PRODUCT DATA SHEET

Surge Protective devices

SPDs for power systems

Code: 6825412-70

Description: SPD TrigeTron T1 H 50, code 6825412-70

Description



Four poles SPD T1 (class I), in 3+1 wiring (3P + N) suitable for installation in TT, TN S & TN CS systems. It is equipped with 3 protection modules of innovative design (protection between L – N). Each module combines in series a heavy duty varistor (MOV) and a spark gap, thus providing high protection against temporary overvoltages (TOV) and limiting the leakage current between phase and neutral. It is also equipped with a heavy duty spark gap, sealed into a noble gas filled cylinder (protection between N – PE), in order to prevent any leakage current to the earthing system, thus allowing its installation before the RCD, even in TT systems. The spark gap between N – PE is also providing optimum protection against temporary overvoltages (TOV) caused even by medium voltage faults. It is capable to withstand high energy lightning currents up to 12,5 kA (10/350 μs) per pole, 50 kA (10/350 μs) per 4 poles, providing protection to structures with external lightning protection system of classes III and IV. Additionally, it is providing protection against surge currents up to 65 kA (8/20 μs) per pole. The residual voltage per pole is less than 1,5kV (@ 20 kA) providing complete protection to equipment of all categories of insulation level (category IV up to category I) according to IEC 60364-4-44.

Technical characteristics

Protection type EN / IEC 61643-11	T1 (Class I)
Number of poles	4
Connection between terminals	L1–N, L2–N, L3–N & N–PE
Installation in	TN S, TN CS, TT
Nominal operating voltage, Un	230/400 V, 50 Hz
Maximum operating voltage, Uc	300 V (L–N) / 305 V (N–PE), 50 Hz
Iimp, “class I” test, (10/350μs), 1P	12,5 kA (L–N) / 50 kA (N–PE)
Imax, “class II” test, (8/20μs), 1P	65 kA (L–N) / 100 kA (N–PE)
In, “class II” test, (8/20μs), 1P	20 kA (L–N) / 50 kA (N–PE)
Up, (at In)	1,5 kV (L–N) / 1,5 kV (N–PE)

Responce time, ta	25 ns (L–N) / 100 ns (N–PE)
Maximum back up fuse	315 A gG
Short circuit withstand, Isccr	25 kA / 50 Hz
Follow current interrupt rating (N–PE), Ifi	100 A rms
Temporary overvoltage (TOV) 120min L-N	442 V withstand
Temporary overvoltage (TOV) 200ms N-PE	1200 V withstand
Thermal protection & monitoring indication	YES
Residual current, IPE	5 µA
Installation location	indoor
Protection level of housing	IP20 (built in)
Dimensions WxHxD (mm)	72x106x87 mm
Operating temperature	-40 oC ÷ +80 oC
Relative humidity	5% ÷ 95%
Rail mounting	DIN-3 (TS-35/EN50022)
Housing material	Polycarbonate halogen free
Maximum conductor for terminal	35 mm2
Conductor terminals tightening torque	2,5 Nm
Maximum conductor for remote contacts	1,5 mm2
Combined equivalent protection as per TS 61643–12 & IEC 61643-12	T1 (CAT IV) + T2 (CAT III & CAT II) + T3 CAT I)
Certification	VDE, CE
Conformity with	LVD 2014/35/EU
Installation only by qualified electrician	IEC 60417–6182
ELEMKO management systems	ISO 9001, ISO 14001, ISO 45001