

Westector® Overcurrent Trip Device

Background

A provider of overcurrent tripping systems for use on low-voltage circuit breakers since the 1960s, Westinghouse currently manufactures the Westector® overcurrent trip device for Class 1E and non-Class 1E Westinghouse DS and DB low-voltage circuit breakers. The Westector overcurrent trip device is a direct replacement for the vintage Amptector® overcurrent trip device.

Westinghouse provides the Westector overcurrent trip device as an individual unit or as part of a complete retrofit kit to replace/upgrade existing overcurrent tripping systems provided by the original equipment manufacturer. Kits include a Westector overcurrent trip device, direct trip actuator, current sensors, wiring harness, hardware and complete installation instructions, and are available for other original equipment manufacturer low-voltage breaker applications.

The Westector overcurrent trip system is standard equipment supplied on new DB and DS circuit breakers configured per original shop-order requirements and is qualified per originally installed equipment.

Description

The Westector overcurrent trip device is a solid-state I2T device that provides adjustable overcurrent tripping for the retrofitted breaker. It is adjustable for delay time and current pickup. Settings are continuous as opposed to discrete, so they can be made along the entire range of the time-current characteristics curve. The tripping characteristics for a specific breaker rating are determined by both the sensor rating and the specific settings on the Westector overcurrent trip device, which then supplies a tripping current to the actuator, thereby tripping the breaker.

All of the necessary tripping energy comes from the load current flowing through the sensors; no separate power source is needed. The Westector overcurrent trip device develops an output for its associated trip actuator when preselected conditions of current magnitude and duration are exceeded.



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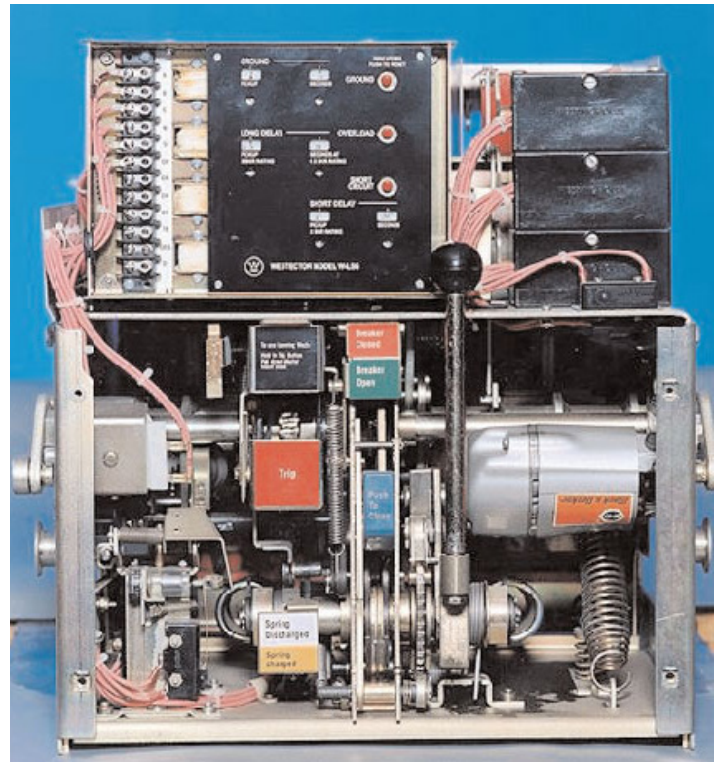
The Westector overcurrent trip device is available in six pickup combinations (only one Westector overcurrent trip device is required per breaker). The combinations are:

- Long and instantaneous
- Long and short
- Long, instantaneous and ground
- Long, short and ground
- Long, short and instantaneous
- Long, short, instantaneous and ground

A discriminator feature is included with any Westector overcurrent trip device that does not have an instantaneous element. This feature provides fixed, instantaneous tripping when a breaker is closed into a fault.

Current sensors are available in a wide range of multi-tap ratings, making the system flexible over a wide range of tripping applications. The sensors produce an output proportional to the load current, so that by changing the sensors, you can change the breaker's continuous current rating within the frame size.

The actuator, which consists of a spring-charged plunger held in place by a permanent magnet, receives a tripping pulse from the Westector overcurrent trip device and provides a maximum mechanical force to trip the breaker. The actuator automatically resets when the breaker opens



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Benefits

- The benefits that can be realized using the Westector overcurrent trip device include:
- Proven technology with more than 30 years of field use
- Fewer spurious breaker trips
- Improved trip setting accuracy of two percent repeatability
- Easy calibration for accurate and repeatable trip set parameters
- Fewer spare parts and decreased maintenance due to the use of a minimal number of components
- Less maintenance due to a corrosion- and contamination-resistant static sensor system

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