

# Enhanced Direct Trip Actuator

## Background

Since the 1960s, Westinghouse has manufactured an analog over-current trip unit. Westinghouse now manufactures the Westector® analog over-current trip unit for use on Class 1E and non-Class 1E Westinghouse DS and DB low-voltage circuit breakers. The Westector over-current trip system basically consists of a Westector, direct trip actuator (DTA) and phase current sensors. In 2003, Westinghouse developed an enhanced DTA for use with its Westector over-current trip system to provide increased trip force with reduced susceptibility to “shock-out.”



DS breaker DTA

## Description

The new DTA is a Class 1E-qualified, form, fit and function replacement for many vintage-style DTAs used with Westector and Amptector®\* over-current tripping systems. In many instances, the only necessary adjustment when the enhanced DTA is installed is a simple change in wire terminations.

\*The new DTA will work with a majority of vintage Amptector over-current trip system styles. Please contact your Westinghouse Nuclear Parts Specialist for specific application details.

## DB Breaker Applications

The new DTA is a direct replacement for the following vintage design actuators for use with Amptector/Westector over-current trip devices on DB breakers:

591C326G01	692C704G01	692C704G02	4A35630G12	591C326G01-MOD
591C326G02	692C705G02	4A35630G13	4A35630G44	9A10102G44
591C326G03	9026A05G01	692C706G02	4A35630G14	9A10103G44

The new DTA part numbers versus breaker application are as follows:

1C83225G01	DB	25
1C83225G02	DB	50
1C83225G03	DB	75/100

The new DTA will function with the following Amptector over-current trip device series, all groups: 140D092, 139D643, 6895D02, 6968D06, 6998D02, 6997D20, 8209A10 and 1233C97, as well as with Westector over-current trip system 2D39995 trip units. “MPM-DB Breaker,” Rev. 0, March 31, 2002, Sections 11-6.2.1, 11-6.2.2 and 11-6.2.3 are applicable to the installation and testing of the new DTAs.

## DS Breaker Applications

For DS breaker applications, the new DTA is a direct replacement for the following vintage design actuators:

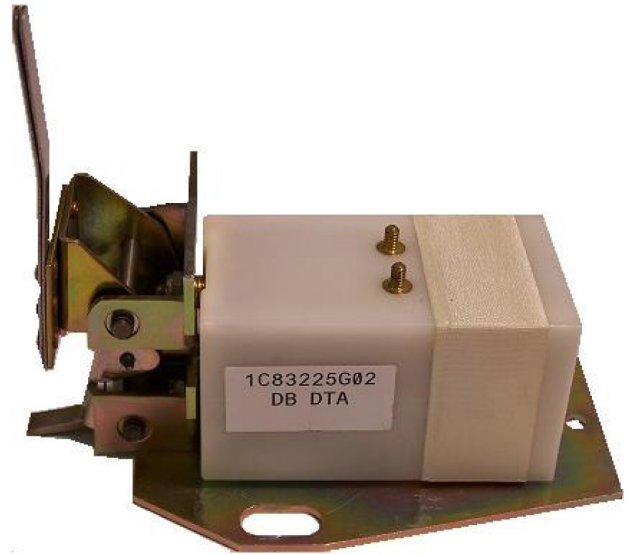
New DTA	Previous Part Numbers			
2D82805G01	1B81068G01	4A35629G11	6482C55G01	8242C73G01
2D82805G02	1B81068G02	4A35629G11-OTL	6482C55G01-MOD	8242C73G02
2D82805G03	1B81068G03	592C114G03		

The new direct trip actuator is not a direct replacement for DTA style 592C114G01 (red magnet) used with the following Amptectors: 140D092, 139D643 and 151D792. It is recommended that both the Amptector over-current trip device and DTA be replaced when replacing either of the two devices. Please reference Westinghouse Technical Bulletin NSID-TB-88-05.

The new DTA will function with the following Amptector device series, all groups: 6895D02, 6968D06, 6998D02, 6997D20, 8209A10 and 1233C97, as well as with Westector 2D39995 trip units.

## Benefits

- Available for both DB and DS applications.
- Greatly reduced susceptibility to shock-out.
- Higher magnetic retention core than previous designs.
- Rugged, hermetically sealed core.
- Seismically and environmentally qualified.
- Subjected more than 13,700 combined breaker and actuator operations.
- Designed, manufactured and commercially dedicated by Westinghouse.



DB breaker DTA

## Experience

- Westinghouse has furnished more than 1,000 DTAs to nuclear plants for more than 25 years.
- Westinghouse personnel have significant nuclear industry experience.

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*Amptector is a registered trademark of the Eaton Corporation.*