

SPECIFICATION		Specification No.	T-090510C11-13			
		Drawing No.	T-090510C11	Revision	a	Page
Product Name	Low-voltage surge protective devices Model FV-400	Enactment Date	Sep.08.2022	Revision Date	Oct.28.2024	
		Drawing Section	Sales Engineering Department			
<p>1. General</p> <p>This product is SPD FV-400 type for power supply. It protects electric devices from abnormal voltage induced in the power supply circuit whose maximum continuous voltage is 510VAC. This product consists of SPD's body and holder, and the body has a fuse to cut off itself from the circuit in case that the SPD becomes defective due to excessive current etc.</p> <p>2. Environmental Condition</p> <p>2.1 Location of use : Indoor</p> <p>2.2 Rated operation temperature : -40°C~+70°C</p> <p>2.3 Rated operation humidity : less than 90% (without condensation)</p> <p>2.4 Storage temperature: : -40°C~+70°C</p> <p>2.5 Storage humidity: : less than 90% (without condensation)</p> <p>2.6 Altitude: : less than 2000m</p> <p>3. Construction</p> <p>3.1 Appearance, construction, and dimension</p> <p>-Please refer to the appearance diagram : T-090510A11</p> <p>-The installation of the holder is to DIN rails (35mm-wide) as standard.</p> <p>(Note: By adjusting the installation plate, the installation without DIN rails is also available. Please refer to the specification for more details.)</p> <p>3.2 Marking</p> <p>① Model of product</p> <p>② SPD type (Class II)</p> <p>③ Degree of protection (IP)</p> <p>④ Maximum continuous operating voltage (U_C)</p> <p>⑤ Voltage protection level (U_P)</p> <p>⑥ Discharge parameters (I_{max})</p> <p>⑦ Manufacture year/month</p> <p>⑧ Manufacturer's name</p>						

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		Drawing Section	Sales Engineering Department			

4. Characteristics

Table 1

Item	Measurement Condition	Characteristics	
1. Test classification		Class II	
2. Max. continuous operating voltage U_c		510V(50/60Hz)	
3. Max. discharge current I_{max}	8/20 μ s	20kA	
4. Nominal discharge current I_n	8/20 μ s	10kA	
5. Protection level U_p		<2.0kV	
6. Response speed		<3ns	
7. Insulation resistance	Between the terminals	DC 500V	> 100M Ω
	Each terminal-between the mounting plates		
8. Overcurrent protection		30A(FDS-20kA)	
9. Short-circuit current rating I_{SCCR}		10kA	
10. Temporary overvoltage U_T		580V 5s(50/60Hz)	
11. Leakage current I_{PE}	AC510V	1mA	
12. Number of ports		1port	
13. Degree of protection		IP20	
14. Operation display of fuse		Visible	
15. Identification of terminals		Indicated	
16. Mounting method		35mm DIN rail	

Note 1) Temperature and humidity complies with JIS-Z8703(standard condition of test site):

- Standard temperature condition: 20°C \pm 15°C,
- Standard humidity condition: 65% \pm 20%

5. Connection

Following cables are acceptable.

- Single/Multiple: AWG12-6 (recommended torque: 1.47~1.96N \cdot m)
- Recommended terminals: Crimped terminals for M5.

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6. Inspection

Electrical and Mechanical characteristics, Appearance, and Dimensions are checked as Table 2.

Table 2

Item	Inspection	Quality criterion
Varistor voltage at1mA (MOV)	Total inspection	738V-840V
Table 1 2~5,8~11	Type inspection	According to JIS C 5381-11:2014
Response time	Type inspection	According to Table.1
Insulation resistance (DC 250V)	Total inspection	
Appearance	Total inspection	According to T-090510A11
Dimension	Sampling	

Note 1) "Sampling Inspection" shall be conducted by using the Single, Standard Sampling based on Special Inspection Standard S-3, AQL = 2.5 (ISO2859).

Note 2) "Type Inspection" shall be conducted by selecting at least one piece from the first production lot when the product is renewed, and material or manufacturing method of the product are changed.

7. Packing

It is packed in an individual box per piece

The product name, Max. continuous operating voltage(Uc), manufacturer's name, and the quantity are printed on the box.

8. Warranty

Sankosha's warranty period is for one year after the delivery date. If complaints about products are found to be justifiable, we replace only the actual defective product with a non-defective one.

9. Environmental Compliance (RoHS compliance)

This product is applicable to EU RoHS Directive(*) for regulated substances (10 substances: lead, mercury, cadmium, hexavalent chromium, PBB, PBDE, DEHP, BBP, DBP, DIBP), and does not include controlled substances that exceed regulatory limits.

* European Parliament and Council Directive 2011/65 / EU, (EU) 2015/863

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