

## PRODUCT DATA SHEET

### SURGE PROTECTIVE DEVICES (SPDs)

**Code: 68 25 425**

Ed. 02/2021

**Brand Name: TrigeTron T1 HS 100**
**Application: 230/400 V AC electrical networks**

#### 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 25 kA (10/350  $\mu$ s) per pole, 100 kA (10/350  $\mu$ s) per 4 poles, providing protection to structures with external lightning protection system of all classes (class IV up to class I). Additionally, it is providing protection against surge currents up to 65 kA (8/20  $\mu$ s) per pole. The residual voltage per pole is less than 1,5kV (@ 25 kA) providing complete protection to equipment of all categories of insulation level (category IV up to category I) according to IEC 60364-4-44.



#### Protection type EN / IEC 61643–11

- T1 / Class I

#### Technical characteristics

Number of Poles	4
Connection between terminals	L <sub>1</sub> – N, L <sub>2</sub> – N, L <sub>3</sub> – N & N – PE
Installation in	TN S, TN CS, TT
Nominal operating voltage, U <sub>N</sub>	230/400 V, 50 Hz
Maximum operating voltage, U <sub>C</sub>	300 V (L–N) / 305 V (N–PE), 50 Hz
I <sub>imp</sub> , "class I" test, (10/350 $\mu$ s), 1P	25 kA (L–N) / 100 kA (N–PE)
I <sub>max</sub> , "class II" test, (8/20 $\mu$ s), 1P	65 kA (L–N) / 130 kA (N–PE)
I <sub>n</sub> , "class II" test, (8/20 $\mu$ s), 1P	25 kA (L–N) / 100 kA (N–PE)
U <sub>p</sub> , (at I <sub>n</sub> )	<1,5 kV (L–N) / <1,5 kV (N–PE)
Response time, t <sub>A</sub>	<25 ns (L–N) / <100 ns (N–PE)
Maximum back up fuse	<315 A gG
Short circuit withstand, I <sub>sc</sub>	50 kA / 50 Hz
Follow current interrupt rating (N–PE), I <sub>f</sub>	100 A rms
Temporary Overvoltage (TOV), 120 min L–N	442 V withstand
Temporary Overvoltage (TOV), 200 ms N–PE	1200 V withstand
Thermal protection	YES
Residual current, I <sub>PE</sub>	<5 $\mu$ A
Monitoring indication	YES
Installation location	Indoor
Protection level of housing	IP20 (built in)
Dimensions WxHxD	144x106x87 mm
Operating temperature, $\vartheta$	-40°C ÷ +80°C
Relative humidity	5% ÷ 95%
Maximum conductor for terminal	35 mm <sup>2</sup>
Conductor terminals tightening torque	2,5 Nm
Maximum conductor for remote contacts	1,5 mm <sup>2</sup>
Rail mounting	DIN-3 (TS-35/EN50022)
Housing material	Polycarbonate halogen free
Combined equivalent protection as per TS 61643 – 12 & IEC 61643 – 12	T1 (CAT IV) + T2 (CAT II & CAT III) + 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

#### Country of Origin

Greece

**Unit: piece / Package: 1 piece**

We reserve the right to introduce changes in the component due to technical evolution.