



Certificate of Compliance

Certificate: 1349643 **Master Contract:** 154470 (015734_A_000)
Project: 70128624 **Date Issued:** 2017-05-08
Issued to: Tyco Electronics Corporation
2901 Fulling Mill Road
Middletown, Pennsylvania 17057
USA
Attention: Brian Lineberry

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C', 'US' and ▲



Issued by: *Ramana Tangirala*
Ramana Tangirala

PRODUCTS

CLASS - C321590 - SUPPLEMENTARY PROTECTORS-Component Acceptance-Certified to U.S. Standards

CLASS - C321530 - SUPPLEMENTARY PROTECTORS-COMPONENT ACCEPTANCE PROGRAM

Model “W28” followed by suffixes, Supplementary Protector, Commercial Appliances, , 0.25 to 20A, 50/60 Hz, 277V ac max and 50V dc max, manual reset type with manual switching feature, thermally operated, trip-free mechanism, (additionally W28S may be manually operated) 1-pole, open type, rated as follows:

W28X : 0.25A to 20A, 50/60Hz, 277V ac max and 50V dc max,

Application Codes for all devices from 0.25A to 15A inclusive:

0.25A to 2A: TC2

3A to 15A: TC1

OL0, 0.25A to 15A, 277V ac and 50V dc; SC: 1kA, C1, 277V ac and SC: 1kA, C1, 50V dc;

2 hp max at 250V ac single phase

240V ac max at 400 Hz

Application Codes for all devices from 15.1A to 20.00A inclusive:

15.1 to 20A: TC1

OL0, 15.1A to 20A, 277V ac and 50V dc; SC: 1kA, C1, 277V ac and SC: 1kA, C1, 50V dc;

2 hp max at 250V ac single phase

1 hp max at 125V ac single phase



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W28H : 0.25A to 20A, 50/60Hz, 277V ac max and 50V dc max.

Application Codes for all devices from 0.25A to 15A inclusive:

0.25A to 2A: TC2

3A to 15A: TC1

OL0, 0.25A to 15A, 277V ac and 50V dc; SC: 1kA, C1, 277V ac; SC: 2kA, C1, 125V ac and SC: 1kA, C1, 50V dc;

2 hp max at 250V ac single phase

240V ac max at 400 Hz

Application Codes for all devices from 15.1A to 20.00A inclusive:

15.1 to 20A: TC1

OL0, 15.1A to 20A, 277V ac and 50V dc; SC: 1kA, C1, 277V ac and SC: 1kA, C1, 50V dc;

2 hp max at 250V ac single phase

1 hp max at 125V ac single phase

W28S: 3A to 15A, 50/60Hz, 120V ac max

Application Codes:

TC1, OL0, 3A to 20A, 120V ac, SC: 1kA, C1, 120V ac;

120V ac max at 400 Hz – 30,000 operations

Conditions of Acceptability:

1. These devices are accepted as components for use only in other Certified equipment, where the suitability of the combination is determined by the CSA Group.
2. Protectors rated 0.25A to 2A have a trip-ampere rating based on 175 percent of the marked full load ampere rating. Protectors rated 3A to 20A have a trip-ampere rating based on 135 percent of the marked full load ampere rating.
3. These devices should be mounted in enclosures having adequate strength and thickness and in the intended manner and with spacings in accordance with the requirements of the overall equipment.
4. For alternating-current rated devices, short circuit capacity of the alternating-current supply shall not exceed 1000 A at 277 V ac (W28X and H), 120 V ac (W28S), 60 Hz single phase. Series fuses shall be rated not more than four times the full load current marked on the device using K5 fuses.
5. For devices with the "H" circuit function, short circuit capacity of the alternating-current supply shall not exceed 2000 A at 125 V, 60Hz single phase. Series fuses shall be rated not more than four times the full load current marked on the device using K5 fuses



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6. For direct-current rated devices, the short circuit capacity of the direct-current supply shall not exceed 1000 A at 50 V dc. The series fuses shall be rated not more than four times the full load current marking device using K5 fuses.
7. 3.2A devices shall comply with the end-use application that it shall be located inside the enclosure housing the transformer.
8. Cat. No. W28, rated 15A, 250 Vac, de-rated to 4.85 Amps and placed in a 105°C ambient for Calibration and Temperature tests. The maximum temperature obtained were 106°C on the load terminal. An Overload test was conducted at the de-rated current value at 600% of rated current. The unit was tested with Valox 420SEO 1.22 mm. Thick rated at 130°C.
9. These protectors have been deemed trip-free, cycling.
 - i) The protector shall be inaccessible to tampering (shorting of the terminals).
 - ii) The protector shall not be shunted during the temperature testing of the transformer, and shall not operate during this testing.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 235 - Supplementary Protectors
UL 1077 - Supplementary Protectors for Use in Electrical Equipment