales & Technical Support

Canada: 647-808-0965
Fax: 847-656-5094

WWW.SMSCONNECTORS.COM

PLM • Fittings For Metal Clad Cable

FEATURES/BENEFITS

- Slip-on design with no disassembly for easy installation.
- Neoprene bushing for raintight seal.
- Locknuts, bushings and flange gasket included - no additional materials to purchase.
- Flange gasket prevents moisture penetration through threads.
- Made from copper-free aluminum alloy for corrosion resistance.
- Fits broad range - .351-4.62 cable O.D.

APPLICATION

- For terminating metal clad cable

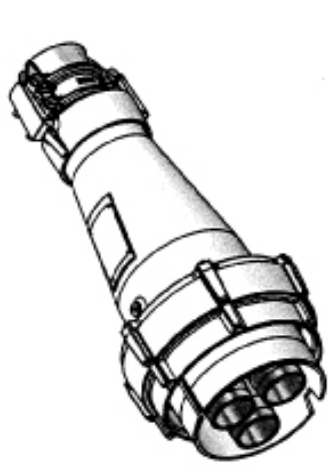
CERTIFICATION



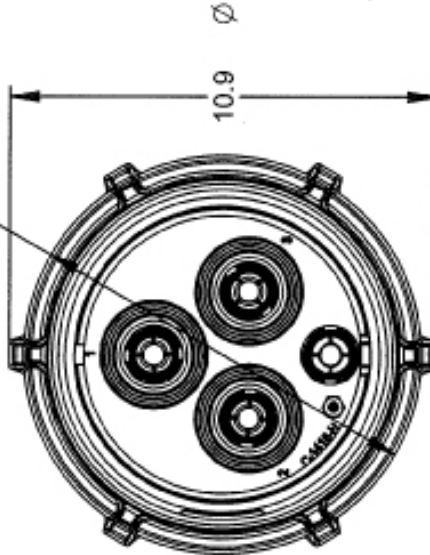
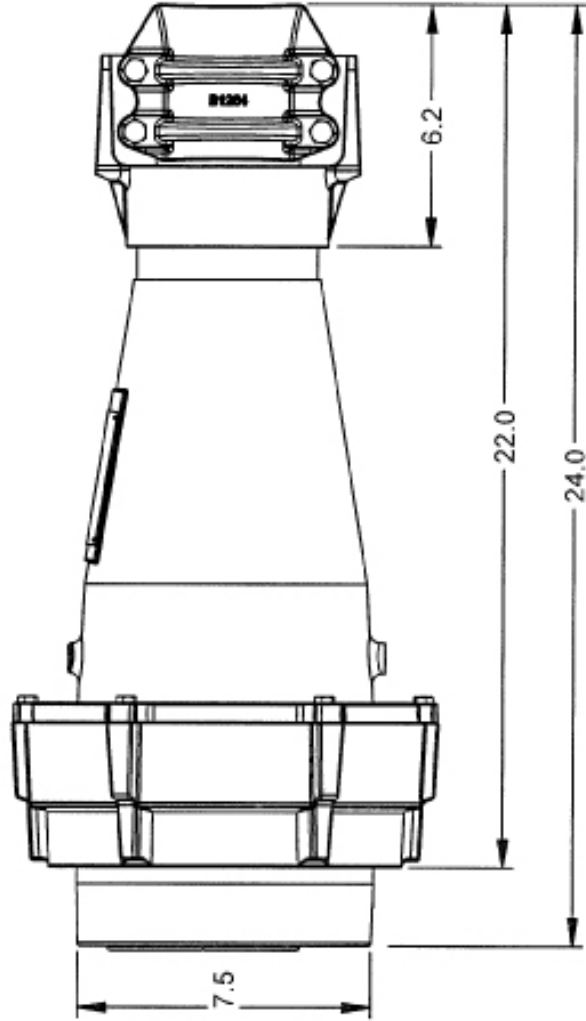
TO ORDER

DETERMINE SATISFACTORY FIT BY CHECKING CABLE DIMENSIONS A AND B. IF CABLE DIMENSIONS DO NOT FALL WITHIN ACCEPTABLE RANGE, CONSULT FACTORY.

| Catalog Number Ship Wt. | A Dia. Over Jacket | B Core Dia. | C Max. Cable Size | D Conduit O.D. | E Fitting Overall | Length (Lbs.) | |
|----------------------------|-----------------------|----------------|----------------------|-------------------|----------------------|------------------|-------|
| JAG 45-0S | .35 | .45 | .61 | 1/2 | 1-5/8 | 2-1/4 | 1/4 |
| JAG 55-05 | .45 | .55 | .61 | 1/2 | 1-5/8 | 2-1/4 | 1/4 |
| JAG 65-05 | .55 | .65 | .61 | 1/2 | 1-5/8 | 2-1/4 | 1/4 |
| JAG 75-05 | .65 | .75 | .61 | 1/2 | 1-5/8 | 2-1/4 | 1/4 |
| JAG 85-05 | .75 | .85 | .61 | 1/2 | 1-5/8 | 2-1/4 | 1/4 |
| JAG 95-05 | .85 | .95 | .61 | 1/2 | 1-5/8 | 2-1/4 | 1/4 |
| JAG 99-07 | .85 | .99 | .81 | 3/4 | 2 | 2-5/8 | 1/3 |
| JAG 107-07 | .92 | 1.07 | .81 | 3/4 | 2 | 2-1/4 | 1/3 |
| JAG 113-07 | .98 | 1.13 | .81 | 3/4 | 2 | 2-1/4 | 1/3 |
| JAG 121-07 | 1.07 | 1.21 | .81 | 3/4 | 2 | 2-1/4 | 1/3 |
| JAG 112-10 | 1.00 | 1.12 | 1.00 | 1 | 2-3/8 | 3-1/16 | 1/2 |
| JAG 125-10 | 1.12 | 1.25 | 1.00 | 1 | 2-3/8 | 3-1/16 | 1/2 |
| JAG 138-10 | 1.22 | 1.38 | 1.00 | 1 | 2-3/8 | 3-1/16 | 1/2 |
| JAG 138-12 | 1.28 | 1.38 | 1.25 | 1-1/4 | 2-7/8 | 3-3/8 | 2/3 |
| JAG 156-12 | 1.38 | 1.56 | 1.25 | 1-1/4 | 2-7/8 | 3-3/8 | 2/3 |
| JAG 174-12 | 1.56 | 1.74 | 1.25 | 1-1/4 | 2-7/8 | 3-3/8 | 2/3 |
| JAG 188-12 | 1.74 | 1.88 | 1.25 | 1-1/4 | 2-7/8 | 3-3/8 | 2/3 |
| JA6 174-15 | 1.60 | 1.74 | 1.63 | 1-1/2 | 3-1/4 | 4-1/16 | 1 |
| JAG 188-15 | 1.74 | 1.88 | 1.63 | 1-1/2 | 3-1/4 | 4-1/16 | 1 |
| JAG 200-15 | 1.88 | 2.00 | 1.63 | 1-1/2 | 3-1/4 | 4-1/16 | 1 |
| JAG 218-15 | 2.00 | 2.18 | 1.63 | 1-1/2 | 3-1/4 | 4-1/16 | 1 |
| JAG 219-20 | 2.05 | 2.19 | 2.09 | 2 | 4 | 4-5/16 | 1-1/2 |
| JAG 236-20 | 2.19 | 2.36 | 2.09 | 2 | 4 | 4-5/16 | 1-1/2 |
| JAG 247-20 | 2.35 | 2.47 | 2.09 | 2 | 4 | 4-5/16 | 1-1/2 |
| JAG 261-20 | 2.47 | 2.61 | 2.09 | 2 | 4 | 4-5/16 | 1-1/2 |
| JAG 263-25 | 2.46 | 2.63 | 2.49 | 2-1/2 | 4-23/32 | 5-7/16 | 2-1/2 |
| JAG 280-25 | 2.62 | 2.80 | 2.49 | 2-1/2 | 4-23/32 | 5-7/16 | 2-1/2 |
| JAG 296-25 | 2.80 | 2.96 | 2~49 | 2-1/2 | 4-23/32 | 5-7/16 | 2-1/2 |
| JAG 297-30 | 2.80 | 2.97 | 3.11 | 3 | 5-3/32 | 5-3/4 | 3 |
| JAG 311-30 | 2.95 | 3.11 | 3.11 | 3 | 5-3/32 | 5-3/4 | 3 |
| JAG 327-30 | 3.10 | 3.27 | 3.11 | 3 | 5-3/32 | 5-3/4 | 3 |
| JAG 343-30 | 3.26 | 3.43 | 3.11 | 3 | 5-3/32 | 5-3/4 | 3 |
| JAG 359-30 | 3.42 | 3.59 | 3.11 | 3 | 5-3/32 | 5-3/4 | 3 |
| JAG 375-35 | 3.52 | 3.75 | 3.61 | 3-1/2 | 5-11/16 | 5-13/16 | 3-1/4 |
| JAG 392-35 | 3.75 | 3.92 | 3.61 | 3-1/2 | 5-11/16 | 5-13/16 | 3-1/4 |
| JAG 412-35 | 3.90 | 4.12 | 3.61 | 3-1/2 | 5-11/16 | 5-13/16 | 3-1/4 |
| JAG 423-40 | 4.05 | 4.23 | 4.11 | 4 | 6-3/32 | 5-13/16 | 3-1/2 |
| JAG 437-40 | 4.20 | 4.37 | 4.11 | 4 | 6-3/32 | 5-13/16 | 3-1/2 |
| JAG 4S1-4B | 4.34 | 4.51 | 4.11 | 4 | 6-3/32 | 5-13/16 | 3-1/2 |
| JAG 462-40 | 4.43 | 4.62 | 4.11 | 4 | 6-3/32 | 5-13/16 | 3-1/2 |



1:8



NOTE: THIS DRAWING ALSO APPLIES TO THE
QPML-415A AND TPML-415A MODELS

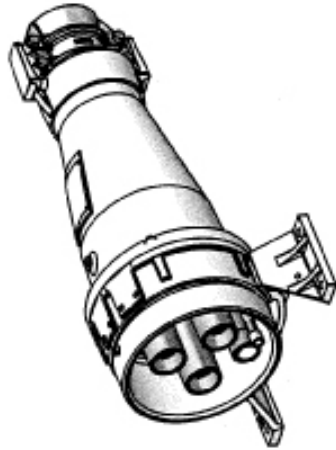
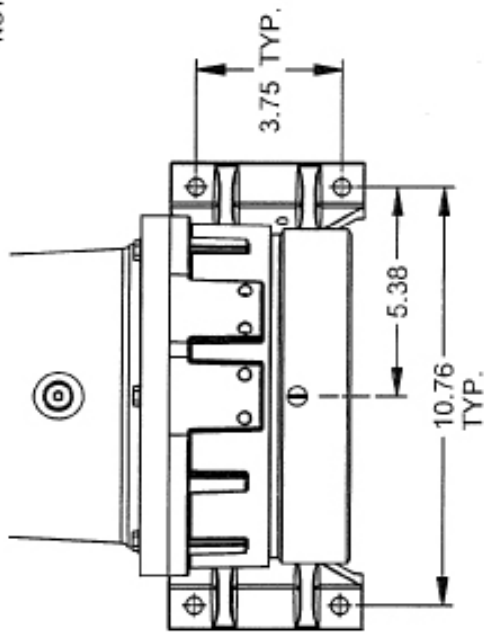
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DIMENSIONS ARE IN INCHES

PML-415A

NOTE: THIS DRAWING ALSO APPLIES TO THE
QSFL-415A AND TSFL-415A MODELS

SCALE = 1:4
DIMENSIONS ARE IN INCHES

SFL-415A



1:8

