PRODUCT CATALOG

SUBSTATION CONNECTORS

765 kV

ABOUT PLP

PLP is an industry-leading designer, manufacturer, and supplier of precision-engineered products for the electric power and telecommunications industries. PLP's line of distribution, transmission, substation, and fiber optic solutions are trusted worldwide to perform better and last longer. With multiple U.S. manufacturing plants and locations in over 20 countries, PLP delivers high-quality products and unparalleled service to customers around the world.

FOUNDED: **1947**

HEADQUARTERS: **CLEVELAND, OHIO**

TEAM MEMBERS: **3,500**

PRODUCTS: **20,000+**

GLOBAL PLANTS: **20+**

QUALITY STANDARDS: **ISO 9001**

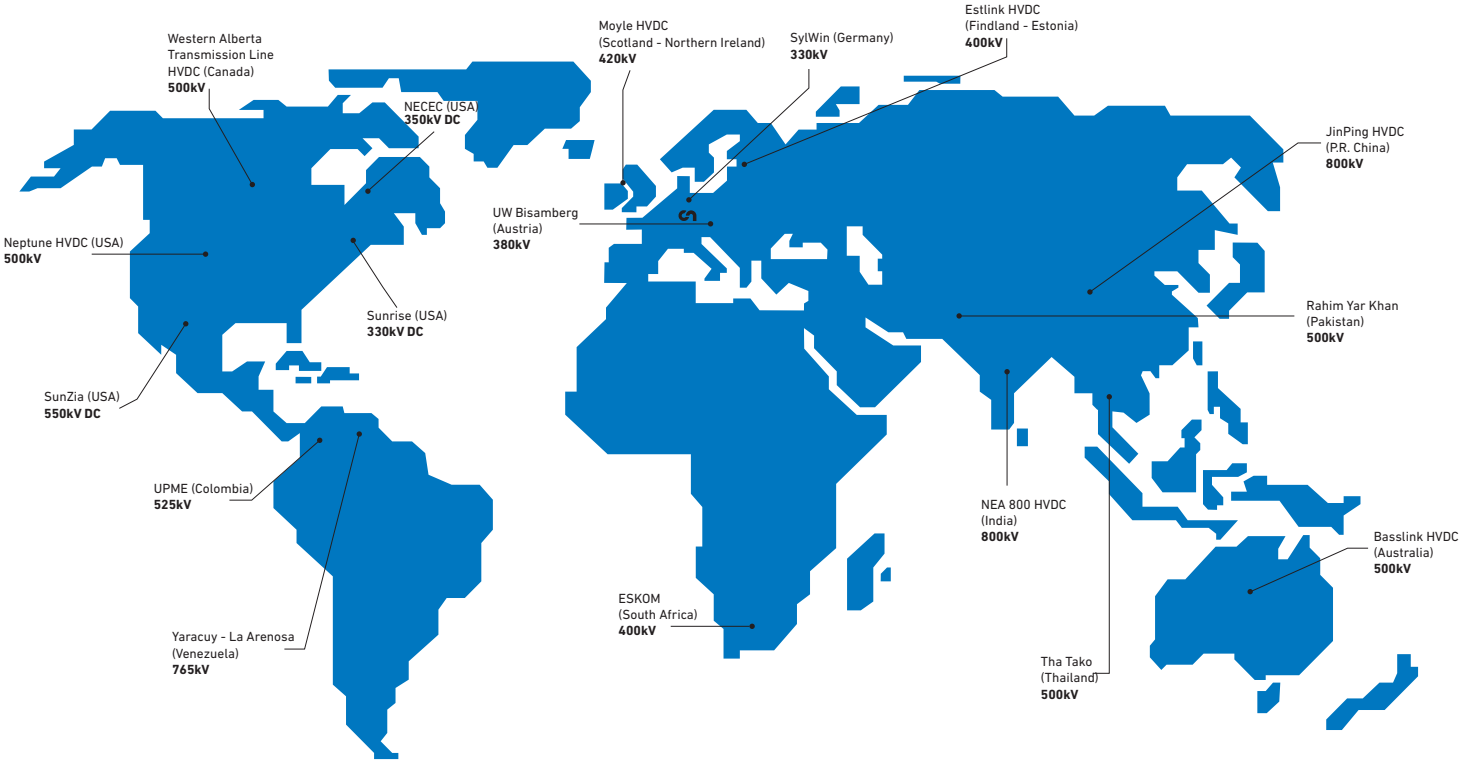
RESEARCH CENTERS: **11**

TESTING STANDARDS: **IEEE/IEC/ANSI**

PLP SUBSTATION CONNECTORS

PLP's line of substation connectors includes designs for all voltage levels up to 1100 kV AC and DC. The product range includes standard connectors, busbar couplers, bimetallic and copper clamps, and insulator string sets. In addition, a complete set of complimentary accessories, including stranded and tubular conductors, insulators, and grounding materials is available. And with more than 4,000 existing products and 1,000 tailor-made products designed each year, PLP offers customizable solutions for any application.

Projects completed in over 100 countries worldwide



Learn More

U.S. SALES CONTACTS

SUBSTATION
SALES

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INTERNATIONAL@PLP.COM

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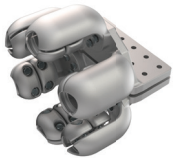

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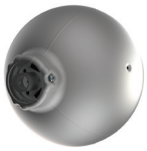

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SubCon™

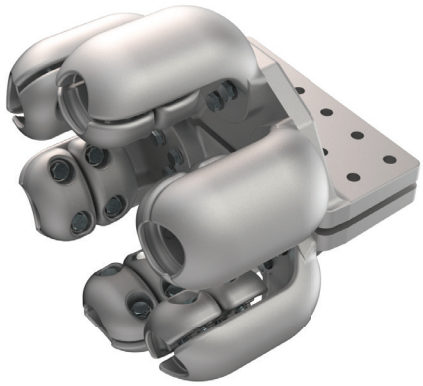
ALUMINUM TERMINALS

Cable to Pad
765kV

Aluminum alloy terminal to connect cables to a flat pad surface. Corona free operation for 765kV. Designed to IEC 61284 and ANSI/NEMA CC-1 standards. Electrical joint compound is recommended for all cable and pad contact surfaces.

CASTINGS: Aluminum Alloy

HARDWARE: High-Strength Stainless Steel



- Conductor Ranges: 1" - 2.5" diameter
- Standard & custom cable spacing, pad sizes, angles, and hole spacing are available
- Bolt shields are available

Part Family	Description
I*FK	Cable to Flat Pad, Bolted
I*FW	Cable to Flat Pad, Welded
I*FP	Cable to Flat Pad, Compression
V*FK	Cable to 45° Pad, Bolted
V*FW	Cable to 45° Pad, Welded
V*FP	Cable to 45° Pad, Compression

*Denotes the number of cables

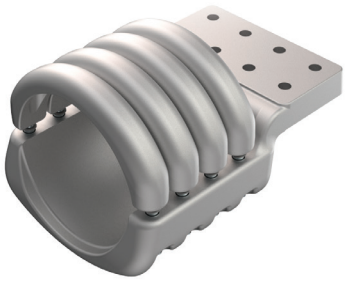
ALUMINUM TERMINALS

Tube to Pad
765kV

Aluminum alloy terminal to connect bus tube to a flat pad surface. Corona free operation for 765kV. Designed to IEC 61284 and ANSI/NEMA CC-1 standards.

CASTINGS: Aluminum Alloy

HARDWARE: High-Strength Stainless Steel

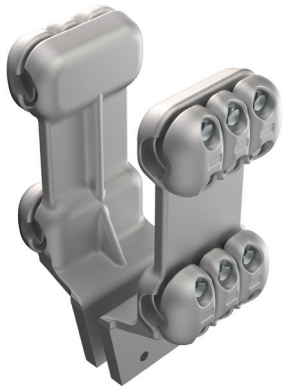


- Common Bus Tube Sizes: 4", 5", 6", and 8" IPS (other sizes available)
- Standard & custom angles and hole spacing are available
- Bolt shields are available

Part Family	Description
I1FK	Tube to Flat Pad, Bolted
I1FW	Tube to Flat Pad, Welded
L1FK	Tube to 90° Pad, Bolted
L1FW	Tube to 90 Pad, Welded

ALUMINUM TEES

Cable to Pad
765kV



Aluminum alloy tee to connect the specified number of cables to a flat pad surface. Corona free operation for 765kV. Designed to IEC 61284 and ANSI/NEMA CC-1 standards. Electrical joint compound is recommended for all cable and pad contact surfaces.

CASTINGS: Aluminum Alloy

HARDWARE: High-Strength Stainless Steel

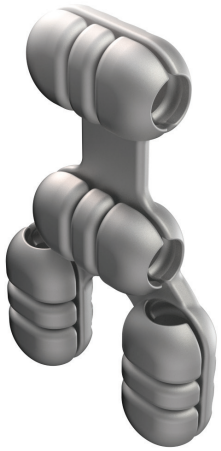
- Conductor Ranges: 1" - 2.5" diameter
- Standard & custom cable spacing, pad sizes, angles, and hole spacing are available
- Bolt shields are available

Part Family	Description
T*FK	Cable to Pad, Bolted

*Denotes the number of cables

ALUMINUM TEES

Cable to Cable
765kV



Aluminum alloy tee to connect the specified number of cables in the main/run to tap. Corona free operation for 765kV. Designed to IEC 61284 and ANSI/NEMA CC-1 standards. Electrical joint compound is recommended for all cable contact surfaces.

CASTINGS: Aluminum Alloy

HARDWARE: High-Strength Stainless Steel

- Conductor Ranges: 1" - 2.5" diameter
- Standard & custom cable spacing and angles are available

Part Family	Description
T11K	1 Cable Main to 1 Cable Tap, Bolted
T12K	1 Cable Main to 2 Cable Tap, Bolted
T22K	2 Cable Main to 2 Cable Tap, Bolted

SubCon™

ALUMINUM TEES

Tube to Cable
765kV

Aluminum alloy tee to connect one bus tube in the main/run to the specified number of cables in the tap. Corona free operation for 765kV. Designed to IEC 61284 and ANSI/NEMA CC-1 standards. Electrical joint compound is recommended for all cable contact surfaces.

CASTINGS: Aluminum Alloy

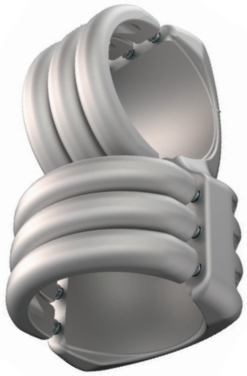
HARDWARE: High-Strength Stainless Steel

- Conductor Ranges: 1" - 2.5" diameter
- Common Bus Tube Sizes: 4", 5", 6", and 8" IPS (other sizes available)
- Standard & custom cable spacing and angles are available
- Welded application of tube/cable is available
- Compression application of cable is available

Part Family	Description
T11K	1 Tube Main to 1 Cable Tap, Bolted
T12K	1 Tube Main to 2 Cable Tap, Bolted
T13K	1 Tube Main to 3 Cable Tap, Bolted
T14K	1 Tube Main to 2 Cable Tap, Bolted

ALUMINUM TEES

Tube to Tube
765kV



Aluminum alloy tee to connect one bus tube in the main/run to one bus tube in the tap. Corona free operation for 765kV. Designed to IEC 61284 and ANSI/NEMA CC-1 standards.

CASTINGS: Aluminum Alloy

HARDWARE: High-Strength Stainless Steel

- Common Bus Tube Sizes: 4", 5", 6", and 8" IPS (other sizes available)
- Standard & custom angles are available

Part Family	Description
T11K	1 Tube Main to 1 Cable Tap, Bolted
T11W	1 Tube Main to 1 Cable Tap, Welded

SubCon™

ALUMINUM COUPLERS

Tube to Tube
765kV

Aluminum alloy coupler to connect two bus tubes of the same size, or different sizes. Corona free operation for 765kV. Designed to IEC 61284 and ANSI/NEMA CC-1 standards.

CASTINGS: Aluminum Alloy

HARDWARE: High-Strength Stainless Steel

- Common Bus Tube Sizes: 4", 5", 6", and 8" IPS (other sizes available)
- Standard & custom angles are available

Part Family	Description
I11K	Tube to Tube, Bolted
I11W	Tube to Tube, Welded

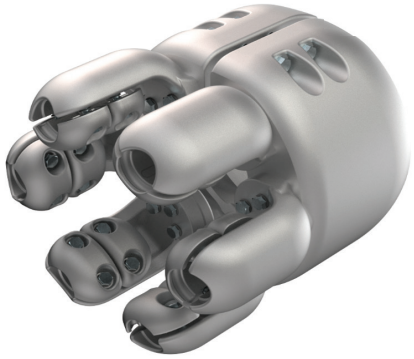
ALUMINUM COUPLERS

Tube to Cable
765kV

Aluminum alloy coupler to connect one bus tube to the specified number of cables. Corona free operation for 765kV. Designed to IEC 61284 and ANSI/NEMA CC-1 standards. Electrical joint compound is recommended for all cable contact surfaces.

CASTINGS: Aluminum Alloy

HARDWARE: High-Strength Stainless Steel



- Conductor Ranges: 1" - 2.5" diameter
- Common Bus Tube Sizes: 4", 5", 6", and 8" IPS (other sizes available)
- Standard & custom cable spacing and angles are available

Part Family	Description
I*1K	Cable to Tube, Bolted
I*1W	Cable to Tube, Welded
I*1P	Cable to Tube, Compression

*Denotes the number of cables

SubCon™

ALUMINUM PARALLEL CONNECTORS

Cable to Cable
765kV

Aluminum alloy parallel connector for cable in the main/run and tap. Corona free operation for 765kV. Designed to IEC 61284 and ANSI/NEMA CC-1 standards. Electrical joint compound is recommended for all cable contact surfaces.

CASTINGS: Aluminum Alloy

HARDWARE: High-Strength Stainless Steel

- Conductor Ranges: 1" - 2.5" diameter
- Standard & custom cable spacing and angles are available

Part Family	Description
P11K	Cable to Cable, Bolted
P22K	2 Cable to 2 Cable, Bolted

ALUMINUM CABLE SPACERS

765kV

Aluminum alloy spacer to connect the specified number of cables at a specified distance. Corona free operation for 765kV. Designed to IEC 61284 and ANSI/NEMA CC-1 standards. Electrical joint compound is recommended for all cable contact surfaces.

CASTINGS: Aluminum Alloy

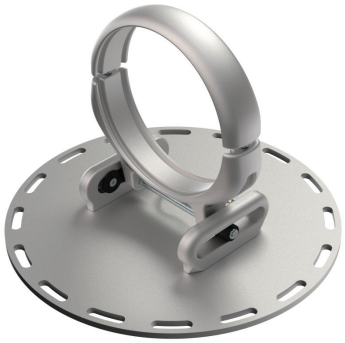
HARDWARE: High-Strength Stainless Steel

- Conductor Ranges: 1" - 2.5" diameter
- Common Cable Spacing: 4", 6", 8", 12", and 18"
- Standard & custom cable spacing available

Part Family	Description
Q2K	2 Cable Spacer, Bolted
Q3K	3 Cable Spacer, Bolted
Q4K	4 Cable Spacer, Bolted
Q6K	6 Cable Spacer, Bolted

ALUMINUM BUS SUPPORTS

Tube to Insulator
765kV



Aluminum alloy bus support to connect one bus tube to an insulator bolt circle. Corona free operation for 765kV. Designed to IEC 61284 and ANSI/NEMA CC-1 standards.

CASTINGS: Aluminum Alloy

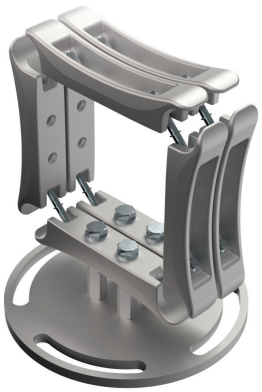
HARDWARE: High-Strength Stainless Steel
Mounting Hardware is NOT included

- Common Bus Tube Sizes: 4", 5", 6", and 8" IPS (other sizes available)
- Common Bolt Circle Sizes: 3", 5", and 7"
- Fixed, sliding, and angular designs are available

Part Family	Description
IJ0K	1 Tube to Insulator, Bolted
IJ0W	1 Tube to Insulator, Welded

ALUMINUM BUS SUPPORTS

Cable to Insulator
765kV



Aluminum alloy bus support to connect the specified number of cables to an insulator bolt circle. Corona free operation for 765kV. Designed to IEC 61284 and ANSI/NEMA CC-1 standards. Electrical joint compound is recommended for all cable contact surfaces.

CASTINGS: Aluminum Alloy

HARDWARE: High-Strength Stainless Steel
Mounting Hardware is NOT included

- Conductor Ranges: 1" - 2.5" diameter
- Common Cable Spacing: 4", 6", 8", 12", and 18"
- Common Bolt Circle Sizes: 3", 5", and 7"

Part Family	Description
IJ1OK	1 Cable to Insulator, Bolted
IJ2OK	2 Cable to Insulator, Bolted
IJ3OK	3 Cable to Insulator, Bolted
IJ4OK	4 Cable to Insulator, Bolted
IJ6OK	6 Cable to Insulator, Bolted

SubCon™

ALUMINUM EXPANSIONS

Tube to Insulator
765kV

Aluminum alloy expansion to connect two bus tubes of the same size to an insulator bolt circle. Corona free operation for 765kV. Designed to IEC 61284 and ANSI/NEMA CC-1 standards.

CASTINGS: Aluminum Alloy

HARDWARE: High-Strength Stainless Steel

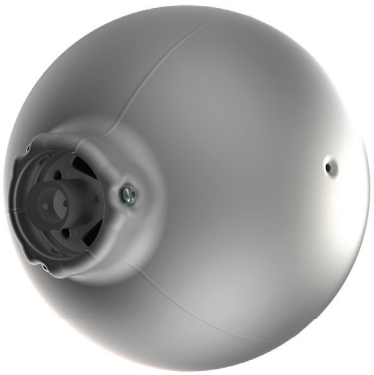
Mounting Hardware is NOT included

- Common Bus Tube Sizes: 4", 5", 6", and 8" IPS (other sizes available)
- Common Bolt Circle Sizes: 3", 5", and 7"
- Bus tube application available in fixed, sliding, and angular designs
- Welded application of tube is available

Part Family	Description
IXOXK	Tube to Tube, Bolted
IXOXW	Tube to Tube, Welded

ALUMINUM CAPS

765kV



Aluminum alloy corona bell end cap for sealing aluminum tube from rain and excessive humidity. The corona bell reduces electrostatic losses and radio interference. Corona free operation for 765kV. Designed to IEC 61284 and ANSI/NEMA CC-1 standards.

- Common Bus Tube Sizes: 4", 5", 6", and 8" IPS (other sizes available)
- Available for bolted or welded application
- Available with damping conductor clamp

Part Family	Description
RCK	Tube End Cap, Bolted
RCW	Tube End Cap, Welded

ALUMINUM A-FRAME VEES

Tube to Tube
765kV

Aluminum alloy vee to connect one bus tube in the main/run to two bus tubes of the same diameter at 30-degrees. Corona free operation for 765kV. Designed to IEC 61284 and ANSI/NEMA CC-1 standards.

CASTINGS: Aluminum Alloy

HARDWARE: High-Strength Stainless Steel

- Common Bus Tube Sizes: 4", 5", 6", and 8" IPS (other sizes available)
- Standard & custom angles are available

Part Family	Description
W21K	1 Tube Main to 2 Tube Tap, Bolted
W21W	1 Tube Main to 2 Tube Tap, Welded

ALUMINUM A-FRAME TEES

Tube to Tube
765kV

Aluminum alloy tee to connect one bus tube in the main/run to one bus tube in the tap at 15-degrees. Corona free operation for 765kV. Designed to IEC 61284 and ANSI/NEMA CC-1 standards.

CASTINGS: Aluminum Alloy

HARDWARE: High-Strength Stainless Steel

- Common Bus Tube Sizes: 4", 5", 6", and 8" IPS (other sizes available)
- Standard & custom angles are available

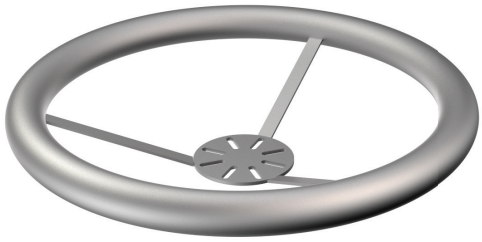
Part Family	Description
W11K	1 Tube Main to 1 Tube Tap, Bolted
W11W	1 Tube Main to 1 Tube Tap, Welded

SubCon™

ALUMINUM CORONA RINGS

765kV

Aluminum alloy corona ring to minimize electrostatic loss and prevent electrical discharge. Corona free operation for 765kV. Designed to IEC 61284 and ANSI/NEMA CC-1 standards.



- Typically attached to insulators and switchgear.
- Common Bolt Circle Sizes: 3", 5", and 7"
- Common Ring Sizes: 18", 24", and 36"

Part Family	Description
TZK	Corona Ring, Bolted
TZW	Corona Ring, Welded

GROUNDING STIRRUPS

765kV

Aluminum alloy connector from a bus tube or stranded conductor with a tinned stirrup loop for grounding connections. Corona free operation for 765kV. Designed to IEC 61284 and ANSI/NEMA CC-1 standards.

- Conductor Ranges: 1" - 2.5" diameter
- Common Bus Tube Sizes: 4", 5", 6", and 8" IPS (other sizes available)
- Custom angles are available

Part Family	Description
D1K	Tube Grounding Stirrup, Bolted
D1W	Tube Grounding Stirrup, Welded
D*K	Cable Grounding Stirrup, Bolted

*Denotes the number of cables

STRING HARDWARE ASSEMBLIES

765kV

PLP String Hardware Assemblies include a full range of hardware solutions for tangent suspension, angled suspension, dead-end, and tri-bundle assemblies. Each component in the standard assembly packages was carefully selected to ensure proper fitment and optimal performance. All components arrive at the job site in project-specific, weather-resistant packaging to help expedite identification and installation. Customized string assembly configurations and designs are available.

Contact PLP for modification requests or customized packages. Corona free operation for 765kV. Designed to IEC 61284 and ANSI/NEMA CC-1 standards.

CATALOG NUMBER ORDERING INFORMATION

(Block 1) (Block 2) (Block 2) (optional depending on configuration) (Block 3) – (Block 4) (Block 5)

Catalog Number Example: T21K-363

Block 1

Connector Type	Description
I	Straight
T	T-Form
V	45°
L	90°
W	Other Angle
H	Parallel
Q	Spacer
R	Tube Endcap
P	Parallel Groove
S	Suspension
D	Earthing Fixpoint
N	Conductor Bows and Rings

Block 2

Configuration of Conductors and Terminals	Description
1	Single
2	Duplex
3	Triplex
4	Quadruple
F	Flat Terminal
0	Baseplate
J	Bus Support
X	Expansion

Block 3

Connection Principle	Description
K	Bolted
P	Compressed
W	Welded
R	Bolt-Compressed

Block 4

Manufacturer's Specification Code
Supplied by PLP

Block 5

Optional	
Cu	Copper Conductors
AlCu	Bimetal Conductors

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