Deadbolt™ Control Circuit Model 9840 Installation Instructions

Overview

The Deadbolt Control Circuit Surge Suppressor (Model 9840) protects your electronic control equipment from transient voltages appearing on the power lines.

Installation and Wiring

Your Deadbolt protects your electronic equipment by redirecting damaging transient surge voltages to earth ground. A good ground connection is essential for proper operation of your Deadbolt.

The Deadbolt has a threaded connector that allows you to attach the unit directly to a service entrance panel. This is generally a good place to make your connections including the ground connection. However, some panels are not properly grounded. An alternate good ground connection would be a long buried grounding rod.

Refer to the illustrations on the following page for 120 volt and 240 volt wiring. Be sure to shut off all power before attempting to connect the Deadbolt to the electrical service panel. A qualified electrician should complete all wiring.

Operation

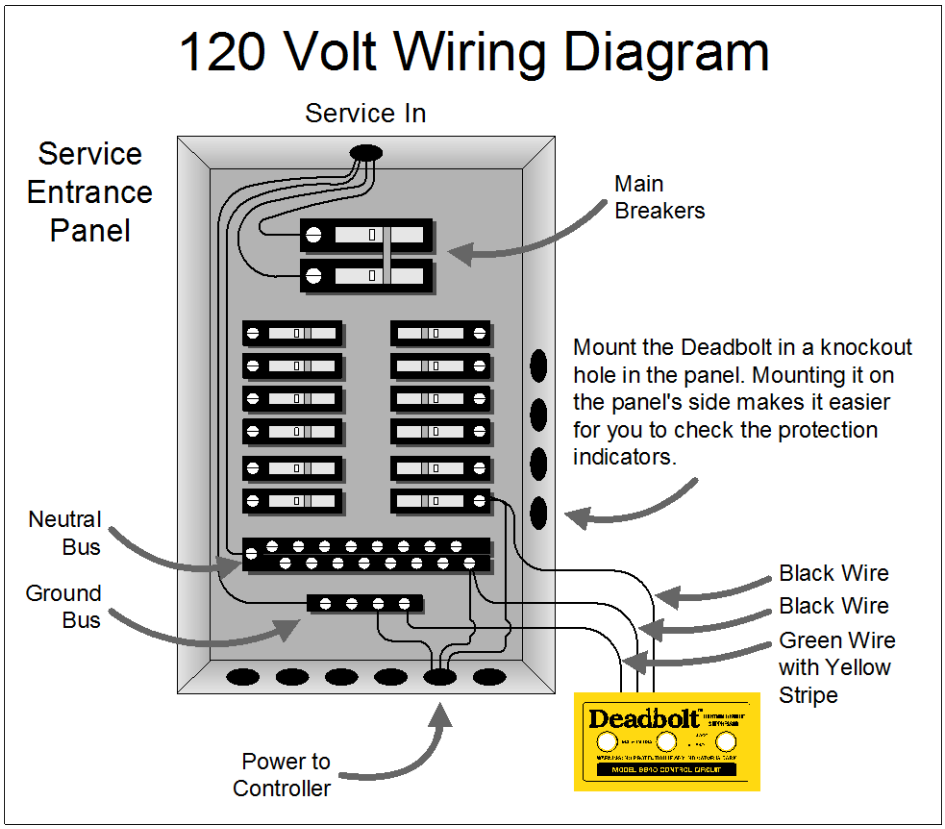
The Deadbolt has three round viewing windows on its front. Check these windows periodically, especially after a thunderstorm, to ensure the unit is still operating properly. If any window shows a dark circle in the center, the unit is no longer protecting the circuit.

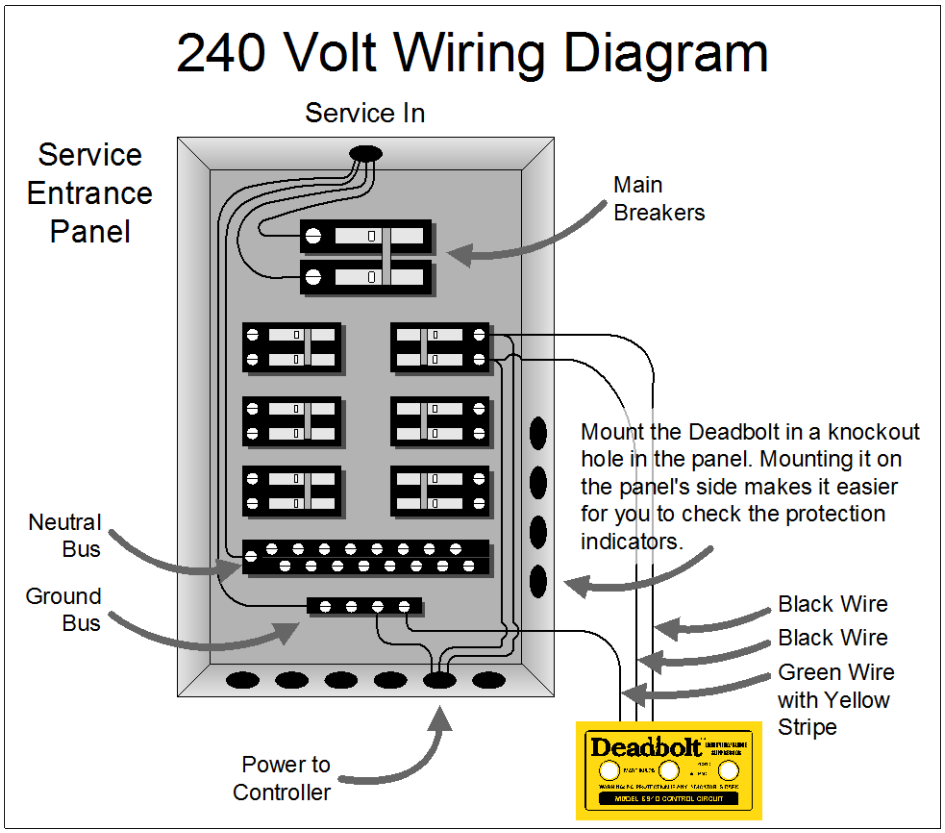
While your Deadbolt will automatically reset after redirecting a transient surge voltage, intense or long duration surges could damage the unit. One of these conditions will result:

- The indicators will become dark. This indicates that the Deadbolt has been damaged in the process of protecting your circuit and that it has been disconnected from the circuit. The circuit breaker will be tripped, but you will be able to reset the circuit breaker. That is why it is important to regularly inspect the viewing windows.

- The indicators will not become dark, but the circuit breaker will be tripped. If this occurs, the circuit breaker will continue to trip when you attempt to reset it.

There are no serviceable parts in the Deadbolt model 9840 so it must be replaced if either of the conditions described above occurs.


120 Volt Wiring Diagram
Service In
Service Entrance Panel
Main Breakers
Mount the Deadbolt in a knockout hole in the panel. Mounting it on the panel's side makes it easier for you to check the protection indicators.
Neutral Bus
Ground Bus
Black Wire
Black Wire
Green Wire with Yellow Stripe
Power to Controller
Deadbolt


240 Volt Wiring Diagram
Service In
Service Entrance Panel
Main Breakers
Mount the Deadbolt in a knockout hole in the panel. Mounting it on the panel's side makes it easier for you to check the protection indicators.
Neutral Bus
Ground Bus
Black Wire
Black Wire
Green Wire with Yellow Stripe
Power to Controller
Deadbolt

Specifications

Maximum Operating Voltage .....265 VAC 50/60 Hz

Rated Clamping Voltage (8μS x 20μS waveform)

Hot to Neutral (H-N).....710 volts (@ 200 amps)

Hot to Ground (H-G) .....710 volts (@ 200 amps)

Neutral to Ground (N-G) .....710 volts (@ 200 amps)

Maximum Surge Current .....18,000 (X3) amps

Energy Handling Capability .....360 (X3) joules (10μS x 1000μS waveform)

Reaction Time.....<50 nanoseconds

Connection Wire Size and Length .....AWG 12, 30 inches
(2.05 mm diameter, 76.2 cm)

Service

Before requesting technical assistance from Val Products Inc., make sure you have reviewed this document. Often times product related problems can be traced back to improper installation or operation.

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