

## PRODUCT DATA SHEET

### SURGE PROTECTIVE DEVICES (SPDs)

**Code: 68 25 412**

Ed. 03/2021

**Brand Name: TrigeTron T1 H 50**
**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 12,5 kA (10/350  $\mu$ s) per pole, 50 kA (10/350  $\mu$ s) 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  $\mu$ s) 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.



#### 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	12,5 kA (L–N) / 50 kA (N–PE)
I <sub>max</sub> , "class II" test, (8/20 $\mu$ s), 1P	65 kA (L–N) / 100 kA (N–PE)
I <sub>n</sub> , "class II" test, (8/20 $\mu$ s), 1P	20 kA (L–N) / 50 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>scsr</sub>	25 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 L–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	72x106x87 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.