

Avian Protection Products, Assorted



1. Scope

This standard covers the requirements for an assortment of avian protection products.

This standard applies to the following Seattle City Light (SCL) Stock Numbers:

Stock No.	Description
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013038	Raptor protection cover, single arm/pin construction
013039	Raptor protection cover, double arm/pin construction
014426	Raptor protection cover, deadend suspension construction
014427	Raptor protection cover extension
013042	Cutout cover with fastener pin
013043	Wildlife connector cap
580776	Transformer Bushing Cover, Arrestor Cover, Termination Cover
013360	Conductor marker/diverter, round
013582	Bushing cover, 15 – 35 kV

2. Application

The products specified in this standard are intended to cover a variety of exposed high-voltage parts commonly found on the 26.4 kV, overhead distribution system to protect birds, such as crows, pigeons, and eagles, from electrical shock.

Stock No. 013360 may also be effective in diverting large birds such as swans, eagles, ducks, and geese.

Products are suitable for indoor or outdoor applications and are non-tracking.

Operations personnel shall determine if products may be installed on energized systems or if equipment must be de-energized and grounded first. It should not be necessary to disassemble system components to install protection products.



Protective products may be cut to improve fit.

Operations personnel are encouraged to try different products and report their experiences and findings to Standards.

For additional information, refer to Construction Standard 0072.01 - Avian Protection.

3. Product Requirements

3.1 Stock Number 013038

Description **Raptor protection cover, single arm/pin construction**

Manufacturer TE Connectivity

Catalog Number BCIC-G-PIN-795-01

Color Gray

Material Fire retardant, flame resistant ABS/PVC blend with UV inhibitors

Overall length 32 inches

Specific application Product is installed over vertical, tie-top, "F" neck, Class 57-2 porcelain insulators or over vertical, clamp top, Class 57-12 porcelain insulators. Tie-top, "F" neck insulators are typically used with 397.5 kcmil (Chickadee) or smaller conductor. Clamp top insulators are typically used with 954 kcmil (Rail) conductor. Flexible cover allows conductors to exit up to 30 degree angles from any axis.



3.2 Stock Number 013039

Description **Raptor protection cover, double arm/pin construction**

Manufacturer TE Connectivity

Catalog Number BCIC-G-DPIN-795-01

Color Gray

Material Fire retardant, flame resistant ABS/PVC blend with UV inhibitors

Overall length 42 inches

Specific application Product is installed over vertical, tie-top, "F" neck, Class 57-2 porcelain insulators or over vertical, clamp top, Class 57-12 porcelain insulators. Tie-top, "F" neck insulators are typically used with 397.5 kcmil (Chickadee) or smaller conductor. Clamp top insulators are typically used with 954 kcmil (Rail) conductor. Flexible cover allows conductors to exit up to 30 degree angles from any axis.



3.3 Stock Number 014426

Description **Raptor protection cover, deadend suspension construction**

Manufacturer TE Connectivity

Catalog Number BCIC-G-DE/CL-01

Color Gray

Material Fire retardant, flame resistant ABS/PVC blend with UV inhibitors

Overall length 27 inches

Specific application Product is installed over deadend shoe connected to a suspension insulator in primary deadends.



Product Requirements, continued

3.4 Stock Number 014427

Description **Raptor protection cover extension**

Manufacturer TE Connectivity

Catalog Number BCAC-G-ARM-01

Color Gray

Material Fire retardant, flame resistant ABS/PVC blend with UV inhibitors

Overall length 31 inches

Specific application Product is installed over primary conductor and is connected to the Raptor Cover.



3.5 Stock Number 013042

Description **Cutout cover with fastener pin**

Manufacturer Kaddas Enterprises, Inc.

Catalog Number KE1183-GR

Color Gray

Material Fire retardant, flame resistant base material with UV inhibitors

Specific application Product is installed over 100 ampere, open type, porcelain or polymer cutouts, Seattle City Light Stock Numbers 682099 and 013739, and locked with a pin.



3.6 Stock Number 013043

Description **Wildlife connector cap**

Manufacturer Central Moloney

Catalog Number 70380436

Color Gray

Material Molded glass-filled polyester

Specific application Product is used to add wildlife protection to overhead distribution transformer primary bushings. Unscrew the original connector and install new connector in its place. Connector will accept copper or aluminum conductor up to 2/0 AWG. Note: All new overhead transformers are already provided with this type of protective connector.



3.7 Stock Number 580776

Description **Transformer bushing cover, arrester cover, termination cover**

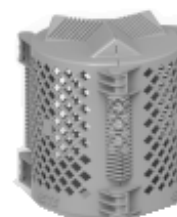
Manufacturer TE Connectivity

Catalog Number BCAC-G-IC-5D/6

Color Gray

Material Polyolefin

Specific application Hinged cover snaps and locks around overhead distribution transformer primary bushings. This cover is approximately 5 inches in diameter and is used with arresters and terminations.



Product Requirements, continued

3.8 Stock Number 013360

Description	Conductor marker/diverter, round
Manufacturer	Preformed Line Products
Catalog Number	RAPTOR-Y
Color	See Application Section below.
Material	UV stabilized plastic and stainless steel spring



Specific application Product is attached along a span of primary conductor. Device stands out like a beacon against background features, letting birds see where the power lines are. When swaying in the wind, the device also makes a noise that birds can hear. Highly reflective yellow tape is positioned in the center of each device to further assist in warning birds. Fits conductor 0.1" – 1.5" in diameter. Device can be installed on live power lines with a hot stick. Recommended spacing is every 15 feet.

3.9 Stock Number 013582

Description	Animal Protection Bushing Cover
Manufacturer	TE Connectivity
Catalog Number	BCAC-G-5D/8
Color	Gray
Material	Cross-linked polymer



Specific application Hot-stickable insulating cover designed to prevent animal-related outages on pole-top transformer bushings. Fits bushing sizes ranging from 15 to 35 kV.

4. Packaging

Products shall be packaged to prevent damage during shipping, handling, and storage.

5. Issuance

Stock Unit: EA (for all products)

6. Approved Manufacturers

Approved manufacturers and catalog numbers are cited in Section 3 of this standard.

7. References

SCL Construction Standard 0072.01; "Avian Protection"

8. Sources

4-1773455-0 E361; "Energy Ready Reference Guide, Generation, Distribution, Transmission," Tyco Electronics; 12/09

KE1039; Revision C; "Line Protector," Drawing; Kaddas Enterprises; Released 05-11-08

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Seattle City Light
MATERIAL STANDARD
Avian Protection Products, Assorted

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TE Connectivity; www.te.com