Electronic Transient Surge Protection

From
Mains Power Supply to Low Volts & Communications

TRANSTECH ELECTRONIC CONTROLS

Also in Melbourne - Sydney - Brisbane - Adelaide
### TLP - Transient Lightning Protection

This is a TLP overview - contact sales for the full range of TLP protectors

#### MAINS PROTECTORS

CAT C, 20kV AND 20 kA - use TLP-80-3P, TLP-120-3P, TLP-160-3P

CAT B, 6kV and 3kA - use TLP-8-1P/240 OR TLP-150-3P/CATB

#### SERIES FILTERS UP TO 40 AMPS

CAT B & A, 6kV @ 20 Amps.

<table>
<thead>
<tr>
<th>AS 1768</th>
<th>IEEE C62 compliant</th>
</tr>
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<tbody>
<tr>
<td>MODELS</td>
<td>VOLTAGE Nominal (Vrms) Maximum (Vrms)</td>
</tr>
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<td>H</td>
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#### LOW VOLTAGE PROTECTORS, INSTRUMENTATION AND COMMUNICATIONS (Cat A & B)

<table>
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</tbody>
</table>

#### Notes and Standards:


Compliance: N2909

TransTech Electronic Controls Pty Ltd
Perth H.O Design/Manufacturing

Contact: Dale Tunbridge or John King or Mark Van Schalm (Melbourne)

MOB: 0439 911-883 or 0419-502-660 or 0409 697-156

Unit 2 / 48 Delamarta Road

WANGARA W.A. 6065

TLP - Transient Lightning Protection

Perth - Melbourne - Sydney - Brisbane - Adelaide
5. Transient Standards Categories and Definitions.

According to AS 1768:2005 the installation of transient over-voltage protectors can be broken down into five (5) categories.

Such categories are shown below from highest risk (E) to lowest risk (A):

**CAT E 6kV / 70kA**

The Point of entry to “very exposed or critically important site.

Example: Telecom tower on hill.

**CAT D 6kV / 30kA**

The point of entry to an exposed rural site.

Example: Pump station a Country Area

**CAT C 6kV / 15 - 20kA**

The point of entry to a site in the City or built up area.

Example: Most common building or site

**CAT B 6kV / 3kA**

Within a building immediately after the point of entry or Main Board.

Example: Sub-boards.

**CAT A 6kV / 500Amp**

Within a building and fed from a sub-board being CAT B location.

Example: GPO,s
MODEL :- TLP-80-1P
Transtech Lightning Protector - 240V Single Phase, 3 Modes
For CAT C or less

TECHNICAL DATA

Normal Working voltage
240VAC rms

Minimum Working voltage
220VAC rms

Maximum Working voltage
275VAC rms

Working Freq.
40 - 60Hz

Peak let thru volts
less than 800V

Maximum mains current
Unlimited (parallel connected)
Must be fuse protected over 100A Mains

Imax
80kA (8/20uS)

Response time
Less than 25nS

Relay Contacts
SPCO (1 amp @240Vac)

Surge Reset
Automatic

SPECIAL FEATURES

Relay Output
Phase loss or Neutral
Disconnected the relay de-energizes.

LED's (2)
Power On / Unit Healthy,
(LEd ON = healthy)

GENERAL SPECIFICATION

Operating Temp
-40 to +70 Deg C

Terminals
16mm² solid max / 10mm² flex max

Remote Terminals
Plug in 2.5mm²

Indicators
Red LED’s

Housing Material
Mild Steel(Powder coated)

Dimensions
80 (H) x 80 (H) x 115 (L)

Weight
850 grams

Mounting
DIN 43880 Standard DIN Rail

GENERAL DESCRIPTION

The TLP-80-1P is a “new series” lightning and transient protector which provides protection for electrical / electronic equipment connected to three phase distribution systems.

The TLP-80-1P is a true 3 mode parallel connected protection device offering 3 levels of kA rating in all 3 modes.

The TLP-80-1P offers a DIN style housing to suit most MCB profiles.

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP-xx 1P.

FEATURES

♦ Low “let thru” voltage
♦ Designed and manufactured to ISO 9001
♦ Neutral to Earth Monitor
♦ Internally protected – automatic reset
♦ Local status indication by LED’s
♦ Remote status indication c/o relay
♦ High Energy designed pcb’s
♦ CE Marking / C-tick N 2909
♦ Full 3 mode protection
♦ DIN 43880 compliant
♦ Designed to pass IEC 61643-1:2005 and AS/NZS 1768:2003

NOTE: This device must be installed by a Qualified Electrician

DESIGNED & MANUFACTURED by: Transtech Electronic Controls Pty Ltd Perth W.A. ABN: 21 070 629 499
Design changes may occur in the interests of product performance & development E&OE.
MODEL :- TLP-120-1P
Transtech Lightning Protector - 240V Single Phase, 3 Modes
For CAT C or less

TECHNICAL DATA

Normal Working voltage 240VAC rms
Minimum Working voltage 220VAC rms
Maximum Working voltage 275VAC rms
Working Freq. 40 - 60Hz
Peak let thru volts less than 800V
Maximum mains current Unlimited (parallel connected)
Imax 120kA (8/20μS)
Response time Less than 25nS
Relay Contacts SPCO (1 amp @240Vac)
Surge Reset Automatic

SPECIAL FEATURES

Relay Output Phase loss or Neutral
Disconnected the relay de-energizes.

LED’s (2) Power On / Unit Healthy,
(LEON = healthy)

GENERAL DESCRIPTION

The TLP-120-1P is a “new series” lightning and transient protector which provides protection for electrical / electronic equipment connected to three phase distribution systems.

The TLP-120-1P is a true 3 mode parallel connected protection device offering 3 levels of kA rating in all 3 modes.

The TLP-120-1P offers a DIN style housing to suit most MCB profiles.

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP 1P.

FEATURES

♦ Low “let thru” voltage
♦ Designed and manufactured to ISO 9001
♦ Neutral to Earth Monitor
♦ Internally protected – automatic reset
♦ Local status indication by LED’s
♦ Remote status indication c/o relay
♦ High Energy designed motherboard
♦ CE Marking / C-tick N 2909
♦ Full 3 mode protection
♦ DIN 43880 compliant
♦ Designed to pass IEC 61643-1:2005 and AS/NZS 1768:2003

NOTE: This device must be installed by a Qualified Electrician

DESIGNED & MANUFACTURED by: Transtech Electronic Controls Pty Ltd Perth W.A. ABN: 21 070 629 499

Design changes may occur in the interests of product performance & development E&OE.
MODEL :- TLP-P80-3DRI
Transtech Lightning Protector - 415V Three Phase, 3 Mode
For CAT C

TECHNICAL DATA

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Working voltage</td>
<td>415VAC rms</td>
</tr>
<tr>
<td>Minimum Working voltage</td>
<td>328VAC rms</td>
</tr>
<tr>
<td>Maximum Working voltage</td>
<td>476VAC rms</td>
</tr>
<tr>
<td>Working Freq.</td>
<td>40 - 60Hz</td>
</tr>
<tr>
<td>Peak let thru volts</td>
<td>Less than 810V</td>
</tr>
<tr>
<td>Maximum mains current</td>
<td>Unlimited (parallel connected)</td>
</tr>
<tr>
<td></td>
<td>Must be fuse protected over</td>
</tr>
<tr>
<td></td>
<td>100A Mains</td>
</tr>
<tr>
<td>In</td>
<td>36kA</td>
</tr>
<tr>
<td>Imax</td>
<td>80kA (8/20uS)</td>
</tr>
<tr>
<td>Response time</td>
<td>Less than 25nS</td>
</tr>
<tr>
<td>Relay Contacts</td>
<td>SPCO (1 amp @240Vac)</td>
</tr>
<tr>
<td>Surge Reset</td>
<td>Automatic</td>
</tr>
</tbody>
</table>

SPECIAL FEATURES
 Relay Output Phase loss disconnected the relay de-energizes.
 LED’s (dual colour) L1, L2, L3, (LED ON = healthy)
                                (LED AMBR = replace)

GENERAL SPECIFICATION

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Operating Temp</td>
<td>-40 to +70 Deg C</td>
</tr>
<tr>
<td>Terminals</td>
<td>16mm² solid max / 10mm² flex max</td>
</tr>
<tr>
<td>Remote Terminals</td>
<td>Plug in 2.5mm²</td>
</tr>
<tr>
<td>Indicators</td>
<td>Red / Amber LED’s</td>
</tr>
<tr>
<td>Housing Material</td>
<td>Mild Steel(Powder coated)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>105 (W) x 120 (H) x 75 (D)</td>
</tr>
<tr>
<td>Weight</td>
<td>700 grams</td>
</tr>
<tr>
<td>Mounting</td>
<td>DIN 43880 Standard DIN Rail</td>
</tr>
</tbody>
</table>

GENERAL DESCRIPTION

The TLP-P80-3DRI is a “new series” lightning and transient protector which provides protection for electrical / electronic equipment connected to three phase distribution systems.

The TLP-P80-3DRI is a true 3 mode (L-L / L-N / N-E) parallel connected surge protection device offering protection for all 3 phases, it also introduces a unique feature, by being connected to a TLP-DSI which will indicate the status of each phase remotely.

The TLP-P80-3DRI is powered by all 3 phases and does not lose indication until all 3 phases have failed. This is a distinct advantage over units where indicators are powered from a single phase.

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP-xx-3P.

FEATURES

- Low “let thru” voltage
- Designed and manufactured to ISO 9001
- Internally protected – automatic reset
- Local status indication by dual colour LED’s
- Remote panel indicator
- Alarm status indication via in-built c/o relay
- High Energy designed pcb’s
- CE Marking / C-tick N 2909
- Full 3 mode protection
- DIN 43880 compliant
- Designed to pass IEC 61643-1:2005 and AS/NZS 1768:2003

NOTE: This device must be installed by a Qualified Electrician

DESIGNED & MANUFACTURED by: Transtech Electronic Controls Pty Ltd Perth W.A. ABN: 21 070 629 499
Design changes may occur in the interests of product performance & development E&OE.
DATA SHEET

MODEL :- TLP-80-3P/NEM
Transtech Lightning Protector - 415V Three Phase, 3 Mode with Neutral to Earth Monitoring
For CAT C or less

TECHNICAL DATA

Normal Working voltage 415VAC rms
Minimum Working voltage 328VAC rms
Maximum Working voltage 476VAC rms
Working Freq. 40 - 60Hz
Peak let thru volts Less than 810V
Maximum mains current Unlimited (parallel connected)
Must be fuse protected over 100A Mains
Imax 80kA (8/20uS)
Response time Less than 25nS
Relay Contacts SPCO (1 amp @240Vac)
Surge Reset Automatic

SPECIAL FEATURES

Relay Output Phase loss or Neutral & Earth both disconnected the relay de-energizes.
LED’s (4) L1, L2, L3, N-E
(LEC ON = healthy)

GENERAL SPECIFICATION

Operating Temp -40 to +70 Deg C
Terminals 16mm² solid max / 10mm² flex max
Remote Terminals Plug in 2.5mm²
Indicators Red LED’s
Housing Material Mild Steel(Powder coated)
Dimensions 155 (W) x 105(D) x 85 (H)
Weight 850 grams
Mounting DIN 43880 Standard DIN Rail

GENERAL DESCRIPTION

The TLP-80-3P/NEM is a “new series” lightning and transient protector which provides protection for electrical / electronic equipment connected to three phase distribution systems.

The TLP-80-3P/NEM is a true 3 mode parallel connected protection device offering 3 levels of kA rating in all 3 modes.

The TLP-80-3P/NEM now offers a Neutral to Earth protection monitoring circuit (NEMON) which until now has not been available. The NEMON circuit ensures that all 3 modes of protection are active and offers a fully monitored and reliable protection device.

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP-xx-3P/NEM.

FEATURES

♦ Low “let thru” voltage
♦ Designed and manufactured to ISO 9001
♦ Neutral to Earth Monitor
♦ Internally protected – automatic reset
♦ Local status indication by LED’s
♦ Remote status indication c/o relay
♦ High Energy designed pcb’s
♦ CE Marking / C-tick N 2909
♦ Full 3 mode protection
♦ DIN 43880 compliant
♦ Designed to pass IEC 61643-1:2005 and AS/NZS 1768:2003

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Design changes may occur in the interests of product performance & development E&OE.
TECHNICAL DATA

Normal Working voltage 415VAC rms
Minimum Working voltage 328VAC rms
Maximum Working voltage 476VAC rms
Working Freq. 40 - 60Hz
Peak let thru volts Less than 810V
Maximum mains current Unlimited (parallel connected)
Must be fuse protected over 100A Mains
In 43kA (10 Impulses)
Imax 130kA (8/20uS)
Response time Less than 25nS
Relay Contacts SPCO (1 amp @240Vac)
Surge Reset Automatic

SPECIAL FEATURES

Relay Output Phase loss disconnected the relay de-energizes.
LED's (dual colour) L1, L2, L3,
(LED RED = healthy)
(LED AMBER = replace)

GENERAL SPECIFICATION

Operating Temp -40 to +70 Deg C
Terminals 16mm² solid max / 10mm² flex max
Remote Terminals Plug in 2.5mm²
Indicators Red / Amber LED’s
Housing Material Mild Steel(Powder coated)
Dimensions 105 (W) x 120 (H) x 75 (D)
Weight 700 grams
Mounting DIN 43880 Standard DIN Rail

GENERAL DESCRIPTION

The TLP-P130-3DRI is a “new series” lightning and transient protector which provides protection for electrical / electronic equipment connected to three phase distribution systems.

The TLP-P130-3DRI is a true 3 mode (L-L / L-N / N-E) parallel connected surge protection device offering protection for all 3 phases, it also introduces a unique feature, by being connected to a TLP-DSI which will indicate the status of each phase remotely.

The TLP-P130-3DRI is powered by all 3 phases and does not lose indication until all 3 phases have failed. This is a distinct advantage over units where indicators are powered from a single phase.

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP-xx-3P.

FEATURES

♦ Low “let thru” voltage
♦ Designed and manufactured to ISO 9001
♦ Internally protected – automatic reset
♦ Local status indication by dual colour LED’s
♦ Remote panel indicator
♦ Alarm status indication via in-built c/o relay
♦ High Energy designed pcb’s
♦ CE Marking / C-tick N 2909
♦ Full 3 mode protection
♦ DIN 43880 compliant
♦ Designed to pass IEC 61643-1:2005 and AS/NZS 1768:2003

NOTE: This device must be installed by a Qualified Electrician
DATA SHEET

MODEL:-- TLP-120-3P/NEM
Transtech Lightning Protector - 415V Three Phase, 3 Mode with Neutral Earth Monitoring
CAT C or less

TECHNICAL DATA

Normal Working voltage 415VAC rms
Minimum Working voltage 328VAC rms
Maximum Working voltage 476VAC rms
Working Freq. 40 - 60Hz
Peak let thru volts less than 810V
Maximum mains current Unlimited (parallel connected)

Imax 120kA (8/20μS)
Response time Less than 25nS
Relay Contacts SPCO (1 amp @240Vac)
Surge Reset Automatic

SPECIAL FEATURES

Relay Output Phase loss or Neutral & Earth both disconnected the relay de-energizes.
LED’s (4) L1, L2, L3, N-E (LED ON = healthy)

GENERAL SPECIFICATION

Operating Temp -40 to +70 Deg C
Terminals 16mm² solid max / 10mm² flex max
Remote Terminals Plug in 2.5mm²
Indicators Red LED’s
Housing Material Mild Steel (Powder coated)
Dimensions 155 (W) x 105 (D) x 85 (H)
Weight 850 grams
Mounting DIN 43880 Standard DIN Rail

GENERAL DESCRIPTION

The TLP 120-3P/NEM is a “new series” lightning and transient protector which provides protection for electrical / electronic equipment connected to three phase distribution systems.

The TLP 120-3P/NEM is a true 3 mode parallel connected protection device offering 3 levels of kA rating in all 3 modes.

The TLP-120-3P/NEM now offers a Neutral to Earth protection monitoring circuit (NEMON) which until now has not been available. The NEMON circuit ensures that all 3 modes of protection are active and offers a fully monitored and reliable protection device.

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP 3P/NEM.

FEATURES

♦ Low “let thru” voltage
♦ Designed and manufactured to ISO 9001
♦ Neutral to Earth Monitor
♦ Internally protected – automatic reset
♦ Local status indication by LED’s
♦ Remote status indication c/o relay
♦ High Energy designed pcb’s
♦ CE Marking / C-tick N 2909
♦ Full 3 mode protection
♦ DIN 43880 compliant
♦ Designed to pass IEC 61643-1:2005 and AS/NZS 1768:2003

NOTE: This device must be installed by a Qualified Electrician.

DESIGNED & MANUFACTURED by: Transtech Electronic Controls Pty Ltd Perth W.A. ABN: 21 070 629 499
Design changes may occur in the interests of product performance & development E&OE.

I:\Shared\Engineering Dept\DataSheets & Product Packet Labels\TLP-120-3P_NEM new.docx 12 January 2010
DATA SHEET

MODEL :- TLP-160-3P
Tran tech Lightning Protector - 415V Three Phase, 3 Mode
CAT C or less

TECHNICAL DATA

Normal Working voltage 415VAC rms
Minimum Working voltage 328VAC rms
Maximum Working voltage 476VAC rms
Working Freq. 40 - 60Hz
Peak let thru volts less than 810V
Maximum mains current Unlimited (parallel connected)
Imax 160kA (8/20uS)
Response time Less than 25nS
Relay Contacts SPCO (1 amp @240Vac)
Surge Reset Automatic

SPECIAL FEATURES

Relay Output Phase loss or MOV failed
the relay de-energizes.
LED’s (4) L1, L2, L3, N-E
(LED ON = healthy)

GENERAL SPECIFICATION

Operating Temp -40 to +70 Deg C
Terminals 16mm² solid max / 10mm² flex max
Remote Terminals Plug in 2.5mm²
Indicators Red LED’s
Housing Material Mild Steel (Powder coated)
Dimensions 155 (W) x 105 (H) x 85 (D)
Weight 850 grams
Mounting DIN 43880 Standard DIN Rail

GENERAL DESCRIPTION

The TLP 160-3P is a “new series” lightning and transient protector which provides protection for electrical / electronic equipment connected to three phase distribution systems.

The TLP160-3P is a true 3 mode parallel connected protection device offering 3 levels of kA rating in all 3 modes.

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP-xxx-3P

FEATURES

♦ Low “let thru” voltage
♦ Designed and manufactured to ISO 9001
♦ Internally protected – automatic reset
♦ Local status indication by LED’s
♦ Remote status indication c/o relay
♦ High Energy designed pcb’s
♦ CE Marking / C-tick N 2909
♦ Full 3 mode protection
♦ DIN 43880 compliant
♦ Designed to pass IEC 61643-1:2005 and AS/NZS 1768:2003

NOTE: This device must be installed by a Qualified Electrician.

DESIGNED & MANUFACTURED by: Tran tech Electronic Controls Pty Ltd Perth W.A. ABN: 21 070 629 499
Design changes may occur in the interests of product performance & development E&OE.
MODEL :- TLP-160-3P/NEM
Transtech Lightning Protector - 415V Three Phase, 3 Mode with Neutral Earth Monitoring
CAT C or less

TECHNICAL DATA
Normal Working voltage 415VAC rms
Minimum Working voltage 328VAC rms
Maximum Working voltage 476VAC rms
Working Freq. 40 - 60Hz
Peak let thru volts less than 810V
Maximum mains current Unlimited (parallel connected)
I_{max} 160kA (8/20uS)
Response time Less than 25nS
Relay Contacts SPCO (1 amp @240Vac)
Surge Reset Automatic

SPECIAL FEATURES
Relay Output Phase loss or Neutral & Earth both disconnected the relay de-energizes.
LED’s (4) L1, L2, L3, N-E (LED ON = healthy)

GENERAL SPECIFICATION
Operating Temp -40 to +70 Deg C
Terminals 16mm² solid max / 10mm² flex max
Remote Terminals Plug in 2.5mm²
Indicators Red LED’s
Housing Material Mild Steel (Powder coated)
Dimensions 155 (W) x 105 (D) x 85 (H)
Weight 850 grams
Mounting DIN 43880 Standard DIN Rail

GENERAL DESCRIPTION
The TLP 160-3P/NEM is a “new series” lightning and transient protector which provides protection for electrical / electronic equipment connected to three phase distribution systems.

The TLP160-3P/NEM is a true 3 mode parallel connected protection device offering 3 levels of kA rating in all 3 modes.

The TLP-160-3P/NEM now offers a Neutral to Earth protection monitoring circuit (NEMON) which until now has not been available. The NEMON circuit ensures that all 3 modes of protection are active and offers a fully monitored and reliable protection device.

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP 3P/NEM.

FEATURES
♦ Low “let thru” voltage
♦ Designed and manufactured to ISO 9001
♦ Neutral to Earth Monitor
♦ Internally protected – automatic reset
♦ Local status indication by LED’s
♦ Remote status indication c/o relay
♦ High Energy designed pcb’s
♦ CE Marking / C-tick N 2909
♦ Full 3 mode protection
♦ DIN 43880 compliant
♦ Designed to pass IEC 61643-1:2005 and AS/NZS 1768:2003

NOTE: This device must be installed by a Qualified Electrician.

DESIGNED & MANUFACTURED by: Transtech Electronic Controls Pty Ltd Perth W.A. ABN: 21 070 629 499
Design changes may occur in the interests of product performance & development E&OE.
TECHNICAL DATA

Normal Working voltage: 415VAC rms
Minimum Working voltage: 328VAC rms
Maximum Working voltage: 476VAC rms
Working Freq.: 40 - 60Hz
Peak let thru volts: less than 810V
Maximum mains current: Unlimited (parallel connected)
Must be fuse protected over 100A Mains
Imax: 240kA (8/20uS)
Response time: Less than 25nS
Relay Contacts: SPCO (1 amp @240Vac)
Surge Reset: Automatic

SPECIAL FEATURES

Relay Output: Phase loss or MOV failed the relay de-energizes.
LED’s (4): L1, L2, L3, (LED ON = healthy)

GENERAL SPECIFICATION

Operating Temp: -40 to +70 Deg C
Terminals: 16mm² solid max / 10mm² flex max
Remote Terminals: Plug in 2.5mm²
Indicators: Red LED’s
Housing Material: Mild Steel (Powder coated)
Dimensions: 155 (W) x 105 (H) x 85 (D)
Weight: 850 grams
Mounting: DIN 43880 Standard DIN Rail

GENERAL DESCRIPTION

The TLP 240-3P is a “new series” lightning and transient protector which provides protection for electrical / electronic equipment connected to three phase distribution systems.

The TLP 240-3P is a true 3 mode parallel connected protection device offering 3 levels of kA rating in all 3 modes.

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP-xxx-3P

FEATURES

♦ Low “let thru” voltage
♦ Designed and manufactured to ISO 9001
♦ Internally protected – automatic reset
♦ Local status indication by LED’s
♦ Remote status indication c/o relay
♦ High Energy designed pcb’s
♦ CE Marking / C-tick N 2909
♦ Full 3 mode protection
♦ DIN 43880 compliant
♦ Designed to pass IEC 61643-1:2005 and AS/NZS 1768:2005

NOTE: This device must be installed by a Qualified Electrician.
MODEL: TLP-150-3M/CAT B
Transtech Lightning Protector - 415V Three Phase, 3 Mode

TECHNICAL DATA

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal working voltage</td>
<td>415VAC rms</td>
</tr>
<tr>
<td>Minimum working voltage</td>
<td>328VAC rms</td>
</tr>
<tr>
<td>Maximum working voltage</td>
<td>476VAC rms</td>
</tr>
<tr>
<td>Working Freq.</td>
<td>40 - 60Hz</td>
</tr>
<tr>
<td>Peak let thru volts</td>
<td>&lt;800V</td>
</tr>
<tr>
<td>Maximum mains current</td>
<td>Unlimited (parallel connected)</td>
</tr>
<tr>
<td>Must be fuse protected over 100A Mains</td>
<td></td>
</tr>
<tr>
<td>Category</td>
<td>AS/NZS 1768 Cat B</td>
</tr>
<tr>
<td>In (Crest current)</td>
<td>60kA (8/20uS)</td>
</tr>
<tr>
<td>Imax (Max discharge current)</td>
<td>150kA (8/20uS)</td>
</tr>
<tr>
<td>Response time</td>
<td>Less than 25nS</td>
</tr>
<tr>
<td>Surge Reset</td>
<td>Automatic</td>
</tr>
</tbody>
</table>

SPECIAL FEATURES

- LED Indication: LED’s ON = TLP healthy
- LED OFF = TLP repair
- Relay Output: Changeover volt-free

GENERAL SPECIFICATION

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temp</td>
<td>-40 to +70 Deg C</td>
</tr>
<tr>
<td>Terminals</td>
<td>16mm² solid max / 10mm² flex max</td>
</tr>
<tr>
<td>Remote Terminals</td>
<td>N/A</td>
</tr>
<tr>
<td>Indicators</td>
<td>Green LED’s</td>
</tr>
<tr>
<td>Housing Material</td>
<td>Aluminium (Powder coated)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>95.5(W) x 72(H) x 108(L)</td>
</tr>
<tr>
<td>Weight</td>
<td>700 grams</td>
</tr>
<tr>
<td>Mounting</td>
<td>DIN 43880 Standard DIN Rail</td>
</tr>
</tbody>
</table>

GENERAL DESCRIPTION

The TLP-150-3M/CAT B is a lightning and transient protector which provides protection for electrical / electronic equipment connected to three phase distribution systems. The mains borne transient voltages may occur as a result of lightning strikes or the switching of large inductive / capacitive loads.

The TLP-150-3M/CAT B is a parallel device for Cat B applications and should be installed as close as possible to the supply being protected. It is recommended that connecting cables be kept shorter than 300mm.

The TLP-150-3M/CAT B is a true 3 mode protection device with an Imax rating of 150kA for Cat B applications.

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP 150-3M.

FEATURES

- Low “let thru” voltage
- Designed and manufactured to ISO 9001
- Certified for BER Projects
- Internally protected – automatic reset
- LED status indication for power loss or fault
- Designed to pass IEC 616431-1:2005 and AS/NZS 1768:2003
- Long lifetime, fully lacquered PCB’s
- CE Marking / C-tick N 2909
- Full 3 mode protection
- DIN 43880 compliant

DESIGNED & MANUFACTURED by: Transtech Electronic Controls Pty Ltd Perth W.A. ABN: 21 070 629 499
Design changes may occur in the interests of product performance & development E&OE.
DATA SHEET

MODEL TLP-DSI
Direct Status Indicator

TECHNICAL DATA

The TLP-DSI is powered directly from the Remote Indicator (RI) output of Transtech TLP any High Energy TLP unit which incorporates the unique Remote Indicator circuitry.

Status LEDs 3 x RED

GENERAL SPECIFICATION

Operating Temp. -25 to 70 degrees C
Connection 3 way 2.5mm² plug-off
Housing Material ABS.
Dimensions 48 x 48 x 60 mm
Weight 25gm nominal
Mounting Through panel mount

GENERAL DESCRIPTION

The TLP-DSI is a self-powered remotely mounting status indicator which mirrors the status LEDs on Transtech’s High Energy TLP’s which have a unique remote Indicator (RI) output fitted.

The LEDs of the TLP-DSI match their respective status LED on the monitored TLP unit. A unique circuit design means that only 3 wires are required to display the status of any one of the monitored TLP LEDs.

The length of the 3 core cable between the TLP-xxx and its TLP-DSI should be no more than a maximum of 5 meters.

FEATURES

♦ Designed and manufactured to ISO 9001
♦ Small size 48mm x 48mm panel mount unit
♦ 3 bright, easy to read LEDs
♦ Status LEDs match those of the TLP LEDs
♦ Easy to connect - only 3 wires
♦ Plug-off terminals
♦ No setup required.
DATA SHEET

MODEL TLP-PSI
Powered Remote Status Indicator

TECHNICAL DATA

Power Supply: 120, 220/240 +/- 15%
VA Rating: Typically 1.3VA

Status LEDs:
- Power: BLUE
- Healthy: RED
- Fault: YELLOW

Output: Relay volt free contact

GENERAL SPECIFICATION

Operating Temp. -25 to +70 degrees C
Power Terminals Plug in 1.5mm²
Sense Terminals Plug in 1.5mm²
Relay Output Term. Plug off 2.5mm²
Indicators Blue, Red, Yellow LEDs
Housing Material ABS
Dimensions 48 x 48 x 60
Weight 50gm nominal
Mounting Through panel mount

GENERAL DESCRIPTION

The TLP-PSI is a 48mm x 48mm AC powered, status indicator which may be connected to any TLP product which incorporates a status output relay. The TLP-PSI can be mounted in a convenient location at some distance from the associated transient protection device.

The TLP-PSI uses a transformer isolated 24V DC to monitor the TLP status (fault) relay, it has three status LEDs;

- BLUE = Power OK
- RED = Healthy
- YELLOW = Faulty (replace)

FEATURES

- Designed and manufactured to ISO 9001
- Small size 48mm x 48mm panel mount unit
- 3 bright, easy to read LEDs
- Easy to connect
- Plug-off terminals
- Boxed (shrouded) AC connector
- No setup required.

DESIGNED & MANUFACTURED by: Transtech Electronic Controls Pty Ltd Perth W.A. ABN: 21 070 629 499
Design changes may occur in the interests of product performance & development E&OE

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March 7, 2013
DATA SHEET

MODEL :-TLP-415P/E-DIN
Transtech Lightning Protector (no Neutral) - CAT B

TECHNICAL DATA

Voltage rating Normal working voltage 415V
Max. working volts 480V RMS
Working Freq. 40 - 60 Hz
Peak let thru volts 710V
Protection Modes Phase - Earth ONLY
Surge Rating 20kA,
Mass Surge Material 60kA, 8/20uSecs
Meets Surge Ratings to AS/NZS 1768-1991
IEEE C 62.41, UL 1449
Earth Leakage Approx 500uA
Operating Current N/A in parallel

GENERAL SPECIFICATION

Operating Temp -20 to 70 Deg C
Storage Temp -55 to 75 Deg C
Humidity 0 - 90% RH
Indication 3 Neon indicators
Terminals Self opening 0.5 - 10mm
20 - 6 AWG
Housing Material KRILEN / AL cover
Mounting Style DIN or G rail
Dimensions 112mm x 75mm x 45mm
Weight 195 grams

GENERAL DESCRIPTION

The TLP-415P/E-DIN series is a lightning and power transient arrester which provide voltage surge limitation to power electrical devices connected to the mains power supply.

The TLP-415P/E-DIN provides effective protection by clamping the over voltage to a safe level. Three (3) indicators show if the TLP-415P/E-DIN is “healthy” and providing protection. Should one(1) indicator go off replacement should be done as soon as possible if ALL three indicators are off the device must be replaced IMMEDIATELY.

The TLP-415P/E-DIN must always be installed on the load side of a fuse or MCB.

The TLP-415P/E-DIN can be mounted directly on to “G” or “DIN” rails (DIN 46277-1 and 46277-3)

BENEFITS:-

♦ Low “let thru” voltage
♦ Protection between 3 Phases – Earth
♦ Fast snap on DIN rail mounting
♦ 26kA discharge capacity per line
♦ Location Category B to AS 1768
♦ CE / C-tick marking
♦

*** CAUTION ***

♦ Ensure that the Earth is appropriately terminated at all times. Ensure that the all Phases are at 0V potential before removing the unit for service.
Electronic Transient Surge Protection

20 AMP Series Filter 23mm WIDE

UNIQUE FEATURES:

- Slimmest 20Amp Model available
- 3rd Party Tested to IEC 61643-1:2005 (PASSED)
- High Fault Rating 54kA Mass
- Metal Housing
- Front LED
- Australian Designed and Manufactured
- Over 15,000 Installed Australia Wide

Model: TLP-SF20-SL-240V
Model: TLP-SP20-SL-240V
**DATA SHEET**

**MODEL : TLP-SF20SL-240V**

Transtech Lightning Protector/Surge Filter - 20Amp for 240Vac

---

**TECHNICAL DATA**

**Voltage rating**
- Normal working voltage: 240V RMS
- Max. Working volts: 275V RMS
- Working Freq.: 40 - 60 Hz
- Peak let thru volts: 710 V (typical 1 pulse)
- Protection Modes: Ph-N, Ph-E, N-E

**Surge Rating:**
- Imax (max discharge current): 42kA (8/20msec) @ 75%
- lmax (crest current): 24kA

**Surge Filter**
- Inductor Type: Common Mode 20A choke
- Capacitors: X and Y
- Cut-off Frequency: Less than 1kHz (-3dB loss)
- Attenuation: (60dB) 5MHz
- Earth Leakage: Approx. 500uA
- Operating Current: 3mA nominal
- Loss: Less than 2Watts
- Continuous Current: 20 Amps

---

**GENERAL SPECIFICATION**

**Operating Temp:** -35 to 70 Deg C
**Storage Temp:** -55 to 90 Deg C
**Humidity:** 0 - 90% RH
**Terminals:** Self opening 0.5 – 4sq mm

**Housing Material:** MS cover/ ABS base
**Mounting Style:** DIN or G rail
**Dimensions (LxHxW):** 112mm x 75mm x 23.5mm nom.
**Weight:** 175 grams

---

**GENERAL DESCRIPTION**

The TLP-SF20SL series are lightning and power surge transient arrestors with surge filtering. These provide voltage limitation and filtering of transients for sensitive electronic devices connected to the mains power supply. The TLP-SF20SL provides effective protection via a three stage circuit. The input stage limits the over-voltage excursion, the second stage series surge filter restricts the rate of rise of voltage (dV/dt) of any transient over-voltage and the final stage clamps the output voltage to a safe level.

The TLP-SF20SL must always be installed on the load side of a fuse rated at **20 amps or less**.

The TLP-SF20SL can be mounted directly on to “G” or “DIN” rails (DIN 46277-1 and 46277-3)

---

**BENEFITS:**
- Slim 23mm wide metal housing.
- Low “let thru” voltage
- Series inductor to control rate of voltage rise
- Protection between all lines
- System Healthy Indicator - LED
- Fast snap on DIN rail mounting
- 24kA discharge capacity per line
- For location Cat B to AS 1768:2003
- Tested & Passed to IEC 61643-1:2005
- Designed to IEEE C 62.41 (UL1449)
- Designed and manufactured in Australia to ISO 9001

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DESIGNED & MANUFACTURED by: Transtech Electronic Controls Pty Ltd Perth W.A. ABN: 21 070 629 499

Design changes may occur in the interests of product performance & development E&OE

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ISSUE A / Rev C

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November 2, 2011
TECHNICAL DATA

Voltage rating
Normal working voltage
220 - 250V RMS
Max. working volts 275V RMS
Working Freq. 40 - 60 Hz
Peak let thru volts 710V (single pulse)
Protection Modes Ph-N, Ph-E, N-E
Surge Rating:
Imass 108kA
Imax 72kA
Iin 48kA
Operating Burden Approx 7mA
Meets Surge Ratings to AS/NZS 1768:2003
IEEE C 62.41:2005
UL 1449

Filter
Inductor Type Common Mode 20A choke
Capacitors X and Y
Attenuation (60dB) 5MHz
Earth Leakage Approx 500uA
Operating Current 20 Amps
Maximum Current 22 Amps

Other Features
Relay Output Form C 5A continuous
(Relay fails to safe position)
Relay Terminals Plug-in 0.5 – 2.5mm

GENERAL SPECIFICATION

Operating Temp -35 to 70 Deg C
Storage Temp -55 to 75 Deg C
Humidity 0 - 90% RH
Terminals Self opening 0.5 – 4 sq mm
Housing Material Mild Steel – DIN clip feet
Mounting Style DIN rail
Dimensions (HxWxD) 120mm x 52mm x 80mm
Weight 195 grams

GENERAL DESCRIPTION

The TLP-SF20RI series is a series of lightning and power transient arrestors with filtering + LED and relay output which provides voltage surge limitation and filtering to sensitive electronic devices connected to the mains power supply and rated up to 20 amps.

The TLP-SF20RI provides effective protection by clamping the over voltage and via the series filter reducing the rate of rise of the clamped voltage to a safe level.

If a fault occurs within the TLP-SF20RI the “healthy LED will extinguish and the relay will de-energize).

The TLP-SF20RI must always be installed on the load side of a protective device rated at 20 amps or less.

The TLP-SF20RI can be mounted directly on to “DIN” rails (DIN 46277-1)

BENEFITS:-

♦ Low “let thru” voltage
♦ Series filter to control rate of voltage rise
♦ Protection between all lines (diff & common mode)
♦ Power “ON” indication
♦ Unit “HEALTHY” indication (with relay)
♦ Fast snap on DIN rail mounting
♦ Designed for MEN Systems
♦ Location Category B to AS 1768:2005
♦ Tested to IEEE C 62.41:2005 & compliant)
♦ Designed and manufactured to ISO 9001
♦ CE / C-tick marking
MODEL :- TLP-SP20SL-275
Transtech SERIES/PARALLEL Lightning Protector - 20Amp for 275V

TECHNICAL DATA

Voltage rating
Normal working voltage
240V DC/AC
Max. Working volts
275V DC/AC
Working Freq.
DC - 60 Hz
Rated Current
20 Amps for series connect
Unlimited for parallel connect
Peak let thru volts
900 V
Protection Modes
Ph-N, Ph-E, N-E
Surge Rating:-
Ph-N, 24kA, 8/20μS
Ph-E, 24kA, 8/20μS
N-E, 24kA, 8/20μS
Imax
72kA
Earth Leakage
Approx 500uA
Continuous Current
20 Amps
(see above re series/parallel)

Meets Surge Ratings to AS/NZS 1768:2003
IEEE C 62.41, UL 1449
IEC 61643.1:2005

GENERAL SPECIFICATION

Operating Temp
-35 to 70 Deg C
Storage Temp
-55 to 90 Deg C
Humidity
0 - 90% RH
Terminals
Self opening 0.5 – 4sq mm
Housing Material
M/Steel cover / ABS base
Mounting Style
DIN or G Rail
Dimensions (LxHxW)
112mm x 75mm x 23.5mm
Weight
175 grams

GENERAL DESCRIPTION

The TLP-SP20SL range is either a series or parallel connected lightning and power transient arrester. The range provides voltage surge limitation for sensitive electronic devices connected to the mains power supply.

The TLP-SP20SL must always be installed on the load side of a fuse rated at 20 amps or less.

The TLP-SP20SL can be mounted directly on to “G” or “DIN” rails (DIN 46277-1 and 46277-3)

BENEFITS:-

♦ Slim 23mm wide metal housing.
♦ Low “let thru” voltage
♦ Protection between all lines
♦ System Healthy Indicator
♦ Fast snap on DIN rail mounting
♦ 24kA discharge capacity per line
♦ For location Cat B to AS 1768:2003
♦ Tested to IEC 61643-1:2005
♦ Tested to IEEE C 62.41 (UL1449)
♦ Designed and manufactured in Australia to ISO 9001
Low Cost Surge Protection

Also in Melbourne - Sydney – Brisbane – Adelaide
MODEL :- TLP-V60/275/S
Transtech Lightning Protector - 240V Plug-in Protectors CAT C or less

TECHNICAL DATA

Normal Working voltage 240VAC rms
Minimum Working voltage 185VAC rms
Maximum Working voltage 275VAC rms
Working Freq. 40 - 60Hz
Peak let thru volts less than 1000V
Maximum mains current Unlimited (parallel connected)
Imax 60kA (8/20uS)
Response time Less than 25nS
Relay Contacts SPCO (1 amp @240Vac)

SPECIAL FEATURES
Relay Output MOV failed the relay de-energizes.
Indicator L1, L2, L3, flag type

GENERAL SPECIFICATION
Operating Temp -40 to +80 Deg C
Terminals 35mm² solid max / 10mm² flex max
Remote Terminals Plug in 2.5mm²
Indicators Green/Red mechanical flag
Housing Material Thermoplastic UL94-V-O
Degree Protection IP-20
Dimensions (module) 18 (W) x 60 (H) x 90 (D)
Weight 850 grams
Mounting DIN 43880 Standard DIN Rail

GENERAL DESCRIPTION
The TLP-V60/275S is a “new series” PLUG-IN lightning and transient protector which provides protection for electrical / electronic equipment connected to three phase distribution systems.

The TLP-V60/275S is a single mode parallel connected protection device offering 60kA single mode but for all three phases. see “1 Pole N/E” version Fig below.

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP-xxx- 3P

FEATURES
• Designed and manufactured to ISO 9001
• Local status indication by mechanical flag
• Remote status indication by c/o relay
• High Energy designed pcb’s
• CE Marking / C-tick N 2909
• Available in 1P or 2P or 3P bases
• DIN 43880 compliant
• Designed to pass IEC 61643-1:2005 and AS/NZS 1768:2005

NOTE: This device must be installed by a Qualified Electrician.
MODEL :- TLP-V60/275/SM
Transtech Lightning Protector - 240V Plug-in Protector Range CAT C or less

TECHNICAL DATA

Normal Working voltage 240VAC rms
Minimum Working voltage 185VAC rms
Maximum Working voltage 275AC rms
Working Freq. 40 - 60Hz
Peak let thru volts less than 1000V
Maximum mains current Unlimited (parallel connected)
Imax 60kA (8/20us)
Response time Less than 25nS
Relay Contacts SPCO (1 amp @240Vac)
Surge Reset Automatic

SPECIAL FEATURES
Relay Output MOV failed the relay de-energizes.
Indicator L1, L2, L3, flag type

GENERAL SPECIFICATION
Operating Temp -40 to +80 Deg C
Terminals 35mm² solid max / 10mm² flex max
Remote Terminals Plug in 2.5mm²
Indicators Green/Red mechanical flag
Housing Material Thermoplastic UL94-V-O
Degree Protection IP-20
Dimensions (module) 18 (W) x 60 (H) x 90 (D)
Weight 850 grams
Mounting DIN 43880 Standard DIN Rail

GENERAL DESCRIPTION

The TLP-Vxx/275/S is a “new series” PLUG-IN lightning and transient protector which provides protection for electrical / electronic equipment connected to three phase distribution systems.

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP-xxx-3P

FEATURES

♦ Designed and manufactured to ISO 9001
♦ Local status indication by mechanical flag
♦ Remote status indication by c/o relay
♦ High Energy designed pcb’s
♦ CE Marking / C-tick N 2909
♦ Available in 1P or 2P or 3P bases
♦ DIN 43880 compliant
♦ Designed to pass IEC 61643-1:2005 and AS/NZS 1768:2005

NOTE: This device must be installed by a Qualified Electrician.
TECHNICAL DATA

Normal Working voltage 240VAC rms
Minimum Working voltage 185VAC rms
Maximum Working voltage 275AC rms
Working Freq. 40 - 60Hz
Peak let thru volts less than 1000V
Maximum mains current Unlimited (parallel connected)
Imax 100kA (8/20uS)
Response time Less than 25nS
Relay Contacts SPCO (1 amp @240Vac)
Surge Reset Automatic

SPECIAL FEATURES

Relay Output MOV failed the relay de-energizes.
Indicator Flag type

GENERAL SPECIFICATION

Operating Temp -40 to +80 Deg C
Terminals 35mm² solid max / 10mm² flex max
Remote Terminals Plug in 2.5mm²
Indicators Green/Red mechanical flag
Housing Material Thermoplastic UL94-V-O
Degree Protection IP-20
Dimensions (module) 36 (W) x 60 (H) x 90 (D)
Weight 850 grams
Mounting DIN 43880 Standard DIN Rail

GENERAL DESCRIPTION

The TLP-V60/275S is a “new series” lightning and transient protector which provides protection for electrical / electronic equipment connected to a single phase distribution system.

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP-xxx-3P

FEATURES

- Designed and manufactured to ISO 9001
- Local status indication by mechanical flag
- Remote status indication by c/o relay
- High Energy designed pcb’s
- CE Marking / C-tick N 2909
- Available in 1P or 2P or 3P
- DIN 43880 compliant
- Designed to pass IEC 61643-1:2005 and AS/NZS 1768:2005

NOTE: This device must be installed by a Qualified Electrician.
TECHNICAL DATA

Normal Working voltage 240VAC rms
Minimum Working voltage 185VAC rms
Maximum Working voltage 275AC rms
Working Freq. 40 - 60Hz
Peak let thru volts less than 1000V
Maximum mains current Unlimited (parallel connected)
Must be fuse protected over 100A Mains
Imax 100kA (8/20uS)
Response time Less than 25nS
Relay Contacts SPCO (1 amp @240Vac)
Surge Reset Automatic

SPECIAL FEATURES

Relay Output MOV failed the relay de-energizes.
Indicator L1, L2, L3, flag type

GENERAL SPECIFICATION

Operating Temp -40 to +80 Deg C
Terminals 35mm² solid max / 10mm² flex max
Remote Terminals Plug in 2.5mm²
Indicators Green/Red mechanical flag
Housing Material Thermoplastic UL94-V-O
Degree Protection IP-20
Dimensions (module) 36 (W) x 60 (H) x 90 (D)
Weight 850 grams
Mounting DIN 43880 Standard DIN Rail

GENERAL DESCRIPTION

The TLP-V100/275S is a “new series” lightning and transient protector which provides protection for electrical / electronic equipment connected to three phase distribution systems.

The TLP-V100/275S is a single mode parallel connected protection device offering 60kA single mode.

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP-xxx-3P

FEATURES

- Designed and manufactured to ISO 9001
- Local status indication by mechanical flag
- Remote status indication by c/o relay
- High Energy designed pcb’s
- CE Marking / C-tick N 2909
- Available in 1P or 2P or 3P
- DIN 43880 compliant
- Designed to pass IEC 61643-1:2005 and AS/NZS 1768:2005

NOTE: This device must be installed by a Qualified Electrician.

DESIGNED & MANUFACTURED by: Transtech Electronic Controls Pty Ltd Perth W.A. ABN: 21 070 629 499
Design changes may occur in the interests of product performance & development E&OE.
TECHNICAL DATA

Normal Working voltage 240VAC rms L – E (PE)
Minimum Working voltage 185VAC rms
Maximum Working voltage 275AC rms
Working Freq. 40 - 60Hz
Peak let thru volts less than 1000V
Maximum mains current Unlimited (parallel connected)
Imax 60kA (8/20us)
Response time Less than 25nS
Relay Contacts SPCO (1 amp @240Vac)
Surge Reset Automatic

SPECIAL FEATURES
Relay Output MOV failed the relay
dee-energizes.
Indicator L1, L2, L3, flag type

GENERAL SPECIFICATION

Operating Temp -40 to +80 Deg C
Terminals 35mm² solid max / 10mm² flex max
Remote Terminals Plug in 2.5mm²
Indicators Green/Red mechanical flag
Housing Material Thermoplastic UL94-V-O
Degree Protection IP-20
Dimensions (module) 55 (W) x 60 (H) x 90 (D)
Weight 850 grams
Mounting DIN 43880 Standard DIN Rail

GENERAL DESCRIPTION

The TLP-DS60/275 3V is a “new series” lightning and transient protector which provides protection for electrical / electronic equipment connected to three phase distribution systems.

The TLP-DS60/275 3V is a single mode parallel connected protection device offering 60kA single mode for Line 1,2,3 and Earth – see “3 Pole PE” version Fig below.

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP-xxx- 3P

FEATURES

- Designed and manufactured to ISO 9001
- Local status indication by mechanical flag
- Remote status indication by c/o relay
- High Energy designed pcb’s
- CE Marking / C-tick N 2909
- Available in 1P or 2P or 3P bases
- DIN 43880 compliant
- Designed to pass IEC 61643-1:2005 and AS/NZS 1768:2005

NOTE: This device must be installed by a Qualified Electrician.
TECHNICAL DATA

- Normal Working voltage: 110 - 240VAC
- Minimum Working voltage: -
- Maximum Working voltage: 275AC
- Working Freq.: 40 - 60Hz
- Peak let thru volts: -
- Maximum mains current: 100A

SPECIAL FEATURES

- Relay Output: -
- Indicator: 2 digit LCD
- Battery: 7.2V service life 1 year

GENERAL SPECIFICATION

- Operating Temp: -40 to +80 Deg C
- Terminals: 2.5mm
- Remote Terminals: -
- Indicators: 2 Digit LCD
- Housing Material: Thermoplastic UL94-V-O
- Degree Protection: IP-20
- Dimensions (module): 18 (W) x 60 (H) x 90 (D)
- Weight: 125 grams
- Mounting: DIN 43880 Standard DIN Rail

GENERAL DESCRIPTION

The TLP-LEC-A is a “new series” lightning and transient protector COUNTER with sensor for electrical / electronic equipment connected to three phase distribution systems.

The TLP-LEC-A has a single current sensor for monitoring any one phase – if three phases require monitoring install 3 TLP-LEC-A units.

FEATURES

- Designed and manufactured to ISO 9001
- CE Marking / C-tick N 2909
- Available in 1P only
- DIN 43880 compliant

NOTE: This device must be installed by a Qualified Electrician.
Electronic Transient Surge Protection

LOW VOLTAGE & BUS PROTECTORS – Cat B or A

NEW

Also in Melbourne - Sydney – Brisbane – Adelaide
DATA SHEET

MODEL :- TLP-SL62-30D
Transtech Lightning Protector - Dual Channel

TECHNICAL DATA

Voltage rating (per channel)
Normal working volt 30V D.C. (peak AC)
Max. working volts 37V D.C. (peak AC)
Peak let thru volts 43.5V

Current/Resistance rating (per channel)
End to End resist. 6 ohms nominal
Max Current 500 mA
Discharge Current 2kA per mode or 4kA per line (8/20usec)

Response rating
Response time: Under 10nsec

GENERAL SPECIFICATION

Operating Temp -10 to 70 Deg C
Storage Temp -40 to 105 Deg C
Connections Self-opening 2.5mm/12AWG
Housing Material Polyester PBT
Mounting Style DIN Rail
Dimensions 93.1(d) x 102.5(h) x 6.2(w)
Weight 52 grams

GENERAL DESCRIPTION

The TLP-SL62 series of lightning and transient arrestors are manufactured in a slim-line 6.2mm housing for those applications where a high packing factor is required. The units provide protection for electronic equipment connected to twisted pair control and communication signal lines.

The TLP-SL62-30D has true three stage protection in all modes.

FEATURES

♦ Dual channel unit
♦ Two independent channels (common earth)
♦ 3 stage protection
♦ Low “let thru” voltage
♦ Protection between ALL lines
♦ Designed for 3kV impulse lines
♦ Fast snap on DIN rail mounting
♦ Fail to safe
♦ Field proven technology
♦ 4kA discharge capacity per channel
♦ Designed and manufactured to ISO 9001
♦ 6.2mm Slim Profile
♦ 300mm uncommitted earthing cable
♦ CE marking / C-tick N2909

DESIGNED & MANUFACTURED in AUSTRALIA by: Transtech Electronic Controls Pty Ltd Perth W.A. ABN: 21 070 629 499
Design changes may occur in the interests of product performance & development E&OE

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Confidential
August 23, 2011
TECHNICAL DATA

Voltage rating
Normal working volt 05,12,15,18,24,48V +/-
Peak let thru volts 10,19,25,29,39,78V resp.

Current/Resistance rating
End to End resist. Less than 6 ohm
Max Current 600 mA
Surge Current Imax 2 kA/mode (8/20uS)

Response rating
Response time Under 10nsec

GENERAL SPECIFICATION

Operating Temp -10 to 60 Deg C
Storage Temp -55 to 75 Deg C
Terminals Self-opening 2.5mm/12AWG
Housing Material KRILEN
Mounting Style DIN
Dimensions 110mm X 52mm X12mm
Weight 60 grams

GENERAL DESCRIPTION

The TLP-SL12-xx series is a very compact 12mm wide lightning and transient arrester providing protection for equipment connected to low voltage instrument loops by limiting the transient over-voltage to less than twice the normal working voltage.

The TLP-SL12-xx series provides protection between all conductors, line to line and each line to earth. It is mounted on to “DIN” rail (46277-3) and offers screen termination via terminals and the earth via a 300 mm earth wire “tail”.

FEATURES

♦ Low “let thru” voltage
♦ Protection between ALL lines
♦ Fast snap on DIN rail mounting
♦ Fail to safe status design
♦ Field proven technology
♦ Low line losses (volt drop)
♦ Designed and manufactured to ISO 9001
♦ High stacking density
♦ C-Tick/ CE Compliant
♦ IEC 1000-4-2 & EN50082
TECHNICAL DATA

Voltage Rating
Current Loop: 22V – 48Vdc (black/black)
Supply: 190-265Vac (blue/brown)

Current/Impedance Rating
End to End Impedance: N/A parallel connection
Max Current: N/A parallel connection
Discharge Power: Imax = 10kA (8-20uS wave)

Response rating
Response time: Less than 10nS
EMC Compliance: EN50082 part 2
Field Bus: 31.25kbit/s

GENERAL SPECIFICATION

Operating Temp: -20 to 60 Deg C
Storage Temp: -40 to 80 Deg C
Humidity: 5% to 95% RH (Non-condensing)
Termination wires: Flying Leads (250mm 1.0mm²)
(colour coding) Blue & Brown for 240vac supply
Black for 4-20mA signal
Green / Yellow for earth
Housing Material: ANSI 316 Stainless Steel
Dielectric Strength: 25°C, 50 kHz, 19kV/mm
Thread: a) 20mm ISO (M20 x 1.5)
b) ½” NPT
Weight: 185g
Dimensions: 75mm (L) x 25mm Hex
  c/- 250mm coloured leads

GENERAL DESCRIPTION

The TLP-48HM-4W-240 lightning/transient protector provides protection for field mounted transmitters or electronic devices mounted in exposed areas. The TLP-48HM-4W-240 consists of a high speed solid state switching network which protects all signal and supply lines and common earth. The front end protection per line has a gas discharge tube with a 10kA rating.

The housing material is ANSI 316 stainless steel with a 23mm flat for assisting mechanical mounting. The unit is encapsulated in high temperature casting epoxy. This epoxy offers high impact resistance with excellent electrical properties and high temperature stability. The standard male thread is the common 20mm conduit entry (20mm ISO, M20 x 1.5), several other thread types are available upon request.

The TLP-48HM-4W-240 is designed to be added to standard installations. Most field transmitters have two conduit entries, one is used to connect the data cable, the spare can be used for the TLP-48HM-4W-240 connection. Under most field installations no additional connection boxes are required. Should no spare entry be available then a simple conduit tee can be used as close as possible to the field device.

The TLP-48HM-4W-240 connection is a simple parallel connection for BOTH supply and signal lines (see connection schedule). Care must be taken in the earthing of the green/yellow earth wire from the TLP-48HM-4W-240. This earth wire must be earthed to local general/structural metal work, all leads to be kept as short as possible at all times.

FEATURES

♦ ESD Protection
♦ Low “let thru” voltage
♦ Protection between ALL lines (including 240vac supply)
♦ Field proven technology
♦ Simple field mounting
♦ Field Buss compatible (4-20mA loop only)
♦ Parallel Connection (No loop impedance)
♦ Designed and manufactured to ISO 9001
♦ C-Tick/CE compliant
♦ Meets AS/NZS 1768:2003 Class B
♦ Meets IEC 61643:2005 Class I & II
♦ Auto resetting
♦ High 10kA discharge
**DATA SHEET**

Subject to change without notice

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**MODEL :- TLP-SL12-RS 485MB**

Transtech Lightning Protector - RS-485 (Modbus Compatible)

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**TECHNICAL DATA**

**Voltage rating**
- Normal working volt: +/- 12V
- Peak let thru volts: 19V @ 1p = 1A
- Peak let thru volts: 24V @ 1p = 10A

**Current/Resistance rating**
- End to End resist.: Less than 0.6 ohms
- Max Current: 1 Amp
- Discharge Power: 400W PPPD @ (8/20uS) (Peak Pulse Power Discharge)

**Response rating**
- Response time: Under 10nsec

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**GENERAL SPECIFICATION**

**Capacitance** @ 1mMz, 75pF
**Opering Temp** -10 to 60 Deg C
**Storage Temp** -55 to 75 Deg C
**Terminals** Self-opening
**2.5mm/12AWG**

**Housing Material** KRILEN
**Mounting Style** DIN
**Dimensions** 110mm X 52mm X12mm

**Weight** 60 grams

---

**GENERAL DESCRIPTION**

The **TLP-SL12-RS 485MB** is a very compact 12mm wide lightning and transient arrester providing protection for equipment connected to the Modbus RS 485 multi-point or party line bus by limiting the transient over-voltage to less than twice the normal working voltage.

The **TLP-SL12-RS 485MB** provides protection between all conductors, line to line and each line to earth. It is mounted on to “DIN” rail (46277-3) and offers screen termination via terminals and the earth via a 300 mm earth wire “tail”.

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**FEATURES**

- Low “let thru” voltage
- Protection between ALL lines
- Fast snap on DIN rail mounting
- Fail to safe status design
- High speed switch technology to prevent signal attenuation
- Low line losses (volt drop)
- Designed and manufactured to ISO 9001
- C-Tick/ CE Compliant
- IEC 1000-4-2 & EN50082
DATA SHEET
Subject to change without notice

MODEL :- TLP-DNET
Transtech Lightning Protector - DeviceNet

TECHNICAL DATA

Voltage Rating Supply
Normal Working voltage 24V D.C.
Max. Working voltage 31V D.C.
Varistors voltage 39V D.C.
Surge current 1000A@(8/20uS)

Current/Resistance Rating
End to End resist. Less than 0.2R
Max Current Thin cable = 4Amp
Thick cable = 8 Amp
Discharge Power 300W PPPD@ (8/20uS)
(dissipation per line)

Protection
Protection modes CAN-H to CAN-L, CAN-H to Screen
CAN-L to Screen, Screen to V-Screen to V+, V+ to V-
Line Capacitance 15pF
Breakdown Voltage 26.7V D.C. minimum
Clamp voltage 43.0V D.C. maximum @ (8/20uS)

GENERAL SPECIFICATION

Operating Temp -10 to 70 Deg C
Storage Temp -55 to 80 Deg C
Terminals Self opening
2.5mm/12AWG
Housing Material KRILEN
Mounting Style DIN
Dimensions 75mm X 45mm X 30mm
Weight 120 grams

GENERAL DESCRIPTION

The TLP-DNET lightning and transient arrestor provides protection for equipment connected to the DEVICENET INTERFACE NETWORK.

The TLP-DNET provides very effective protection by limiting the transient overvoltage to less than twice the normal voltage on the supply and data lines.

The TLP-DNET provides protection between all conductors, Power/data line to line and line to earth.

The TLP-DNET can be mounted on DIN rail and the earth return in via a 5mm earth stud.

FEATURES

♦ ESD Protection > 25kV
♦ Low “let thru” voltage
♦ Protection between ALL lines
♦ Fast snap on DIN mounting
♦ Fail to safe status design
♦ IEC 1000-4-2 & EN50082
♦ Ultra low capacitance data line
♦ Field proven technology
♦ Low line losses (volt drop)
♦ Designed and manufactured to ISO 9001
♦ High stacking density
♦ C-Tick / CE Compliant
Electronic Transient Surge Protection

COMMUNICATIONS PROTECTORS

Also in Melbourne - Sydney – Brisbane – Adelaide
MODEL: - TLP-48/RJ45H-4
Transtech Lightning Protector – Ethernet RJ45

TECHNICAL DATA

Voltage rating
Normal working volt 48Volts
Nominal Current 1 Amp or less
Clamping Volts 90Volts line to screen
Impulse Clamping < 600Volts (1kV/us)
Surge withstand Imax 0.3A (8/20usec)
Energy Level Less than 100 joules

Characteristics
Transmission Speed 100M bpss
Insertion Loss < 3.0 dB at 100MHz
Pins 1 – 2 and 3 - 6

GENERAL SPECIFICATION

Insulation resistance > 10 Megohm
Connections RJ45 Female / Female
Operating Temp -10 to 70 Deg C
Storage Temp -55 to 80 Deg C
Mounting Style DIN Rail Female to Female
Dimensions 85mm X 25mm X 40mm
Weight 62 grams

GENERAL DESCRIPTION

The TLP-48/RJ45H-4 lightning and transient arrestor provides protection for Ethernet, Twisted Pair Cat 5 ISDN and DSL Network Cables

The TLP-48/RJ45H-4 provides very effective protection by limiting the transient over-voltage between the conductor s of Netowrk cable pairs and the screen

The TLP-48/RJ45H-4 utilizes fast response gas filled arrestors and Transorbs to provide low let thru voltages for fast transient rise times. The use of low capacitance gas filled arrestors ensures reliable operation at high frequencies with low insertion losses.

FEATURES

♦ Low “let thru” voltage
♦ Two Stage protection
♦ Protection between lines and screen
♦ Suitable for 10BaseT and 100BaseT
♦ Aluminium housing
♦ Field proven technology
♦ Low line losses
♦ Designed and manufactured to ISO 9001
♦ C-Tick/ CE Compliant
♦ Complies with IEC 616431L21-2005
**DATA SHEET**

Subject to change without notice

MODEL:- TLP-N/FF
Transtech Lightning Protector – Coax Bulkhead +Tag

**TECHNICAL DATA**

Voltage rating
- Normal working volt: 70Volts
- Nominal Current: 5 Amps or less
- Clamping Volts: 90Volts line to screen
- Impulse Clamping: < 600Volts (1kV/us)
- Surge withstand: 20kA (8/20usec)
- Energy Level: 400 joules

RF Characteristics
- RF Power: 50 Watts
- Insertion Loss: < 0.2dB at 2GHz
- VSWR: 1.07 : 1 @ 1GHz
- 1.10 : 1 @ 2GHz

**GENERAL SPECIFICATION**

Capacitance: < 1.5pF
Insulation resistance: > 10 Megohm
Operating Temp: -10 to 80 Deg C
Storage Temp: -55 to 80 Deg C
Mounting Style: Bulkhead/Type N Female to Female
Dimensions: 67mm X 25mm X25mm
Weight: 80 grams

**GENERAL DESCRIPTION**

The TLP-N/FF lightning and transient arrester provides protection for coaxial lines for radio transmitters, receivers or HF party line bus.

The TLP-N/FF provides very effective protection by limiting the transient over-voltage between the inner conductor of the coaxial cable and the screen.

The TLP-N/FF utilizes fast response gas filled arrestors to provide low let thru voltages for fast transient rise times. The use of low capacitance gas filled arrestors ensures reliable operation at high frequencies with low insertion losses.

**FEATURES**

- Low “let thru” voltage
- Protection between line and screen
- Bulkhead mounting with additional fixed “bolt-thru” earth tag
- Field proven technology
- Low line losses
- Designed and manufactured to ISO 9001
- C-Tick/ CE Compliant
- IEC 1000-4-2 & EN50082
- AS 1768-2003
TECHNICAL DATA

Voltage rating
Normal working volt: 70Volts
Nominal Current: 5 Amps or less
Clamping Volts: 90Volts line to screen
Impulse Clamping: < 700Volts (1kV/us)
Surge withstand: 20kA (8/20usec)
Energy Level: 400 joules

RF Characteristics
RF Power: 50 Watts
Insertion Loss: < 0.5dB at 2GHz
VSWR: < 1.3

GENERAL SPECIFICATION

Capacitance: < 1.5pF
Insulation resistance: > 10 Gigohm
Operating Temp: -10 to 80 Deg C
Storage Temp: -55 to 80 Deg C
Mounting Style: Type F
Female to Female
Dimensions: 52mm X 25mm X25mm
Weight: 50 grams

GENERAL DESCRIPTION

The TLP-F/FF lightning and transient arrester provides protection for coaxial lines for radio transmitters, receivers or HF party line bus.

The TLP-F/FF provides very effective protection by limiting the transient over-voltage between the inner conductor of the coaxial cable and the screen.

The TLP-F/FF utilizes fast response gas filled arrestors to provide low let thru voltages for fast transient rise times. The use of low capacitance gas filled arrestors ensures reliable operation at high frequencies with low insertion losses.

FEATURES

♦ Low “let thru” voltage
♦ Protection between line and screen
♦ Field proven technology
♦ Low line losses
♦ Designed and manufactured to ISO 9001
♦ C-Tick/ CE Compliant
♦ IEC616431:21
♦ IEC 1000-4-2 & EN50082
♦ AS 1768-2003
MODEL:- TLP-F/MF
Transtech Lightning Protector – Coax Type F Cables

TECHNICAL DATA

Voltage rating
Normal working volt 70Volts
Nominal Current 5 Amps or less
Clamping Volts 90Volts line to screen
Impulse Clamping < 700Volts (1kV/us/V)
Surge withstand 20kA (8/20usec)
Energy Level 400 joules

RF Characteristics
RF Power 50 Watts
Insertion Loss < 0.5dB at 2GHz
VSWR <1.3

GENERAL SPECIFICATION

Capacitance < 1.5pF
Insulation resistance > 10 Gigohm
Operating Temp -10 to 80 Deg C
Storage Temp -55 to 80 Deg C
Mounting Style Type F
Male to Female
Dimensions 52mm X 25mm X 25mm
Weight 50 grams

GENERAL DESCRIPTION

The TLP-F/MF lightning and transient arrestor provides protection for coaxial lines for radio transmitters, receivers or HF party line bus.

The TLP-F/MF provides very effective protection by limiting the transient over-voltage between the inner conductor of the coaxial cable and the screen

The TLP-F/MF utilizes fast response gas filled arrestors to provide low let thru voltages for fast transient rise times. The use of low capacitance gas filled arrestors ensures reliable operation at high frequencies with low insertion losses.

FEATURES

♦ Low “let thru” voltage
♦ Protection between line and screen
♦ Field proven technology
♦ Low line losses
♦ Designed and manufactured to ISO 9001
♦ C-Tick/ CE Compliant
♦ IEC616431:21
♦ IEC 1000-4-2 & EN50082
♦ AS 1768-2003
A GUIDE
TO SPECIFYING
ELECTRONIC SURGE PROTECTION DEVICES

Preface:

This document is meant as a guide to those involved in specifying, applying and/or approving electronic transient protection devices. It is by no means a definitive paper on the types of transient surge protection available nor in any way proposes to set out a particular manufacturer, type or technique.

This guide does not address “structural lightning protection” other than to direct the reader to the Australian Standard AS NZS 1768:2005 and in particular to the proven techniques for effective structural lightning design and installation. Good structural protection and earthing/bonding is an essential part of minimizing possible effects from lightning transients.

The most important consideration for any Engineer specifying electronic transient protection is the “let-thru” voltage as this is critical to the proper functioning of the electronic/electrical equipment it is intended to protect following a transient. The critical considerations in specifying electronic transient protectors are:

1. **Compatibility**
The protector should not inhibit the systems normal operation if it operates

2. **Survival & housing**
Transients from a lightning strike (close proximity) can exceed 200,000 amps, however statistically the average transient is approx 10,000 amps. The IEC Standard uses 10,000 amps as the accepted “norm”, however AS1768 has adopted 70,000 amps therefore any protector should have a rating equal to or exceeding 70,000 amps to meet the current Australian Standard. It is recommended by the leading MOV suppliers that surge protectors incorporating such devices be constructed of metal as a safety precaution Clause 7.9.2 of IEC61643-1:2005 addresses this aspect.

3. **Let-thru voltage**
The magnitude of the transient reaching the electronic/electrical equipment is critical and can cause anything from data-corruption to flash-over and arcing damage. The suitable protector should therefore offer a let-thru voltage less than the maximum voltage rating for the equipment (the current IEC states 2.5kV as the minimum insulation level). Transients occur between all conductors of a system – that is: Ph-N / Ph-E / N-E and in instrumentation and data-line circuits both Common Mode and Differential Mode. Protectors need to offer such levels of protection

4. **Indication of failure**
In-line protectors such as used for 120/240vac sub-circuit, instrumentation and/or data-lines are inherently “self-revealing” upon a major transient as the circuit invariably goes open. In Main Board protection systems it is essential to have an indication to warn of failure or degradation of the protective devices, such indication should be both local visual and a relay output.

5. **Installation**
The performance of transient protectors depends upon correct installation as they are required to manage high frequency waveforms, therefore the length and size of connecting cables must be considered, as a guide refer to AS4070:1992. As a rule of thumb the larger the cross section and the shorter the cable the better, 500mm of 6 sq mm cable is recommended as a minimum.
SUGGESTED SPECIFICATION

1.1 Point-of-Entry Main & Sub Distribution Boards.

Provide lightning/transient surge suppression to the mains supply of the main switchboard and each sub distribution board. Supply, install and connect a … insert Manufacturer(s)...., or similar product of equivalent function and quality to the satisfaction of the Engineer. Such rating to be no less than 70kA surge capacity according to IEC 61643.1 and are to include all 3 phases plus Neutral and offer true 3 mode protection.

The installation shall be strictly in accordance with the Manufacturers recommendations.

1.2 Final Sub Circuits

Where indicated on power circuit schedules a series filter surge protector shall be fitted to protect individual circuits. The series filters shall be …. Insert manufacturer(s).... or similar product equivalent in function, size and quality to the approval of the Engineer. Rating shall be no less than 24kA according to IEC 61643.1 and offer true 3 mode protection. The surge device shall be compatible with any RCD protection and protect against high frequency noise and transient surges in all modes (L-N, L-E, N-E). The series protectors shall be constructed to meet UL 1449 and be Third Party tested to IEC61643.1.

Where alternatives are offered the tenderer shall provide sufficient data to prove that the alternative complies with the specification.

All transient/surge protection devices shall be mounted to protrude thru the distribution board escutcheon plate and shall have visible status indication. Where nominated such series surge filters shall have in addition an incorporated relay that monitors the health of the protection device and provides a volt-free changeover contact for monitoring by the Building Management System (BMS).
1. INTRODUCTION

The committees of all International Standards, after years of research have decided that the average indirect lightning surge is only 10kA. Standards Australia, however, via AS1768:2005 Table F1 states 70kA as a maximum indirect lightning surge value.

Transtech has therefore taken the decision to meet the higher level as detailed by Standards Australia and as a consequence the main board of the TLP range of Surge Protectors is designed to withstand multiple transient surges of 70kA and a single surge of 140kA.

NOTE: The fault rating assigned to a Mains Surge Protector is not to be confused with the switchboard bus bar fault rating. A transient/lightning surge rating is based upon an 8/20micro second waveform therefore a duration of only 28 microseconds.

2. DESIGN OF TRANSTECH MAINS PROTECTORS

Transtech Electronic Controls Pty Ltd has been designing and manufacturing electronic transient/surge protectors since 1996 and has supplied some of Australia’s biggest Companies not to mention delivering over 15,000 pcs of its 20Amp single phase series filters to the BER Project Australia Wide.

Based upon the preceding information, Transtech Electronic Controls Pty Ltd designs its TLP Mains Surge Protectors with high quality 70micron copper board and accurately calculated track sizing designs. Surge protectors with ratings above 70kA simply offer extended lifetimes to users.

3. PROTECTING A TLP MAINS PROTECTOR

Protection of a Mains Surge Protector is governed according to AS3000. It is a requirement to protect the circuit with either an HRC Fuse or a MCB, the HRC Fuse or MCB size is determined firstly by the Fault Rating of the Switchboard and secondly by the wire size supplying the TLP.

3.1.1. SWITCHBOARD FAULT RATING
This refers to the bus bar fault level, therefore any protection device such as an HRC Fuse or a MCB must be in accordance with suppliers ratings and application advice (an example being Schneider Cascading & Enhanced Discrimination tables)

3.1.2. WIRE SIZE
Transtech Electronic Controls Pty Ltd recommends the maximum size wire to connect a TLP Mains Protector – that is 16 mm² therefore according to AS3000 Table B2 the HRC Fuse or MCB shall be 50 amps maximum.

3.1.3. PROTECTION SELECTION (amp rating)
As per preceding comments, either an HRC Fuse or MCB is required to protect and provide isolation for the Mains Surge Protector. The factors to be considered in the selection of a suitable primary protection device are as per Clauses 3.1.1 and 3.1.2 above.

The current rating of the HRC or MCB should be between 25 amps and 50 amps.
SUMMARY.

A. Transtech Electronic Controls Pty Ltd follows AS1768:2005 and all other relevant Standards in its designs and meets them regarding surge fault ratings.

B. Transtech Electronic Controls Pty Ltd Mains Surge Protectors cover all Category’s E / D / C / B / A

C. Transtech Electronic Controls Pty Ltd manufactures Mains Surge Protectors offering Surge Fault ratings in excess of 70kA, these simply offer the user extended lifetime.

D. The fault ratings of the TLP Mains Surge Protectors should not be confused with switchboard bus bar fault ratings.

E. All Transtech Mains Surge Protectors type TLP’s have internal MOV protection fuses suitable to break 100Amps.

F. The fault rating of a TLP Mains Surge Protector is based upon a very short time of 28 microseconds, not to be confused with a typically 1sec rating as for switchboard Type Tests.

G. Transtech Electronic Controls Pty Ltd has been designing electronic surge protectors for over 16 years and accurately designs the circuit board layout in its TLP series to withstand a 70kA 8/20 microsecond surge.

H. PROTECTION TABLE:

<table>
<thead>
<tr>
<th>TLP MODEL</th>
<th>RECOMMENDED DEVICE</th>
<th>AMPS</th>
<th>COMMENT</th>
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</thead>
<tbody>
<tr>
<td>TLP-SF20SL-240V</td>
<td>HRC</td>
<td>25</td>
<td>Single phase series filter</td>
</tr>
<tr>
<td>TLP-40-xP</td>
<td>HRC</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>TLP-80-xP</td>
<td>HRC</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>TLP-120-xP</td>
<td>MCB</td>
<td>50</td>
<td>MCB’s not tripped by transient</td>
</tr>
<tr>
<td>TLP-160-xP</td>
<td>MCB</td>
<td>50</td>
<td>MCB’s not tripped by transient</td>
</tr>
<tr>
<td>TLP-200-xP</td>
<td>MCB</td>
<td>50</td>
<td>MCB’s not tripped by transient</td>
</tr>
<tr>
<td>TLP-240-xP</td>
<td>MCB</td>
<td>50</td>
<td>MCB’s not tripped by transient</td>
</tr>
</tbody>
</table>
Transtech Electronic Controls Pty Ltd

Australian Agent for:

- HAZARDOUS AREA ENCLOSURES
- HIGH SPEED SENSORS & TACHOS
- ALARM ANNUNCIATORS
- ENCODERS AND TECHOS
- HAZARDOUS AREA FLOW/TEMP/PRESSURE
- PROXIMITY SENSORS & PE CELLS