



Howard Industries, Inc.  
ISO-9001 Certified



# 2149 Wildlife Protector

## Snap-on Wildlife Protection for High-Voltage Bushings

The Howard Industries 2149 Wildlife Protector is designed to prevent outages caused by wildlife contact with exposed high-voltage bushings and is intended for factory or field installation on overhead distribution transformers.

The 2149 Wildlife Protector is made from a UV-enhanced high-density polyethylene resin that provides good mechanical strength and electrical properties combined with excellent weathering characteristics.

The protector's one-piece hinged design features internal molded projections to help hold the protector in place and a snug fit to prevent wildlife contact with the high-voltage bushing terminal. A sturdy latching mechanism secures the protector in the closed position, yet allows for easy removal.

The protector's design includes an opening for the line lead and provisions for a direct-connected lightning arrester lead. A knockout

on the side of the protector body is provided for use with gap-type lightning arresters.

Options include a riser tube insulator for the line lead and a handwheel for tightening high-voltage terminal connections by hand.

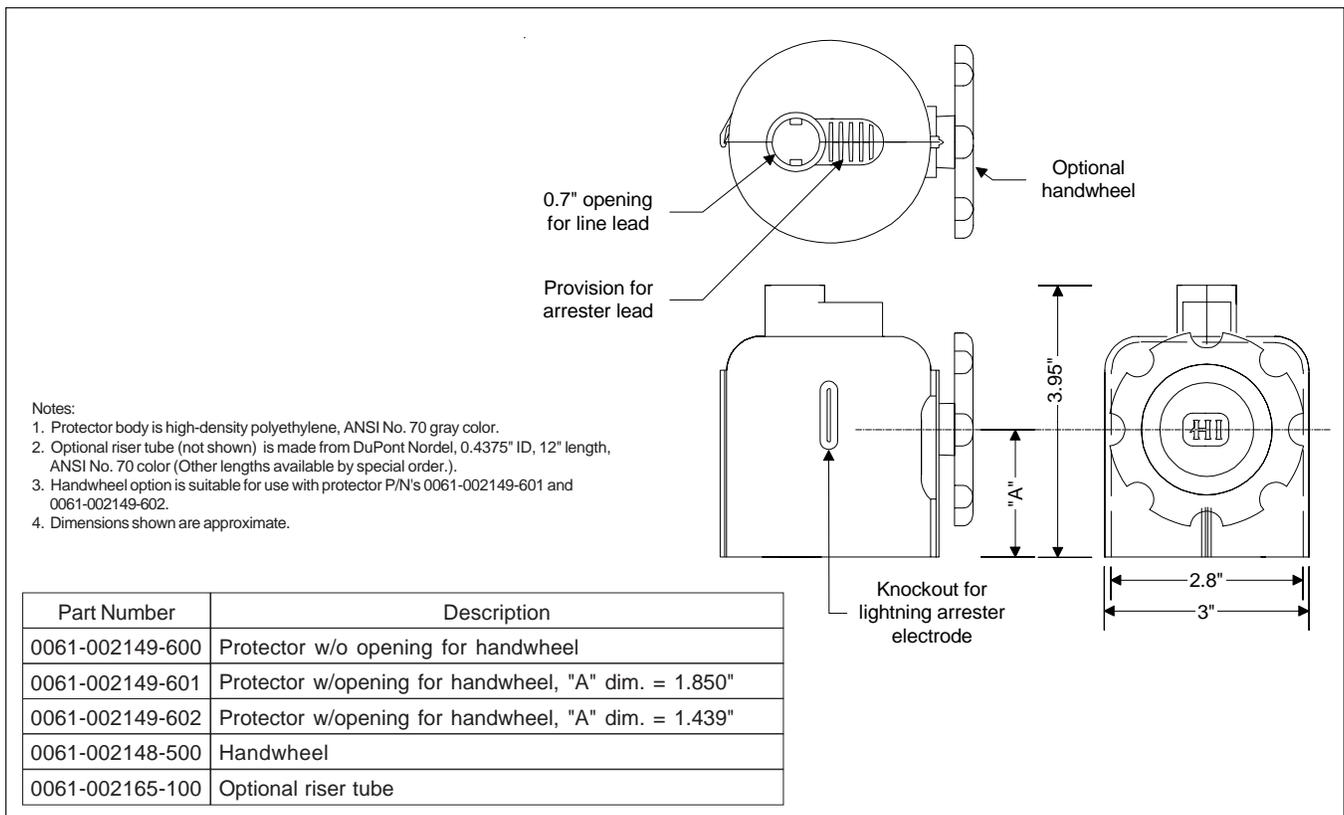


Figure 1: 2149 Wildlife Protector for high-voltage bushings.

### Installation of 2149 Wildlife Protector (without handwheel)

1. Position the protector around the bushing terminal, making sure the bottom surface of the protector is resting on the top skirt of the bushing. Close the protector by snapping the two halves together, while guiding the line lead into the lead opening. If the optional riser tube is used, slip it over the line lead before connecting the lead to the bushing terminal. Position the riser tube in the lead opening while closing the protector. Check to make sure the latching mechanism is completely locked.

2. If a gap-type arrester is being used, remove the protector's arrester electrode knockout and position the protector so that the knockout is oriented toward the arrester electrode. If a direct-connected arrester is being used, insert the arrester lead through the arrester lead provision while closing the protector.

### Installation of 2149 Wildlife Protector (with handwheel)

Follow the procedure described above, but before closing the protector, insert the handwheel into the side opening and screw the handwheel on the terminal stud until the connection is tight.

### Removal

To remove the protector, simply unlatch the protector body and unscrew the handwheel (if present).



Figure 2: 2140 Wildlife Protectors installed on overhead distribution transformers.