

Earlier Approval

Number Year
4529 2009



Certificate No. : 4722

Date of Issue : 01 APR 2014

Date of Expiry : 01 APR 2017

GOVERNMENT OF INDIA
Ministry Of Defence

ELECTRONIC COMPONENTS STANDARDISATION ORGANISATION (LCSO)
QUALIFICATION APPROVAL

(UNDER THE PROVISIONS OF JSS 5999-10)

Grant of this Approval confirms the competence of*

PROTECTRON ELECTROMECH (P) LTD.
No. 44, 29th Cross, 7th Main Road
Banashankari Industrial Layout
Banashankari IInd Stage, BANGALORE – 560 070.

to manufacture the component(s) described below :

1. Component : Connectors, PWB, Two-Part, High-density, Modular
2. Manufacturer's Code : As in Addendum Sheet, Sl. No. 1 to 44
3. Joint Services Specification : JSS 50807
4. Style Reference : As in Addendum Sheet, Sl. No. 1 to 44
5. Range : No. of contacts : 2 Rows : 80 Contacts &
Single row : 40 Contacts
6. JSS 50101 Severities
Temperature : T 40 / 105
Damp Heat : H 14
Air Pressure (Low) : P 17 : 4.4 kPa
Acceleration (Steady state) : Not applicable
Impact (Shock) : S 12 : 500 m/s², 11 ms
Vibration : V 13 : 10 to 2,000 Hz
7. Special features : Body: Glass-filled Polybutylene Terapthalate (GFPBT). Machined Contacts: Pin and Socket – Machined Brass. Spring Member – Beryllium Copper. Punched / Formed Contacts Phosphor Bronze. Contact finish: 0.75 µm (min) Gold plated, Tin plating thickness – 2.5 µm to 5 µm (min).

(BS KOTRESH)
AGM (QA), BEL
Chairman
LCSO Panel
BANGALORE

(VASUDHA PRASADA RAO B)
Scientist 'F'
Officer-in-Charge, LCSO
Defence Research and Development Organisation
LRDE, C V Raman Nagar, BANGALORE – 560 093
For **Electronics Standardisation Sub-Committee**

Place : BANGALORE

Date : 05 SEP 2014

- This Approval does not obviate the need for Batch Acceptance tests.
- Failure of this component during usage may be reported to OIC, LCSO.

CERTIFICATE OF COMPLIANCE

Certificate Number 20150619-E228912
Report Reference E228912-20090323
Issue Date 2015-JUNE-19

Issued to: PROTECTRON ELECTROMECH (P) LTD
44 29TH CROSS 7TH MAIN ROAD
BANASHANKARI INDUSTRIAL LAYOUT
BANASHANKARI II STAGE
BANGALORE KA 560070 INDIA

**This is to certify that
representative samples of**

COMPONENT - FUSES, SUPPLEMENTAL
Refer to Addendum page for Models

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety:

UL 248-1 Low-Voltage Fuses - Part 1: General
Requirements
UL 248-14 Low-Voltage Fuses - Part 14: Supplemental
Fuses
CSA C22.2 No. 248.1, Low-Voltage Fuses – Part 1:
General Requirements
CSA C22.2 No. 248.14, Low-Voltage Fuses – Part 14:
Supplemental Fuses

Additional Information:

See the UL Online Certifications Directory at
www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's
Certification and Follow-Up Service.

Recognized components are incomplete in certain constructional features or restricted in performance
capabilities and are intended for use as components of complete equipment submitted for investigation rather
than for direct separate installation in the field. The final acceptance of the component is dependent upon its
installation and use in complete equipment submitted to UL LLC.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Assistant Chief Engineer, Global Inspection and Field Services

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please
contact a local UL Customer Service Representative at www.ul.com/contactus



CERTIFICATE OF COMPLIANCE

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Report Reference E228912-20090323
Issue Date 2015-JUNE-19

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Models

Supplemental Fuse,

Cat. No. PTF 200 3A, PTF 200 4A, PTF 200 5A, PTF 200 7.5A, PTF 200 10A, PTF 200 15A, PTF 200 20A, PTF 200 25A, PTF 200 30A, PTF 200 35A, PTF 200 40A, PTF 200 3A-S, PTF 200 4A-S, PTF 200 5A-S, PTF 200 7.5A-S, PTF 200 10A-S, PTF 200 15A-S, PTF 200 20A-S, PTF 200 25A-S, PTF 200 30A-S, PTF 200 35A-S, PTF 200 40A-S.
PTF 200 2A-N, PTF 200 3A-N, PTF 200 4A-N, PTF 200 5A-N, PTF 200 7.5A-N, PTF 200 10A-N, PTF 200 15A-N, PTF 200 20A-N, PTF 200 25A-N, PTF 200 30A-N, PTF 200 35A-N, PTF 200 40A-N, PTF 200 20A-SN, PTF 200 25A-SN, PTF 200 30A-SN, PTF 200 35A-SN, PTF 200 40A-SN.



Bruce Mahrenholz, Assistant Chief Engineer, Global Inspection and Field Services

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CERTIFICATE OF COMPLIANCE

Certificate Number 20130401-E228912
Report Reference E228912-20130329
Issue Date 2013-APRIL-01

Issued to: PROTECTRON ELECTROMECH (P) LTD
44 29TH CROSS 7TH MAIN ROAD, BANASHANKARI
INDUSTRIAL LAYOUT, BANASHANKARI II STAGE,
BANGALORE KA 560070 INDIA



This is to certify that representative samples of COMPONENT - FUSES, SUPPLEMENTAL
See next page for Models

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: Low-Voltage Fuses - Part 1: General Requirements, UL248-1 And CSA C22.2 No. 248.1-11
Low-Voltage Fuses – Supplemental Fuses, UL248-14 And CSA C22.2 No. 248.14-00


Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Recognized Component Marks for the U.S. and Canada should be considered as being covered by UL's Recognition and Follow-Up Service and meeting the appropriate U.S. and Canadian requirements.

The UL Recognized Component Mark for the U.S. generally consists of the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory. As a supplementary means of identifying products that have been produced under UL's Component Recognition Program, UL's Recognized Component Mark: , may be used in conjunction with the required Recognized Marks. The Recognized Component Mark is required when specified in the UL Directory preceding the recognitions or under "Markings" for the individual recognitions. The UL Recognized Component Mark for Canada consists of the UL Recognized Mark for Canada:  and the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory.

Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for use as components of complete equipment submitted for investigation rather than for direct separate installation in the field. The final acceptance of the component is dependent upon its installation and use in complete equipment submitted to UL LLC.

Look for the UL Recognized Component Mark on the product.



William R. Carney, Director, North American Certification Programs

UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number 20130401-E228912
Report Reference E228912-20130329
Issue Date 2013-APRIL-01

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Cat. Nos. PTF 300 2A , PTF 300 3A, PTF 300 4A, PTF 300 5A, PTF 300 7.5A, PTF 300 10A, PTF 300 15A, PTF 300 20A, PTF 300 25A, PTF 300 30A, PTF 300 2A-A, PTF 300 3A-A, PTF 300 4A-A, PTF 300 5A-A, PTF 300 7.5A-A, PTF 300 10A-A, PTF 300 15A-A, PTF 300 20A-A, PTF 300 25A-A, PTF 300 30A-A.



William R. Carney, Director, North American Certification Programs
UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number 20150901-E228912
Report Reference E228912-20150831
Issue Date 2015-SEPTEMBER-01

Issued to: PROTECTRON ELECTROMECH (P) LTD
44 29TH CROSS 7TH MAIN ROAD
BANASHANKARI INDUSTRIAL LAYOUT
BANASHANKARI II STAGE
BANGALORE KA 560070 INDIA

This is to certify that representative samples of COMPONENT - FUSES, SUPPLEMENTAL Series PSF, PSFC, PST, PSTC, PMF and PMT.

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 248-14 and CAN/CSA-C22.2 No. 248.14-00, Low-Voltage Fuses - Part 14: Supplemental Fuses.
UL 248-1 and CSA C22.2 No. 248.1-11, Low-Voltage Fuses - Part 1: General Requirements.

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for use as components of complete equipment submitted for investigation rather than for direct separate installation in the field. The final acceptance of the component is dependent upon its installation and use in complete equipment submitted to UL LLC.

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Bruce Mahrenholz, Director North American Certification Program
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Type Designation	Section	Report Date	Approvals
Cat No. PSF 8A, PSF 10A, PSFC 8A, PSFC 10A, PST 8A, PST 10A, PSTC 8A, PSTC 10A. PMF followed by 0.63A, 0.8A, 1A, 1.25A, 1.6A, 2A, 2.5A, 3.15A, 4A, 5A, 6.3A. PMT followed by 0.1A, 0.125A, 0.16A, 0.2A, 0.25A, 0.315A, 0.4A, 0.5A, 0.63A, 0.8A, 1A, 1.25A, 1.6A, 2A, 2.5A, 3.15A, 4A, 5A, 6.3A.	4	2015-08-31	B

Approvals Notes -

A - Evaluated to United States Standards only.

B - Evaluated to United States Standards and Canadian National Standards.

C - Evaluated to Canadian National Standards only.

CERTIFICATE OF COMPLIANCE

Certificate Number 20150106-E228912
Report Reference E228912-20021110
Issue Date 2015-JANUARY-06

Issued to: PROTECTRON ELECTROMECH (P) LTD
44 29TH CROSS 7TH MAIN ROAD
BANASHANKARI INDUSTRIAL LAYOUT
BANASHANKARI II STAGE
BANGALORE KA 560070 INDIA

**This is to certify that
representative samples of**

COMPONENT - FUSES, SUPPLEMENTAL
Refer to Addendum Page for Models

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety:

UL 248-1 - Low-Voltage Fuses - Part 1: General
Requirements
UL 248-14 - Low-Voltage Fuses - Part 14: Supplemental
Fuses
CSA-C22.2 No. 248.1 - Low-Voltage Fuses - Part 1:
General Requirements
CSA-C22.2 No. 248.14 - Low-Voltage Fuses - Part 14:
Supplemental Fuses

Additional Information:

See the UL Online Certifications Directory at
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CERTIFICATE OF COMPLIANCE

Certificate Number 20150106-E228912
Report Reference E228912-20021110
Issue Date 2015-JANUARY-06

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Models

USR, CNR Component, Supplemental miniature glass fuses, Cat. No. PSF, non-time delay and Cat. No. PST, time delay, rated 100 mA to 6.3 A.

USR, CNR Component, Supplemental miniature ceramic fuses, Cat. No. PSFC, non-time delay and Cat. No. PSTC, time delay, rated 100 mA to 6.3 A.



Bruce Mahrenholz, Assistant Chief Engineer, Global Inspection and Field Services

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