PRODUCT DATA SHEET

Surge Protective devices

SPDs for power systems

Code: 6844491-70

Description: SPD Monoblock 12.5/T1 3+1, code 6844491-70

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	320 V (L–N) / 255 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	50 kA (L–N) / 50 kA (N–PE)
In, “class II” test, (8/20μs), 1P	20 kA (L–N) / 20 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	250 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	440 V fail safe
Temporary overvoltage (TOV) 5s L-N	352 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)	72x99x71 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
Combined equivalent protection as per TS 61643–12 & IEC 61643-12	T1 (CAT IV) + T2 (CAT III & CAT II) + T3 CAT I)
Certification	CE
Conformity with	LVD 2014/35/EU
Installation only by qualified electrician	IEC 60417–6182
ELEMKO management systems	ISO 9001, ISO 14001, ISO 45001