



# Certificate of Compliance

**Certificate:** 70214581

**Master Contract:** 170351

**Project:** 80170197

**Date Issued:** 2023-06-01

**Issued To:** Bel Fuse Inc.  
206 Van Vorst St  
Jersey City, New Jersey, 07302  
United States

**Attention:** Editha S. Vergara

*The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.*

**Issued by:** Gwangyeol Park  
Gwangyeol Park



## **PRODUCTS**

CLASS - C531167 - POWER SUPPLIES Component Type (CSA 62368-1)

CLASS - C531197 - POWER SUPPLIES - Component Type (UL 62368-1) - Component Type (UL 62368-1)

- Certified to US Stds

Component type power supplies intended for use with Information Technology and Business Equipment, where the suitability of the combination is to be determined by CSA Group.

Switching Power Supply, Models TCP3500-24S590, TCP3500-1024, TCP3500-1048, TCP3500-H048, TCP4000-H090, TXP3500-1048, TXP4000-1110, YPA.00323; may be followed by alpha/numeric character denoting non-safety critical options.



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Electrical Rating:

| Model  | Input                         |        |       | Output (DC) |                                  |
|--|-------------------------------|--------|-------|-------------|----------------------------------|
|  | V                             | A      | Hz    | V           | A/W                              |
| TCP3500-24S590                                 | 400-480 Vac, 2W+PE            | 12-8   | 50/60 | 10-32       | 125 A maximum<br>3500 W maximum  |
| TCP3500-1024                                   | 115-277/200-480 Vac,<br>3W+PE | 12-5   | 50/60 | 10-32       | 125 A maximum<br>3500 W maximum  |
| TCP3500-1048,<br>TCP3500-H048,<br>TXP3500-1048 | 115-277/200-480 Vac,<br>3W+PE | 12-5   | 50/60 | 10-50       | 73 A maximum<br>3500 W maximum   |
| TCP4000-H090,                                  | 115-277/200-480 Vac,<br>3W+PE | 12-5.6 | 50/60 | 30-100      | 45 A maximum<br>4000 W maximum   |
| TXP4000-1110,<br>YPA.00323                     | 230-277/400-480 Vac,<br>3W+PE | 7-5.2  | 50/60 | 30-137.5    | 36.5 A maximum<br>4000 W maximum |

**CONDITIONS OF ACCEPTABILITY**

1. The power supply is to be installed only by trained service personnel, according to manufacturer installation instructions.
2. Evaluated as Class I (earthed equipment). Reliable earth connection shall be provided in the end use installation.
3. The equipment has been evaluated for use in Pollution Degree 2 environment, up to 3048m altitude, 70°C maximum ambient for TCP series and 55°C maximum ambient for TXP series.
4. TCP Series is provided with an aluminium water-cooled cold plate to aid in cooling the power supply. The aluminium water cooled cold plate is not a part of this evaluation.
5. Temperature tests shall be considered for specific installation conditions in the end system.
6. Spacing of the Power Supply Unit (PSU) have been evaluated for an altitude of 10,000ft (3048m), under IEC60664-1: 1992 Table A.2 (altitude correction factor is 1.15).
7. Enclosure provided with the equipment meets FIRE and ELECTRICAL requirements except for the rear panel of models TXP3500 and TXP4000. Suitability for mechanical enclosure shall be determine at end system.

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8. Evaluated for connection to AC power with a branch circuit protection rated max 40A for models TCP3500, TCP4000, TXP3500 and max. 20 A for model TXP4000.
  9. The PSU has been evaluated for a TN (Including TN-S and TN-C) systems power source.
  10. The PSU has been evaluated for use with a Three Phase power source (3W+PE).
  11. The output of Models TCP3500 and TXP3500 is ES1.
  12. The output of Model TXP4000-1110 is ES3. TXP4000 output is still at ES3 after disconnection at no load condition. Output can only be accessible after 2 minutes from disconnection.
  13. All Isolating transformers isolation barrier insulation temperatures have been measured within the winding on the insulator. The internal temperature did not exceed the insulation Class limits for NORMAL operation and ABNORMAL operation.
  14. The PSU is not intended for use in vehicles, on board ships or aircraft.

#### **APPLICABLE REQUIREMENTS**

- |                                |  |
|--------------------------------|--|
| CAN/CSA C22.2 No. 62368-1:19   | - Audio/video, information and communication technology equipment<br>- Part 1: Safety requirements |
| UL 62368-1 3 <sup>rd</sup> Ed. | - Audio/video, information and communication technology equipment<br>- Part 1: Safety requirements |

#### Notes:

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Products certified under Class C531167 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). [www.scc.ca](http://www.scc.ca)





## Supplement to Certificate of Compliance

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*The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.*

### Product Certification History

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| Project  | Date       | Description  |
|----------|------------|--|
| 80170197 | 2023-06-01 | Update CSA Report 70214581 to add models TCP3500-24S590 and YPA.00323, and add alternative source for gap-pad<br>- based on acceptance of data under the CPC/CTF-3 program                         |
| 80119609 | 2022-03-22 | Update CSA 70214581 (TCP3500, etc) to upgrade to 3rd Ed, add transformers due to alternate insulation systems and alternate components   |
| 80107418 | 2021-11-25 | Update CSA 70214581 to add alternate PWB layouts for the secondary main board and power board<br>- revisions due to reduced number of mosfets on the output rail;<br>- add alternate PWB sources   |
| 80052529 | 2020-08-31 | Update CSA 70214581 to roll back the standard to 62368-1 Ed. 2<br>- The models don't comply with 62368-1 3rd edition due the line-line varistors voltage rating less than 1.25x the rated voltage. |
| 80044198 | 2020-06-01 | Update CSA 70214581 to add component vendors, and upgrade to 62368-1 Ed. 3   |
| 80016654 | 2019-09-06 | Update CSA Report 70214581 to include alternate fuse vendor  |
| 80004676 | 2019-05-29 | Update CSA 70214581 to include new model TCP3500-1024  |
| 70214581 | 2019-02-06 | AC-DC Converter, Models TCP3500-1048, TCP3500-H048, TCP4000-H090, TXP3500-1048, TXP4000-1110 (CSA c/us)  |