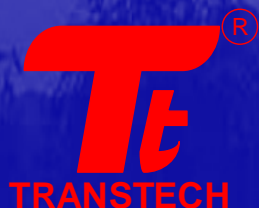
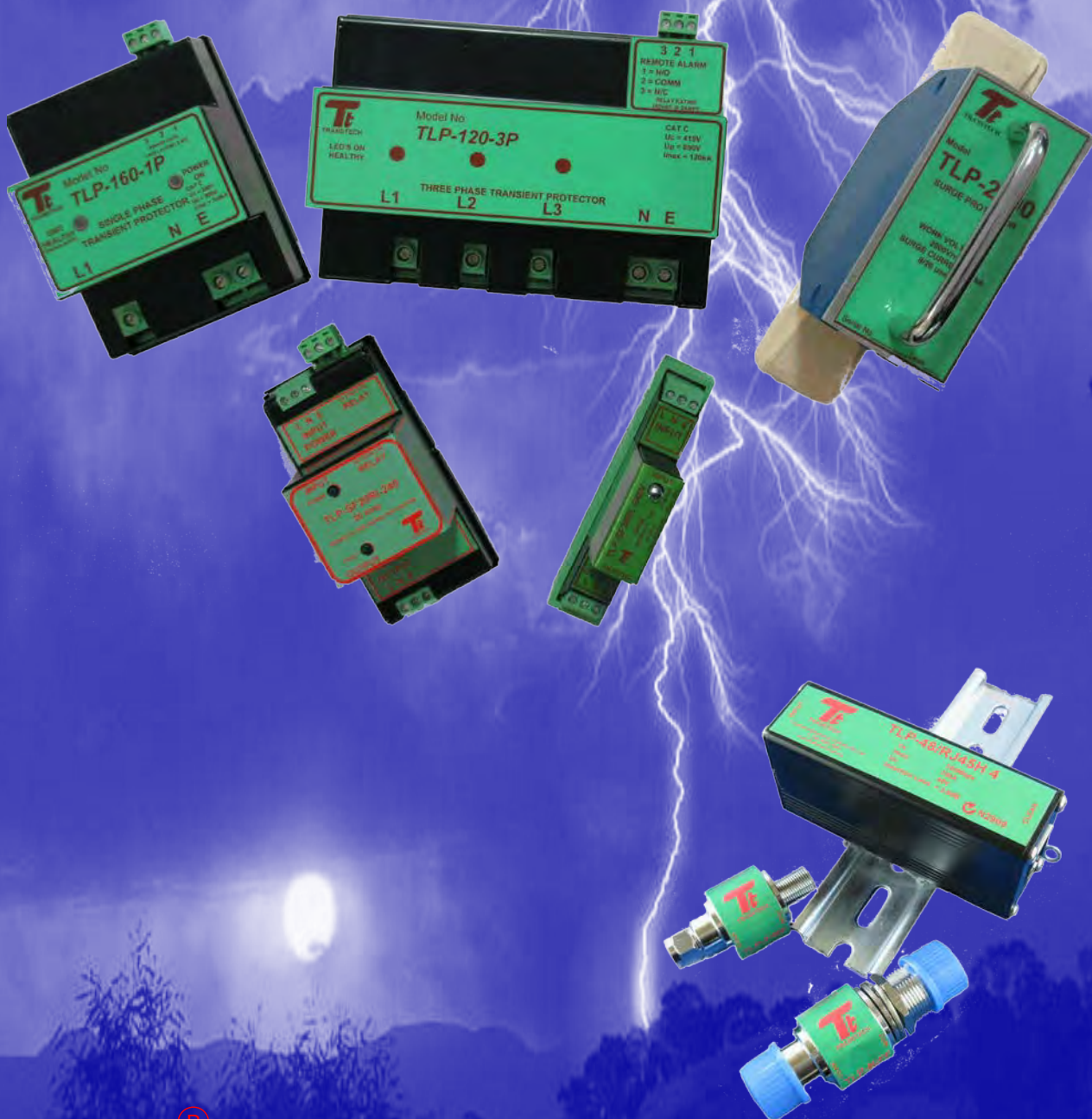


Electronic Transient/Surge Protection

The Transtech Range
Mains Supply to Low Volts to Communications



Also represented in Sydney – Brisbane – Adelaide

Transtech Electronic Controls Pty Ltd

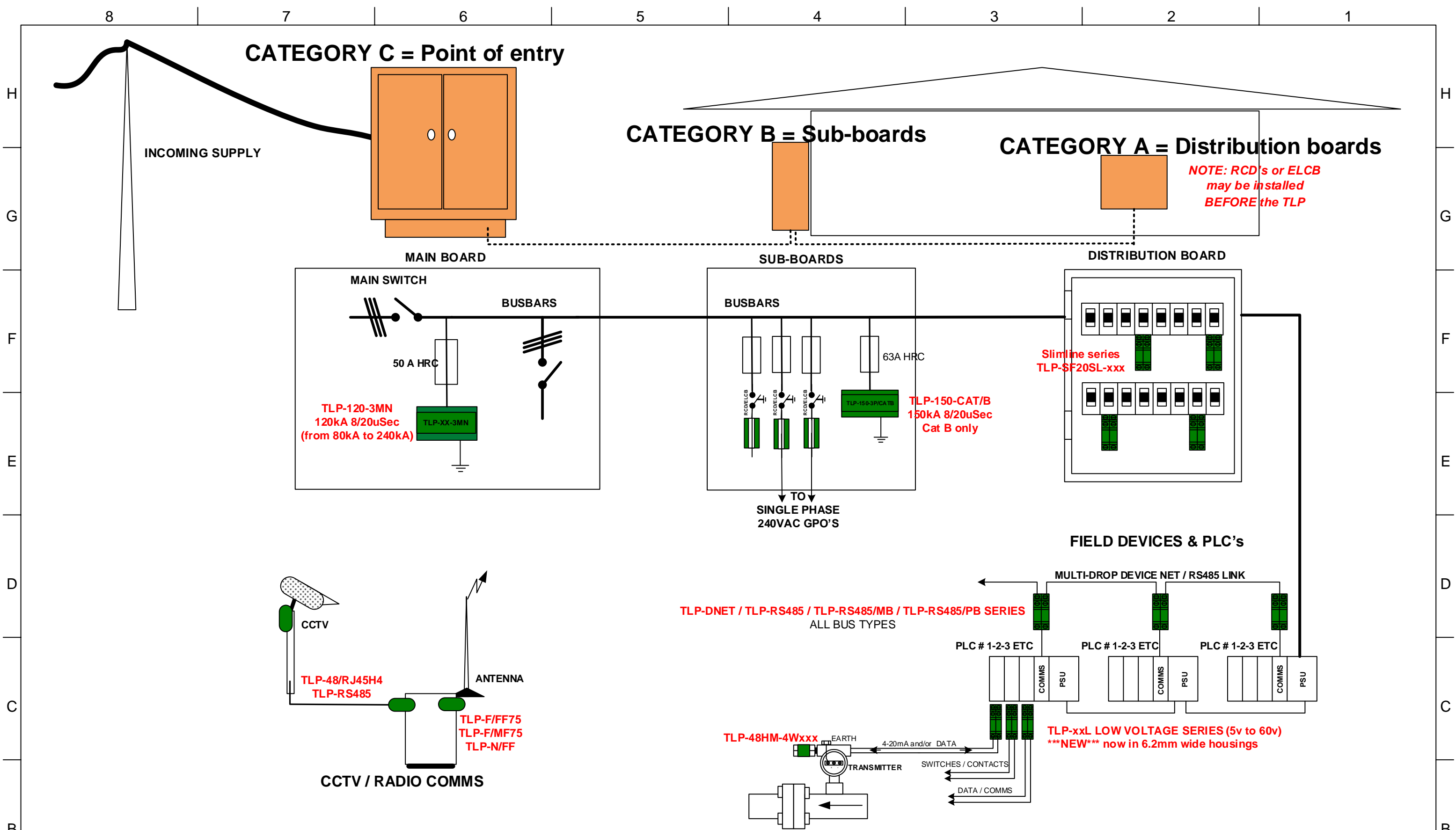
ABN 21 070 629 499

Melbourne and Perth

Perth Tel: (08) 9302-2044

Melbourne Office: (03) 9330-3624

Info@transtech.com.au



REV.	DESCRIPTION	DATE	BY	CK'D	Customer			
A	Original Issue	xx/xx/xxxx	xxx	xxx	XXX XXX PTY LTD			
B	Updated new products	01/10/2011			Project Name XXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXX			
C								
D					SIZE A3	ORDER NUMBER	DWG NO PROxxx/x-x	REV A
E					SCALE	NTS	SHEET	1 OF 1

TransTech Electronic Controls Pty Ltd
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Electrical & Electronic Design Engineers

CATEGORY C - POINT OF ENTRY TYPES



TLP Transient Lightning Protection

Note - below list is not the complete range of available product Transtech manufactured



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MAINS PROTECTORS Category C = Point of Entry

CAT C, (20kV and 20 kA) - use eg. TLP-P130-3DRI, TLP-120-3P, TLP-160-3P

DB & Sub Boards CAT B, (6kV and 3kA) - use eg. TLP-150-3P/CATB.



FIG 1



FIG 2



FIG 3



FIG 4



FIG 5

AS 1768	IEEE C62 compliant	MODELS	VOLTAGE Nominal (Vrms) Maximum (Vrms)	PEAK DISCHARGE CURRENT I _{max} Per Mode 8/20usec (kA)	PEAK DISCHARGE CURRENT I _{imp} Per Mode 10/350usec (kA)	MAX "LET-THRU" VOLTAGE Volts/Modes	INDICATION Visual/Remote	FIGURE No	DIMENSIONS in mm W H D	PRICE EACH LIST PRICE E&OE
		Main SW/Board -Point of Entry Category C P =Parallel connection CP=Compact Parallel D=Dual Colour LEDs R=Relay Output I=Remote Indication MB = Modbus Output								
		High Spec DIN 1 PH (Cat C) DIN PROFILE Remote status/Relay Outut	TLP-P40-1P-R	240 / 275	40	2.5	<800 / 3	Y / Y	FIG 1	80 110 85
			TLP-P80-1P-R	240 / 275	80	5	<800 / 3	Y / Y	FIG 1	80 110 85
			TLP-P120-1P-R	240 / 275	120	7.5	<800 / 3	Y / Y	FIG 1	80 110 85
		High Spec /Fault DIN 3PH (Cat C) Compact Series DIN PROFILE Remote status/Indication capable	TLP-CP50-3P-DRI	415 / 475	50	3	<810 / 3	Y / Y	FIG 3	105 120 75
			TLP-CP100-3P-DRI	415 / 475	100	6.5	<810 / 3	Y / Y	FIG 3	105 120 75
			TLP-CP130-3P-DRI	415 / 475	130	8.5	<810 / 3	Y / Y	FIG 3	105 120 75
		High Spec/Fault DIN 3 PH (Cat C) DIN PROFILE Remote status/Indication capable Modbus Output Available For Modbus Output add +MB to P/N	TLP-P80-3P-DRI	415 / 475	80	5	<810 / 3	Y / Y	FIG 2	150 110 85
			TLP-P120-3P-DRI	415 / 475	120	7.5	<810 / 3	Y / Y	FIG 2	150 110 85
			TLP-P160-3P-DRI	415 / 475	160	10	<810 / 3	Y / Y	FIG 2	150 110 85
			TLP-P200-3P-DRI	415 / 475	200	12.5	<810 / 3	Y / Y	FIG 2	150 110 85
		+MB (modbus output option)								
		Category B = Sub-Boards								
		High Spec/Fault DIN 3 PH (Cat B) Ideal for SubBoard protection No neutral required for this model Ideal for 3PH Motors & Pumps	TLP-150-3P/CAT B (special)	415 / 475	150	-	<810 / 3	Y / Y	FIG 5	150 110 85
			TLP-415P-E-DIN (special)	415 / 475	40	-	<710 / 1	Y	FIG 4	45 75 85

CATEGORY B & A - SERIES CONNECTED TYPES



TLP Transient Lightning Protection

Note - below list is not the complete range of available product Transtech manufactured



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SERIES FILTERS UP TO 40 AMPS CAT B & A.

Cat B & A 6kV @ 20 Amps.



FIG 6



FIG 7



FIG 8

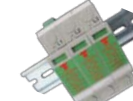


FIG 9



FIG 10



FIG 11

AS 1768, IEEE C62 compliant	MODELS	VOLTAGE Nominal (Vrms)/ Maximum (Vrms)	PEAK DISCHARGE CURRENT With 8/20usec (kA)		MAX "LET-THRU" VOLTAGE Volts/Modes	INDICATION Visual/Remote	FIGURE No	DIMENSIONS in mm W H D	PRICE EACH LIST PRICE E&OE
Industrial (Cat B & A) Din Profile									
Integral 20Amp series filter	TLP-SF20SL-240V	240 / 275	48		385 / 3	Y / N	FIG 6	23 115 75	
Integral 20Amp series filter	TLP-SF20SL-120V	120 / 185	48		600 / 3	Y / N	FIG 6	23 115 75	
Integral 20Amp series filter + Relay	TLP-SF20RI-240	240 / 275	48		600 / 3	Y / Y	FIG 8	52 115 80	
Integral 20Amp series filter + Relay	TLP-SF20RI-120	120 / 185	48		600 / 3	Y / Y	FIG 8	52 115 80	
Integral 40Amp series filter	TLP-SF40 -1P-240	240 / 275	48		810 / 3	Y / N	FIG 11	90 115 85	
Integral 40Amp series filter	TLP-SF40-1P -120	120 / 185	48		810 / 3	Y / N	FIG 11	90 115 85	
Series OR Parallel Cat B & A Up to 20 amps series connected unlimited in parallel connected	TLP-SP20SL 30V	30 / 40	54		600 / 3	Y/N	FIG 7	23 115 75	
	TLP-SP20SL 50V	50 / 60	72		690 / 3	Y / N	FIG 7	23 115 75	
	TLP-SP20SL 150V	150 / 170	72		690 / 3	Y / N	FIG 7	23 115 75	
	TLP-SP20SL 275V	240 / 275	72		690 / 3	Y/N	FIG 7	23 115 75	
AS 1768, IEEE C62 compliant	MODELS	VOLTAGE Nominal (Vrms)/ Maximum (Vrms)	PEAK DISCHARGE CURRENT With 8/20usec (kA)		MAX "LET-THRU" VOLTAGE Volts/Modes	INDICATION Visual/Remote	FIGURE No	DIMENSIONS in mm W H D	PRICE EACH LIST PRICE E&OE
Budget Range (Cat C,B & A)									
Surge & Lightning Protection Products Single Mode single Phase Single mode single Phase 100KA Active & Neutral 2mode Protection Three Phase 60KA Protection Three Phase 100KA Protection Three Phase + N 60KA Protection	TLP-V60/275-SM (Module only)	185 / 275	60		<1000 / 1	Y / N	FIG 10		
	TLP-V60/275-S	185 / 275	60		<1000 / 1	Y / Y	FIG 10	18 90 60	
	TLP-V100/275-S	185 / 275	100		<1000 / 1	Y / Y	FIG 10	36 60 90	
	TLP-DS60/275-2V	185 / 275	60		<1000 / 2	Y / Y	FIG 9	36 60 90	
	TLP-DT60/275-3V-S	185 / 275	60		<1000 / 1	Y / Y	FIG 9	55 60 90	
	TLP-DT100P/275-3V-S	185/275	100		<1000 / 1	Y / Y	FIG 9	70 60 90	
	TLP-DT60/275-4V-S	185 / 275	60		<1000 / 1	Y / Y	FIG 9	65 55 90	

CATEGORY A - BUS & SPECIAL TYPES



TLP Transient Lightning Protection

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LOW VOLTAGE PROTECTORS FOR INSTRUMENTATION
accept both Analog or Digital signals



FIG 17



FIG 11



FIG 12



FIG 13



FIG 14



FIG 15



Fig 16

AS 1768, IEEE C62 compliant	MODELS	VOLTAGE Nominal (Vrms) Maximum (Vrms)	PEAK DISCHARGE CURRENT With 8/20usec (kA)		MAX "LET-THRU" VOLTAGE Volts/Modes	INDICATION Visual/Remote	FIGURE No	DIMENSIONS in mm W H D	PRICE EACH LIST PRICE E&OE
Din Mount 12mm wide									
Single Channel	TLP-SL12-xxL range 12v to 60v	15 / 18 - 60 / 70	8		21 / 3	N / N	FIG 14	12 110 90	
Dual Channel	TLP-SL12-xxD range 12v to 60v	16 / 18 - 60 / 70	8		21 / 3	N / N	FIG 14	12 110 90	
Din Mount 6.0mm wide									
Dual Channel	TLP-SL62-xxD range 12v to 60v	17 / 18 - 60 / 70	4		75/3	N / N	FIG 13	6.2 90 100	
Field Protector , Power & Loop									
Protects 24v loop only	TLP-48HM/M20	24 / 48	10		28 / 3	N / N	FIG 15	- 172 25 hex	
Protect supply 24v/120v/240v & mA loop	TLP-48HM-4W/M20	24 /120/240	10		28 / 3	N / N	FIG 15	- 172 25 hex	
Thread sizes ,M20,PG13.5,1/2"NPT									
Bus Protectors	TLP-SL12-RS232	±15 / ±18	400W PPPD		19 / 2	N / N	FIG 14	12 110 52	
* Other types upon request	TLP-SL12-RS485	±12 / ±15 Vdc	400W PPPD		19 / 2	N / N	FIG 14	12 110 52	
	TLP-SL12-RS485/MB Modbus	±12 / ±15 Vdc	400W PPPD		19 / 2	N / N	FIG 14	12 110 52	
	TLP-SL12-RS485/PB Profibus	±12 / ±15 Vdc	400W PPPD		19 / 2	N / N	.FIG 14	12 110 52	
	TLP-DNET DeviceNet	24 / 31	400W PPPD		19 / 2	N / N	FIG 14	12 110 52	
	TLP-48/RJ45H-4 (8)	24 / 31	400W PPPD		19 / 2	N / N	FIG 12	25 85 55	
Coaxial RF Protectors	TLP-N/FF	70V	20		700 / 1kV/Ms	N / N	FIG 11	TNC FEM/FEM Bulkhead	
* Other types upon request	TLP-F/MF	90V	20		700 / 1kV/Ms	N / N	FIG 11	F FEM/MALE	
	TLP-F/FF	90V	20		701 / 1kV/Ms	N / N	FIG 11	F FEM/FEM	
HV Lighting Protectors	TLP-2000	2kV	100		1.1kV/1	N / N	FIG 16	RSL63 Fuse Holder	
Remote Displays / Strike Counters									
	TLP-PSI 120 or 240V	Supply 120V or 240V	N/A		N/A	Y	FIG 17	48mm x 48mm	
	TLP-DSI	Powered by TLP	N/A		N/A	Y	FIG 17	48mm x 48mm	
	TLP-LEC- A	Supply 120V or 240V	N/A		N/A	Y - 3 Digit	FIG 18	DIN MOUNT see below	
* Other types upon request									

Perth - Melbourne - Sydney - Brisbane - Adelaide



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FIG 18

MODEL:- TLP-Pxxx-3P-DRI

Transtech Lightning Protector Three Phase, 3 Mode with Dual Colour LED's and Remote Indicator Class I / CAT C or less



GENERAL DESCRIPTION

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

The TLP-Pxxx-3P-DRI is a true 3 mode parallel connected protection device offering 4 levels of kA rating in all 3 modes and offers Dual Colour LEDs and a Remote Indicator output to drive a Transtech panel mounted remote monitor module. A further option is a Modbus output to directly interface to a BMS.

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 dual colour LED's
- ♦ Remote status indication relay
- ♦ Remote Indicator output
- ♦ Modbus Output
- ♦ 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
- ♦ Compliant with IEC 62305-4:2010

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

TECHNICAL DATA

Normal Working voltage
Maximum working voltage
Working Freq.
Peak let thru volts Up
Maximum mains current

Mains
Imax
Iimp
Response time
Relay Contacts
Surge Reset

see table 2 below
476VAC rms (phase to phase)
40 - 60Hz
see table 2 below
Unlimited (parallel connected)
Must be fuse protected over 100A

see table 2 below
see table 2 below
Less than 25nS
SPCO (1 amp @240Vac)
Automatic

SPECIAL FEATURES

Relay Output
LED's (3)
DIR
MB

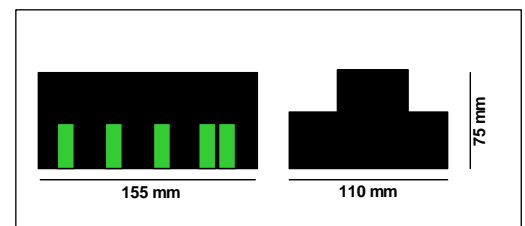
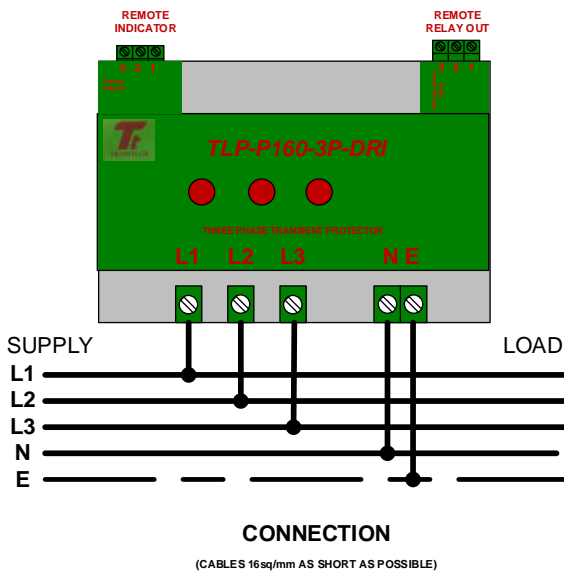
Phase loss
L1, L2, L3, **RED** = healthy / **AMBER** = replace)
Dual LED's Remote Indicator & Relay
Modbus Output for BMS

GENERAL SPECIFICATION

Operating Temp -40 to +70 Deg C
Terminals 16mm² solid max / 10mm² flex max
Remote Terminals Plug in 2.5mm²
Indicators Dual Colour 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

Model	Working Voltage	Frequency.	I _{max}	I _{imp}	I _n	Let Thru V	Response Time
	Phase-Phase		1 Pulse	10/350us	15x8/20us	@3kA	
TLP-P80-3P-DRI	415V	40-60HZ	80kA	5.0kA	32kA	> 810	25nS
TLP-P120-3P-DRI	415V	40-60HZ	120kA	7.5kA	48kA	> 810	25nS
TLP-P160-3P-DRI	415V	40-60HZ	160kA	10.0kA	64kA	> 810	25nS
TLP-P200-3P-DRI	415V	40-60HZ	200kA	12.5kA	80kA	> 810	25nS
TLP-P240-3P-DRI	415V	40-60HZ	240kA	15.0kA	96kA	> 810	25nS
TABLE No 2							

TABLE No 2



MODEL:- TLP-Pxxx-3P-DRI+MBN

Transtech Lightning Protector Three Phase, 3 Mode with Dual Colour LED's, **Modbus** + NEMON Class I / CAT C or less



GENERAL DESCRIPTION

The TLP-Pxxx-3P-DRI+MBN is a "new series" lightning and transient protector which provides protection for electrical / electronic equipment connected to three phase distribution systems.

The TLP-Pxxx-3P-DRI+MBN is a true 3 mode parallel connected protection device offering 4 levels of kA rating in all 3 modes and offers Dual Colour LEDs and a Remote Indicator output to drive a Transtech panel mounted remote monitor module. Also it is equipped with a Modbus output to directly interface to a BMS plus NEMON (Neutral-Earth monitoring).

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 dual colour LED's
- ♦ Remote status indication relay
- ♦ Remote Indicator output
- ♦ **NEMON Neutral – Earth monitoring**
- ♦ **Modbus Output**
- ♦ 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
- ♦ Compliant with IEC 62305-4:2010

TECHNICAL DATA

Normal Working voltage
Maximum working voltage
Working Freq.
Peak let thru volts Up
Maximum mains current

see table 2 below

476VAC rms (phase to phase)

40 - 60Hz

see table 2 below

Unlimited (parallel connected)

Must be fuse protected over 100A

Mains

Imax

Iimp

Response time

Relay Contacts

Surge Reset

see table 2 below

see table 2 below

Less than 25nS

SPCO (1 amp @ 240Vac)

Automatic

SPECIAL FEATURES

Relay Output
LED's (3)
DIR
MB

Phase loss

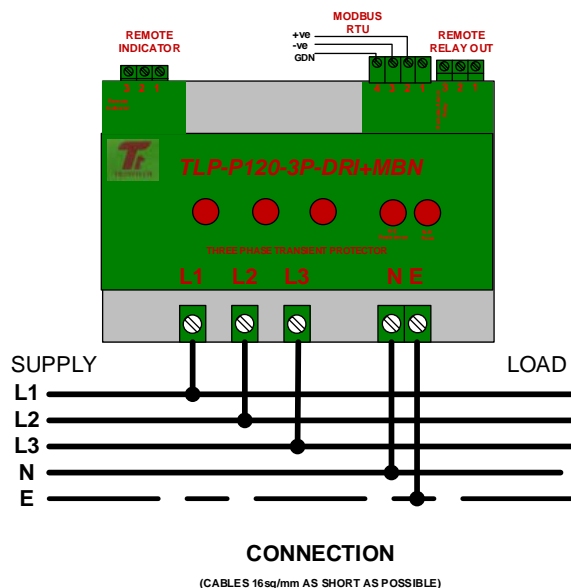
L1, L2, L3, **RED** = healthy / **AMBER** = replace)

Dual LED's Remote Indicator & Relay

Modbus Output for BMS

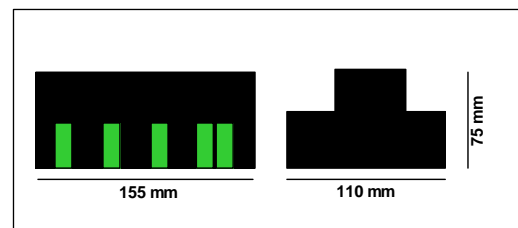
GENERAL SPECIFICATION

Operating Temp -40 to +70 Deg C
Terminals 16mm² solid max / 10mm² flex max
Remote Terminals Plug in 2.5mm²
Indicators Dual Colour LED's
Housing Material Mild Steel (Powder coated)
Dimensions 155 (W) x 105 (D) x 85 (H)
Weight 900 grams
Mounting DIN 43880 Standard DIN Rail



Model	Working Voltage	Frequency.	Imax	Iimp	In	Let Thru V	Response Time
	Phase-Phase		1 Pulse	10/350us	15x8/20us	@3kA	
TLP-P40-3P-DRI+MN	415V	40-60HZ	40kA	-	16kA	> 810	25uS
TLP-P80-3P-DRI+MN	415V	40-60HZ	80kA	5.0kA	32kA	> 810	25uS
TLP-P120-3P-DRI+MN	415V	40-60HZ	120kA	7.5kA	48kA	> 810	25nS
TLP-P160-3P-DRI+MN	415V	40-60HZ	160kA	10.0kA	64kA	> 810	25nS
TLP-P200-3P-DRI+MN	415V	40-60HZ	200kA	12.5kA	80kA	> 810	25nS
TLP-P240-3P-DRI+MN	415V	40-60HZ	240kA	15.0kA	96kA	> 810	25nS

TABLE No 2 (Modbus & N-E Out)



MODEL:- TLP-Pxxx-3P-DRI+MBN

Transtech Lightning Protector Three Phase, 3 Mode with Dual
Colour LED's, **Modbus** + NEMON Class I / CAT C or less

The MODBUS interface board can take up to 8 inputs. These inputs are available on the bus using MODBUS function codes 1 (Read Coils) and 2 (Read Discrete Inputs). Both function codes return the same information. Each input reads as '0' if there is a fault or '1' otherwise. Under normal conditions, all inputs will read as '1'. The input mapping is as follows:

Input	Description
0	Phase A Present
1	Phase B Present
2	Phase C Present
3	Phase A MOV/Fuse OK
4	Phase B MOV/Fuse OK
5	Phase C MOV/Fuse OK
6	Neutral-Earth Fuse OK†
7	Neutral-Earth Resistance OK†
† = Only available on units fitted with a NEMON module. Always reads as '0' on non-NEMON units.	

The current device setup can be retrieved using MODBUS function codes 3 (Read Holding Register) and 4 (Read Input Register). Both codes will retrieve the same information. These registers can be set using MODBUS function codes 6 (Write Single Register) or 16 (Write Multiple Registers). The register details are as follows:

Register	Description	Default	Valid Values†
0	Device Address	247	1 to 247 inclusive
1‡	Serial Number (Low Word)	< value is uniquely set at factory >	
2‡	Serial Number (High Word)		
3	Baud Rate (divided by 100, e.g. 192 = 19,200 baud)	192	12, 24, 48, 96, 144, 192, 288, 384, 576, 1152
4	Serial Parity	1	0 = None, 1 = Even, 2 = Odd
5	Serial Bus Mode	0	0 = RTU, 1 = ASCII
6	ASCII Mode Timeout (in units of 10ms)	100	50 to 65535 = 0.5 to 65.535 seconds
† = Any value not within the valid range is ignored and the register contents are not modified. No error is returned. ‡ = Register is read-only and cannot be modified. Any writes to these registers are ignored. No error is returned.			

Writing to registers 3, 4 or 5 will cause the serial communications interface to be restarted and all diagnostics counters to be cleared.

The device will also respond to MODBUS function code 43, sub code 14 (Read Device Identification). This will return standard information such as vendor name, product code and revision as per the MODBUS standard

The device will also respond to MODBUS function code 8 (Diagnostics). All sub-functions are supported, although the device never returns NAK or BUSY responses, so sub-functions 16 and 17 always return 0.

All other MODBUS function codes are unsupported and will cause an error reply to be generated.

The default setup will be a device ID of 247 (the maximum ID allowed, and unlikely to already be on a bus), with a baud rate of 19200 and EVEN parity (both as specified by the MODBUS standard). These will be able to be configured here during testing or will be able to be configured by the customer if they have an appropriate computer and RS485 interface to use.

Some PLCs may allow configuration from their HMI if they support arbitrary setting of register values in MODBUS slaves.

MODEL:- TLP-CPxxx3P-DRI

Transtech Lightning Protector Three Phase, 3 Mode with Dual Colour LED's and Remote Indicator – Class I / CAT C or less



GENERAL DESCRIPTION

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

The TLP-CPxxx-3P-DRI is a true 3 mode parallel connected protection device offering 3 levels of kA rating in all 3 modes and offers Dual Colour LEDs and a Remote Indicator output to drive a panel mounted remote monitor module.

A special feature is that the CP series can be ordered with a Modbus output which replaces the relay output.

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

FEATURES

- ◆ Compact design – space saving
- ◆ Low “let thru” voltage
- ◆ Designed and manufactured to ISO 9001
- ◆ Internally protected – automatic reset
- ◆ Local status indication by dual colour LED's
- ◆ Remote status indication relay or Modbus Output
- ◆ Remote Indicator output
- ◆ 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
- ◆ Compliant with IEC 62305-4:2010

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

TECHNICAL DATA

Normal Working voltage
Maximum working voltage
Working Freq.
Peak let thru volts Up
Maximum mains current

I_{max}
I_{imp}
Response time
Relay Contacts
Surge Reset

see table 2 below
476VAC rms (phase to phase)
40 - 60Hz
see table 2 below
Unlimited (parallel connected)
Must be fuse protected over 100A Mains
see table 2 below
see table 2 below
Less than 25nS
SPCO (1 amp @240Vac)
Automatic

SPECIAL FEATURES

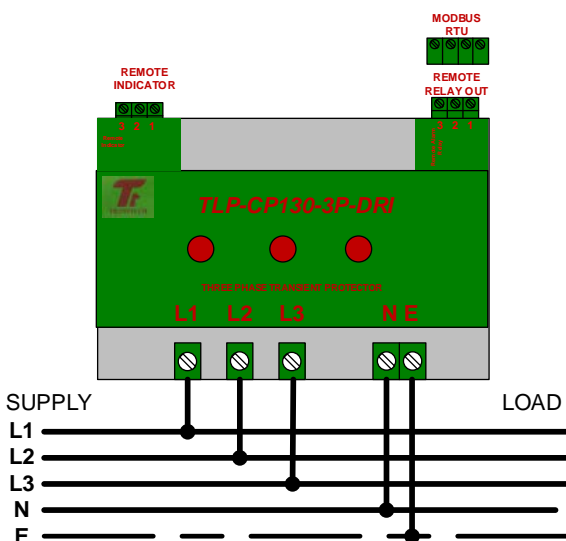
Relay Output
LED's (3)
DIR
OPTION
Modbus Output

Phase loss
L1, L2, L3, **RED** = healthy / **AMBER** = replace)
Dual LED's Remote Indicator & Relay

Replaces the Relay output

GENERAL SPECIFICATION

Operating Temp -40 to +70 Deg C
Terminals 16mm² solid max / 10mm² flex max
Remote Terminals Plug in 2.5mm²
Indicators Dual Colour 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

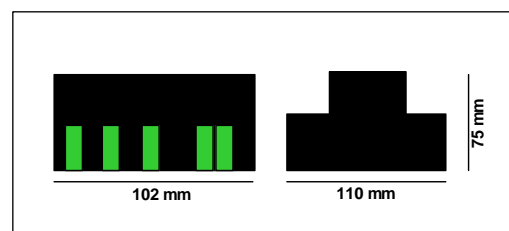


CONNECTION

(CABLES 16sq/mm AS SHORT AS POSSIBLE)

Model	Working Voltage	Frequency.	I _{max}	I _{imp}	I _n	Let Thru V	Response Tim
	Phase-Phase		1 Pulse	10/350us	15x8/20us	@3kA	
TLP-CP50-3P-DRI	415V	40-60HZ	50kA	3kA	20kA	> 810	25nS
TLP-CP100-3P-DRI	415V	40-60HZ	100kA	6.5kA	40kA	> 810	25nS
TLP-CP130-3P-DRI	415V	40-60HZ	130kA	8.5kA	52kA	> 810	25nS
TLP-CP50-3P-MB	415V	40-60HZ	50kA	3kA	20kA	>810	25nS
TLP-CP100-3P-MB	415V	40-60HZ	100kA	6.5kA	40kA	>810	25nS
TLP-CP130-3P-MB	415V	40-60HZ	130kA	8.5kA	52kA	>810	25nS

TABLE No 2



MODEL:- TLP-150-3M/CATB

Transtech Lightning Protector Three Phase, 3 Mode with Dual Colour LED's and Relay & MB - CAT B or less



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 as short as possible, nominally less than 300mm.

The TLP-150-3M/CAT B is a true 3 mode protection device with an I_{max} rating of 150kA for Category B applications such as sub-distribution boards.

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

FEATURES

- ◆ Compact design – space saving
- ◆ Low “let thru” voltage
- ◆ Designed and manufactured to ISO 9001
- ◆ Internally protected – automatic reset
- ◆ Local status indication by dual colour LED's
- ◆ Remote status indication relay
- ◆ **BMS monitoring via Modbus Module option**
- ◆ 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.

TECHNICAL DATA

Normal Working voltage
Maximum working voltage
Working Freq.
Peak let thru volts
Maximum mains current

I_{max}
Response time
Relay Contacts
Surge Reset

Phase to Phase 415V
476VAC rms (phase to phase)
40 - 60Hz
Less than 700V
Unlimited (parallel connected)
Must be fuse protected over 100A Mains
150kA
Less than 25nS
SPCO (1 amp @240V/ac)
Automatic

SPECIAL FEATURES

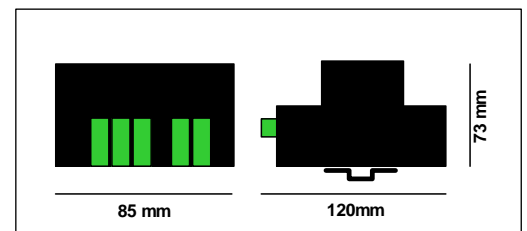
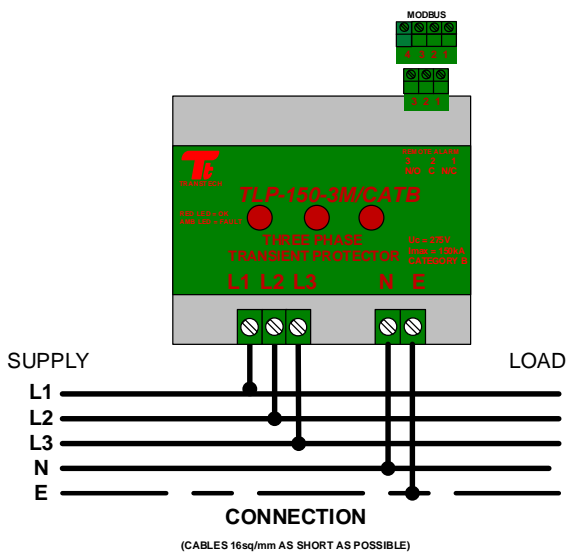
Relay Output
Modbus Output (Optional extra)
LED's (3)
Indications

Phase loss
Can be equipped with Modbus output
L1, L2, L3, **RED** = healthy / **AMBER** = replace)
Dual LED's and Remote Relay

GENERAL SPECIFICATION

Operating Temp
Terminals
Remote Terminals
Indicators
Housing Material
Dimensions
Weight
Mounting

-40 to +70 Deg C
16mm² solid max / 10mm² flex max
Plug in 2.5mm²
Dual Colour LED's
Mild Steel (Powder coated)
85 (W) x 110 (D) x 73 (H)
850 grams
DIN 43880 Standard DIN Rail



MODEL:- TLP-Pxxx-1P-R

Transtech Lightning Protector Single Phase, 3 Mode with Dual Colour LED's and Remote Indicator CAT C or less



GENERAL DESCRIPTION

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

The TLP-Pxxx-1P-R is a true 3 mode parallel connected protection device offering 4 levels of kA rating in all 3 modes and offers Dual Colour LEDs and a Remote Indicator output to drive a Transtech panel mounted remote monitor module.

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

FEATURES

- ♦ Low “let thru” voltage
- ♦ Designed and manufactured to ISO 9001
- ♦ Internally protected – automatic reset
- ♦ Local status indication by dual colour LED's
- ♦ Remote status indication relay
- ♦ Remote Indicator output
- ♦ Modbus Output
- ♦ 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.

TECHNICAL DATA

Normal Working voltage
Maximum working voltage
Working Freq.
Peak let thru volts
Maximum mains current

Imax
Response time
Relay Contacts
Surge Reset

see table 2 below

275VAC rms (phase to neutral / earth)
40 - 60Hz

see table 2 below

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

see table 2 below

Less than 25nS
SPCO (1 amp @240V/ac)
Automatic

SPECIAL FEATURES

Relay Output
LED's (2)

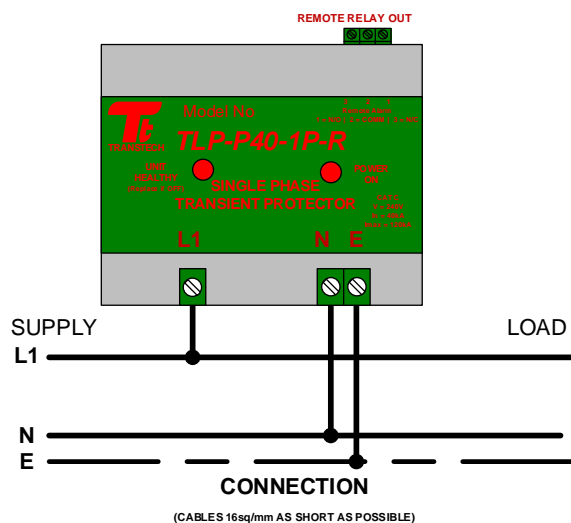
Phase loss

L1, **RED** = healthy / **AMBER** = replace)

Power ON = **RED**

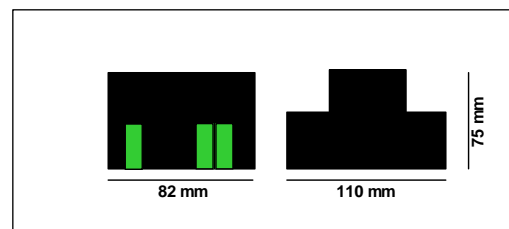
GENERAL SPECIFICATION

Operating Temp -40 to +70 Deg C
Terminals 16mm² solid max / 10mm² flex max
Remote Terminals Plug in 2.5mm²
Indicators Dual Colour 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



Model	Working Voltage Phase-Neutral	Frequency.	Imax	In 15x8/20us	Let Thru V @3kA	Response Time
TLP-P40-1P-R	240V	40-60HZ	40kA	16kA	> 810	25nS
TLP-P80-1P-R	240V	40-60HZ	80kA	32kA	> 810	25nS
TLP-P120-1P-R	240V	40-60HZ	120kA	52kA	> 810	25nS
TLP-P40-1P-24-R	24V	40-60HZ	40kA	16kA	>810	25nS

TABLE No 2



MODEL:- TLP-Pxxx-1P-R+N

Transtech Lightning Protector Single Phase, 3 Mode with Dual Colour LED's. Remote Indicator & N-E Monitor CAT C or less



GENERAL DESCRIPTION

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

The TLP-Pxxx-1P-R is a true 3 mode parallel connected protection device offering 4 levels of kA rating in all 3 modes and offers Dual Colour LEDs and a Remote Indicator output to drive a Transtech panel mounted remote monitor module.

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

FEATURES

- ◆ Low “let thru” voltage
- ◆ Designed and manufactured to ISO 9001
- ◆ Internally protected – automatic reset
- ◆ Local status indication by dual colour LED's
- ◆ Remote status indication relay
- ◆ Remote relay output for Phase fail PLUS N-E connection
- ◆ Modbus Output
- ◆ 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.

TECHNICAL DATA

Normal Working voltage
Maximum working voltage
Working Freq.
Peak let thru volts
Maximum mains current

Imax
Response time
Relay Contacts
Surge Reset

see table 2 below

275VAC rms (phase to neutral / earth)
40 - 60Hz

see table 2 below

Unlimited (parallel connected)

Must be fuse protected over 100A Mains

see table 2 below

Less than 25nS

SPCO (1 amp @240V/ac)

Automatic

SPECIAL FEATURES

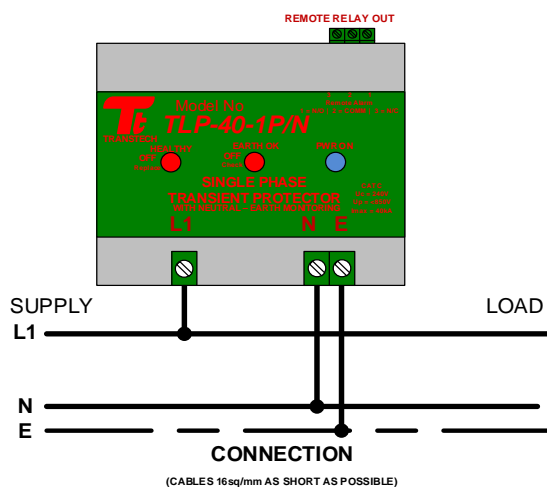
Relay Output
LED's (3)

Phase loss or no N-E connection
L1, **RED** = healthy / **AMBER** = replace
N-E, **RED** = OK / **AMBER** = check
Power ON = **BLUE**

GENERAL SPECIFICATION

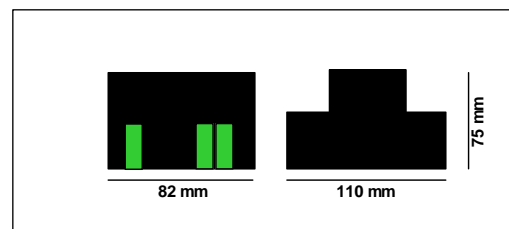
Operating Temp
Terminals
Remote Terminals
Indicators
Housing Material
Dimensions
Weight
Mounting

-40 to +70 Deg C
16mm² solid max / 10mm² flex max
Plug in 2.5mm²
Dual Colour LED's
Mild Steel (Powder coated)
155 (W) x 105 (D) x 85 (H)
850 grams
DIN 43880 Standard DIN Rail



Model	Working Voltage	Frequency.	Imax	In	Let Thru V @3kA	Response Time
	Phase-Neutral			15x8/20us		
TLP-P40-1P-R+N	240V	40-60HZ	40kA	16kA	> 810	25nS
TLP-P80-1P-R+N	240V	40-60HZ	80kA	32kA	> 810	25nS
TLP-P120-1P-R+N	240V	40-60HZ	120kA	52kA	> 810	25nS

TABLE No 2



MODEL:- TLP-415P-E-DIN

Transtech Lightning Protector 3 PH Motor Protector
with Indication for CAT B or A



GENERAL DESCRIPTION

The TLP-415P-E-DIN series is a lightning and power transient arrester which provide voltage surge limitation to power electrical devices such as 3Ph motors.

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.

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP-415P-E-DIN

*** CAUTION ***

Ensure that the Earth is appropriately terminated at all times. Ensure that the all Phases are at 0V potential before removing the unit from service.

FEATURES

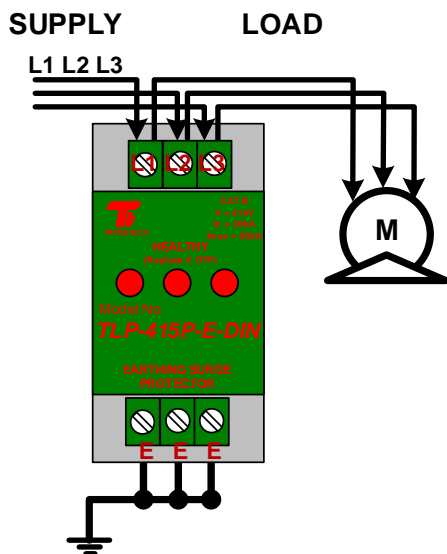
- ♦ Low “let thru” voltage
- ♦ Protection between 3 Phases – Earth
- ♦ Fast snap on DIN rail mounting
- ♦ 26kA discharge capacity per line
- ♦ Location Category B to AS 1768
- ♦ CE / C-tick marking

TECHNICAL DATA

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

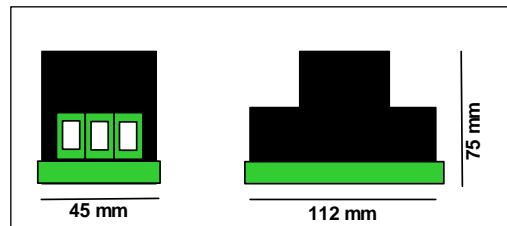
GENERAL SPECIFICATION

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 10mm 20 - 6 AWG
Housing Material	KRILEN / MS cover
Mounting Style	DIN or G rail
Dimensions	112mm x 75mm x 45mm
Weight	195 grams



CONNECTION

(CABLES 16sq./mm AS SHORT AS POSSIBLE)



Airport Surge Protectors

Model: TLP-2000



Australian designed & manufactured

MAIN BUILDINGS

Protection of Airport Main Supply
Three Phase 415V to 240kA fault (8/20usec)
Single Phase 240V to 80kA fault (8/20usec)
Status "life" indication via bi-colour LED's
Relay output for status monitoring
Modbus output for BMS interfacing



LIGHTNING PROTECTION FOR RUNWAYS & TAXIWAYS & BUILDINGS



TAXIWAY/RUNWAY TLP-2000

Protecting Darwin Airport since 1999
Controlled "let-thru" surge Voltages
Three mode protection (excl. TLP-2000)
CE and c-tick compliant
AS1798:2005 compliant



RUNWAY / TAXIWAY LIGHTING

Protection for runway and taxiway lighting
Up to 2000V – withdrawable type protector
Unique testing and serial numbering
Live exchange of protectors

Re-calibration/re-certification service offered
for the TLP-2000 currently in service.

SPECIFICATIONS

MODEL	TLP-2000	TLP-P80-1P	TLP-P240-3P-DRI
Application	Runway/Taxi	1 Phase	3 Phase
VOLTAGE			
Nominal Vrms	2000	240	415
Maximum Vrms	2200	275	485
PHASES			
Number	1	1	3
FREQUENCY			
Range (Hz)	40-60	40-60	40-60
CURRENT			
Nominal Amps	N/A	N/A	N/A
PEAK DISCHARGE			
8/20usec (kA)	80	80	240
MAX LET THRU VOLTS			
Volts >	3200	690	690
Modes	1	3	3
INDICATION			
Visual (LED)	NO	YES	YES
Remote (Relay)	NO	YES	YES
Monitoring (Modbus)	NO	YES	YES
WORKING TEMP			
Range (DegC)	-40 to +70degC	-40 TO +70degC	-40 to +70degC
MOUNTING STYLE			
Type	Plug/Fuse	DIN	DIN
WEIGHT			
Nett (Grams)	1500	285	750

For other applications please ask us for a solution

MOUNTING STYLE

The TLP-2000 consists of a 63Amp HV fuse holder with 1.1kV MOV's, handle and protection plate with single stud / bottom entry connection. The TLP-P80-1P and TLP-P240-3P are DIN rail mounted in switchboards.

MODES OF PROTECTION

The TLP series of surge/lightning protectors are designed to the latest International Standards as listed below, the range also offers three (3) modes of protection – being L-L, L-N, N-E.

Standards designed to:

IEC 61643-1

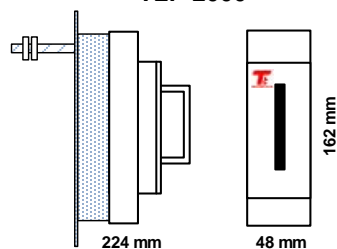
AS1768:2003

IEC 62305-4:2010



Also in Sydney – Brisbane – Adelaide – Hobart - Devonport

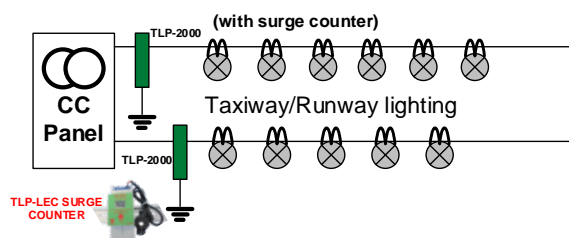
DIMENSIONS



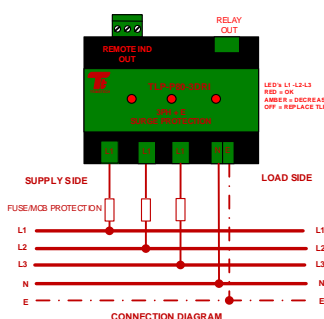
DIMENSIONS

Model	W	D	H
TLP-P80-1P	106	110	72
TLP-P240-3P	140	110	72

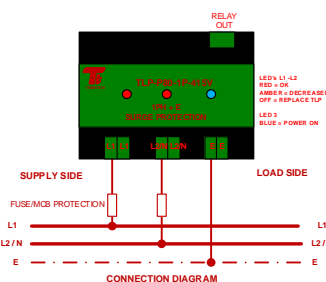
TYPICAL APPLICATION FOR TLP-2000



3 Phase connection



1 Phase connection



PERFORMANCE GUARANTEE

Transtech® has been designing and manufacturing Industrial Instrumentation since 1996 and has an established policy of 100% testing prior to shipping to it's Customers. By this method Transtech® guarantees that all products are fit for purpose and carry a 5 year replacement warranty.

Transtech Electronic Controls Pty Ltd

Perth - Melbourne

Perth Tel: (08) 9302-2044

Melbourne Tel: (03) 9330-3624

Info@transtech.com.au

ABN 21 070 629 499

MODEL:- TLP-DSI / TLP-PSI

Transtech Lightning Protector Accessories/Monitors

GENERAL DESCRIPTION

TLP-DSI – designed for TLP connection

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 (Code 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.

TLP-PSI – designed to retro-fit any relay output

The TLP-PSI is a 48mm x 48mm AC or DC powered, status indicator which may be connected to any Transtech model 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 Supply OK
RED	= Protector is Healthy
YELLOW	= Protector is Faulty (replace)

FEATURES

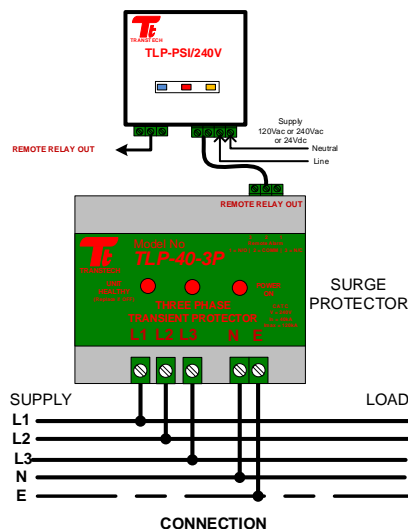
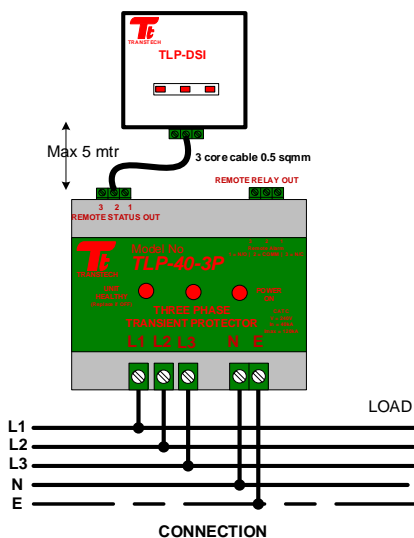
- Designed and manufactured to ISO 9001
- Small size 48mm x 48mm panel mount unit
- 3 bright, easy to read LEDs
- Status LEDs match those of the TLP LEDs
- Easy to connect - only 3 wires
- Plug-off terminals
- No setup required.

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

TECHNICAL DATA

Operating Temp.	-25 to 70 degrees C
Connection	3 way 2.5mm ² plug-off
Housing Material	ABS.
Protection Degree	IP54 (front of panel)
Dimensions	48 x 48 x 60 mm
Weight	25gm nominal
Mounting	Through panel mount

SPECIAL FEATURES

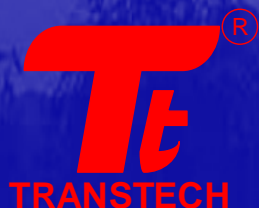


Electronic Transient/Surge Protection

Series Filter Range



www.transtech.com.au



Also represented in Sydney – Brisbane – Adelaide

Transtech Electronic Controls Pty Ltd

ABN 21 070 629 499

Melbourne and Perth

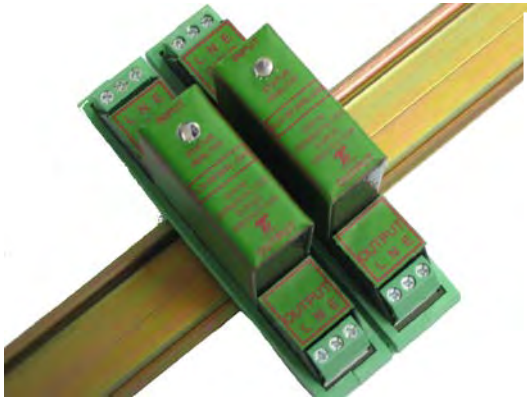
Perth Tel: (08) 9302-2044

Melbourne Office: (03) 9330-3624

Info@transtech.com.au

MODEL:- TLP-SF20SL-xxxV

Transtech Lightning Protector Single Phase **20Amp**, 3 Mode with LED & RELAY covering CAT B - A



GENERAL DESCRIPTION

The TLP-SF20SL-xxx is a range of single phase series connected 20Amp lightning and transient protector, that provides protection for electrical / electronic equipment connected to single phase distribution systems.

The TLP-SF20SL-xxx are true 3 mode series connected protection devices with a specifically designed low pass filter and high level of kA rating in all 3 modes.

The TLP-SF20SL-xxx series offers a DIN style format to match the profile of most MCB's. An option of have a relay output is available.

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

FEATURES

- ◆ Compact design – space saving
- ◆ Low “let thru” voltage
- ◆ Designed and manufactured to ISO 9001
- ◆ Internally protected – automatic reset
- ◆ Local status indication by coloured LED's
- ◆ Remote status indication relay output
- ◆ High Energy/low dissipation designed pcb's
- ◆ CE Marking / C-tick N 2909
- ◆ Full 3 mode protection
- ◆ DIN 43880 compliant
- ◆ Independently Tested and passed IEC 61643-1:2005
- ◆ Designed to meet AS/NZS 1768:2007

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

TECHNICAL DATA

Normal Working voltage
Maximum working voltage
Working Freq.
Peak let thru volts
Maximum mains current

see table 2 below
275VAC rms (phase to neutral)
40 - 60Hz
see table 2 below
20A (40Amp and 63Amp available)
Must be fuse protected over 100A Mains
see table 2 below
Less than 25nS
Optional SPCO (1 amp @240Vac)
Automatic

Imax
Response time
Relay Contacts
Surge Reset

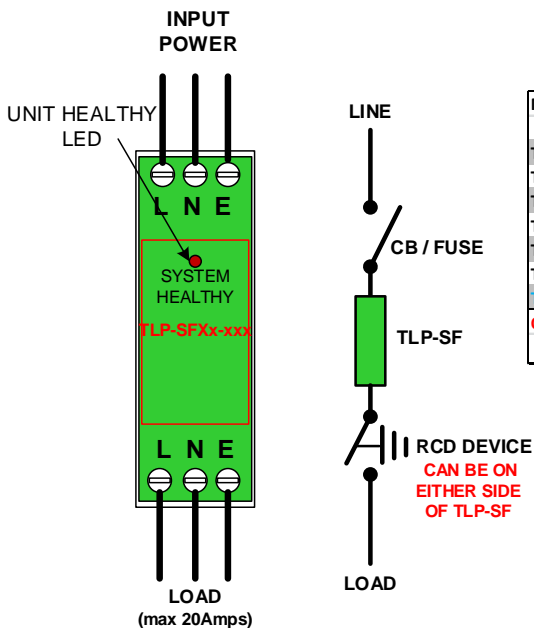
SPECIAL FEATURES

Indication
OPTIONS
Relay Output

LED Power ON
Available on **TLP-SF20RI-xxx**

GENERAL SPECIFICATION

Operating Temp -40 to +70 Deg C
Terminals 4mm² solid max / 10mm² flex max
Remote Terminals -
Indicators LED
Housing Material Mild Steel (Powder coated)
Dimensions see table 3 below
Weight see table 3 below
Mounting DIN 43880 Standard DIN Rail



Model	Working Voltage Frequency.		Imax	In	Let Thru V 15x8/20us 1p @ 1Amp	Response Time	Cut Off Freq. dB
	Line - Neutral						
TLP-SF20SL-12VDC	12V	DCV	6kA	4kA	<48	25nS	-3dB
TLP-SF20SL-24V	24V	40-60HZ	6kA	4kA	<48	25nS	-3dB
TLP-SF20SL-30V	30V	40-60HZ	6kA	4kA	<60	25nS	-3dB
TLP-SF20SL-110VDC	110V	DCV	36kA	24kA	<275	25nS	-3dB
TLP-SF20SL-120V	120V	40-60Hz	36kA	24kA	<710	25nS	-3dB
TLP-SF20SL-240V	240V	40-60HZ	36kA	24kA	<710	25nS	-3dB
TLP-SF20RI-240V	240V	40-60HZ	72kA	48kA	<710	25nS	-3dB

Other Voltages available please contact factory

TABLE No 2

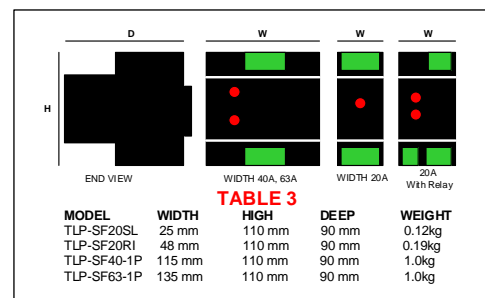


TABLE 3

MODEL	WIDTH	HIGH	DEEP	WEIGHT
TLP-SF20SL	25 mm	110 mm	90 mm	0.12kg
TLP-SF20RI	48 mm	110 mm	90 mm	0.19kg
TLP-SF40-1P	115 mm	110 mm	90 mm	1.0kg
TLP-SF63-1P	135 mm	110 mm	90 mm	1.0kg

MODEL:- TLP-SFxx-1P-xxxV

Transtech Lightning Protector Single Phase, 3 Mode with LED & RELAY covering CAT C

GENERAL DESCRIPTION

The TLP-SFxx-1P-xxx is a range of single phase series connected 40Amp & 63Amp lightning and transient protectors, that provide protection for electrical / electronic equipment connected to single phase distribution systems.

The TLP-SFxx-1P-xxx are true 3 mode series connected protection devices with a specifically designed low pass filter and high level of kA rating in all 3 modes.

The TLP-SFxx-1P-xxx series offers a DIN style format to match the profile of most MCB's, these models offer a relay output as standard.

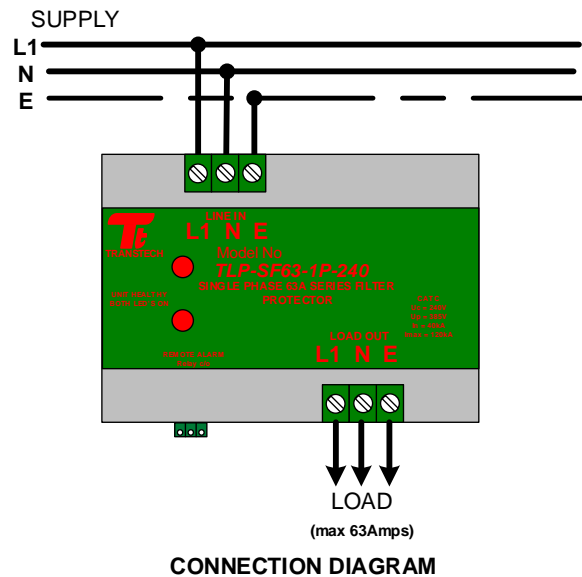
For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP-SFxx-1P



FEATURES

- ◆ Compact design – space saving
- ◆ Low “let thru” voltage
- ◆ Designed and manufactured to ISO 9001
- ◆ Internally protected – automatic reset
- ◆ Local status indication by coloured LED's
- ◆ Remote status indication relay output
- ◆ High Energy/low dissipation designed pcb's
- ◆ CE Marking / C-tick N 2909
- ◆ Full 3 mode protection
- ◆ DIN 43880 compliant
- ◆ Designed to meet IEC 61643-1:2005
- ◆ Designed to meet AS/NZS 1768:2007

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



TECHNICAL DATA

Normal Working voltage
Maximum working voltage
Working Freq.
Peak let thru volts
Maximum mains current

see table 2 below
275VAC rms (phase to neutral)
40 - 60Hz
see table 2 below
40Amp and 63Amp
Must be fuse protected over 100A Mains
see table 2 below
Less than 25nS
Optional SPCO (1 amp @ 240Vac)
Automatic

Imax
Response time
Relay Contacts
Surge Reset

SPECIAL FEATURES

Indication 2
OPTIONS
Relay Output

LED Power ON and all Healthy
SPCO Relay (1Amp @ 240Vac)

GENERAL SPECIFICATION

Operating Temp -40 to +70 Deg C
Terminals 16mm² solid max / 10mm² flex max
Remote Terminals -
Indicators Two (2) LED's
Housing Material Mild Steel (Powder coated)
Dimensions see table 3 below
Weight see table 3 below
Mounting DIN 43880 Standard DIN Rail

Model	Working Voltage	Frequency.	Imax	In	Let Thru V	Response Time	Cut Off Freq
	Line - Neutral			15x8/20us	1p @ 1Amp		dB
TLP-SF40-1P-120V	120V	40-60HZ	54kA	18kA	>710	25nS	-3dB
TLP-SF40-1P-240V	240V	40-60HZ	54kA	18kA	>710	25nS	-3dB
TLP-SF63-1P-120V	120V	40-60HZ	58kA	18kA	>710	25nS	-3dB
TLP-SF63-1P-240V	240V	40-60HZ	58kA	18kA	>713	25nS	-3dB
					0		

Other Voltages available please contact factory

TABLE No 2

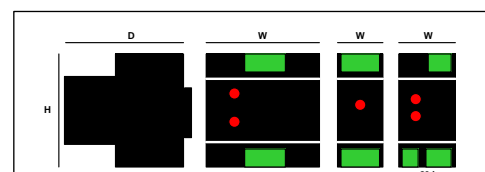


TABLE 3

MODEL	WIDTH	HIGH	DEEP	WEIGHT
TLP-SF20SL	25 mm	110 mm	90 mm	0.12kg
TLP-SF20RI	48 mm	110 mm	90 mm	0.19kg
TLP-SF40-1P	115 mm	110 mm	90 mm	1.0kg
TLP-SF63-1P	135 mm	110 mm	90 mm	1.0kg

MODEL:- TLP-SF32-80-3P-DR

Transtech Lightning Protector – 415V 3 Phase 32 Amp **Series Filter**,
3 Mode Cat C / Type I or less



GENERAL DESCRIPTION

The TLP-SF32-80-3P-DR is a new 32Amp series filter lightning and transient protector which provides protection for electrical / electronic equipment connected to three phase distribution systems.

The TLP-SF32-80-3P-DR is a true 3 mode series connected protection device offering an 80kA 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-SF32-xx-3P.required.

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.

TECHNICAL DATA

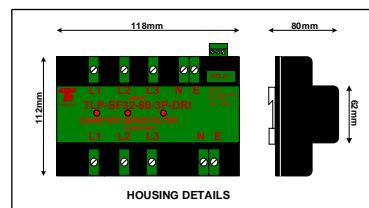
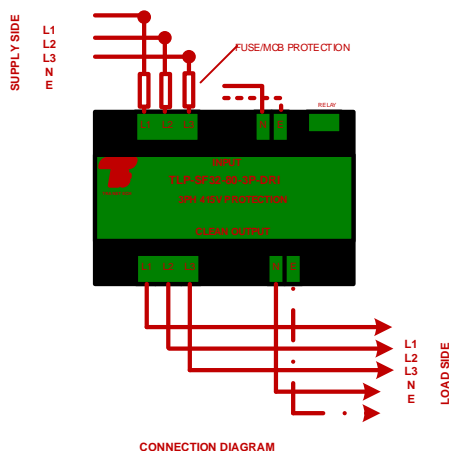
Normal Working voltage	415VAC rms
Minimum Working voltage	328VAC rms
Maximum Working voltage	476VAC rms
Working Freq.	40 - 60Hz
Peak let thru volts	less than 810V
Maximum mains current	32 Amps
limp	5kA (10/350uS)
Imax	80kA (8/20uS)
Response time	Less than 25nS
Relay Contacts	SPCO (1 amp @240Vac)
Surge Reset	Automatic

SPECIAL FEATURES

Relay Output	Phase loss or disconnected the relay de-energizes.
LED's (4)	L1, L2, L3, (RED = healthy / AMBER = replace) Power OK = BLUE

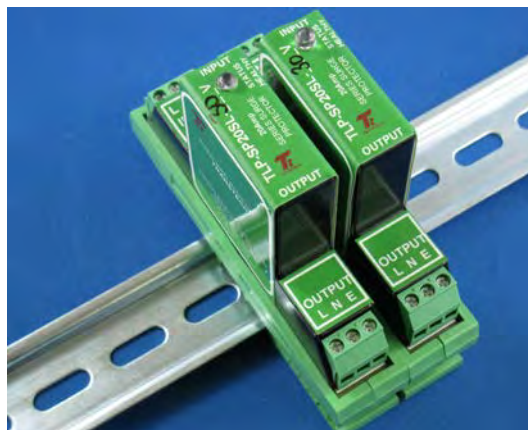
GENERAL SPECIFICATION

Operating Temp	-40 to +70 Deg C
Terminals	16mm ² solid max / 10mm ² flex max
Remote Terminals	Plug in 2.5mm ²
Indicators	Bi-colour LED's
Housing Material	Mild Steel (Powder coated)
Dimensions	105 (W) x 85 (H) x 155 (L)
Weight	850 grams
Mounting	DIN 43880 Standard DIN Rail



MODEL:- TLP-SP20SL-xxxV

Transtech Lightning Protector Single Phase **20Amp**, **Series OR Parallel** connection covering CAT B - A



FEATURES

- ◆ Compact design – space saving
- ◆ Low “let thru” voltage
- ◆ Designed and manufactured to ISO 9001
- ◆ Internally protected – automatic reset
- ◆ Local status indication by coloured LED's
- ◆ High Energy/low dissipation designed pcb's
- ◆ CE Marking / C-tick N 2909
- ◆ Full 3 mode protection
- ◆ DIN 43880 compliant
- ◆ Designed to meet IEC 61643-1:2005
- ◆ Designed to meet AS/NZS 1768:2007 and UL1449-3

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

GENERAL DESCRIPTION

The TLP-SP20SL range is either a series or parallel connected lightning and power transient arrestor. 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)

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP-SP20SL-xxx

TECHNICAL DATA

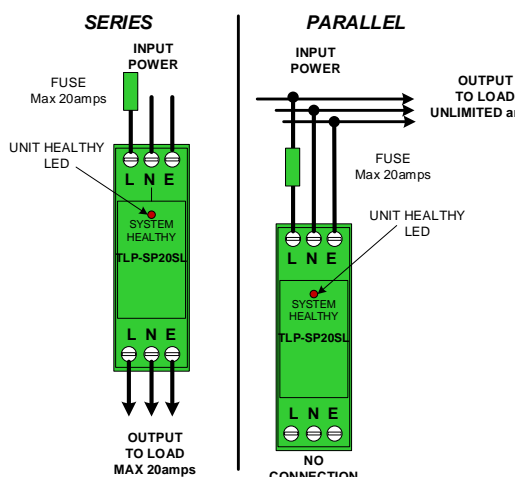
Normal Working voltage	see table 2 below
Maximum working voltage	275VAC rms (phase to neutral)
Working Freq.	40 - 60Hz
Peak let thru volts	see table 2 below
Maximum mains current	20A (40Amp and 63Amp available)
	Must be fuse protected over 100A Mains
Imax	see table 2 below
Response time	Less than 25nS
Relay Contacts	Optional SPCO (1 amp @240Vac)
Surge Reset	Automatic

SPECIAL FEATURES

Indication	LED Power ON
OPTIONS	
Relay Output	Not available

GENERAL SPECIFICATION

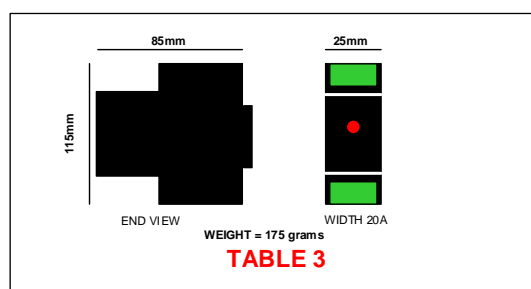
Operating Temp	-40 to +70 Deg C
Terminals	4mm ² solid max / 10mm ² flex max
Remote Terminals	-
Indicators	LED
Housing Material	Mild Steel (Powder coated)
Dimensions	see table 3 below
Weight	see table 3 below
Mounting	DIN 43880 Standard DIN Rail



Model	Working Voltage Line - Neutral	Frequency	Imax	In 15x8/20us	Let Thru V 1p @ 1Amp	Response Time	Cut Off Freq dB
TLP-SP20SL-30V	30V	40-60HZ	36kA	24kA	<48	25nS	N/A
TLP-SP20SL-50V	50V	40-60HZ	36kA	24kA	<60	25nS	N/A
TLP-SP20SL-150V	110V	40-60HZ	36kA	24kA	<165	25nS	N/A
TLP-SP20SL-275V	240V	40-60Hz	36kA	24kA	<625	25nS	N/A

Other Voltages available please contact factory

TABLE No 2



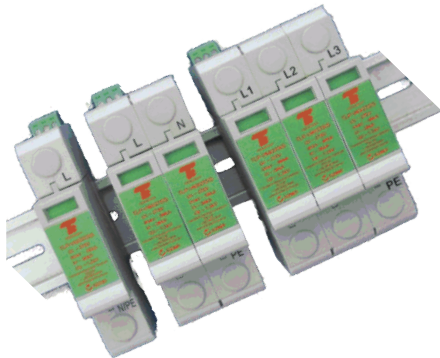
Electronic Transient/Surge Protection

Low Cost Plug-In Protection Range



MODEL:- TLP-LOW COST 60kA

Transtech Lightning **Plug-In Protector** Single & Three Phase,
Flag Indicator + Relay – Class I / CAT C or less



GENERAL DESCRIPTION

The TLP-V60/275-S and DS60/275 3V-S is a “new series” lightning and transient protector which provides protection for electrical / electronic equipment connected to three phase distribution systems.

Both models are a single mode parallel connected protection device offering 60kA single mode for Single Phase Line 1 to earth and Three Phase Lines 1, 2, 3 to Earth.

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP-DT100P-3V-S

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
- 3 Pole base with common PE version
- 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

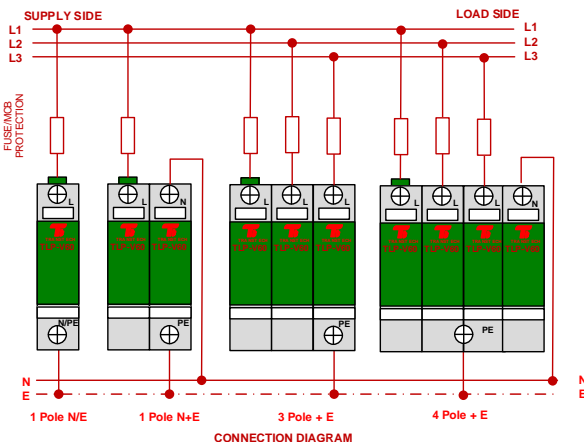
Normal Working voltage	240VAC rms L – E(PE)
Minimum Working voltage	185VAC rms
Maximum Working voltage	275AC rms
Working Freq.	40 - 60Hz
Peak let thru volts	less than 1000V
Maximum mains current	Unlimited (parallel connected) Must be fuse protected over 100A Mains
I _{max}	60kA (8/20uS)
I _{in}	25kA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

SPECIAL FEATURES

Relay Output MOV failed Indicator	The relay de-energizes. L1, L2, L3, flag type RED / GREEN
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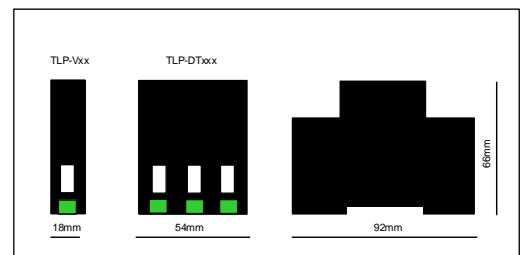
GENERAL SPECIFICATION

Operating Temp	-40 to +80 Deg C
Terminals	35mm ² solid max / 10mm ² flex max
Remote Terminals	Plug in 2.5mm ²
Indicators	Green/Red mechanical flag
Housing Material	Thermoplastic UL94-V-O
Degree Protection	IP-20
Dimensions (module)	See dimensions below
Weight	850 grams
Mounting	DIN 43880 Standard DIN Rail



Model	Working Voltage	Frequency.	I _{max}	I _{imp}	I _n	Let Thru V	Response Tim
	Phase-PNE		1 Pulse	10/350us	15x8/20us	@3kA	
TLP-V60/275-S	275V 1P	40-60HZ	60kA	4kA	25kA	> 1350	25nS
TLP-DS60/275-2V-S	275V 2P	40-60HZ	60kA	4kA	25kA	> 1350	25nS
TLP-DT60/275-3V-S	275V 3P	40-60HZ	60kA	4kA	25kA	>1350	25nS

TABLE No 2



MODEL:- TLP-LOW COST 100kA

Transtech Lightning **Plug-In Protector** Single & Three Phase,
Flag Indicator + Relay – Class I / CAT C or less



GENERAL DESCRIPTION

The TLP-V100P/275-S and DT100/275 3V-S is a “new series” lightning and transient protector which provides protection for electrical / electronic equipment connected to three phase distribution systems.

Both models are a single mode parallel connected protection device offering 100kA single mode for Single Phase Line 1 to earth and Three Phase Lines 1, 2, 3 to Earth.

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP-DT100P-3V-S

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
- 3 Pole base with common PE version
- 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

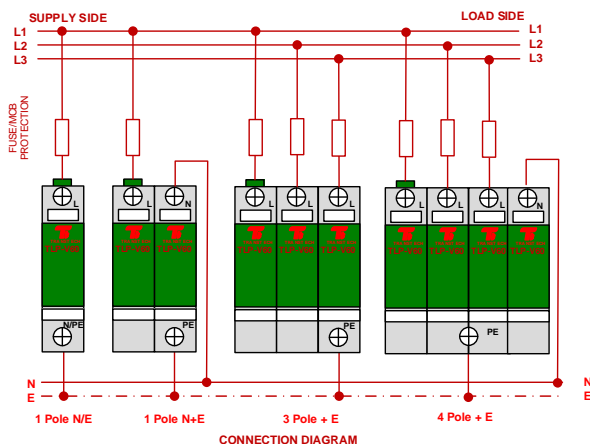
Normal Working voltage	240VAC rms L – E(PE)
Minimum Working voltage	185VAC rms
Maximum Working voltage	275AC rms
Working Freq.	40 - 60Hz
Peak let thru volts	less than 1000V
Maximum mains current	Unlimited (parallel connected)
	Must be fuse protected over 100A Mains
I _{max}	100kA (8/20uS)
I _{in}	40kA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

SPECIAL FEATURES

Relay Output MOV failed Indicator	The relay de-energizes. L1, L2, L3, flag type RED / GREEN
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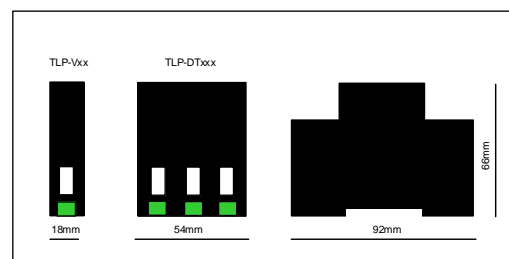
GENERAL SPECIFICATION

Operating Temp	-40 to +80 Deg C
Terminals	35mm ² solid max / 10mm ² flex max
Remote Terminals	Plug in 2.5mm ²
Indicators	Green/Red mechanical flag
Housing Material	Thermoplastic UL94-V-O
Degree Protection	IP-20
Dimensions (module)	See dimensions below
Weight	850 grams
Mounting	DIN 43880 Standard DIN Rail



Model	Working Voltage	Frequency.	I _{max}	I _{imp}	I _n	Let Thru V	Response Tim
	Phase-PNE		1 Pulse	10/350us	15x8/20us	@3kA	
TLP-V100P/275-S	275V	40-60HZ	100kA	6.5kA	40kA	> 1350	25nS
TLP-DT100P/275-S	275V	40-60HZ	100kA	6.5kA	40kA	> 1350	25nS

TABLE No 2



MODEL:- TLP-V40/2400

Transtech Lightning 40kA HV Single Phase,
Flag Indicator + Relay – Class I / CAT C or less



GENERAL DESCRIPTION

The TLP-V40/2400 is a “low cost” lightning and transient protector which provides protection for electrical / electronic equipment specifically for Airport Runway lighting systems.

The TLP-V40/2400 is a single mode parallel connected protection device offering 40kA single mode for Phase Line 1 to earth.

For mains supply of greater than 100A adequate HRC fuse or MCB protection must be installed prior to the TLP-V40/2400

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
- ◆ 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

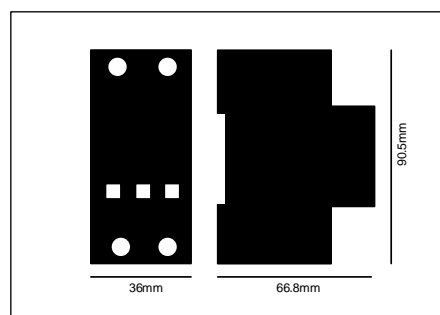
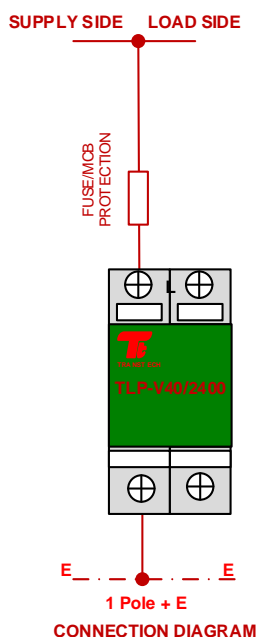
Normal Working voltage	2200VAC L – E(PE)
Minimum Working voltage	-
Maximum Working voltage	2400VAC rms
Working Freq.	40 - 60Hz
Peak let thru volts	less than 1300V
Maximum mains current	Unlimited (parallel connected) Must be fuse protected over 100A Mains 40kA (8/20uS)
I _{max}	-
I _{in}	-
Response time.	Less than 25nS
Relay Contacts.	SPCO (1 amp @240Vac)
Surge Reset	Automatic

SPECIAL FEATURES

Relay Output MOV failed Indicator	The relay de-energizes. L1 flag type RED / GREEN
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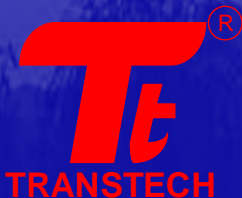
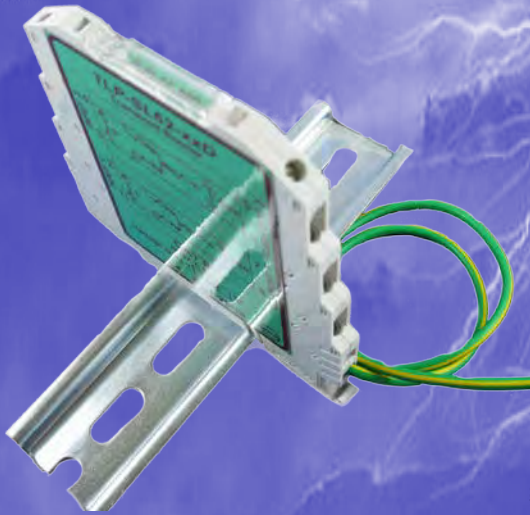
GENERAL SPECIFICATION

Operating Temp	-40 to +80 Deg C
Terminals	35mm ² solid max / 10mm ² flex max
Remote Terminals	Plug in 2.5mm ²
Indicators	Green/Red mechanical flag
Housing Material	Thermoplastic UL94-V-O
Degree Protection	IP-20
Dimensions (module)	90.5 x 36 x 66.8mm (H x W x D)
Weight	850 grams
Mounting	DIN 43880 Standard DIN Rail



Electronic Transient/Surge Protection

Low Voltage and Bus Protectors – CAT B or A



Also represented in Sydney – Brisbane – Adelaide

Transtech Electronic Controls Pty Ltd

ABN 21 070 629 499

Melbourne and Perth

Perth Tel: (08) 9302-2044

Melbourne Office: (03) 9330-3624

Info@transtech.com.au

MODEL:- TLP-SL62-xxD

Transtech Lightning Protector for LV Instrument Loops – 2 Channels.

GENERAL DESCRIPTION

The TLP-SL62-xxD is a very compact single Channel **6.2mm wide** lightning and transient arrester providing protection for equipment with low voltage digital or analogue inputs, limiting the transient over-voltage to less than twice the normal working voltage.

The TLP-SL62-xxD 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".

TECHNICAL DATA

Voltage rating
Normal working voltage +/- 05, 12, 15, 18, 24, 30, 48 Vdc
Peak let thru volts 19V @ 1p = 1A
Peak let thru volts 24V @ 1p = 10A

Current/Resistance rating
End to End resist. Less than 6 ohms
Max Current 500 mA
Surge Current:
Imax 2kA/mode (8/20us) – total 8kA
 2 kA/mode (10/350us)
In 0.9kA per mode

Discharge Power 400W PPPD @ (8/20us)
 (Peak Pulse Power Discharge)
Leakage Current Less than 1microamp @ 25C
Response time. Under 10nsec

GENERAL SPECIFICATION

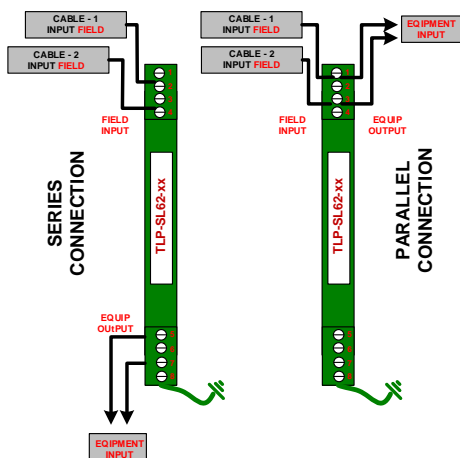
Capacitance @ 1mMz, 75pF
Operating Temp -10 to 60 Deg C
Storage Temp -55 to 75 Deg C
Terminals Self-opening 2.5mm/12AWG
Housing Material KRILEN
Mounting Style DIN
Dimensions 110mm X 52mm X12mm
Weight 60 grams

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
- ♦ IEC 61643-1 and IEC 62305-4
- ♦ AS1768:2003

WIRING/CONNECTION NOTE:

The TLP-SL12-xxL series must be connected the correct way around. Terminals 1-2 are always the field input and terminals 7-8 (clean lines) must always input to the equipment being protected.

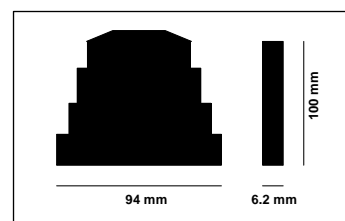


CONNECTION SCHEDULE

Model	Working Voltage	Frequency.	Imax	In	Let Thru V	Response Time
	Line - Line			15x8/20us 1p @ .5Amp		
TLP-SL62-05D	5V	DCV	8kA	0.9kA	>24	10nS
TLP-SL62-12D	12V	DCV	8kA	0.9kA	>24	10nS
TLP-SL62-15D	15V	DCV	8kA	0.9kA	>24	10nS
TLP-SL62-18D	18V	DCV	8kA	0.9kA	>24	10nS
TLP-SL62-24D	24V	DCV	8kA	0.9kA	>24	10nS
TLP-SL62-48D	48V	DCV	8kA	0.9kA	>24	10nS

Other Voltages available - also in ACV please contact factory

TABLE No 2



MODEL:- TLP-30D-3A

Transtech Lightning Protector for **HIGH** Current Loops – 2 Channels.

GENERAL DESCRIPTION

The TLP-30D-3A is a compact 3 Amp dual Channel **17.5mm wide** lightning and transient arrester providing protection for equipment with low voltage digital or analogue inputs as well as power circuits. The TLP-30D-3A limits the transient over-voltage to less than twice the normal working voltage.

The TLP-30D-S3A has true three stage protection in all modes and the unique three stage protection involves several clamping devices that make up the three stages.

* **Stage one** primary protection is a high speed 3-electrode surge arrester with ultra fast di/dt characteristics.

* **Stage two** is a combination of high energy Varistors with solid-state switches that automatically reset under normal operation. This stage has a ghost effect and is only activated by a transient or surge. This unique combination gives the benefit of fast automatic clamping and resetting with no capacitive effect under normal operating conditions.

* **Stage three** has solid state semiconductor clamps that are designed for transient voltage suppression. These clamps have ultra-fast response times with high surge handling capability and flat voltage clamping at high currents.

The combination of the three stages provide protection from both differential and common mode transients. The TLP-30D-S3A also has low end to end resistance giving optimum signal strength and little volt drop effect.

TECHNICAL DATA

Voltage rating	
Normal working voltage	+/- 30 Vdc
Peak let thru volts	44V @ 1p = 3A
Current/Resistance rating	
End to End resist.	Less than 6 ohms
Max Current	3 Amps
Surge Current:	
Imax	10kA/mode (8/20us) – total 40kA
In	4kA per mode
Discharge Power	400W PPPD @ (8/20uS)
	(Peak Pulse Power Discharge)
Leakage Current	Less than 1microamp @ 25C
Response time.	Under 10nsec

FEATURES

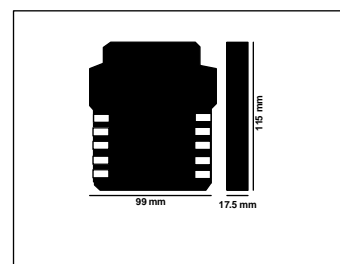
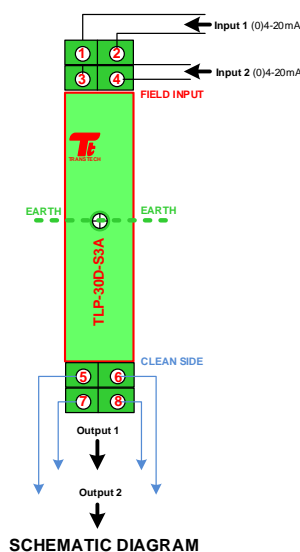
- ♦ Low "let thru" voltage
- ♦ Two independent and isolated channels
- ♦ Protection between ALL lines
- ♦ 20kA discharge capacity for each channel
- ♦ Fast snap on DIN rail mounting
- ♦ Fail to safe status design
- ♦ High speed switch technology to prevent signal attenuation
- ♦ Low line losses (volt drop)
- ♦ Designed and manufactured to ISO 9001
- ♦ C-Tick/ CE Compliant
- ♦ IEC 1000-4-2 & EN50082
- ♦ IEC 61643-1 and IEC 62305-4
- ♦ AS1768:2003

GENERAL SPECIFICATION

Capacitance	@ 1mMz, 75pF
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	116mm X 88mm X17.5mm
Weight	125 grams

WIRING/CONNECTION NOTE:

The TLP-30D-3A must be connected the correct way around. Terminals 1-2 are always the field input and terminals 7-8 (clean lines) must always input to the equipment being protected.



MODEL:- TLP-SL12 xxL

Transtech Lightning Protector for LV Instrument Loops – 1 Channel.

GENERAL DESCRIPTION

The TLP-SL12-xxL is a very compact single Channel **12mm wide** lightning and transient arrester providing protection for equipment with low voltage digital or analogue inputs, limiting the transient over-voltage to less than twice the normal working voltage.

The TLP-SL12-xxL 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".

TECHNICAL DATA

Voltage rating
Normal working voltage +/- 05, 12, 15, 18, 24, 30, 48 Vdc
Peak let thru volts 19V @ 1p = 1A
Peak let thru volts 24V @ 1p = 10A

Current/Resistance rating
End to End resist. Less than 6 ohms
Max Current 1 Amp
Surge Current:
Imax 10kA/mode (8/20us) – total 20kA
 2 kA/mode (10/350us)
In 4kA per mode

Discharge Power 400W PPPD @ (8/20us)
 (Peak Pulse Power Discharge)
Leakage Current Less than 1microamp @ 25C
Response time. Under 10nsec

GENERAL SPECIFICATION

Capacitance @ 1mMz, 75pF
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

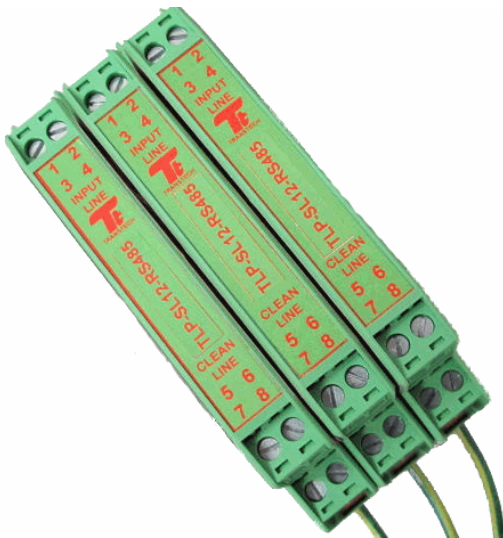
WIRING/CONNECTION NOTE:

The TLP-SL12-xxL series must be connected the correct way around. Terminals 1-2 are always the field input and terminals 7-8 (clean lines) must always input to the equipment being protected.

Model	Working Voltage Frequency.		Imax	In	Let Thru V	Response Time
	Line - Line					
TLP-SL12-05L	5V	DCV	10kA	2kA	>24	10nS
TLP-SL12-12L	12V	DCV	10kA	2kA	>24	10nS
TLP-SL12-15L	15V	DCV	10kA	2kA	>24	10nS
TLP-SL12-18L	18V	DCV	10kA	2kA	>24	10nS
TLP-SL12-24L	24V	DCV	10kA	2kA	>24	10nS
TLP-SL12-48L	48V	DCV	10kA	2kA	>24	10nS

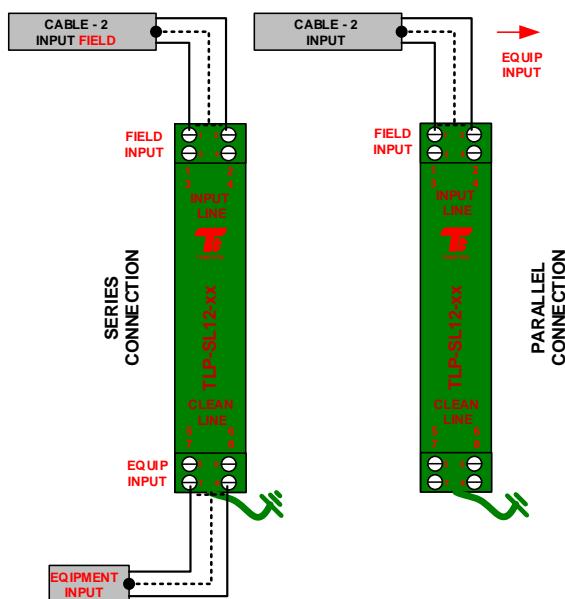
Other Voltages available - also in ACV please contact factory

TABLE No 2

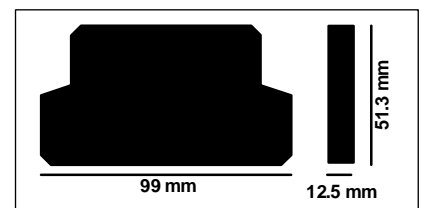


FEATURES

- ♦ 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
- ♦ IEC 61643-1 and IEC 62305-4
- ♦ AS1768:2003



CONNECTION SCHEDULE



MODEL:- TLP-SL12 xxD

Transtech Lightning Protector for LV Instrument Loops – 2 Channel.

GENERAL DESCRIPTION

The TLP-SL12-xxD is a very compact 2 Channel **12mm wide** lightning and transient arrester providing protection for equipment with low voltage digital or analogue inputs, limiting the transient over-voltage to less than twice the normal working voltage.

The TLP-SL12-xxD 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".

TECHNICAL DATA

Voltage rating
Normal working voltage +/- 05, 12, 15, 18, 24, 30, 48 Vdc
Peak let thru volts 19V @ 1p = 1A
Peak let thru volts 24V @ 1p = 10A

Current/Resistance rating
End to End resist. Less than 6 ohms.
Max Current 1 Amp
Surge Current:
Imax 10 kA/mode (8/20us) – total 20kA
 2 kA/mode (10/350us)
In 4 kA per mode.

Discharge Power 400W PPPD @ (8/20uS)
 (Peak Pulse Power Discharge)
Leakage Current less than 1 micro amp @ 25C
Response time. Under 10nsec

GENERAL SPECIFICATION

Capacitance @ 1mMz, 75pF
Operating Temp -10 to 60 C
Storage Temp -55 to 75 C
Terminals Self-opening 2.5mm/12AWG
Housing Material KRILEN
Mounting Style DIN
Dimensions 110mm X 52mm X12mm
Weight 60 grams

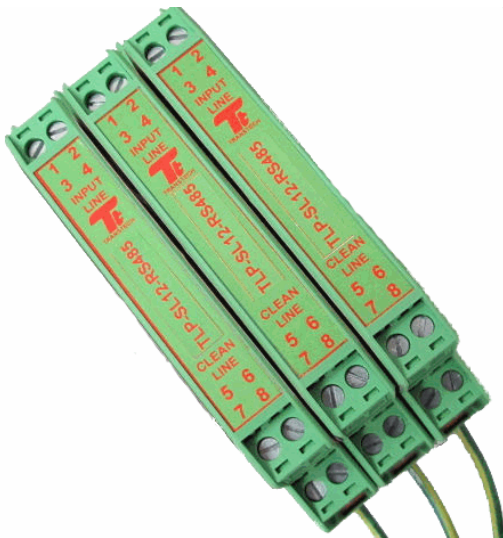
WIRING/CONNECTION NOTE:

The TLP-SL12-xxD series must be connected the correct way around. Terminals 1-2 and 3-4 are always the field input and terminals 5-6 and 7-8 (clean lines) must always input to the equipment being protected.

Model	Working Voltage	Frequency.	Imax	In	Let Thru V	Response Time
	Line - Line			15x8/20us	1p @ 1Amp	
TLP-SL12-05D	5V	DCV	10kA	2kA	>24	10nS
TLP-SL12-12D	12V	DCV	10kA	2kA	>24	10nS
TLP-SL12-15D	15V	DCV	10kA	2kA	>24	10nS
TLP-SL12-18D	18V	DCV	10kA	2kA	>24	10nS
TLP-SL12-24D	24V	DCV	10kA	2kA	>24	10nS
TLP-SL12-48D	48V	DCV	10kA	2kA	>24	10nS

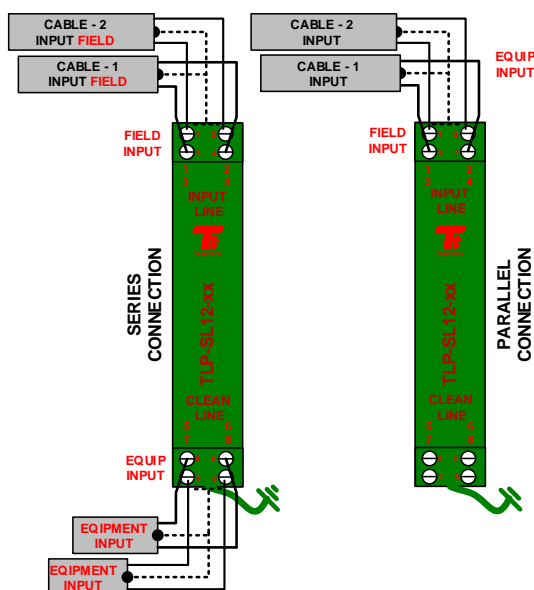
Other Voltages available - also in ACV please contact factory

TABLE No 2

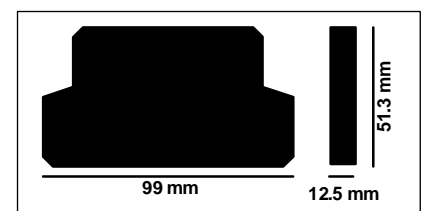


FEATURES

- ♦ 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
- ♦ IEC 61643-1 and IEC 62305-4
- ♦ AS1768:2003



CONNECTION SCHEDULE



MODEL:- TLP-48HM-XX-XXX

Transtech Lightning Protector - Head Mounted
for both Analogue and Digital Field Transmitters

GENERAL DESCRIPTION

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

The housing material is ANSI 25mm Hex 316 stainless steel to assist mechanical mounting. The unit is encapsulated in high temperature casting epoxy which offers high impact resistance with excellent electrical properties and high temperature stability. The standard male thread is the M20mm (20mm ISO, M20 x 1.5), however we also stock ½" NPT and PG13.5 as Standard.

The **TLP-48HM-4W** is designed to be added to standard installations of field transmitters which usually have two entries, one is used to connect the data/signal cable and the spare can be used for the **TLP-48HM-XX-XXX** 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-XX** connection is a simple parallel connection for **BOTH supply and signal lines** (see connection schedule below). Care must be taken to correctly earth the green/yellow earth wire from the **TLP-48HM-XX**. This earth wire must be earthed to the 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 24Vdc supply)
- ◆ Field proven technology
- ◆ Simple field mounting
- ◆ Field Bus compatible
- ◆ Parallel Connection (No loop impedance)
- ◆ Designed and manufactured to ISO 9001
- ◆ C-Tick/CE compliant
- ◆ Meets AS/NZS 1768:2003 Class B
- ◆ Meets IEC 6421.1:2005 Class I & II
- ◆ Auto resetting
- ◆ High 10kA discharge

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

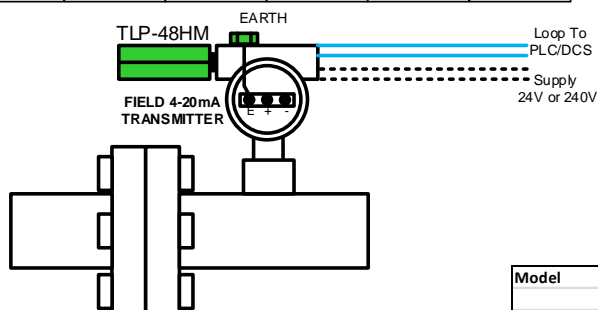
TECHNICAL DATA

Voltage Rating	See Table below
Current/Impedance Rating	See Table below
Response time:	Less than 10ns
EMC Compliance:	EN50082 part 2 C-tick / CE compliant
Field Bus:	31.25kbit/s

GENERAL SPECIFICATION

Operating Temp:	-20 to 60°C
Storage Temp:	-40 to 80°C
Humidity:	5% to 95% RH (Non-condensing)
Termination:	Flying Leads(250mm 1.0mm ²) Blue & Blue for 24V supply Black for 4-20mA signal Green / Yellow for earth
Housing Material:	ANSI 316 Stainless Steel Laser printed Part No and connection details.
Dielectric Strength:	25°C, 50kHz, 19kV/mm
Thread:	a) 20mm ISO (M20 x 1.5) b) ½" NPT c) PG13.5
Weight:	250g
Dimensions:	75mm (L) x 25mm Hex c/- 250mm coloured leads

MODEL	LOOP +ve	LOOP -ve	Supply L	Supply N	Earth
TLP-48HM 2W	Black	Black			Ylw/Gm
TLP-48HM 4W/24V	Black	Black	Brown	Blue	Ylw/Gm
TLP-48HM 4W/240V	Black	Black	Brown	Blue	Ylw/Gm



CONNECTION SCHEDULE

Model	Working Voltage	Frequency.	I _{max}	In	Let Thru V	Response Time	Available
	Line - Neutral			15x8/20us	1p @ 1Amp		Threads
TLP-48HM-2W	N/A	N/A	10kA	2.5kA	-	25nS	M20-NPT-PG13.5
TLP-48HM-4W-24V	24VDC	DC	10kA	2.5kA	-	25nS	M20-NPT-PG13.5
TLP-48HM-4W-240V	240VAC	40-60HZ	10kA	2.5kA	-	25nS	M20-NPT-PG13.5
						25nS	

Specify the required Thread as a suffix: eg TLP-48HM-4W-240/M20.
Other Voltages available please contact factory

TABLE No 2

MODEL:- TLP-SL12-RS485

Transtech Lightning Protector for RS485 Bus

GENERAL DESCRIPTION

The TLP-SL12-RS 485 is a very compact **12mm wide** lightning and transient arrester providing protection for equipment connected to the 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 485 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".

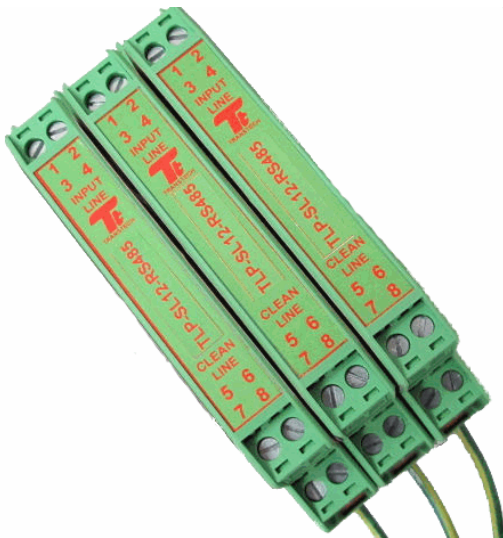
The TLP-SL12-RS 485 is suitable for all types of RS485 protocol due to the unique design whereby it has a high speed voltage sensitive switch which only enables the MOV protection when it senses a surge.

TECHNICAL DATA

Voltage rating	+/- 12V
Normal working volt	19V @ 1p = 1A
Peak let thru volts	24V @ 1p = 10A
Protocols	Modbus Profibus Profibus Extender
Current/Resistance rating	
End to End resist.	Less than 0.6 ohms
Max Current	1 Amp
Surge Current I_{max}	10kA/mode (8/20us) 2 kA/mode (10/350us)
Discharge Power	400W PPPD @ (8/20uS) (Peak Pulse Power Discharge)
Response rating	
Response time	Under 10nsec

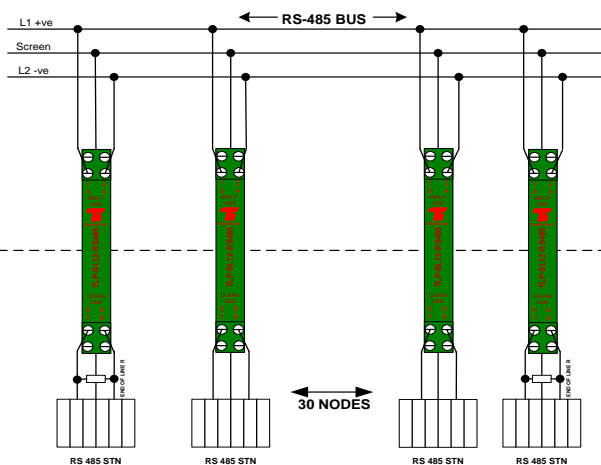
GENERAL SPECIFICATION

Capacitance	@ 1mMz, 75pF
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	100mm X 51.3mm X12.5mm
Weight	60 grams



FEATURES

- ◆ Low "let thru" voltage
- ◆ All common protocols MB | PB | PB/TDR
- ◆ 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
- ◆ IEC 61643-1 and IEC 62305-4
- ◆ AS1768:2003

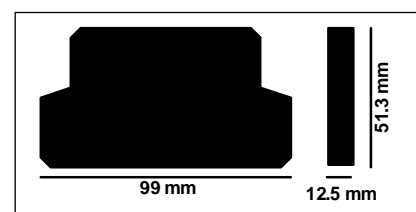


CONNECTION SCHEDULE

Model	Working Voltage	Frequency.	I _{max}	In	Let Thru V	Response Time
	Line - Line			15x8/20us	1p @ 1Amp	
TLP-SL12-RS485	+/-12VDC	DCV	10kA	2kA	>24	10nS
TLP-SL12-RS485MB	+/-12VDC	DCV	10kA	2kA	>24	10nS
TLP-SL12-RS485PB	+/-12VDC	DCV	10kA	2kA	>24	10nS
TLP-SL12-RS485PB/TDR	+/-12VDC	DCV	10kA	2kA	>24	10nS
TLP-DNET	See separate data-sheet for DeviceNet protector					
Other communication protocols on request						

TABLE No 2

TABLE No 2



MODEL:- TLP-DNET

Transtech Lightning Protector for DeviceNet Bus



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, providing 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.

TECHNICAL DATA

Voltage Rating Supply	
Normal Working voltage.	24VDC.
Max. Working voltage	31VDC.
Varistors voltage.	39VDC.
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-

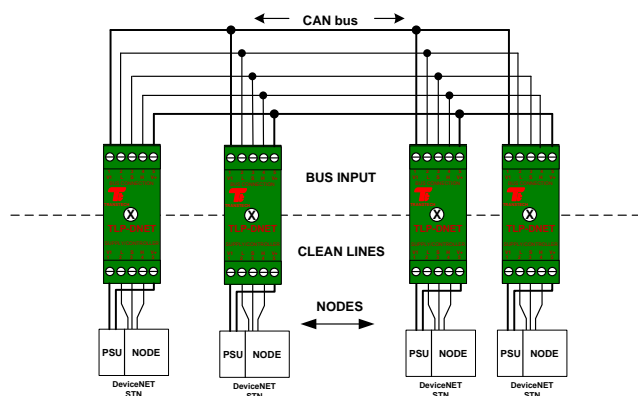
Line Capacitance	15pF
Breakdown Voltage	26.7V D.C. minimum
Clamp voltage	43.0V D.C. maximum @ (8/20uS)

GENERAL SPECIFICATION

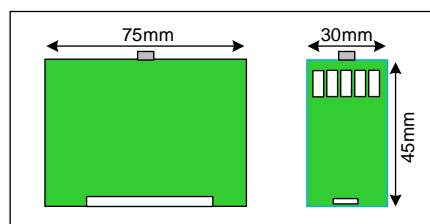
Operating Temp	-10 to 70 Deg C
Storage Temp	-55 to 80 Deg C
Terminals	Self-opening 2.5mm/12AWG
Housing Material	KRILEN
Mounting Style	DIN
Dimensions	75mm X 45mm X 30mm
Weight	120 grams

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



CONNECTION SCHEDULE



MODEL:- TLP-48/RJ45-4(8)

EtherNet RJ45 Protectors

GENERAL DESCRIPTION

The **TLP-48/RJ45H-4(8)** lightning and transient arrestor provides protection for Ethernet, Twisted Pair, Cat 5 ISDN and DSL Network Cables. In addition it provides very effective protection by limiting the transient over-voltage between the conductors of Network cable pairs and the screen

The **TLP-48/RJ45H-4(8)** 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.

The **TLP-48/RJ45-CAT6** for 1000BaseTx (CAT6) transmission standard utilizes very 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.

TECHNICAL DATA

Voltage rating

Normal working volt	48Volts
Nominal Current	500mAmp or less
Clamping Volts	90Volts line to screen
Impulse Clamping	< 600Volts (1kV/us)
Surge withstand I _{max}	See Table below
Energy Level	Less than 100 joules

Characteristics

Transmission Speed	See table below
Insertion Loss	< 3.0 dB at 100MHz
Pins Data	1 / 2 and 3 / 6
Pins POE	4 / 5 and 7 / 8

GENERAL SPECIFICATION

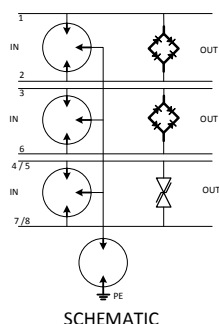
Insulation resistance	> 10 Megohm
Connections	RJ45 Female / Female
Operating Temp	-10 to 70 Deg C
Storage Temp	-55 to 80 Deg C
Mounting Style	DIN Rail Female to Female
Dimensions	See table below
Weight	62 grams

FEATURES

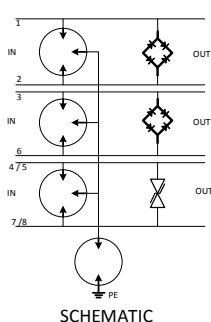
- ♦ Low "let thru" voltage
- ♦ Two Stage protection
- ♦ Protection between lines and screen
- ♦ Suitable for 10BaseT, 100BaseT and 1000-BaseTx CAT6
- ♦ Aluminium housing
- ♦ Field proven technology
- ♦ Low line losses
- ♦ Designed and manufactured to ISO 9001
- ♦ C-Tick/ CE Compliant
- ♦ Complies with IEC 616431-21-2005
- ♦ Complies with EN50173 Cat 6 and IEEE 802.3af

MODEL	Nom. Volts	Nom. I	Trans. Speed (Mbps)	Trans. Std	I _{max}	Temp.	Dimensions
TLP-48/RJ45-4	48	500mA	100Mbps	100BaseT	2.5kA	0 – 70DegC	85 x 40 x 25mm
TLP-48/RJ45-8	48	500mA	100Mbps	100BaseT	2.5kA	0 – 70DegC	85 x 40 x 25mm
TLP-48/RJ45-CAT6	48	500mA	1000Mbps	1000BaseTx Cat	10kA	0 – 70DegC	66 x 40 x 25mm

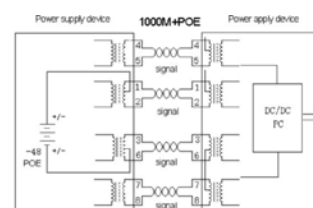
TLP-48/RJ45H-4



TLP-48/RJ45H-8



TLP-48/RJ45H-CAT6



MODEL:- TLP-N/FF and TLP-F/MF

Coaxial Cable Bulkhead and F type



GENERAL DESCRIPTION

The TLP-N/FF & TLP-F/MF lightning and transient arrestor provides protection for coaxial lines for radio transmitters, receivers or HF party line bus. They provide very effective protection by limiting the transient over-voltage between the inner conductor of the coaxial cable and the screen

The TLP-N/FF & 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 required.

TECHNICAL DATA

Voltage rating

Normal working volt	90Volts
Nominal Current	5 Amps or less
Frequency Range	DC – 2500MHz
Clamping Volts	700Volts line to screen
Impulse Clamping	< 600Volts (1kV/us)
Surge withstand	20kA (8/20usec)
Energy Level	400 joules

RF Characteristics

RF Power	25 Watts
Insertion Loss	< 0.15dB at 2GHz
VSWR	<1.2 : 1 @ 1GHz

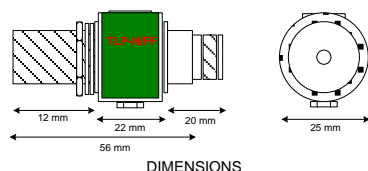
FEATURES

- ♦ 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
- ♦ IEC 61643-21

GENERAL SPECIFICATION

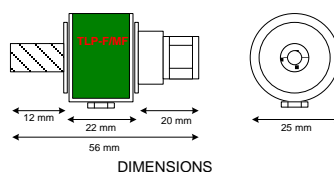
Impedance	50 Ohms
Capacitance	< 1.5pF
Insulation resistance	> 10 Gigohm
Operating Temp	-40 to 80 DegC
Storage Temp	-55 to 80 DegC
Mounting Style	Bulkhead/Type N Female to Female
Dimensions	67mm X 25mm X25mm
Weight	80 grams

TLP-N/FF Bulkhead



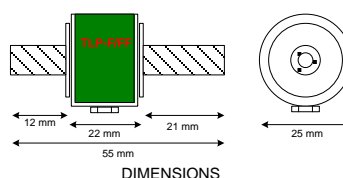
DIMENSIONS

TLP-F/MF Type F



DIMENSIONS

TLP-F/FF Type F



DIMENSIONS

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