

SPECIFICATION		Specification No.	T-150220C11～14				
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Product Name	MZAC-200	Enactment Date	Jun 6, 2023	Revision Date	Oct.13, 2023		
		Drawing Section	Sales Engineering Department				

1. General

This product is a power supply SPD with a disconnection mechanism used to protect equipment from abnormal voltages and currents such as lightning surges induced in AC power supplies.

This product complies with IEC 61643-11:2011 and has obtained CB certification (No: NL-91107).

2. Service Condition

- 2.1 Install Location :Indoor
- 2.2 Ambient Temperature :-40°C ~ +85°C
- 2.3 Relative Humidity :≤90% (non-condensing)
- 2.4 Storage Temperature :-40°C ~ +85°C
- 2.5 Storage Humidity :≤90% (non-condensing)

3.Appearance, Dimensions and Marking

3.1 Appearance and dimensions.

Table.1

Model Number	Appearance
MZAC-200	T-150220A11

3.2 Marking

Following particulars are marked on the body of this product;

- (1) Manufacture's name or trademark
- (2) Maximum continuous operation voltage U_c
- (3) Test classification and discharge parameter (U_{oc})
- (4) Voltage protection level U_p
- (5) Degree of protection (IP code)
- (6) Type of current (～)
- (7) Terminal identification
- (8) CE mark
- (9) RECOGNIZED COMPONENT MARK and UL Performance Mark

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4. Characteristics

SPD characteristics shown in Table.2

Table.2

Item		Characteristics
1. Model number		MZAC-200
2. Comply with standard	IEC 61643-11:2011	Class III
	UL1449 5 th Edition	Type 3 SPD
3. Rated operational voltage		AC 240/120V
4. Maximum continuous operation voltage U_c / MCOV		AC275V (50/60Hz)
5. Open Circuit Voltage U_{oc} (Note.2)	IEC 61643-11:2011	1.2/50 μ s 6kV
6. Voltage protection level U_p (Note.2)	IEC 61643-11:2011	L1 - L2 ≤ 1.5 kV
		L1 / L2 - PE ≤ 1.5 kV
7. Short-circuit current rating I_{SCCR} (Note.2)	IEC 61643-11:2011	L1/L2-PE 70A (50/60Hz)
8. Temporary overvoltage U_T (Note.2)	IEC 61643-11:2011	L1/L2-PE 335V 5s (50/60Hz)
9. Leakage current I_{PE} (Note.2)	IEC 61643-11:2011	AC255V (L1/L2-PE) ≤ 1 mA
10. Nominal discharge current I_n	UL1449 5 th Edition	3kA
11. Measured limiting voltage MLV (Note.3)	UL1449 5 th Edition	L-L: 1960V
		L-G (PE) : 1020V
12. Number of ports		1port
13. Installation category		indoor
14. Degree of protection		IP20
15. Terminal identification		L1: Red, L2: Black, PE: Yellow/Green Wire size: L1,L2 : 20AWG,PE : 16AWG
16. Fault indicator	Normal / Fault	No display / Silver

Note 1) Test Conditions

Temperature 20 $\pm$ 15°C, Humidity 65 $\pm$ 20% (IEC 160-1963 (normal condition of test place)).

Note 2) Perform tests based on the provisions of IEC 61643-11:2011.

Recommended external separator: 313010MX250P (manufactured by Littelfuse)

Note 3) Perform tests based on UL standards.

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5. Inspection Condition

The inspection of electrical characteristics, mechanical characteristics and appearance shall be held as following Table.3.

Table.3.

Item	Inspection type	How to check for Characteristics
	Product inspection	
1. DC Spark-over voltage V_s	Sampling	L1/L2-PE : 387~473V
2. Table 2 5~10	Type	According to IEC 61643-11:2011
3. Nominal discharge current	Type	According to UL1449 5 th Edition
4. Measured limiting voltage	Type	According to UL1449 5 th Edition
5. Low temperature test	Type	After testing under the test conditions in Table 4, The varistor voltage and leakage current must be within the standards.
6. High temperature test	Type	
7. High temperature-humidity test	Type	
8. Temperature cycle test	Type	
9. Vibration test	Type	
10. Appearance/Structure	Sampling	According to Table.1
11. Dimensions	Sampling	
12. Display	Sampling	

Note 1) As a general rule, sampling inspection shall be AQL=1.0 according to ISO2859 (counting sampling procedure and sampling table), one-time sampling, normal inspection, and normal inspection level I.

Note 2) "Type inspection; This inspection is executed when the main material is changed.

Note 3) Test conditions

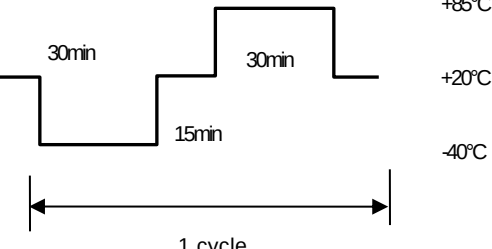
Temperature 20±15°C, Humidity 65±20%(IEC Publication 160(normal condition of test place))

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6. Environmental Test

Table.4 shows the environmental test condition of this product.

Table.4

Item	Test Condition	Test Time
1. Low temperature test	Ta= -40±3°C	1000h
2. High temperature test	Ta= +85±2°C	1000h
3. High temperature-humidity test	Ta= +40±2°C 90~95%	4Day
4. Temperature cycle test		30 cycles
5. Vibration test	Frequency:40(Hz) Sweep rate:19.6m/s ² (2G)	15min/3axis

7. Packing and Marking of Wrapping Box

7.1 Packing

Use packaging that will not be easily deformed or damaged during transportation.

7.2 Display contents

The following items are specified on the surface of the package.

(1) Product name/model (2) Manufacturing date (3) Quantity (4) Manufacturer's name (5) CE mark

8. Quality Guarantee Period

The warranty period of this product has been one year since the product was delivered.

If defective product claims are found to be justifiable, replacement products meeting the applicable specification will be provided.

9. Environmental correspondence

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