

# SPECIFICATIONS

## **DISTRIBUTION TRANSFORMERS: 5 – 167 KVA SINGLE BUSHING, POLE TYPE**

Transformers, distribution class, pole-mount type, single phase, 60 cycle, self cooled 65 degrees C rise. The transformer shall be new.

**Standards:** The transformer shall be manufactured, tested and furnished according to the latest edition, revision or amendments to the applicable standards of ANSI, NEMA, IEEE, and RUS except as specifically noted in these applications. The manufacturer shall be a USA manufacturer and all writings, designations, markings, manuals, instructions, guides, and any readable items shall be in English.

**Primary:** Primary voltage shall be as stated in the bid documents:  
**13.8/7.9 kVolts**

**Basic Insulation Level (BIL):** The insulation level shall be **110 kV BIL**.

**Secondary:** Secondary voltage shall be as requested in the bid documents:  
**(X) 120/240 Volts**

**Bushings:** The Transformer shall be:  
**(X) Single Bushing**

The Single Primary Bushing shall be 15 - kV, high creep bushing. Anti-tracking devices shall also be used at the base of the primary bushing. Secondary terminals shall be tin-plated to accommodate aluminum or copper conductors.

**Tank:** Tank, cover, and accessories to be made using 304L stainless steel with a suitable primer and finish coats that are certified to meet or exceed the performance requirements of the 1983 Edison Electrical Institute, Coatings Committee. External color shall be ANSI # 70 - Light Grey.  
Transformer to be equipped with lifting lugs. A grounding lug for cable sizes # 6 through # 2/0 is required.

**Taps:** Transformer shall be provided with no-load taps, two 2-1/2 % above nominal voltage rating and two 2-1/2 % below nominal voltage rating. A readable sign warning that tap changer is not to be operated in the energized state must be provided near the tap changer handle.

**Losses Evaluation:** Bidders are required to submit guaranteed transformer loss data for each transformer voltage and kVA rating at the time of bid submission. CUC will use these loss data with the CUC's cost of losses in the determination of the lowest evaluated bid.

CUC's cost of losses has been calculated at the following amounts:

- \$ 2,800/kW for no load (core) losses
- \$ 680/kW for full load (winding) losses

In addition to other required tests, transformer shall be tested for losses. Loss data shall be obtained at 85 degree C. Certified results shall be sent to the purchasing agent of the Commonwealth Utilities Corporation no later than 7 days shipment.

CUC will assess a penalty charge based on the difference between guaranteed losses and the certified losses obtained by test multiplied by the cost of losses provided above.

**Identification:** In addition to the standard manufacturer's nameplate, the manufacturer shall be required to apply the following to the outside front face of the transformer.

- 1.) The kVA rating shall be legibly and durably marked on the tank in numerals not less than 2-1/2 inches high.
- 2.) To designate that the transformers are stainless steel, the letters SS not less than 2-1/2 inches high shall be marked next to the kVA rating.
- 3.) Non-PCB identification label, which shall not be smaller than 1 inch by 2 inches.

**Manufacturer:** At the time of bid, vendor shall provide transformer data, e.g., catalog cuts of manufacturer, that indicate unit(s) being supplied meet specifications. The data submitted shall identify the transformer manufacturer and provide address and contact information.

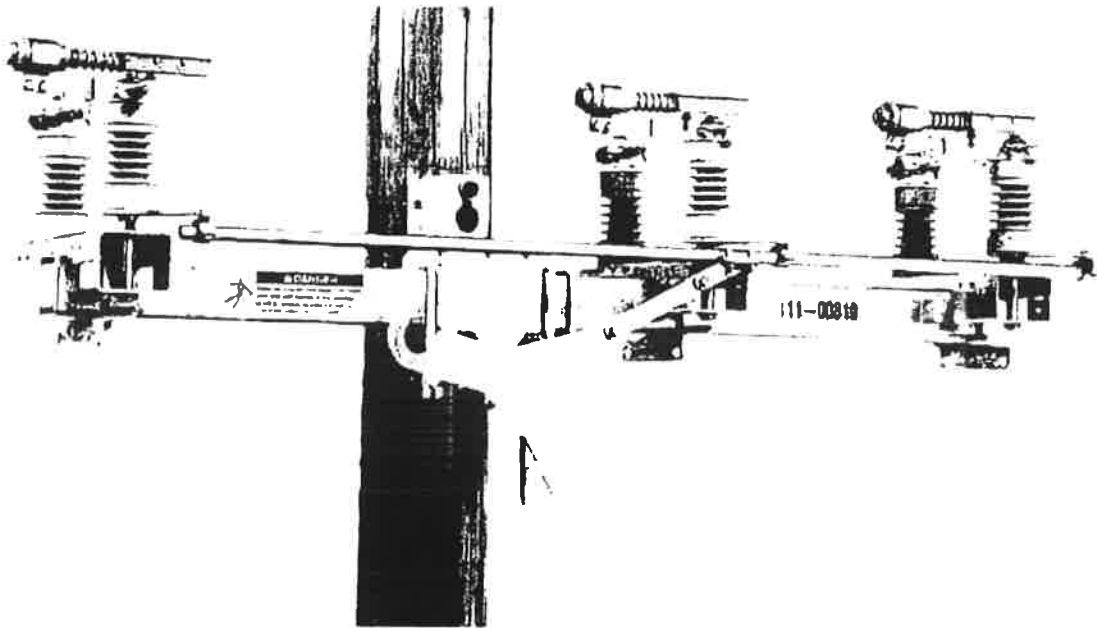
**Guarantee:** The vendor warrants that the equipment furnished under this specification is new and free from defects in materials and workmanship, and agrees to repair or replace at his expense for a period of 12 months from the date of initial operation or 18 months from the date of acceptance, whichever occurs earlier, any unit that is unsuitable for operation or fails in operation during normal and proper use.

**Shipping:** Transformers in containers shall be delivered C.I.F. CUC Warehouse, Lower Base, Saipan, Commonwealth of the Northern Marianas Islands. The Commonwealth Utilities Corporation shall be responsible for off-loading the transformers. Transformers are to be shipped in closed containers.

Prepared by: \_\_\_\_\_ Reviewed by: \_\_\_\_\_ Approved by: \_\_\_\_\_

2550-00-02

## IMPROVED S&C Omni-Rupter<sup>®</sup> Switches for Overhead Distribution



**S&C Omni-Rupter Switches have been redesigned from the ground up to provide long-life, high-performance switching while building in the quality, reliability, and durability you've come to expect from S&C.**

Here's a rundown of the major improvements:

- **Interrupters** now feature a redesigned operating cam and shunt arm arrangement with an internal latch and spring mechanism that provides a consistent operating speed for the interrupters independent of the speed of the operating mechanism.  
The interrupter housing is now molded from a high-performance, UV resistant polycarbonate thermoplastic. The same interrupter is now used at both 14.4 kV and 25 kV, reducing your stocking requirements for spare components.
- The **positive toggle linkage** ensures that the switch blades are under positive pressure when the switch is closed. By eliminating the need to provide "wind up" in the vertical pipe, Omni-Rupter Switches are now even easier to install. The linkage also eliminates the possibility of "contact creep" and overheating, which can occur if the operating handle closed stop is not properly set or if the pole warps over time.
- **Jaw contacts** now use spring-loaded "floating contact" buttons that provide secure, even contact pressure when the switch is closed. Field-replaceable sacrificial guide fingers help align the blade and protect the current-carrying contacts if the switch is closed into a fault, giving the Omni-Rupter Switch improved fault closing performance.
- **New articulating terminal pads** (patent pending) allows more flexibility when connecting jumpers. They reduce loading stress on the blades while minimizing operating friction and blade misalignment from overloaded terminal pads.
- The **hookstick operating handle** is also improved. The new curved hookstick handle has rounded "U-shaped" pull-rings that provide a larger landing area for the hookstick and is larger, for smoother operation through the full opening or closing stroke. It is also easier to operate from under the switch, at an angle from the switch, and even from behind the pole. The lockout tab is now incorporated into the operating handle, improving its visibility by placing it front and center on the switch.

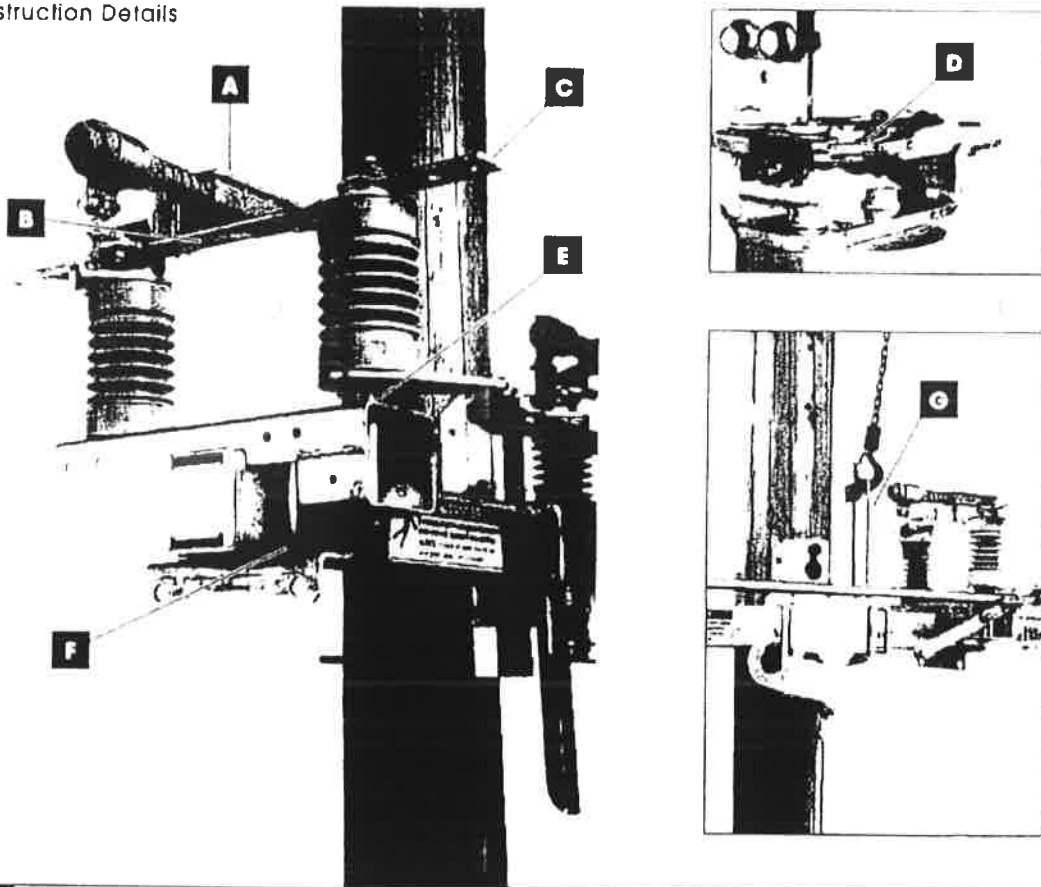


August 15, 2010, S&C Electric Company

Photo Sheet 765-710

IMPROVED S&C (Dann)Kupper Switches for Overhead Distribution

Construction Details



<b>A</b>	No-External Arc Interrupter. Provides circuit interruption without external arc. Employs a specially-designed trailer and liner formulation which creates de-ionizing gases for efficient circuit interruption. Same interrupter is used on 14.4-kV and 25-kV models.
<b>B</b>	Blade with Copper-Tungsten Arcing-Tip. Nickel-silver-plated copper blade is aligned at the factory without any requirement for field adjustment. All current path parts are copper or copper-based materials.
<b>C</b>	Articulating Hinge-end Terminal Pad. Pivoting terminal pads minimize loading of the blade and provide greater flexibility when making jumper connections.
<b>D</b>	Stationary Jaw and Contact Assembly. Floating jaw contact buttons provide even contact forces between the upper and lower jaw contacts, reducing friction during operation.
<b>E</b>	Redesigned Spindle and Bronze Flange Bearing, Stainless-Steel Shaft, and Drive Lever. Provide all-weather durability and performance.
<b>F</b>	Unique Clamping System with Dead-Ending Bracket. Securely and permanently locks the pole-units to the base. Integral dead ending brackets eliminate the need for separate dead-ending provisions.
<b>G</b>	Single Point Lifting Bracket. Provides permanent means of lifting for convenient rigging and hoisting.

### Switch Operation

When the switch is closed, each interrupter shunt arm is positioned between the auxiliary return arm and the opening shunt contact. The return arm is an extra visual assurance that the interrupter was reset, and is ready for the opening operation. See Figure 1.

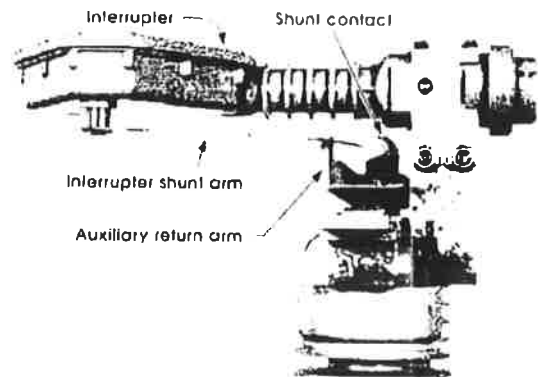


Figure 1. Switch in closed position. Interrupter shunt arm is between shunt contact and auxiliary return arm

As the switch is opened, each interrupter shunt arm engages the shunt contact, transferring current through the interrupter. The curved shape of the shunt contact guides the shunt arm through its travel and keeps the arm centered on the contact surface. A copper-bronze alloy inset minimizes display. See Figure 2.

As each blade reaches 45 degrees open, the latch inside the interrupter holding the spring loaded trailer releases. This provides a consistent interrupting speed. Switching performance is independent of the speed of the operating pipe or hookstick mechanism. As the blades open to 90 degrees, the interrupter shunt arm snaps back into position beneath the interrupter.

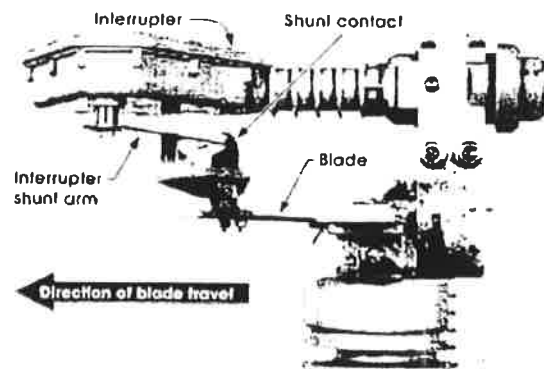


Figure 2. Switch during opening. Interrupter shunt arm engages shunt contact, transferring current through the interrupter.

As the switch is closed, each interrupter shunt arm is guided into position by the curved back of the shunt contact, as the blade closes into the jaw contact guide fingers. See Figure 3. The shunt arm again comes to rest between the return arm and the shunt contact as shown in Figure 1.

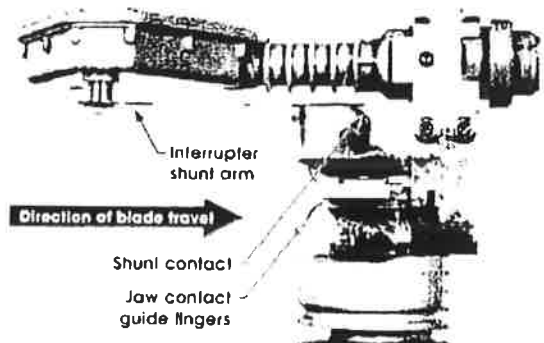


Figure 3. Switch during closing. Interrupter shunt arm is guided into place by shunt arm guide, as jaw contact guide fingers guide blade into place

**Standard Features**

- Choice of steel or insulated base. The steel base is constructed of 4" x 4" galvanized, electric-welded tube. The insulated base is constructed of reinforced pultruded structural tube, finished with a UV-resistant gray polyurethane coating. (Insulated bases not available for switches in the triangular mounting configuration.)
- Four sections of 6"-10" vertical operating pipe as specified on the erection drawing for the applicable Standard Mounting Arrangement.
- Pole Mounting Bracket. Galvanized steel pole-mounting bracket which accommodates steel or wood poles, 5 1/2 inches to 14 inches in diameter.
- Integrated single-point lifting bracket provides easy hoisting and installation. Retracts for storage.
- Dead-ending bracket. Dead-ending requires optional pole band and J-bolts, and extension link assemblies.
- The appropriate set of operating mechanism components for the vertical operating pipe: e.g., handle, rod guides or guide bearings, and couplings.

**Optional Features**

- Hookstack operating mechanism is operable from the ground using an "extender" stick. There's no vandal-tempting operating handle. Reduces installation time by up to 60%. Includes integrated lockout/tagout tab.
- Wildlife protection helps reduce wildlife-related nuisance outages. Made from high-strength, UV-resistant materials.
- Mounting provisions for three or six surge arresters. Pole band and J-bolts provide required support when dead-ending directly to the switch.

- Extension link assemblies for dead-ending directly to the switch.
- Ice shields (applicable for vertical and tiered-outboard mounting configurations.)

**Standard Minor Modifications**

Standard minor modifications are departures from Standard Mounting Arrangements which are so frequently encountered that they are included on S&C's basic erection drawings.

- One 2 1/2" diameter tubular fiberglass insulating section in vertical operating shaft (rotating-type operating mechanisms).
- One Cyproxy® Insulator unit in vertical operating shaft (specify rotating- or reciprocating-type operating mechanism).
- Key interlock—single lock for "locked-open" application.
- One 1" diameter fiberglass insulating section in vertical operating shaft (reciprocating-type operating mechanisms).
- Heavy-duty vertical operating shafts—1 1/2" IPS pipe in lieu of 1" IPS pipe (reciprocating-type operating mechanisms).

For additional information concerning application, installation, or operation of Omni-Rupter Switches, contact your nearest S&C Sales Office.

RATINGS									
KV			Ampere					Fault Closing Capability, Amperes Peak	
Nominal	Maximum	BIL	Continuous	Interrupting*	Peak	One-Second, RMS Sym.	Three-Second, RMS Sym.	Two-Time Duty Cycle	Ten-Time Duty Cycle
14.4	17.0	110	900	900	65,000	25,000	20,000	42,000	21,000
25	29	150	900	900	65,000	25,000	20,000	42,000	21,000

\* Line and cable drooping interrupting ratings are dependent on the length of line. Contact your nearest S&C Sales Office for details.

Printed in U.S.A.

# Type C STANDARD Cutout

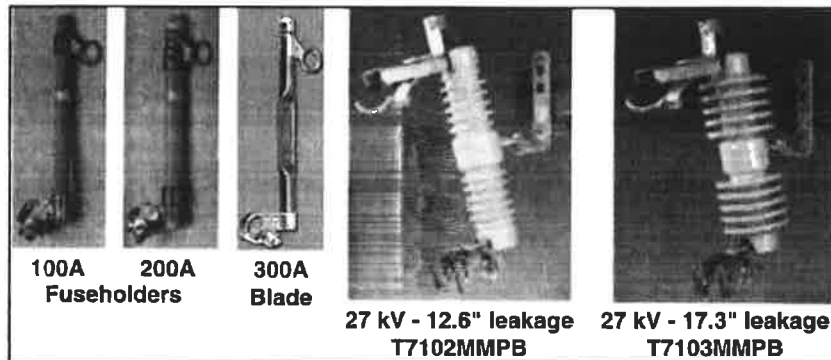
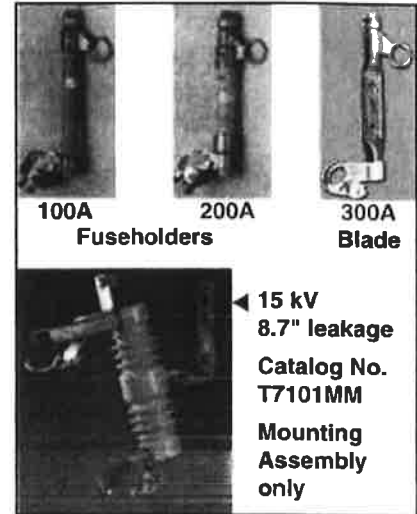


10A-7

## Fuseholders and Mounting Assemblies Ordering Information

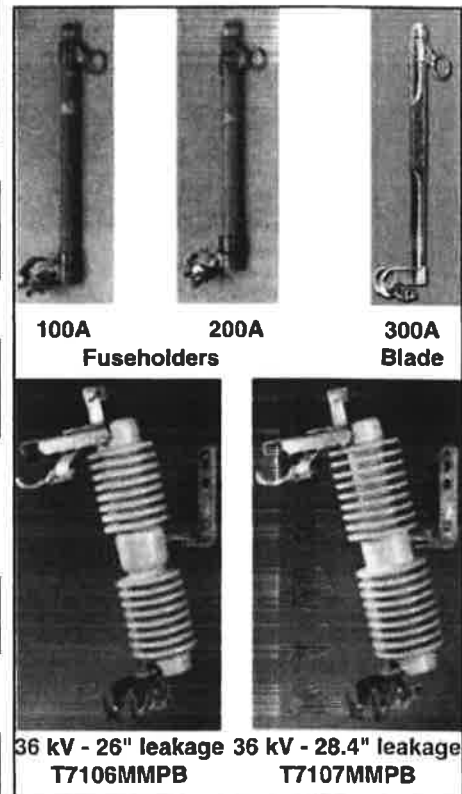
### \* 15 kV - 110 kV LIW (BIL)

*Cutout Base Catalog Number	Fuseholder or Blade only Catalog No.	Weight		Mounting Assembly only *Catalog No.	Weight	
		lb.	kg.		lb.	kg.
C710112	T710112T	1.8 lb.	0.82 kg.	T7101MM	12.9 lb.	5.85 kg.
C710114	T710114T	2.0 lb.	0.91 kg.			
C710143	T710143T	2.6 lb.	1.18 kg.			
C710133	T710133T	2.1 lb.	0.95 kg.			



### 27 kV - 125 kV LIW (BIL)

C710211	T710211T	2.1 lb.	0.95 kg.	T7102MM	15.6 lb.	7.08 kg.
C710213	T710213T	2.3 lb.	1.14 kg.			
C710242	T710242T	2.7 lb.	1.22 kg.			
C710233	T710233T	2.5 lb.	1.13 kg.			



### 27 kV - 150 kV LIW (BIL)

C710311	T710311T	2.1 lb.	0.95 kg.	T7103MM	21.3 lb.	9.66 kg.
C710313	T710313T	2.3 lb.	1.14 kg.			
C710342	T710342T	2.7 lb.	1.22 kg.			
C710333	T710333T	2.5 lb.	1.13 kg.			

### 36 kV - 170 kV LIW (BIL)

C710613	T710613T	2.8 lb.	1.27 kg.	T7106MM	23.4 lb.	10.61 kg.
C710643	T710643T	3.2 lb.	1.45 kg.			
C710633	T710633T	2.8 lb.	1.27 kg.			

NOTE: 26" fuse links are recommended.

### 36 kV - 170 kV LIW (BIL)

C710713	T710713T	2.8 lb.	1.27 kg.	T7107MM	28.7 lb.	13.02 kg.
C710743	T710743T	3.2 lb.	1.45 kg.			
C710733	T710733T	2.8 lb.	1.27 kg.			

NOTE: 26" fuse links are recommended.

### Universal Cutout Tool

Ideal for Standard and Linkbreak 100 amp fuse holders (ABB, Chance S&C) to easily lift out, place, \*open and close. Inverted, secure method also fits Chance Electronic Sectionalizers.

Cat. No. **PSC4033484** (Wt. 4 oz.) See Tools Catalog Section 2100.

*\*When opening a cutout, follow all work rules and OSHA regulations. Not for use with Loadbreak cutouts.*



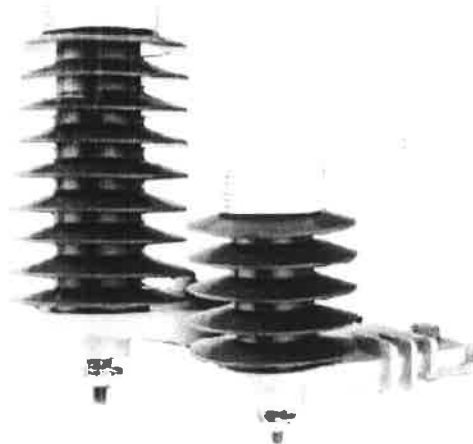


**HUBBELL #2137097324**

**DynaVar Distribution Class Surge Arrester, 10 kV, Polymer/Metal Oxide, Heavy Duty**

SKU # 09635937632

Manufacturer Series: PDV-100



**Please Log In or Register to view pricing & availability.**

## Specifications

<b>Arrester Type:</b>	Distribution Class Surge
<b>Material:</b>	Polymer
<b>Duty Rating:</b>	Heavy
<b>Voltage - kV:</b>	10
<b>Insulating Bracket:</b>	Standard
<b>Mounting:</b>	Crossarm Bracket
<b>Top Terminal:</b>	Nut, Wire Clamp
<b>Bottom Terminal:</b>	Isolator, Nut, Washer and Terminal Nut
<b>Insulating Cap:</b>	Protective Cap

### Bolts, Thimbleye®

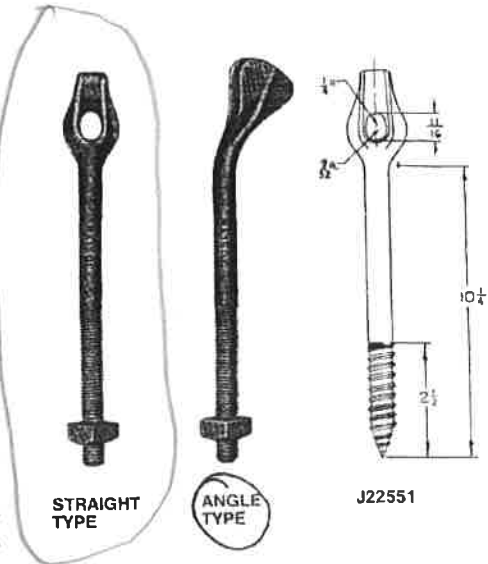
Hot Dip Galvanized

Joslyn Thimbleye® bolts are forged in two styles, straight and bent at a 45-degree angle. They are used for attaching guys and deadends to poles and crossarms, eliminating the need for thimbles, strain plates, guy hooks and extra strand.

These dimensions are the same as for Thimbleye® anchor rod (see anchor section AN). Bolt length is measured from below the eye to the last thread. All Thimbleye® bolts have cone joints and are roll threaded, except for the J22551 which has a gimlet point. 1/8-inch diameter bolts have a minimum ultimate strength of 12,400-pounds; 3/4-inch bolts have a minimum ultimate strength of 18,350-pounds.

Straight Type Catalog No.	Approximate Shipping Weight (Lbs. per 100 pcs.)	Angle Type Catalog No.	Approximate Shipping Weight (Lbs. per 100 pcs.)	Bolt Diameter (Inches)	Bolt Length (Inches)	Thread Length (Inches)
J8050 (E)+	124	J8150*(E)+	130	5/8	8	4
J8051*(E)+	142	J8151*(E)+	144	5/8	10	4
J8052*(E)+	160	J8152*(E)+	162	5/8	12	6
J8053+	172	J8153*+	184	5/8	14	6
J8054*+	186	J8154+	206	5/8	18	6
J8055+	204			5/8	18	6
J22551	142			5/8	10-1/4	2-1/2
		J8161 (E)+	216	3/4	10	4
J8062 (E)+	228	J8162 (E)+	240	3/4	12	6
J8063+	256	J8163+	264	3/4	14	6

\* ANSI Standard + Bell Standard (E) REA Accepted



### Braces, Alley Arm

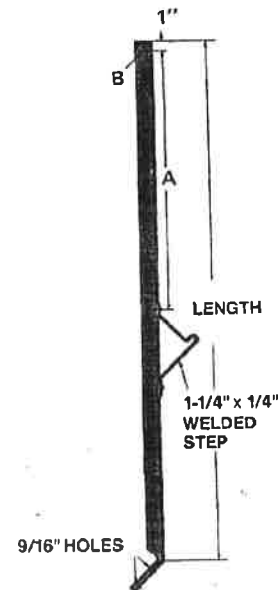
Hot Dip Galvanized

Alley arms, crossarms mounted to one side of the pole, require rigid bracing to insure proper alignment of power distribution and transmission lines. Sturdy Joslyn angle steel alley arm braces mount at a 45-degree angle and come complete with a solidly welded inman step.

These braces are mounted to the side of the arm by a machine bolt and attached to the pole with two 1/2-inch lag screws.

Catalog No.	Angle Size (Inches)	Length (Feet)	A (Inches)	B (Inches)	Brace Mtg. Hole Dia. (Inches)	Approximate Shipping Weight (Lbs. per 100 pcs.)
J1522	1-3/4 x 1-3/4 x 3/16	5	30	9/16		1,300
J1525 (E)	1-3/4 x 1-3/4 x 3/16	7	30	11/16		1,750
J1526	2 x 2 x 1/4	10	50	11/16		3,600

(E) REA Accepted



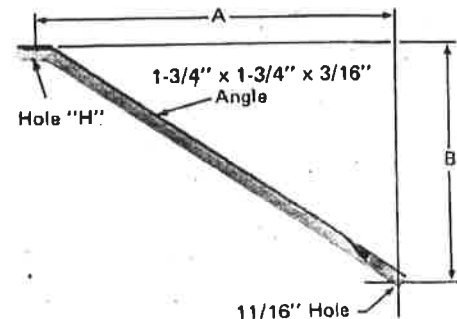
### Braces, Angle

Hot Dip Galvanized

These braces are used as tension members on the side of the arm opposite the odd conductor to compensate for the unbalanced load. The pole mounting end is flattened so the brace can be used as either a right or left hand member.

Catalog No.	H Hole Dia.	Dimensions (Inches)		Approximate Shipping Weight (Lbs. per 100 pcs.)
		A Span	B Drop	
J1442 (E)	11/16	42	27	950
J1430 (E)	13/16	30	20	700

(E) REA Accepted

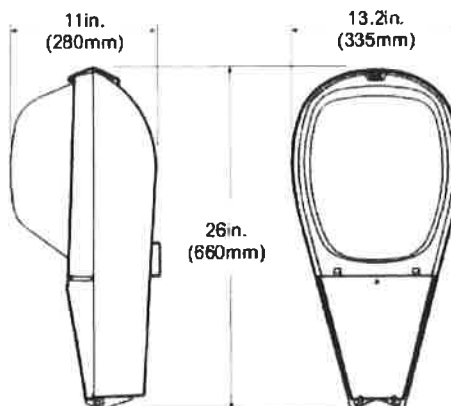
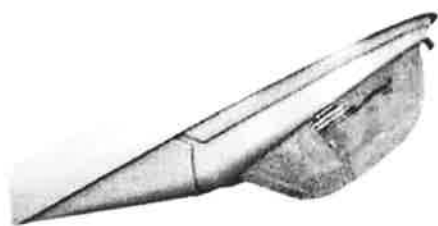




**COBRA HEAD STREET LIGHT FIXTURE MOUNTING BRACKET ARM**

**2" diameter X 8 feet**

# Street Light with 150 Watt High Pressure Sodium and Drop Lens #150-HPS-RLC



**Product Description:** Also called a Cobrahead or Roadway Light, this rugged street light includes a 150 watt pulse high pressure sodium lamp with a quad-tap ballast (120, 208, 240 and 277 Volt). 480 volt option is available with a surcharge.

**Housing:** The housing is made of die-cast aluminum and has a hinged door frame for easy maintenance. Gray powder coat finish is standard. The lens is made of heat and impact resistant tempered glass. Fixture accommodates up to 2" O.D. pipe which is supplied separately.

**Socket:** Porcelain 5KV Pulse Rated Mogul Base with Nickel Plated Screw Shell.

**Photocell:** Field-installed photocell option is available. Please choose the voltage for the photo-cell when ordering. We recommend that this fixture and its optional photo-cell are installed by a licensed electrician.

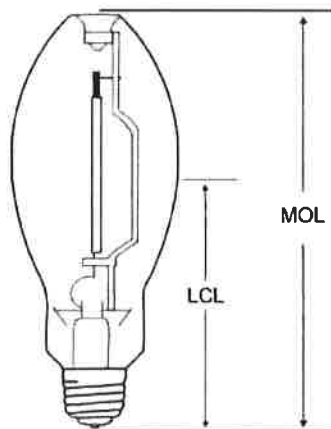
This fixture is UL listed for wet locations  
EPA = 0.97 square feet  
Fixture weight is 30 lbs.

### Bulb Characteristics:

<b>Bulb Size</b>	ED17
<b>Bulb Finish</b>	Clear
<b>Base</b>	Medium <i>Mogul</i>
<b>MOL (Maximum Overall Length) (in.)</b>	5.71
<b>LCL (Light Center Length) (in.)</b>	3.43
<b>Lamp Watts (Nominal)</b>	150
<b>Approx. Initial Lumens</b>	16,000
<b>Approx. Mean Lumens</b>	14,400
<b>Average Rated Life (Hours)</b>	24,000
<b>Color Temperature (K)</b>	2,100
<b>CRI (Color Rendering Index)</b>	22

### Ballast Characteristics:

**Input Volts (60 hz):** 120, 208, 240, 277  
**Input Watts:** 188, 188, 188, 188  
**Approx Line Current (Amps):** 1.6, 0.85, 0.80, 0.70  
**Circuit Type:** HXH - High Power Factor  
**ANSI:** S55  
**Insulation Class:** H  
**Power Factor:** > 90%  
**Regulation:**  
     **Line Volts:** ±5%  
     **Lamp Watts:** ±10%  
**Min. Ambient Starting Temp.:** -40°F/-40°C  
**High Potential Test (Volts):**  
     **1 Minute:** 1650  
     **1 Second:** 2000



ORIGINAL

<b>COMMONWEALTH UTILITIES CORPORATION</b>	
RFP No.	HPS STREETLIGHT
150 and 250 Watt, 120/240 V Dual Voltage, Woodpole Mounted	

## HIGH PRESSURE SODIUM STREETLIGHT SPECIFICATIONS:

High Pressure Sodium Streetlight, woodpole mounted, designed to provide lighting for roadways, residential neighborhoods and parking areas.

**STANDARDS:** The HPS streetlight fixture shall be manufactured, tested and furnished according to the latest edition, revision, or amendments to the applicable standards of ANSI, NEMA, IEEE, IES, RUS and UL except as specifically noted in these standards.

**FIXTURE:** The fixture shall be a horizontal luminaire. The fixture shall be constructed of a die-cast aluminum upper housing and a one-piece bottom door/globe ring, hinged at the back and latched on the street side with a die-cast aluminum 2-position latch. The globe refractor can be glass.

The fixture shall attach to either a 1¼" or 2" mast arm with a 4-bolt, 2-bracket mounting arrangement that will provide ease in leveling with positive holding against severe impact or vibration.

A factory-installed birdguard shall fit snugly around either a 1¼" or 2" mounting tenon.

The optical reflector shall be design to provide an IES Type II standard distribution pattern. The optical system shall be a floating anodized aluminum reflector to provide ease of cleaning to maintain performance. The optical system shall be self-leveling and sealed with a breathing and filtering gasket of dacron-polyester, die-cut and overlaid to eliminate voids that occur with butt-joining. Gaskets are to be cemented full perimeter to the reflector seat with no metallic clips or fasteners.

The unit shall be prewired to a porcelain terminal block with tunnel-type compression terminals to accept incoming supply leads.

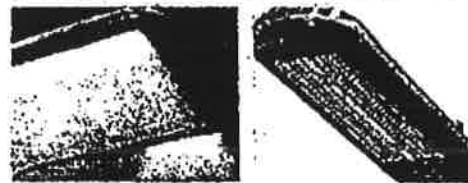
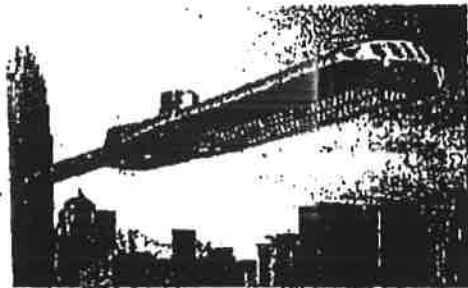
**BALLAST:** The ballast shall be a constant wattage auto-transformer(CWA) or regulated. The ballast shall meet ANSI specification S55 for a 150 watt fixture and ANSI specification S50 for a 250 watt fixture.

L.E.D. STREET LIGHT FIXTURE W/ PHOTOCELL

LightingScience®

Changing the way the world experiences light.

(PROLIFIC® RoadWay



Benefits

- Sustainable Design
  - Custom etched optics to reduce the use of plastics.
  - No tertiary optical losses.
  - Use of recycled and recyclable corrosion resistant materials.
  - Full cutoff optics meet Dark Sky requirements
- Holistic Thermal Design
  - Underdriving LEDs to improve efficiency and system life.
  - Use of premium grade alloy for enhanced thermal conduction.
  - Electronics are isolated and sealed from the optical chamber.
- Standard 1 1/4" to 2" mast arm
- Typical Applications include:
  - Roadways
  - City Streets
  - Residential Streets
  - Parking Lots
  - Campuses

Features\*

	LSR1	LSR2	LSR3	LSR4
Lumen Output				
at operating temperature	4354	5890	9365	11716
Input Power (Watts)	50	74	101	116
Efficiency (lm/w)	87	79	92	81
Color Temperature (CCT)	5000K <span style="border: 1px solid black; padding: 2px;">Note: Actual temp 5253K</span>			
Color Rendering Index (CRI)	70			

Rated Life

- L70: 60,000 Hours
- Housing: Die Cast and Extruded Aluminum
- Finish: Powder Coated
- Optical Distribution: Type II, Type III, IES Full Cutoff
- Mounting Options: 1 1/4" to 2" Mast Arm
- EPA:
  - LSR1, LSR2: J7
  - LSR3, LSR4: L0
- Dimensions:
  - LSR1, LSR2: 28.10" x 8.0" x 4.3"
  - LSR3, LSR4: 714mm x 203mm x 109mm
  - LSR1, LSR4: 32.10" x 8.0" x 4.3"
  - LSR3, LSR4: 942mm x 203mm x 109mm
- Operating Temperature: -40°C to +40°C (-40°F to +104°F)
- Voltage: 120-277 VAC @ 50-60 Hz
- Weight:
  - LSR1, LSR2: 22lbs
  - LSR3, LSR4: 25lbs
- Warranty: 5 Year Limited
- Certification:
  - UL
  - ETL
  - IP67 optics
- Environment: \* All others are optional

Lighting Science Group

### lighting facts™

As Required by U.S. DOT

Lumen Output (Lumens)	6890
Watts	73.81
Lumens per Watt (lm/w)	93.35
Color Temperature (CCT)	5000K (Daylight)
Color Rendering Index (CRI)	70

No warranty or responsibility is assumed for the placement and positioning of this fixture. The LED is designed to provide uniform illumination and is not to be used in applications where the LED is not intended to be used. Additional information and technical data is available at [www.lightingscience.com](http://www.lightingscience.com) for the LED Performance Series.

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LSR 0908  
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