

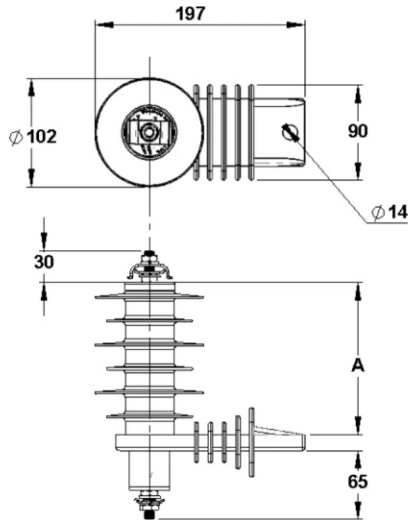
DPS Surge Arrester

Heavy Duty 100kA

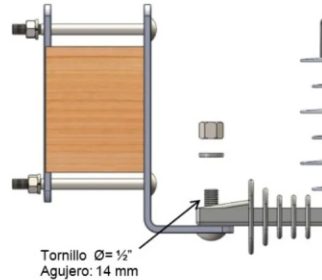
Stavol

Distribution Line and Transformers receive high performance protection against overvoltage using the STAVOL® Surge Arrester DPS distribution type 10KA

Arrester rating (kV rms)	MCOV (kV rms)	Front-of-wave Protection level (kV peak)	Steep Current Impulse Residual Voltage (Kv) 10kA		Maximum Discharge Voltage (kV peak) 8/20 μs Current Wave						Height A (mm)	BIL (kV)
			With inductive voltage	Without inductive voltage	1.5 kA	3 kA	5 kA	10kA	20kA	40kA		
					8.6	9.1	10	10.7	12.2	14.2		
3	2.55	10.6	11.4	11	8.6	9.1	10	10.7	12.2	14.2	70	64,5
6	5.1	20.7	21.7	20.6	21.2	18.3	19,8	21.4	24.5	28.8	93	70,5
9	7.65	31.7	32.4	30.4	26	28	30	32,8	37.4	43.5	135	100
10	8.52	33.7	35.7	36.8	28	31	33	34	41	45		
12	10.2	41.5	43.2	41.2	33.9	36.6	39.2	42,9	48.9	56.9		
15	12.7	51.8	52.2	50.2	42.4	45.7	49	53.6	61.1	71.1		
18	15.3	61.6	68.8	64.8	50.6	54.8	58.8	64.3	73.4	85.3	190	132
21	17	66	68.8	64.8	53.7	58.2	62.4	68.2	77.9	90.6	213	144
24	19.5	77	60.2	56.2	62.7	67.9	72.8	79.6	90.8	106	235	157,5
27	22	87.2	84.4	82.7	70	79.4	83	89.2	98.9	110	257	171
30	24.4	97.1	100.5	96.5	79.5	85.7	91.8	100	115	133	267	174
36	29	116	120.8	114.8	95.3	103	110	120	137	160	312	200



Dimensions (in millimeter)



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CAUTION. Prior installing this product read carefully the manual and follow each one of the recommendations.

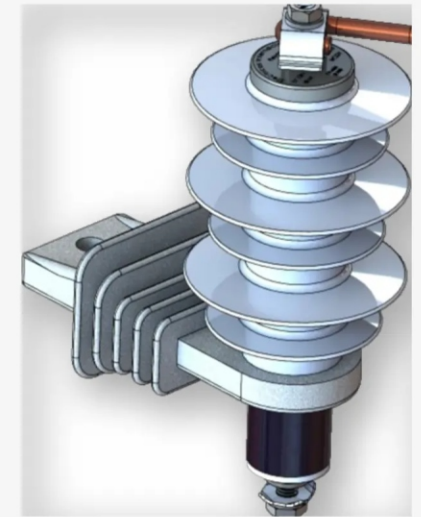


WARNING. Make sure the nameplate information is in accordance with the requirement of transmission line.



General

DPS Protecciones S.A.S. Experts in design and manufacturing of protective systems for power transmission lines and distribution transformers is glad to offer **Surge Arrester Polymer (10kA)**. Our deep knowledge of the Colombian electricity infrastructure and generally in South America along with our 30 years of industry expertise has led us to develop a surge arrester using the most demanding materials: WACKER® Silicone and Zinc oxide varistors especially made for high performance and durability, 100% manufactured in the United States.



Construction

DPS Surge Arrester 10kA heavy Duty distribution class surge arrester design consists of polymer housing molded over a Metal Oxide Varistors (MOVs) module. This molding process is superior in that it eliminates the possibility of air pockets at the housing / module interface that could lead to moisture ingress failures over time.

The high-strength composite matrix insulating material used to encapsulate the module is cured to the arrester module assembly to form a solid insulation system. This assembly method allows the insulating material to provide a secondary moisture barrier as well as provides the cantilever strength levels required in the field.

All production tests are designed to meet **IEEE C62.11/ IEC 60099-4 standards.**

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Production Test

To ensure the highest quality of DPS Protecciones 10kA distribution class surge arrester each fully assembled arrester must pass the following production tests:

- 100% Physical Inspection
- 100% Partial Discharge Inception Voltage test
- 100% AC Leakage current
- 100% Fully Energized at MCOV

USA manufactured metal oxide varistors have received the following tests:

- 100% Physical Inspection
- 100% Discharge Voltage test
- 100% V1mA/cm2
- 100% Leakage Current at 80% of V1mA/cm2 Voltage
- Batch High-current, Short-duration test
- Batch Thermal Stability test
- Batch Aging test

Useful Life.

Once the ground line disconnector has operated, it means the surge arrester has failed and needs replacement.

Mechanical Loads:

Torque: 30 N.m
Cantilever strength: 2000 N

General Application Recommendation

The design of DPS Protecciones distribution class Surge Arrester provides optimum protection for three wire uni-grounded and impedance grounded systems with a nominal operating system voltage of 13.2kV rms with a maximum operating system voltage of 13.8kV RMS.

Performance Test Characteristics

DPS Protecciones 10kA distribution class surge arrester is tested per design tests specified by IEEE Std C62.11™ IEC 60099-4 standards:

Duty Cycle:

22 current surges of 10 kA crest, 8/20 μs waveshape.

High-current, Short-Duration Discharge:

2 current surges of 100 kA crest, 4/10 μs waveshape.

Low-current, Long-Duration Discharge:

20 current surges of 250A crest, 2000 μs duration rectangular wave.

The thermal stability of the arrester is verified following each of these tests by:

1. Continually decreasing power values during a thirty minute power monitoring period.
2. No evidence of physical or electrical deterioration.
3. The 10 kA discharge voltages measured after each test changed less than 10% from the initial values.

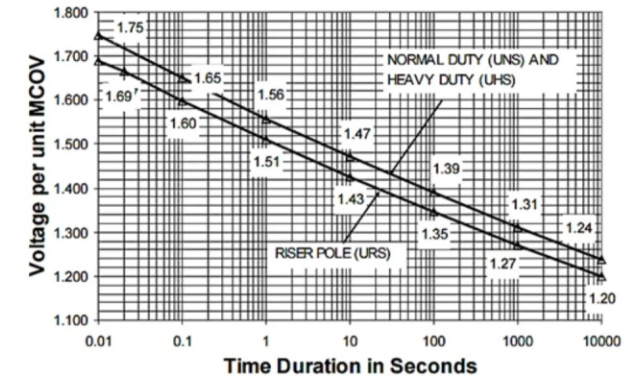
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Fault Current Withstand Test.

The Fault Current Withstand of DPS Protecciones 10kA distribution class surge arrester design has been verified to be non-fragmenting to levels shown in the table below in accordance with the requirements listed in IEEE Std C62.11™ / IEC 60099-4 standards.



Installation Guide.

DPS surge Arrester is completely assembled to be mounted on a metallic or wood cross arms or directly in the housing of the transformer. To facilitate connections, we have developed a line connector called Omega type, in which the bare wire (4 AWG -1/0) is placed.

Please ensure this device is installed and operated only by competent personnel familiar with good practices **Safety and Health (OSHA)**.



Waste management*



* For more information Contact your local hazardous waste agency.

Material	Disposición final
Metalic waste: Steel, Aluminium.	Previously separated metals could be recycle by authorized companies.
DPS ZnO Blocks	It must be handle as dangerous waste.
Arrester hanger	It must be handle as dangerous waste.
Cardboard:	Box 100% recyclable.