Surge arresters

POLIM-C..N

Technical data

- For system voltages up to	7.2 kV rms	- Long duration current impulse	250 A / 2000 µs
- Nominal discharge current I_n 8/20 µs	10 kA pk	- Energy capability, 1 impulse acc. IEC clause 7.4.2	1.5 kJ / kV of Uc
- High current impulse I_{hc} 4/10 µs	100 kA pk		
- Short circuit rating (1) I_s 50 Hz	20 kA rms for 0.2s	- Energy input with I_{hc} acc. IEC clause 7.5.4	3.5 kJ / kV of Uc
- Line discharge class according to IEC 60099-4	2	- Power frequency up to	62 Hz
- Service conditions: temperature (2)	- 60°C up to + 45°C	- Cantilever strength	350 Nm
- Altitude (3)	up to 1800 m	- Torsional strength	50 Nm
		- Vertical load	1000 N

(1) Tested value acc. IEC 60099-4.
(2) These values exceed IEC requirements. For installations in higher ambient temperatures, please contact the manufacturer.
(3) This value exceeds IEC requirements. For installations in higher altitudes, please contact the manufacturer.

Application

Protection of medium voltage AC networks against both, multiple atmospheric and switching overvoltages as well as Very Fast Transients (VFT). Suitable for the protection of motors and cable sheaths. For indoor and outdoor installation.

Advantages

- Low residual voltage
- Long protection distance
- High energy input capacity
- Stable U-I characteristics even after multiple strokes
- Proof against ageing
- Explosion and shatter-resistant design
- Pollution resistant and UV-stable
- Housing resistant to rough handling
- Maintenance free
- Stable against shock and vibration
- High mechanical resistance

Temporary overvoltage capability (TOV) - Power frequency versus time characteristic

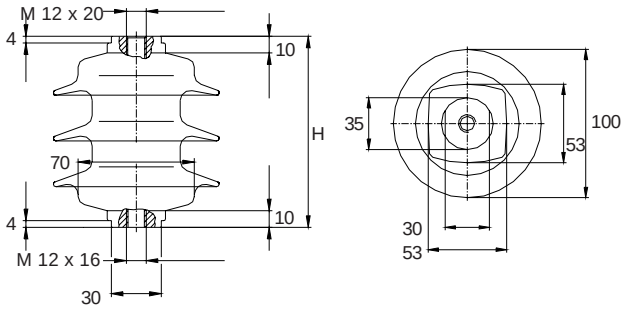
- **During 1 second (a: 1.36 x Uc or b: 1.31 x Uc)**
- **During 3 seconds (a: 1.33 x Uc or b: 1.28 x Uc)**
- **During 10 seconds (a: 1.30 x Uc or b: 1.25 x Uc)**
- a: value tested with a sample that has not been prestressed by any energy input.
- b: value tested with a sample that has been prestressed with a prior energy input according to the operating duty test
- The values have been determined with a test sample preheated at 60 degrees Celsius according to IEC 60099-4 and refer to an ambient temperature up to 45 degrees Celsius.

Guaranteed data

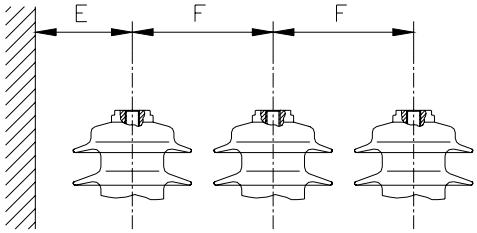
Type	U_R	U_C	Residual voltage (U_{res}) in kV pk at a specified impulse current									
	Rated voltage	Continuous operating voltage	Wave 1/.. us		Wave 8/20 us					Wave 30/60 us		
POLIM-C..N	kV rms	kV rms	5 kA pk	10 kA pk	1 kA pk	2.5 kA pk	5 kA pk	10 kA pk	20 kA pk	125 A pk	250 A pk	500 A pk
0.9	1.13	0.9	3.3	3.7	2.7	2.9	3.0	3.1	3.5	2.3	2.5	2.5
1.0	1.25	1.0	3.7	4.2	3.0	3.2	3.4	3.5	3.9	2.6	2.8	2.9
1.3	1.63	1.3	4.8	5.4	3.9	4.1	4.3	4.5	5.0	3.4	3.5	3.7
1.6	2.00	1.6	5.8	6.5	4.7	5.0	5.3	5.5	6.1	4.1	4.3	4.5
1.8	2.25	1.8	6.5	7.4	5.3	5.7	5.9	6.2	6.9	4.6	4.9	5.0
2.0	2.50	2.0	7.3	8.2	5.9	6.3	6.6	6.9	7.7	5.1	5.4	5.6
2.2	2.75	2.2	8.0	9.0	6.5	6.0	7.2	7.6	8.5	5.6	5.9	6.2
2.5	3.13	2.5	9.0	10.2	7.3	7.8	8.2	8.6	9.6	6.4	6.7	7.0
2.75	3.44	2.75	10.0	11.3	8.1	8.6	9.0	9.5	10.6	7.0	7.4	7.7
3.0	3.75	3.0	10.8	12.2	8.8	9.4	9.8	10.3	11.5	7.6	8.0	8.3
3.6	4.50	3.6	13.0	14.7	10.6	11.3	11.8	12.4	13.8	9.2	9.7	10.0
4.0	5.00	4.0	14.5	16.3	11.7	12.5	13.1	13.8	15.3	10.2	10.7	11.1
4.8	6.00	4.8	17.3	19.5	14.0	15.0	15.7	16.5	18.3	12.2	12.8	13.3
5.0	6.25	5.0	18.0	20.3	14.6	15.6	16.3	17.2	19.1	12.7	13.4	13.9
5.5	6.88	5.5	19.8	22.4	16.1	17.2	17.9	18.9	21.0	14.0	14.7	15.2
6.0	7.50	6.0	21.6	24.4	17.5	18.7	19.5	20.6	22.9	15.2	16.0	16.6
6.3	7.88	6.3	22.7	25.7	18.4	19.7	20.6	21.7	24.1	16.0	16.9	17.5
6.6	8.25	6.6	23.8	26.8	19.3	20.6	21.5	22.7	25.2	16.8	17.6	18.3
7.0	8.75	7.0	25.2	28.5	20.5	21.9	22.8	24.1	26.8	17.8	18.7	19.4
7.2	9.00	7.2	25.9	29.2	21.0	22.4	23.4	24.7	27.4	18.2	19.2	19.9
7.5	9.38	7.5	27.0	30.5	21.9	23.4	24.5	25.8	28.6	19.0	20.0	20.8

Note: The manufacturer reserves the right to change technical data or design without prior notice 10/00

Dimensions (in mm)



Clearances



Insulation data, dimensions and weight

Type	Creepage distance	Flashover distance	Recommended clearances (4)		Height H	Weight	Insulation withstand voltage of empty housing			
							BIL 1.2/50 µs		50 Hz 60s wet	
			E min	F min			req.values acc. to IEC	tested values	req. values acc. to IEC	tested values
	mm	mm	mm	mm	mm	kg	kV pK	kV pK	kV rms	kV rms
0.9	153	107	55	105	87.5	< 1.1	9.0	9.0	4.2	4.2
1.0	153	107	55	105	87.5	< 1.1	9.0	9.0	4.2	4.2
1.3	153	107	55	105	87.5	< 1.1	9.0	9.0	4.2	4.2
1.6	153	107	55	105	87.5	< 1.1	9.0	9.0	4.2	4.2
1.8	153	107	55	105	87.5	< 1.1	9.0	9.0	4.2	4.2
2.0	153	107	55	105	87.5	< 1.1	9.0	9.0	4.2	4.2
2.2	219	134	55	105	115	< 1.4	22.4	22.4	10.5	10.5
2.5	219	134	55	105	115	< 1.4	22.4	22.4	10.5	10.5
2.75	219	134	55	105	115	< 1.4	22.4	22.4	10.5	10.5
3.0	219	134	55	105	115	< 1.4	22.4	22.4	10.5	10.5
3.6	219	134	57	105	115	< 1.4	22.4	22.4	10.5	10.5
4.0	219	134	61	105	115	< 1.4	22.4	22.4	10.5	10.5
4.8	219	134	70	105	115	< 1.4	22.4	22.4	10.5	10.5
5.0	219	134	72	105	115	< 1.4	22.4	22.4	10.5	10.5
5.5	285	162	78	105	142.5	< 1.7	33.0	33.0	15.5	15.5
6.0	285	162	83	105	142.5	< 1.7	33.0	33.0	15.5	15.5
6.3	285	162	86	105	142.5	< 1.7	33.0	33.0	15.5	15.5
6.6	285	162	90	106	142.5	< 1.7	33.0	33.0	15.5	15.5
7.0	285	162	94	110	142.5	< 1.7	33.0	33.0	15.5	15.5
7.2	285	162	96	112	142.5	< 1.7	33.0	33.0	15.5	15.5
7.5	285	162	99	115	142.5	< 1.7	33.0	33.0	15.5	15.5

(4) National and local requirements have priority and may be used.