

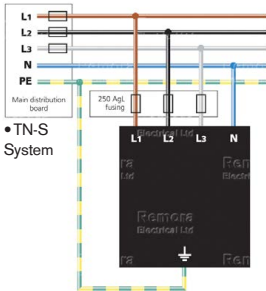
## ELECTRONIC SYSTEM PROTECTION

# ESP 415/XXX

## Electronic System Protection

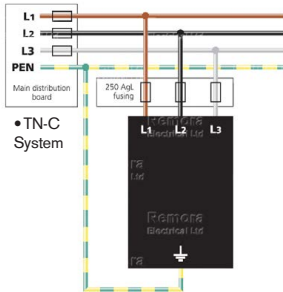


ESP 415 series are an Combined Type 1 and 2 tested protector (to BS EN 61643) for use on the main distribution board, particularly where a structural Lightning Protection System (LPS) is employed, for equipotential bonding. For use at boundaries up to LPZ 0A to protect against flashover (typically the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



### 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
- The varistor based design eliminates the high follow current (*I<sub>f</sub>*) associated with spark gap based surge protection
- 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 415/I/XXX versions for use with Class I or II LPS
- ESP 415/III/XXX versions for use with Class III or IV LPS; or exposed overhead three phase power lines where no LPS is fitted
- ESP 415/X/TNS versions also cover TN-C-S earthing systems



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

**Maximum Voltage - Phase-Neutral  $U_c$ :** 320 V/420 V

**Temporary Over-voltage  $TOV U_1^{(1)}$ :** 350 V

**Short Circuit Withstand Capability:** 25 kA/50 Hz

**Frequency Range:** 47-63 Hz

**Max. Back-up Fuse:** 250 V

**Leakage Current (to earth):** 2.5 mA

**Volt Free Contact:** Connect via screw / Current Rating 0.5 A / Nominal Voltage (RMS) 250 V

**Temperature Range:** -40°C to + 80°C

**Connection Type:** Screw Terminal

**Conductor Size (stranded):** 25mm<sup>2</sup>

**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)			
		Nom discharge current 8/20 up	Let-through voltage up at /n <sup>(2)</sup>	Impulse discharge current 10/350 us /imp	Let-through voltage up at /imp <sup>(2)</sup>	Nom discharge current 8/20 up	Let-through voltage up at /n <sup>(2)</sup>	Max discharge current /max per mode <sup>(3)</sup>
ESP 415/I/TNS	Class I or II LPS	25	< 1.4kV	25kA	< 1.3kV	25kA	< 1.4kV	100kA
ESP 415/III/TNS	Class III or IV LPS	20	< 1.5kV	12.5kA	< 1.2kV	20kA	< 1.5kV	50kA
ESP 415/I/TNC	Class I or II LPS	25	< 1.4kV	25kA	< 1.3kV	25kA	< 1.4kV	100kA
ESP 415/III/TNC	Class III or IV LPS	20	< 1.5kV	12.5kA	< 1.2kV	20kA	< 1.5kV	50kA