1. General

This SPD(Surge Protective Device) is suitable for N-PE.between, this SPD is intended use of protect from abnormal voltage such as indirect lightning surge.

2. Service Condition

2.1 Install Location : Indoor
2.2 Ambient Temperature : -40℃~+70℃
2.3 Relative Humidity : ≤95%(non-condensing)
2.4 Storage Temperature : -40℃~+70℃
2.5 Storage Humidity : ≤95%(non-condensing)
2.6 Altitude : ≤2000m

3. Appearance, Dimensions and Marking

3.1 Appearance and Dimensions.

Table.1

Model Number	Appearance
MZS-NPE	T-061000A02

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_{imp})
(5)Voltage protection level U_P
(6)Degree of protection(IP code)
(7)Identification of terminals
(8)CE Logo, KEMA Logo

4. Characteristics

4.1 SPD characteristics shown in Table.2

Table.2

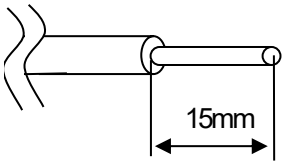
Item	Measurement condition	Characteristics
1.Model Number		MZS-NPE
2.Complies with standard		IEC 61643-11:2011
3.Approvals		KEMA
4.Test classification		Class I, Class II
5.Maximum continuous operation voltage U_c	N-PE	255V (50/60Hz)
6.Impulse discharge current I_{imp}	10/350μs	100kA
7.Nominal discharge current I_n	8/20μs	100kA
8.Voltage protection level U_p	N-PE	≤1.5kV
9. Follow current interrupting rating I_{fi}	N-PE	100A (50/60Hz)
10.Temporary overvoltage U_T	N-PE	1200V 200ms (50/60Hz)
11.Leakage current I_{PE}	AC255V	≤1mA
12.Response time		≤3ns
13.Number of ports		1port
14.Location		In door
15.Mounting method		35mm DIN rail
16.Degree of protection		IP20
17.Identification of terminals		N,PE

Note 1) Test Conditions

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

5. Connection cable

5.1 Cable size : cross-section 5.5~22mm^2 (AWG10~4)
Cable stripping length : about 15mm
Recommended tightening torque : 2.94~3.43N・m (30~35kgf・cm)



6. Inspection Condition

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

Table.3

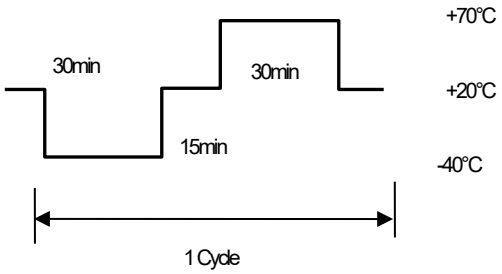
Item	Inspection type	How to check for Characteristics
1.DC sparkover voltage(100V/s)	Sampling	600～900V
2.Insuration resistance	Sampling	DC350V≥1000MΩ
3.Table 2:5~11	Type	According to IEC 61643-11:2011
4.Low temperature test	Type	After Table.4 test DC sparkover voltage and I_{PE}: According to Table.2
5.High temperature test	Type	
6.High temperature-humidity test	Type	
7.Temperature cycle test	Type	
8.Vibration test	Type	
9.Appearance, display	Sampling	According to Table.1
10.Dimension		

Note 1) Sampling Inspection; Single sampling plan, Normal inspection, Special inspection levels S-3based ISO-2859 and AQL=2.5
Note 2) "Type inspection; This inspection is executed when the main material is changed.

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℃	1000h
2.High temperature test	Ta=+70±2℃	1000h
3.High temperature-humidity test	Ta=+40±2℃ 90~95%	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) Model Number (3) Manufacturing date (4) Quantity (5) Manufacturer's name

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 (RoHS compliant)

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