

ELECTRONIC SYSTEM PROTECTION

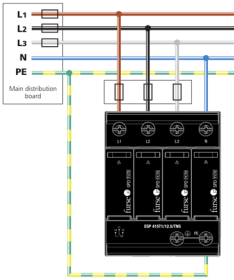
ESP 415T1

Electronic System Protection

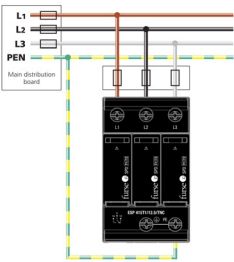


ESP 415T1 Surge Protection Series are a Combined Type 1 and 2 tested protector (to BS EN 61643) for use on the main distribution board, particularly where a structural Lightning Protection System (LPS) is employed, for equipotential bonding. For use at boundaries up to LPZ 0 to protect against flashover (typically the main distribution board location) through to LPZ 2 to protect electrical equipment from damage.

TN-S earthing system



TN-C earthing system



ESP 415/XXX

- Enhanced protection (to BS EN 62305) offering low let-through voltage further minimizing the risk of flashover creating dangerous sparking or electric shock
- Repeated protection in lightning intense environments
- Pluggable module design (with anti-vibration locking clips) allows for simple replacement at end-of-life
- Compact space saving design
- Indicator shows when the protector requires replacement
- Remote signal contact can indicate the protector's status through interfacing with a building management systems
- Use on three phase supplies and power distribution systems for protection against partial direct or indirect lightning strikes
- ESP 415T1/25/XXX versions for use with Class I or II LPS
- ESP 415T1/12.5/XXX versions for use with Class III or IV LPS; or exposed overhead three phase power lines where no LPS is fitted
- ESP 415T1/X/TNS versions also cover TN-C-S earthing systems

Nominal Voltage - Phase-Neutral U_0 (RMS): 240 V

Maximum Voltage - Phase-Neutral U_c (RMS): 415T1/25-275V, 415T1/12.5-300V

Temporary Over-voltage $TOV U_1^{(1)}$: 337 V / 442 V

Short Circuit Withstand Capability: 50kA / 50Hz

Frequency Range: 47-63 Hz

Max. Back-up Fuse: 415T1/25 315A, 415T1/12.5 250A

Leakage Current (to earth): 415T1/25 5µA, 415T1/12.5 600µA

Volt Free Contact: Push-fit connection for conductor up to 1.5mm², rated AC 250V, 1A

Temperature Range: -40°C to + 80°C

Connection Type: Screw Terminal

Conductor Size (solid/stranded): 35mm²

Earth Connection: Screw Terminal

Protection: IP20

Transient Specification Type 1 (BS EN/EN), Class I (IEC)

Type 2 (BS EN/EN), Class II (IEC)

Code	For Use With	Type 1 (BS EN/EN), Class I (IEC)			Type 2 (BS EN/EN), Class II (IEC)			Enclosure	
		Nom discharge current 8/20 up (per mode)/n	Let-through voltage up at /n ²	Impulse discharge current 10/350 us /imp	Let-through voltage up at /imp ²	Nom discharge current 8/20 up (per mode)/n	Let-through voltage up at /n ²		Max discharge current /max (per mode) ³
ESP415T1/25/TNS	Class I or II LPS	25kA	< 1.5kV	25kA	< 1.5kV	25kA	< 1.5kV	65kA	WBXD4
ESP415T1/12.5/TNS	Class III or IV LPS	20kA	< 1.5kV	12.5kA	< 1.5kV	20kA	< 1.5kV	50kA	WBXD4
ESP415T1/25/TNC	Class I or II LPS	25kA	< 1.5kV	25kA	< 1.5kV	25kA	< 1.5kV	65kA	WBXD4
ESP415T1/12.5/TNC	Class III or IV LPS	20kA	< 1.5kV	12.5kA	< 1.5kV	20kA	< 1.5kV	50kA	WBXD4