

SPECIFICATION		Specification No.	T-110750C31~34			
		Drawing No.	T-110750C31	Revision	c	Page
Product Name	SPD for AC MZSR-200JK□ARI	Enactment Date	02.Jun.2014	Revision Date	28.Sep.2019	
		Drawing Section	Sales Engineering Department			

1. General

This SPD(Surge Protective Device) is suitable for a.c. power line, this SPD is intended use of protect from abnormal voltage such as indirect lightning surge.

The composition of this SPD consists of a plug and a base.

Designed for replacing only a plug part if SPD become failure.

Between neutral conductor N of TT or TN system, and protective conductor PE consist of GDT (Gas Discharge Tube) only.

2. Service Condition

- 2.1 Install Location : Indoor
- 2.2 Ambient Temperature : -40°C~+80°C
- 2.3 Relative Humidity : ≤96%(non-condensing)
- 2.4 Storage Temperature : -40°C~+80°C
- 2.5 Storage Humidity : ≤96%(non-condensing)
- 2.6 Altitude : ≤2000m

3. Appearance, Dimensions and Marking

3.1 Appearance and Dimensions.

Table.1

Model Number	Product Configuration	Appearance
MZSR-200	Plug-in module	T-110750A02
MZSR-ARI	Plug-in module	T-110770A04
MZSR-JK1ARI(200)	Base	T-120250A07
MZSR-JK2ARI(200)	Base	T-120250A17
MZSR-JK3ARI(200)	Base	T-120250A27
MZSR-200JK1ARI	SPD(Plug-in module + Base)	T-110750A24
MZSR-200JK2ARI	SPD(Plug-in module + Base)	T-110750A34
MZSR-200JK3ARI	SPD(Plug-in module + Base)	T-110750A44

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)Type of current(～)
- (4)Test classification and discharge parameter (I_n, I_{max})
- (5)Voltage protection level U_p
- (6)Degree of protection(IP code)
- (7)Identification of terminals (Base)
- (8)Max. mains-side overcurrent protection

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4. Characteristics

4.1 SPD characteristics shown in Table.2

Table.2

Item	Measurement condition	Characteristics		
		MZSR-		
1.Model Number		200JK1ARI	200JK2ARI	200JK3ARI
2.Complies with standard		IEC 61643-11:2011		
3.Approvals		KEMA		
4.Test classification		Class II		
5.Nominal Voltage U_N		Single phase	Split·Three phase	Three phase
		200,230V	100/200V 230/400V	230/400V
6.Maximum continuous operation voltage U_c	L-NN-PE	275V (50/60Hz)		
7.Nominal discharge current I_n	8/20 μ s	20kA		
8.Maximum discharge current I_{max}	8/20 μ s	40kA		
9.Voltage protection level U_p	L-NN-PE	$\leq 1.4kV$ / $\leq 1.5kV$		
10.Voltage protection level (5kA) U_{p5kA}	L-NN-PE	$\leq 1kV$ / -		
11.Overcurrent protection		$\leq 125A$ (fuse)		
12.Short-circuit current rating I_{SCCR}		25kA(50/60Hz) ^{N3}		
13.Follow current interrupt rating I_i	L-NN-PE	- / 100A(50/60Hz)		
14.Temporary overvoltage U_T	L-NN-PE	335V 5s / 1200V 200ms (50/60Hz)		
15.Leakage current $I_{\Delta E}$	AC255V (L-NN-PE)	$\leq 1mA$		
16.Dielectric withstanding voltage(only base)	L-N-PE	1.2/50 μ s 10kV		
17.Number of ports		1port		
18.Location		In door		
19.Mounting method		35mm DIN rail		
20.Degree of protection		IP20		
21.Identification of terminals		L,N,PE		
22.Fault indicator	operating state/fault indication	Green/Red		
23.Remote contact ^{N4}	Normal	11-12	Short	
		11-14	Open	
	Fault	11-12	Open	
		11-14	Short	
	Maximum operation voltage/current		AC250V/1.5A	

Note 1) Test Conditions

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

Note 2) Do not use "L-N,L-PE" voltage more than U_c .

Note 3) Including external disconnecter.

Note 4) Characteristics are defined in state where a base and a plug are connected.

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5. Connection cable

- 5.1 Cable size : cross-section 1.6~22mm² (AWG15~4)^{N1}
 Cable stripping length : about 15mm (Figure.1)
 Recommended tightening torque : 1.47~1.96N·m (15~20kgf·cm)
 Screw terminal : M5 Y-type crimped terminal (Width<12mm, Thickness≤1mm)^{N2}

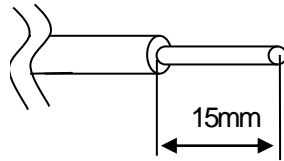


Figure.1

5.2 Remote contact

- Cable size : cross-section 0.05~2mm² (AWG30~14)
 Cable stripping length : 7~8mm

Note1) One cable: ≤22mm², Two cables total: <22mm²

Note2) One cable only

6. 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
1.Varistor voltage (V _{1mA})	Sampling	L-N: 387~473V
2.DC spark-over voltage (V _s)	Sampling	N-PE: ≥800V
3.Table 2:6~15	Type	According to IEC 61643-11:2011
4.Remote contact	Type	According to Table.2
5.Low temperature test	Type	After Table.4 test V _{1mA} : According to Table.3 V _s : According to Table.3 I _{PE} : According to Table.2
6.High temperature test	Type	
7.High temperature-humidity test	Type	
8.Temperature cycle test	Type	
9.Vibration test	Type	
10.Appearance, display	Sampling	According to Table.1
11.Dimension		

Note 1) Sampling Inspection; Single sampling plan, Normal inspection, Special inspection levels S-3 based ISO-2859 and AQL=2.5

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

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7. 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=+80±2°C	1000h
3.High temperature-humidity test	Ta=+40±2°C 90~96%	4days
4.Temperature cycle test		30 cycles
5.Vibration test	Frequency:40(Hz) Sweep rate:19.6m/s ² (2G)	15min/3axis

8. Packing and Marking of Wrapping Box

8.1 Packing

Packaging unit 1 pieces packed in a box.

8.2 Marking of wrapping box

Following particulars are marking on wrapping box.

- (1) Product Name (2) Manufacturer's name (3) Quantity (4) Date of manufacture (5) Lot No (6) RoHS
(6) Test classification

9. 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.

10. 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, 2016/863 / EU

11. Caution

Please use in combination with fuse or breaker to avoid short fault by hitting AC overload voltage.