ADALET PLM
INDUSTRIAL CABLE COUPLERS

www.adalet.com/plm
Portable Cable Systems Couplers / Plugs-Receptacles

Cable Couplers Identification & Application

Couplers are utilized in underground, strip, and pit operations on every continent in the world. Adalet PLM Cable Couplers provide safe, convenient means for connecting portable cable rated up to 15,000 volt and up to 500 Amperes, copper or aluminum conductor to mining equipment, electric shovels, drag lines, loaders, barges, tunneling machines, portable substations, portable junction boxes, or for joining lengths of high voltage cables.

**PLM Cable Coupler**

**MATING THREAD FORM**
- **Q** Quik-Thread Double Start ACME Thread
- **T** Quik-Turn Ramp Style
- **B** Quik-Flip Bolt Style
- **Blank** Standard 8-Pitch

**HOUSING**
- **S** Socket
- **P** Plug

**CONTACTS**
- **M** Male
- **F** Female

**MOUNTING**
- **G** Gear/Equipment Mount
- **L** Line/Cable Mount

**APPLICATIONS**
- Extending Portable Cables
- Mine Power Cables
- Electric Shovels, Drills, drag lines
- Tunneling Machines
- Transformer Connections
- Barge, Ship-Dock Applications
- Turbine Generators
- Motor Disconnect 600V-15kV to 500 Amp

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

415

A

B

ADDED FEATURES
B Interlock contacts in cover for plug
BB Interlock contacts in cover for socket
C Kirklock sockets only
E Electrolytic copper contacts-female
L Insulation in plug mount
N Non-interchangeable amperage
or voltage index
P Padlock provision socket
R Insulation in socket cover
TF Teflon® insulator
Z Beryllium contacts

GROUND CHECK
A One contact included
AA Two contacts
AAA Three contacts
AAAA Four contacts

VOLTAGE CLASS & END BELL SIZE
415 Accommodates cable diameter ranging from 1.50” to 3.50”
515 Accommodates cable diameter ranging from 3.51” to 4.50”

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

COMPLIANCE
• Pennsylvania Bureau of Deep Mine Safety

TO ORDER, PROVIDE:
1. Conductor sizes of phase, ground wires, and ground check wire
2. Overall cable diameter.

Contact Adalet sales representative or email info@adalet.com to place order.
415/515 Series Cable Couplers

Standard EPDM Insulators 15kv, 500 Amp

415/515 Series Cable Couplers are suitable for use up to 15kV. Each coupler includes silver-plated copper contacts rated up to 500 amperes. PLM Couplers feature a durable, corrosion-resistant aluminum shell. Rigid, non-breakable, EPDM insulator tubes are supplied standard. 415/515 Series Couplers are available in line-mount (cable-mount) or gear-mount (equipment-mount) configurations. Select from four different connection options to provide the best solution for your application. Each coupler we ship includes a stress control kit and detailed installation instructions. Several options are available to customize each coupler to your specific requirements.

**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.

<table>
<thead>
<tr>
<th>Catalog Number</th>
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<th>Description</th>
<th>Ship Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFG 415 A</td>
<td>QSFG 415 A</td>
<td>TSFG 415 A</td>
<td>BSFG 415 A</td>
<td>Equipment-mounted couplers socket, female contacts plug, male contacts</td>
<td>34</td>
</tr>
<tr>
<td>PMG 415 A</td>
<td>QPMG 415 A</td>
<td>TPMG 415 A</td>
<td>BPMG 415 A</td>
<td>Line-mounted couplers 1.50-3.50 O.D. cables socket, female contacts plug, male contacts</td>
<td>51</td>
</tr>
<tr>
<td>SFL 415 A</td>
<td>QSFL 415 A</td>
<td>TSGL 415 A</td>
<td>BSFL 415 A</td>
<td>3.50-4.50 O.D. cables socket, female contacts plug, male contacts</td>
<td>53</td>
</tr>
<tr>
<td>PML 415 A</td>
<td>QPML 415 A</td>
<td>TPML 415 A</td>
<td>BPML 415 A</td>
<td></td>
<td></td>
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<tr>
<td>SFL 515 A</td>
<td>QSFL 515 A</td>
<td>TSFL 415 A</td>
<td>BSFL 515 A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PML 515 A</td>
<td>QPML 515 A</td>
<td>TP415 A</td>
<td>BPML 515 A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Options Available at Additional Cost

- **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
415 / 515 Series Cable Couplers

Teflon® Insulators 15kv, 500 Amp

Teflon® tubes combine a non-tracking, easy-to-clean hydrophobic material with an internal o-ring seal between tubes. 415/515 Series Couplers are available in line-mount (cable-mount) or gear-mount (equipment-mount) configurations. Select from four different connection options to provide the best solution for your application. Each coupler we ship includes a stress control kit and detailed installation instructions. Several options are available to customize each coupler to your specific requirements.

**FEATURES**
- Corrosion-resistant aluminum
- Rigid, non-breakable Teflon® insulators
- 500 amp contacts
- Portable cable mounting
- Switchgear or equipment mounting
- Standard cover, stress control kit, instructions included
- Solid polyester fiberglass flange
- Teflon® tubes O-ring sealed to flange
- Nylon lock nuts for positive seal

**BENEFITS**
- Superior electrical and physical protection
- Fewer mating problems
- Quicker Installation
- Quick connect-disconnect
- Versatile application

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Teflon® is a registered trademark of E.J. DuPont de Nemours and Company.

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<table>
<thead>
<tr>
<th>Catalog Number Standard Threads</th>
<th>Catalog Number Acme Quick-Thread</th>
<th>Catalog Number Quick-Turn</th>
<th>Catalog Number Quick-Flip</th>
<th>Description</th>
<th>Ship Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFG 415 ATF</td>
<td>QSFG 415 ATF</td>
<td>TSFG 415 ATF</td>
<td>BSFG 415 ATF</td>
<td>Equipment-mounted couplers socket, female contacts plug, male contacts</td>
<td>34</td>
</tr>
<tr>
<td>PMG 415 ATF</td>
<td>QPMG 415 ATF</td>
<td>TPMG 415 ATF</td>
<td>BPMG 415 ATF</td>
<td>Line-mounted couplers 1.50-3.50 O.D. cables socket, female contacts plug, male contacts</td>
<td>51</td>
</tr>
<tr>
<td>SFL 415 ATF</td>
<td>QSFL 415 ATF</td>
<td>TSGL 415 ATF</td>
<td>BSFL 415 ATF</td>
<td>3.50-4.50 O.D. cables socket, female contacts plug, male contacts</td>
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<td>QPML 415 ATF</td>
<td>TPML 415 ATF</td>
<td>BPML 415 ATF</td>
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<td>SFL 515 ATF</td>
<td>QSFL 515 ATF</td>
<td>TSFL 415 ATF</td>
<td>BSFL 515 ATF</td>
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<td>QPML 515 ATF</td>
<td>TPML 415 ATF</td>
<td>BPML 515 ATF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Options Available at Additional Cost**

- **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
### 415 / 515 Series Cable Couplers

**Teflon® Insulators 15kv, 500 Amp**

<table>
<thead>
<tr>
<th>Electrical Characteristics</th>
<th>No Compound</th>
<th>With Compound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum voltage phase-to-ground</td>
<td>5.5 KV rms</td>
<td>8.7 KV rms</td>
</tr>
<tr>
<td>1 minute dry withstand AC</td>
<td>35.0 KV rms</td>
<td>45.0 KV rms</td>
</tr>
<tr>
<td>6 hour dry withstand DC</td>
<td>25.0 KV rms</td>
<td>35.0 KV rms</td>
</tr>
<tr>
<td>15 minute dry withstand DC</td>
<td>65.0 KV rms</td>
<td>75.0 KV rms</td>
</tr>
<tr>
<td>Corona extinction level</td>
<td>7.5 KV rms</td>
<td>11.0 KV rms</td>
</tr>
<tr>
<td>Basic impulse level</td>
<td>75.0 KV crest</td>
<td>95.0 KV crest</td>
</tr>
</tbody>
</table>

*All tests per IEEE Standard 48-1990*

### PLM Contact Pins

PLM’s standard couplers include silver-plated, copper contact pins that provide excellent electrical connections. Phase and ground contacts are modified to your specific cable requirements. Simply specify the phase and ground conductor diameter and PLM will pre-drill the contact pins to meet your specifications and reduce installation time.
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 screw, and gaskets. Conversion kits should be applied to all couplers on any single cable system.

Quik-Thread coupler rings are color-coded green to provide positive identification.

Quik-Turn coupler rings are color-coded orange.

All tests per IEEE Standard 48-1990

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>ACME Thread Parts Furnished</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>QKP-8</td>
<td>Plug cover and lock ring</td>
<td>Replacement for plug-style couplers. Includes plain cover (without drilling for pilot or ground contacts).</td>
</tr>
<tr>
<td>TKP-8</td>
<td>Plug cover (drilled for pilot and ground contacts) and lock ring</td>
<td>Replacement for plug-style couplers. Includes cover drilled for ground contacts (male or female). Customer to use existing contacts.</td>
</tr>
<tr>
<td>BKP-8</td>
<td>Plug cover (drilled for pilot and ground contacts and for cover insulator assembly) and lock ring</td>
<td>Replacement for plug-style couplers. Includes cover drilled for ground and pilot contacts (male or female) and for cover insulator assembly. Customer to use existing contacts and cover insulator assembly.</td>
</tr>
<tr>
<td>QKP-M/F-8</td>
<td>Socket cover and body</td>
<td>Replacement for socket-style couplers. Includes plain cover (without drilling for pilot or ground contacts).</td>
</tr>
<tr>
<td>TKP-M/F-8</td>
<td>Socket cover ring and socket body</td>
<td>Replacement for socket-style couplers. Includes cover ring to be used with existing cover. Customer to use existing contacts.</td>
</tr>
<tr>
<td>QKP-M/F-15</td>
<td>Socket cover ring and socket body</td>
<td>Replacement for socket-style couplers. Includes cover ring to be used with existing cover and cover insulator assembly. Customer to use existing contacts.</td>
</tr>
</tbody>
</table>
Connection Options

Quik-Flip Bolted Coupler Connection

PLM’s 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.

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Quik-Flip EPDM Insulators</th>
<th>Catalog Number</th>
<th>Quik-Flip Teflon Insulators</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSFG 415A</td>
<td>BSFG 415ATF</td>
<td>BPMG 415A</td>
<td>BPMG 415ATF</td>
</tr>
<tr>
<td>BSFL 415A</td>
<td>BSFL 415ATF</td>
<td>BSFL 515A</td>
<td>BSFL 515ATF</td>
</tr>
<tr>
<td>BPMG 415A</td>
<td>BPMG 415ATF</td>
<td>BSFL 515A</td>
<td>BSFL 515ATF</td>
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<td>BSFL 515ATF</td>
<td>BPML 515A</td>
<td>BPML 515ATF</td>
</tr>
</tbody>
</table>

Other options available on 415/515 series couplers

8-pitch Thread (standard)

A simple, cost effective solution for use in any application

Quik-Turn Ramp Style Quarter-Turn

Color-coded orange (use prefix “T” when ordering)

Ideal for use in applications where frequent connection and disconnection is required.

Quik-Thread Double-Start ACME Thread

Color-coded green (use prefix “Q” when ordering)

Our most popular connection style, wide threads and Teflon coating make them easy to clean and maintain.
Accessories

Coupling and Contact Wrenches

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Description</th>
<th>Ship Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WR</td>
<td>Contact wrench for 415, 515 series</td>
<td>1</td>
</tr>
<tr>
<td>C-1008</td>
<td>Coupling wrench (aluminum) for 415, 515 series</td>
<td>1</td>
</tr>
<tr>
<td>C-1008-S</td>
<td>Coupling wrench (steel) for 415, 515 series</td>
<td>3</td>
</tr>
</tbody>
</table>

COLDPOUR® Compound

Compound filling can prevent condensation and provide added protection in wet locations. Asphaltic compounds cannot be used with EPDM insulations. For those customers who 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.

*Shelf life 6 mos. Should be installed at normal room temperature and allowed to cure for 24 hours*

<table>
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<tr>
<th>Catalog Number</th>
<th>Description</th>
<th>Ship Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP-40</td>
<td>1 5/8 gal. 2-part mix for one LINE mount or two GEAR mount couplers, series 415 coupler</td>
<td>13</td>
</tr>
<tr>
<td>CP-50</td>
<td>1 7/8 gal. 2-part mix for one LINE mount, series 515 coupler</td>
<td>14</td>
</tr>
</tbody>
</table>
Coupler Contact Insulation Cleaning Kit

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

The solvent used in our PCK-100 cleaning kit is an exceptional solvent degreaser formulated without chlorinated solvents or other hazardous ingredients. With its high flash point, the solvent provides an unprecedented degree of user safety. It is strong enough to remove grease, fuel oil, carbon and organic resins yet safe on most plastic and rubber surfaces.

The PLM solvent degreaser:
- Contains no water
- Fully evaporative, leaves no residue
- No hazardous ingredients as defined by the EPA
- Not a flammable liquid (TCC flash point above 145° F)
- No surface leakage of current in immediate residue tests
- High dielectric strength (ASTM D-877 test procedures to 46,000 volts)

<table>
<thead>
<tr>
<th>Catalog Number</th>
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<th>Ship Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCK-100</td>
<td>Cleaning Kit</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Kit consists of 12-oz. spray bottle of non-flammable electrical parts cleaner, bristle brush, two white wiping cloths and polyethylene glove.
PLM was founded in 1951 by Francis Calvert, a cable engineer previously employed by General Electric. G. E. developed a line of interlocked armor cable, but there were no fittings available for terminations. Calvert manufactured the first fittings in his basement. Later that year, he sold the business to John Pescke, Quigg Lohr, and Carroll Miller, whose initials (PLM) formed the company name.

Starting with fittings for armored cables, PLM soon developed splices, terminations, and other accessories for joining cables. In 1957, PLM developed the first coupler designed with a ground check interrupting circuit for safe disconnect, and the first coupler capable of handling 500 amperes at 7500 volts.

In 1963, PLM and Adalet (high quality manufacturer of hazardous location enclosures and accessories) were acquired by the Scott Fetzer Company. The operations of Adalet and PLM merged in 1977.