

## PRODUCT DATA SHEET

## **Surge Protective devices SPDs for power systems**

Code: 6854150-70

Description: SPD SurgeTron T2 H 3+1 RC, code 6854150-70

## **Description**

Four poles SPD T2 (class II), 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 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 faults in medium voltage. It is capable to withstand surge currents up to 50 kA (8/20  $\mu$ s) per pole, 200 kA (8/20  $\mu$ s) per 4 poles, providing protection against surge currents. 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	T2 (Class II)
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
lmax, "class II" test, (8/20μs), 1P	50 kA (L-N) / 65 kA (N-PE)
In, "class II" test, (8/20μs), 1P	20 kA (L-N) / 40 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, Isccr25 kA / 50 HzFollow current interrupt rating (N-PE), Ifi100 A rmsTemporary overvoltage (TOV) 120min L-N442 V withstandTemporary overvoltage (TOV) 200ms N-PE1200 V withstandThermal protection & monitoring indicationYESResidual current, IPE<5 μAInstallation locationindoorProtection level of housingIP20 (built in)Dimensions WxHxD (mm)72x105x70 mmOperating temperature-40 oC ÷ +80 oCRelative humidity5% ÷ 95%Rail mountingDIN-3 (TS-35/EN50022)Housing materialPolycarbonate halogen freeMaximum conductor for terminal35 mm2Conductor terminals tightening torque2,5 NmMaximum conductor for remote contacts1,5 mm2Combined equivalent protection as per TS 61643-12 & IEC 61643-12T2 (CAT IV CAT III & CAT II) + T3 CAT I)CertificationVDE, CEConformity withLVD 2014/35/EUInstallation only by qualified electricianIEC 60417-6182ELEMKO management systemsISO 9001, ISO 14001, ISO 45001		
Temporary overvoltage (TOV) 120min L-N  Temporary overvoltage (TOV) 200ms N-PE  1200 V withstand  Thermal protection & monitoring indication  Residual current, IPE  Residual current, IPE  (5 µA  Installation location  Protection level of housing  IP20 (built in)  Dimensions WxHxD (mm)  Operating temperature  -40 oC ÷ +80 oC  Relative humidity  Signature  Residual current, IPE  (5 µA  Installation location  Protection level of housing  IP20 (built in)  T2x105x70 mm  Operating temperature  -40 oC ÷ +80 oC  Relative humidity  Bill-3 (TS-35/EN50022)  Housing material  Polycarbonate halogen free  Maximum conductor for terminal  Conductor terminals tightening torque  Maximum conductor for remote contacts  Combined equivalent protection as per TS 61643-12 & T2 (CAT IV CAT III & CAT II) + T3 CAT I)  Tertification  VDE, CE  Conformity with  Installation only by qualified electrician  IEC 60417-6182	Short circuit withstand, Isccr	25 kA / 50 Hz
Temporary overvoltage (TOV) 200ms N-PE  Thermal protection & monitoring indication  Residual current, IPE  Residual current, IPE  Installation location  Protection level of housing  IP20 (built in)  Dimensions WxHxD (mm)  Operating temperature  -40 oC ÷ +80 oC  Relative humidity  Signature  Residual current, IPE  -5 μA  Indoor  Protection level of housing  IP20 (built in)  T2x105x70 mm  -40 oC ÷ +80 oC  Relative humidity  DIN-3 (TS-35/EN50022)  Housing material  Polycarbonate halogen free  Maximum conductor for terminal  Conductor terminals tightening torque  Maximum conductor for remote contacts  1,5 mm2  Combined equivalent protection as per TS 61643–12 & IEC 61643-12  Certification  VDE, CE  Conformity with  Installation only by qualified electrician	Follow current interrupt rating (N-PE), Ifi	100 A rms
Thermal protection & monitoring indication  Residual current, IPE  (5 μA  Installation location  Protection level of housing  Dimensions WxHxD (mm)  Operating temperature  Relative humidity  Rail mounting  Housing material  Maximum conductor for terminal  Conductor terminals tightening torque  Maximum conductor for remote contacts  Combined equivalent protection as per TS 61643–12 & IEC 61643-12  Certification  Conformity with  Installation only by qualified electrician  VES  45 μΑ  1000  100	Temporary overvoltage (TOV) 120min L-N	442 V withstand
Residual current, IPE Installation location Protection level of housing Dimensions WxHxD (mm) Operating temperature Operating temperature Au oC ÷ +80 oC Relative humidity Signature Foliation or the minimum of the mi	Temporary overvoltage (TOV) 200ms N-PE	1200 V withstand
Installation location Protection level of housing Protection with level of housing Protection in Protection in Indicate level of the protection in Indicat	Thermal protection & monitoring indication	YES
Protection level of housing Dimensions WxHxD (mm)  Operating temperature Operating temperature -40 oC ÷ +80 oC Relative humidity  Simple Simpl	Residual current, IPE	<5 μΑ
Dimensions WxHxD (mm)  Operating temperature  -40 oC ÷ +80 oC  Relative humidity  S% ÷ 95%  Rail mounting  DIN-3 (TS-35/EN50022)  Housing material  Polycarbonate halogen free  Maximum conductor for terminal  Conductor terminals tightening torque  Maximum conductor for remote contacts  Combined equivalent protection as per TS 61643–12 & IEC 61643-12  Certification  VDE, CE  Conformity with  LVD 2014/35/EU  Installation only by qualified electrician	Installation location	indoor
Operating temperature  Relative humidity  Sw ÷ 95%  Rail mounting  DIN-3 (TS-35/EN50022)  Housing material  Polycarbonate halogen free  Maximum conductor for terminal  Conductor terminals tightening torque  Maximum conductor for remote contacts  Combined equivalent protection as per TS 61643-12 & IEC 61643-12  Certification  VDE, CE  Conformity with  Installation only by qualified electrician  -40 oC ÷ +80 oC  5% ÷ 95%  DIN-3 (TS-35/EN50022)  Polycarbonate halogen free  35 mm2  2,5 Nm  1,5 mm2  T2 (CAT IV CAT III & CAT II) + T3 CAT I)  VDE, CE  LVD 2014/35/EU  Installation only by qualified electrician	Protection level of housing	IP20 (built in)
Relative humidity  Rail mounting  DIN-3 (TS-35/EN50022)  Housing material  Polycarbonate halogen free  Maximum conductor for terminal  Conductor terminals tightening torque  Maximum conductor for remote contacts  Combined equivalent protection as per TS 61643-12 & IEC 61643-12  Certification  VDE, CE  Conformity with  LVD 2014/35/EU  Installation only by qualified electrician	Dimensions WxHxD (mm)	72x105x70 mm
Rail mounting  DIN-3 (TS-35/EN50022)  Housing material  Polycarbonate halogen free  35 mm2  Conductor terminals tightening torque  Maximum conductor for remote contacts  Combined equivalent protection as per TS 61643-12 & IEC 61643-12  Certification  VDE, CE  Conformity with  Installation only by qualified electrician  DIN-3 (TS-35/EN50022)  Polycarbonate halogen free  35 mm2  2,5 Nm  T2 (CAT IV CAT III & CAT II) + T3 CAT I)  EC 61643-12  VDE, CE  LVD 2014/35/EU  IEC 60417-6182	Operating temperature	-40 oC ÷ +80 oC
Housing material  Maximum conductor for terminal  Conductor terminals tightening torque  Maximum conductor for remote contacts  Combined equivalent protection as per TS 61643-12 & T2 (CAT IV CAT III & CAT II) + T3 CAT I)  Certification  VDE, CE  Conformity with  Installation only by qualified electrician  Polycarbonate halogen free  35 mm2  2,5 Nm  1,5 mm2  T2 (CAT IV CAT III & CAT II) + T3 CAT I)  LVD 2014/35/EU  IEC 60417-6182	Relative humidity	5% ÷ 95%
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  Certification VDE, CE  Conformity with LVD 2014/35/EU  Installation only by qualified electrician IEC 60417-6182	Rail mounting	DIN-3 (TS-35/EN50022)
Conductor terminals tightening torque  2,5 Nm  Maximum conductor for remote contacts  1,5 mm2  Combined equivalent protection as per TS 61643-12 & T2 (CAT IV CAT III & CAT II) + T3 CAT I)  IEC 61643-12  Certification  VDE, CE  Conformity with  LVD 2014/35/EU  Installation only by qualified electrician  IEC 60417-6182	Housing material	Polycarbonate halogen free
Maximum conductor for remote contacts  Combined equivalent protection as per TS 61643-12 & T2 (CAT IV CAT III & CAT II) + T3 CAT I)  IEC 61643-12  Certification  VDE, CE  Conformity with  LVD 2014/35/EU  Installation only by qualified electrician  IEC 60417-6182	Maximum conductor for terminal	35 mm2
Combined equivalent protection as per TS 61643-12 & T2 (CAT IV CAT III & CAT II) + T3 CAT I)  Certification VDE, CE  Conformity with LVD 2014/35/EU  Installation only by qualified electrician IEC 60417-6182	Conductor terminals tightening torque	2,5 Nm
IEC 61643-12  Certification  VDE, CE  Conformity with  LVD 2014/35/EU  Installation only by qualified electrician  IEC 60417-6182	Maximum conductor for remote contacts	1,5 mm2
Conformity with  LVD 2014/35/EU  Installation only by qualified electrician  IEC 60417-6182		T2 (CAT IV CAT III & CAT II) + T3 CAT I)
Installation only by qualified electrician IEC 60417-6182	Certification	VDE, CE
	Conformity with	LVD 2014/35/EU
ELEMKO management systems ISO 9001, ISO 14001, ISO 45001	Installation only by qualified electrician	IEC 60417-6182
	ELEMKO management systems	ISO 9001, ISO 14001, ISO 45001



