Metal Oxide Surge Arrester

Type Y10W-40.5/130

1. Genaral information:

WENZHOU YIKUN ELECTRIC CO., LTD. is company specialized in producing 0.28~220 kV A.C System metal oxide surge arrester, electric railway surge arrester with porcelain and polymeric housing for protection electrical system and electric railway against over-voltage, meanwhile we are producing surge arrester used for special condition and area. We have produced metal oxide surge arrester for a long history and it is one of the enterprises which produce polymer housing arrester firstly in China. Our company imports the solid adhesive injection system from Taiwan Fuyuan Co., Ltd and the liquid glue auto-vulcanization shaping injector from America Engle Company. The silicone rubber material produced and applied technology keep ahead at home and abroad.

Our company has especially designed surge arrester for international market and we have provided many arrester to many countries with high quality and competitive price. Meanwhile, we have won many international tender in South America, Middle East, Africa, Southeast Asia and Europe. The surge arresters produced by us have been welcomed by client and exported to many countries such as Iran, Jordan, Japan, Indonesia, Korea, India, Bangladesh, Nepal and Vietnam. Till now, we receive many enquiries daily from all over the world, which have improved our quality and technology. Meanwhile we have tried our best to improve technology by ourselves, consequently, our types of surge arresters have passed CNACL (China National Center for Quality and Test of Insulators and Surger Arrester and KEMA type test.

2. Routine test items:

Our company produce surge arrester according to IEC 60099-4 and ANSI standard, also for every piece of arresters, we will perform routine test items specified in IEC as follows:

I.) DC Reference voltage test
II.) Leakage current test under 0.75 U_{1mA}
III.) Partial discharge test
IV.) Power frequency withstand voltage test
V.) Resistive current test
VI.) Residual voltage test

3. Service Condition:

I.) Ambient temperature: -50 ^{0}C ~ +50 ^{0}C
II.) Altitude: above 1000m
III.) Maximum wind velocity: 45m/s
IV.) Earthquake intensity: 7 degree, 0.3g

Note: We also produce surge arrester used for heavy pollution area and coastal area, when place order, please specify your required creepage distance ratio and altitude.

4. Features:

I.) Excellent Protective Performance: The metal oxide varistor have good response to steep front surge, excellent volt-ampere characteristics and high discharge capacity, which provides a very consistent protection merit at steep front surge, lighting surge and swithing surge and enhance protective capability.

II.) Reliable pressure relief function: the unique pressure relief device worked out upon latest achievements in this field, features precise operation, safely and reliability, which ensure MOA to release internal excessive pressure in any event to minimize fault effect

III.) Unique sealing device: Excellent MOA to sealing is insured during its service life by weathering proof, thermal-resistant and well elastic sealing gasket and unique sealing device as well as high sensitive leakage detection-helium mass spectrometry.

40.5kV/10kA surge arrester

Type: **Y10W – 40.5/130**

-Y : Wenzhou Yikun

-10W : Nominal discharge current at 8/20μs is 10kA

5. Table1: Main technical parameter which is conform to IEC and ANSI standard

Item	**Features**	Unit	Value
1	Rated Voltage	kV	40.5
2	Rated maximum continuous operating Voltage	kV	39
3	Maximum residual Voltage at steep Current (4/10 μs)	kV	130
4	Maximum residual voltage of the nominal dischage Current 10kA (8/20 μs)	kV	120
5	30/60 μs switching impulse residual Voltage	kV	90
6	2ms Rectangular Current	A	400
7	Short Circuit Withstand Current	kA	20
8	High Current impulse withstand (4/10 μs)	kA	100
9	Power frequency withstand Voltage Dry/Wet	kV	70
10	Lightning impulse withstand Voltage	kV	185

6. Table2: Main Guaranteed Technical Particulars of MOA which have passed CNACL and KEMA type test according IEC 60099-4 and ANSI Standard:

No.	CHARACTERISTICS	VALUE
1	System Nominal Voltage, kV	35
2	Type code of MOA	Y10W-40.5/130
3	System Highest Voltage, kV	42
4	Rated Voltage of Arresters (Ur), kV	40.5
5	Continuous Operating Voltage (Uc), kV	39
6	Nominal Discharge Current (Ln), kA	10
7	Short Circuit Withstand Current, kA	20
8	High Current 4/10 Impulse withstand, kA	100
9	Long duration current Impulse withstand upper value 2000 ms, A	400
10	Steep current 1/20 Impulse Residual Voltage at 10 kA Impulse current, kV	110
11	Lightning current 8/20 Impulse Residual Voltage at 500/1000A Impulse Currents, kV a. 5KA b. 10KA c. 20KA	 115 120 135
12	Switching Current 30/60 Impulse Residual Voltage at 500/1000A Impulse Current as applicable., kV	84
13	Line Discharge class/Station class	I/II/III
14	Pressure Relief class & corresponding fault current, kA	B 20
15	Arrester Insulation Impulse withstand voltage, kV	185
16	Arrester Insulation wet power frequency withstand voltage, kV	70
17	Max. External RIV at 1 MHz measured at 1.05 times system highest Voltage, V	≦500
18	Max. Partial discharge in the arrester at 1.05 time continuous operating Voltage., PC	≦10
19	Creepage distance, mm	1340

ZnO Blocks for surge arrester

Technical table of ZnO Varistor 10kA rating ZnO Blocks

Voltage rating	kV	4	5	3
Specification		ϕ42×28±1 (4kV/pc)	ϕ42×34±1 (5kV/pc)	ϕ42×20±1 (3kV/pc)
V1mA Value	kV	5.8～6.1	7.4～7.6	4.5～4.6
Residual voltage Ratio		1.85	1.85	1.85
Max Residual voltage	kV	10.7～11.5	13.7～14.2	8.4～8.6
2ms Rectangular current impulse	A	1000	1000	1000
4/10 High current impulse	kA	100	100	100
Leakage current in 75% V1mA	μA	15	15	15

Note: We also produce 3kV/10kA class 2 (Size: Dia 52x21) and 3kV/10kA class 3 (Size: Dia72x21 and Dia 82x21)