

T1SP3 Type I Class I Surge Arresters

The T1SP3 is a three phase, type 1 & 2¹ surge arrester, designed for use on the boundary between LPZs 0 & 1² in structures using TNS and TT earthing systems.

The **T1SP3/25/100/230R** is designed for use in structures of LPL I³, such as hospitals, banks, mobile operator stations, water-works, power plants, airport buildings for air traffic control and all structures with an explosive risk.

The **T1SP3/12.5/50/230R** is designed for use in structures of LPL II³, such as industrial and administration buildings, schools, supermarkets and cathedrals. The device should be fitted as close as possible to the structures' mains entry point.

¹ EN 61643-1; ² IEC 1312 & EN 62305; ³ EN 62305

Common Characteristics

Max. continuous operating voltage	U_c	275 V AC
Temporary overvoltage (TOV), L/N	U_t	335 V/5 sec.
Temporary overvoltage (TOV), N/PE	U_t	1200 V/0.2 sec.
Response time L/N	\uparrow_A	<25 ns
Response time N/PE	\uparrow_A	<100 ns
Max back-up fuse		315 A gL/gG
Max back-up fuse (when 'V' connected)		63 A gL/gG
Short-circuit withstand capability at max. back-up fuse	I_p	80 kA rms
Lifetime		Min 100000 h

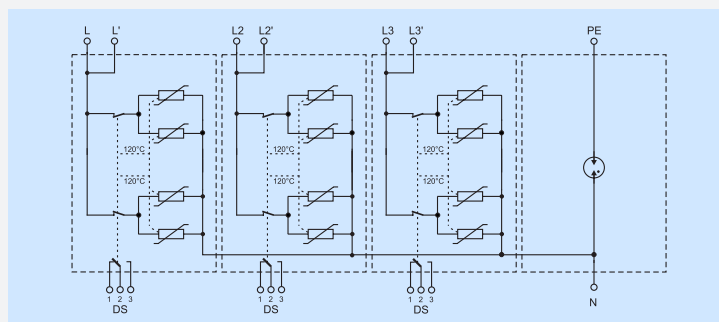
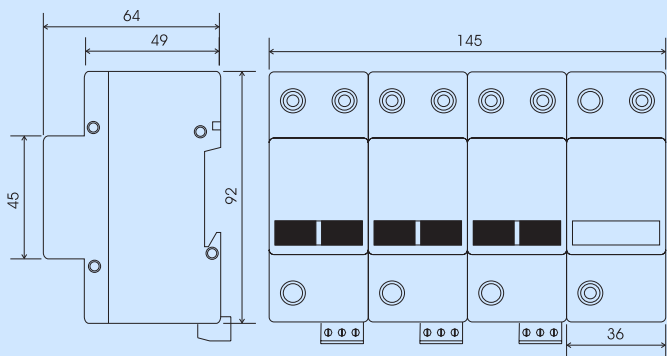


Type: T1SP3/12.5/50/230R

Lightning impulse current (10/350 μ s) L/N - charge	I_{imp}	12.5 kA
- specific energy	Q	6 As
	W/R	36 kJ/ Ω
Lightning impulse current (10/350 μ s) N/PE - charge	I_{imp}	50 kA
- specific energy	Q	25 As
	W/R	625 kJ/ Ω
Total lightning current (10/350 μ s) L1+L2+L3+N \rightarrow PE	I_{total}	50 kA
Max. discharge current (8/20 μ s)	I_{max}	90 kA (L/N) 50 kA (N/PE)
Nominal discharge current (8/20 μ s)	I_n	25 kA
Voltage protection level at I_{imp}	U_p	<1.2 kV
Weight	m	1030 g

Type: T1SP3/25/100/230R

Lightning impulse current (10/350 μ s) L/N - charge	I_{imp}	25 kA
- specific energy	Q	12.5 As
	W/R	156 kJ/ Ω
Lightning impulse current (10/350 μ s) N/PE - charge	I_{imp}	100 kA
- specific energy	Q	50 As
	W/R	2500 kJ/ Ω
Total lightning current (10/350 μ s) L1+L2+L3+N \rightarrow PE	I_{total}	100 kA
Max. discharge current (8/20 μ s)	I_{max}	120 kA (L/N, N/PE)
Nominal discharge current (8/20 μ s)	I_n	50 kA
Voltage protection level at I_{imp}	U_p	<1.3 kV
Weight	m	1125 g



Remote monitor terminals

The T1SP3 range is fitted with 0v remote terminals for connection to a building management or other indication system.

Under normal operating conditions, remote terminal pins 1-2 are closed and 2-3 are open. If the internal varistor component is damaged as a result of thermal overloading, terminations 1-2 will then be open and 2-3 closed.

Electrical strength – Surrounding circuits	3750 V rms
Electrical strength – Network circuits	3750 V rms
Insulation resistance	$2 \times 10^7 \Omega$
Max. switching current	~ 0.5 A
Max switching voltage	~ 250 V

