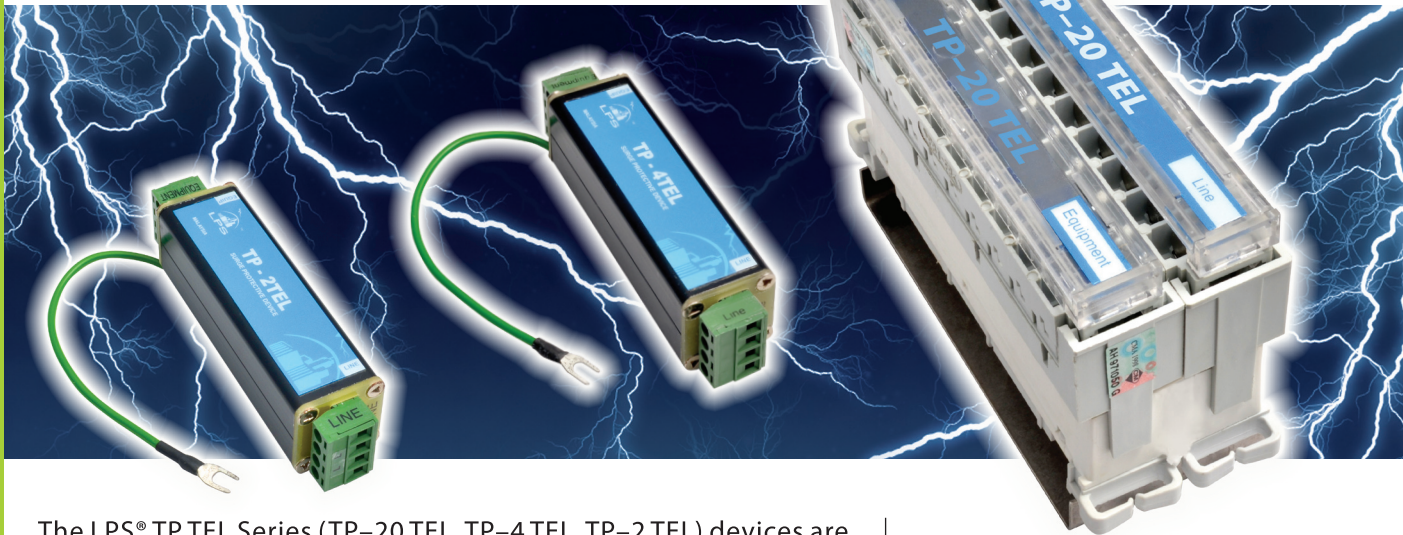


LPS® TP TEL Series

SURGE PROTECTIVE DEVICES



Protect electronic telecommunications circuits
against lightning induced surges



The LPS® TP TEL Series (TP-20 TEL, TP-4 TEL, TP-2 TEL) devices are designed with state-of-the-art technology to protect electronic telecommunications circuits against lightning surges. The LPS® TP-20 TEL configuration is compatible to LSA-Plus connections making them ideal for PABX systems. These devices were designed with high surge capacity to provide unsurpassed performance in lightning surge protection.

How they work

The LPS® TP TEL Series devices are manufactured in Malaysia with multi-stage protection. Primary protection starts with GDT (Gas Discharge Tube) which is then supported with a second stage surge attenuate component and finally to a semiconductor voltage dependant device. These devices deploy state-of-the-art engineering technology with high surge capacity to protect sensitive data networks effectively even in the most lightning prone regions in the world. All this is done without impairing the system's normal operation or cause excessive in-line resistance.

When surges occur, these devices will switch to a fully conductive state to divert high current, after which they will then reset automatically. However, under excessive surge conditions, these devices will fail in shorted mode to earth, securing the protection of the equipment. Components of the LPS® TP-20 TEL – GDT and TP-2G – are also individually replaceable. With a 0.5 mm thickness solid metal conductor on all contact points, printed circuit board type contact point fusing is prevented.

HIGHLIGHTS

- ▶ They protect all lines on both common and transverse modes
- ▶ They can withstand higher currents without contact fusing because of their 0.5 mm thickness solid metal contact points / connectors
- ▶ They have compact in-line installations for 10 pairs of lines – these lines are provided with LSA-Plus compatible disconnection blocks and base mounting frames



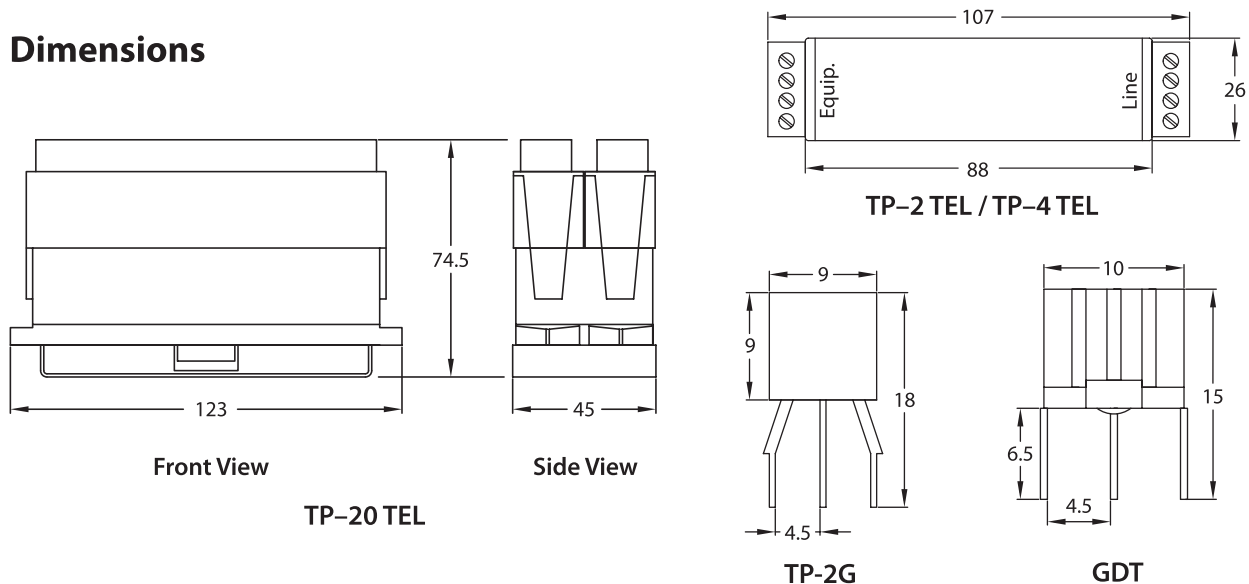
Technical Specifications

Technical Data	TP-20 TEL	TP-4 TEL	TP-2 TEL
Protected Wires	20	4	2
Nominal Operating Signal Voltage	± 150 V		
Maximum Operating Signal Voltage	± 200 V		
Standard Clamp Voltage @ 1 mA	220 V		
Let-through Voltage (Line to Earth) @ IEEE C 62.36 – 1994 (CCITT) / ITU-T k.20, Enhanced 6 kV @ 10/700 µs, 150 A @ 5/310 µs	330 V		
Protection Modes	Common and Transverse Modes		
Maximum Surge Current @ 8/20 µs	10 kA/wire		
-3 db Bandwidth @ 600 Ω circuit	300 Hz – 2.6 MHz		
Series Resistance Per Wire	7.5 Ω		
Insertion Loss @ 300 kHz	< 1.05 db		
Operation and Storage Temperatures	- 40° C to 70° C		
Maximum Capacitance	40 pF		
Maximum Conductor Size	0.5 mm ²	2.5 mm ²	
Weight	330 g	100 g	
Warranty	5 years		

Replacement Modules

Technical Data	TP-20 TEL (Equip)	TP-2G	TP-20 TEL (Line)	GDT
Protected Wires	20	2	20	2
Maximum Surge Current @ 8/20 µs	400 A		10 kA/wire	
Maximum capacitance	40 pF		< 3pF	
DC Sparkover @ 100 V/µs	330 V		230 V	
Impulse Sparkover @ 1 kV/µs	-		650 V	

Dimensions



All dimensions in millimetres

All the above specifications are subjected to changes without prior notice.
Customised products are available upon request.

Awarded the National Mark of
Malaysian Brand 2015



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