SIEMENS

Datasheet 5SD7412-2

General Data	
Standards/regulations	IEC 61643-11: 2011 EN 61643-11: 2012
EN type	T1/T2
Number of ports	One
Mode of protection	L-N, N-PE
Mounting type	DIN rail: 35 mm
Color	light grey RAL 7035
Insulating material	PA 6.6 / PBT
Housing material	PBT
Pollution degree	2
Overvoltage category	III
Inflammability class according to UL 94	V-0
Degree of protection	IP20 (only when all terminal points are used)
Shock (operation)	30g (half sinus / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	7,5g (10-500 Hz/2,5 h/XYZ)
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Permissible humidity (operation)	5 % ... 95 %
Altitude	≤ 2000 m (amsl (above mean sea level))
Width	35,6 mm
Height	89,8 mm
Depth	77.5 mm
Weight	328 g (Net) 356 g (Gross)

Electrical data	
Nominal voltage U_N	240 V AC (TN-S) 240 V AC (TT)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous operating voltage U_C (L-N)	335 V AC
Maximum continuous operating voltage U_C (N-PE)	264 V AC
Reference test voltage U_{REF}	264 V AC
Rated load current I_L	80 A
Residual current I_{PE}	≤ 5 µA
Standby power consumption P_C	≤ 270 mVA
Nominal discharge current I_n (8/20) µs (L-N)	12,5 kA
Nominal discharge current I_n (8/20) µs (N-PE)	50 kA
Maximum discharge current I_{max} (8/20) µs (L-N)	50 kA
Maximum discharge current I_{max} (8/20) µs (N-PE)	50 kA

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Impulse discharge current (10/350) µs (L-N) Peak value I_{imp} Charge Specific energy	 12,5 kA 6,25 As 39 kJ/Ω
Impulse discharge current (10/350) µs (N-PE) Peak value I_{imp} Charge Specific energy	 50 kA 25 As 625 kJ/Ω
Total discharge current I_{Total} (8/20) µs	50 kA
Total discharge current I_{Total} (10/350) µs	25 kA
Follow current interrupt rating I_{fi} (N-PE)	100 A (264 V AC)
Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p (L-N)	≤ 1,2 kV
Voltage protection level U_p (N-PE)	≤ 1,7 kV
Residual voltage U_{res} (L-N)	≤ 1,2 kV (at I_n) ≤ 1,1 kV (at 10 kA) ≤ 1,0 kV (at 5 kA) ≤ 0,9 kV (at 3 kA)
Residual voltage U_{res} (N-PE)	≤ 0,6 kV (at I_n) ≤ 0,5 kV (at 10 kA) ≤ 0,5 kV (at 5 kA) ≤ 0,4 kV (at 3 kA)
Front of wave sparkover voltage at 6 kV (1.2/50) µs (N-PE)	≤ 1,7 kV
TOV behavior at U_T (L-N)	415 V AC (5 s / withstand mode) 457 V AC (120 min / safe failure mode)
TOV behavior at U_T (N-PE)	1200 V AC (200 ms / withstand mode)
Response time t_A (L-N)	≤ 25 ns
Response time t_A (N-PE)	≤ 100 ns
Current tripping factor k	1,6
Max. backup fuse with branch wiring	160 A (gG)
Max. backup fuse with V-type through wiring (at 35 mm^2)	80 A (gG) / 16 mm^2
Connection data	
Connection method	Screw connection
Conductor cross section flexible	1,5 … 25 mm^2
Conductor cross section solid	1,5 … 35 mm^2
Cross section AWG	15 ... 2
Screw thread	M5
Tightening torque	4,5 Nm
Stripping length	16 mm

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