SURGE PROTECTIVE DEVICES (SPDs)
FOR LIGHTNING CURRENT 230V / 50Hz, N-PE, PROTECTION TYPE T1

Part number ELEMKO : 68 44 176

Introduction

Single pole SPDs N-PE, switching type with spark gaps sealed into noble gas filled ceramic cylinder allowing the interruption of high energy lightning currents up to 12,5 kA, 10/350μs (per pole), without changing their functional characteristics. Thanks to the reliable design of chamber that the SPD is equipped with, the operation of the it is achieved in less than 100ns offering a low residual voltage less than 4kV. They are made to co-ordinate with the 50T2 (ELEMKO 68 44 170) in circuits 3 + 1 (3 x 68 44 170 + 1 x 68 44 177) for three phase systems or in circuits 1 + 1 (1 x 68 44 170+ 1 x 68 44 177) for single phase. The N-PE SPD, ELEMKO 68 44 177, is used only for bridging the Neutral (N) with the Protective Earth (PE) conductor. They are mainly used for the protection of residential blocks, industrial plants, office blocks and equipment installed in locations which are vulnerable to lightning strikes. They fulfill all requirements for class I according to the European Standards EN 61643-11 and International IEC 61643-1.

Technical data

Number of Poles	1
Connection between terminals	N – PE
Nominal voltage of the system U_N	230/400V, 50Hz
Maximum operating voltage, U_c	255V, 50Hz
I_{imp}, “class I” test, (10/350μs), 1P	12,5 kA
I_{max}, “class II” test, (8/20μs), 1P	50kA
I_n “class II” test, (8/20μs), 1P	20kA
U_p, (6kV, 1.2/50μs)	<2kV
U_p, (at I_n)	<1,5kV
TOV Withstand (3+1) in combination with 68 44 170	1453V, 50Hz
Main circuit	GDT
Response time, t_A	<100ns
Follow current extinguishing capability, I_F	100A
Short circuit withstand, I_k	25kA / 50Hz
Dimensions (mm)	90 x 70 x 17,5 mm
Monitoring indication	YES
Conductor terminals	35 mm²
Insulation resistance (500Vdc)	>1MΩ
Housing material	Polycarbonate halogen free
Protection level of housing	IP20
Operating temperature, d	-40°C p +80°C
Rail mounting	DIN-3 (TS-35/EN50022)
Standards	EN 61643-11, IEC 61643-11

Drawing	Photo