INDOOR
SURGE ARRESTER
TYPE PROXAR–IIW AC
IN SILICONE HOUSING

CATALOGUE CHART

APPLICATION

Surge arresters type **PROXAR-IIW AC** in silicone housing are intended for protection AC power engineering networks against multiple lightning and switching overvoltage's in MV switchgear, vacuum circuit breakers, MV cables and HV cable sheaths, motors, transformers and capacitors banks. This surge arrester is destined to all special technical requirements as well.

OPERATING CONDITIONS

Surge arresters adapted for indoor installation in temperate and tropical climate. The possibility to install in any working positions.

ADVANTAGES

- - Low residual voltage
- High energy input capacity
- Stable U-I characteristics even after absorbing multiple surges
- Housing resistant to rough handling
- Explosion and shatter – resistant design
- Pollution resistant and UV
- Ability to install in any position (vertically or horizontally)
- Maintenance free
- Low weight, easy transportation and storage
- Ability to work in horizontal position

ADDITIONAL EQUIPMENT

Additional accessories include line and grounding accessories (see: accessories for surge arresters).

ELECTRICAL DETAILS

Arrester classification according to EN 60099-4:2014	SL (Station Low)
Line discharge class according to IEC 60099-4:2009	2
System voltage (Us)	1 – 52 kV
Rated voltage (Ur)	1.3 – 51 kV
Nominal discharge current In 8/20 μs	10 kA
High current impulse Ihc 4/10 μs	100 kA
Rated repetitive charge transfer rating Qrs	1,6 C
Rated thermal Energy Wth	7,0 kJ/kV Ur
Single impulse energy absorption capability (impulse duration 2 ms – 4 ms)	3,5 kJ/kV Ur
Long duration current impulse resistance 2 ms (based on Qrs)	600 A
Short circuit rating	31.5 kA/0.2s
Service conditions:	
- ambient temperature	-45 °C do +60 °C*
- altitude up to	1000 m*
- frequency	48-62 Hz
Mechanical data:	
- SLL specified long-term load	350 Nm
- SSL specified short-term load	560 Nm
- torque	100 Nm
- vertical load	1000 N

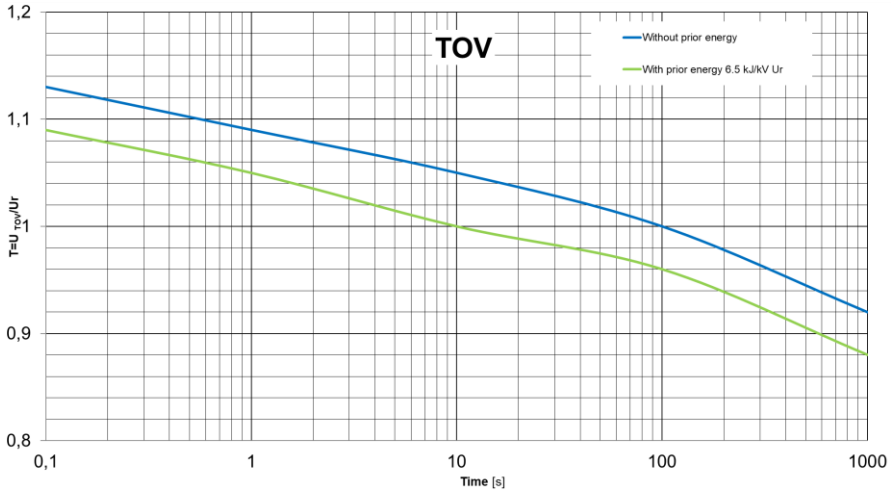
*) For the other values please contact with manufacturer.

ELECTRICAL DATA

Type PROXAR IIW AC	Rated voltage Ur	Max. continuous operating voltage Uc	Residual voltage in [kV] peak at a specified impulse current							
			Wave 1/… µs	Wave 8/20 µs				Wave 30/60 µs		
			10kA	2.5kA	5kA	10kA	20kA	0.25kA	0.5kA	1kA
	kV	kV	kV	kV	kV	kV	kV	kV	kV	kV
1.3	1.3	1.0	3.9	3.0	3.1	3.4	3.8	2.6	2.7	2.8
1.7	1.7	1.3	4.7	3.6	3.8	4.1	4.6	3.1	3.2	3.4
2.0	2.0	1.6	6.8	5.2	5.4	5.9	6.5	4.5	4.6	4.8
2.3	2.3	1.8	7.4	5.6	5.9	6.4	7.1	4.9	5.0	5.2
2.5	2.5	2.0	7.5	5.7	5.9	6.5	7.2	4.9	5.1	5.3
3.1	3.1	2.5	9.0	6.9	7.1	7.8	8.7	5.9	6.1	6.4
3.4	3.4	2.75	9.9	7.6	7.9	8.6	9.5	6.5	6.7	7.1
3.8	3.8	3.0	12.1	9.2	9.6	10.5	11.7	8.0	8.2	8.6
4.5	4.5	3.6	13.8	10.6	11.0	12.0	13.3	9.1	9.4	9.8
5.0	5.0	4.0	14.6	11.2	11.6	12.7	14.1	9.7	9.9	10.4
6.0	6.0	4.8	17.7	13.6	14.1	15.4	17.1	11.7	12.0	12.6
6.3	6.3	5.0	18.1	13.8	14.4	15.7	17.4	11.9	12.2	12.9
7.0	7.0	5.6	19.8	15.1	15.7	17.2	19.1	13.1	13.4	14.1
8.0	8.0	6.4	22.6	17.3	18.0	19.7	21.8	14.9	15.3	16.1
9.0	9.0	7.2	25.4	19.5	20.2	22.1	24.5	16.8	17.2	18.1
10.0	10.0	8.0	28.2	21.6	22.5	24.6	27.3	18.7	19.2	20.1
11.0	11.0	8.8	31.1	23.8	24.7	27.0	30.0	20.5	21.1	22.2
11.3	11.3	9.0	31.9	24.4	25.4	27.8	30.8	21.1	21.7	22.8
12.0	12.0	9.6	33.9	25.9	27.0	29.5	32.7	22.4	23.0	24.2
13.0	13.0	10.4	36.7	28.1	29.2	31.9	35.4	24.3	24.9	26.2
14.0	14.0	11.2	39.5	30.3	31.5	34.4	38.2	26.1	26.8	28.2
15.0	15.0	12.0	42.4	32.4	33.7	36.8	40.9	28.0	28.7	30.2
16.0	16.0	12.8	45.2	34.6	36.0	39.3	43.6	29.9	30.7	32.2
17.0	17.0	13.6	48.0	36.7	38.2	41.8	46.4	31.7	32.6	34.2
18.0	18.0	14.4	50.8	38.9	40.5	44.2	49.1	33.6	34.5	36.3
19.0	19.0	15.2	53.7	41.1	42.7	46.7	51.8	35.5	36.4	38.3
20.0	20.0	16.0	56.5	43.2	45.0	49.1	54.5	37.3	38.3	40.3
21.0	21.0	16.8	59.3	45.4	47.2	51.6	57.3	39.2	40.2	42.3
22.0	22.0	17.6	62.1	47.6	49.4	54.0	60.0	41.1	42.2	44.3
23.0	23.0	18.4	65.0	49.7	51.7	56.5	62.7	42.9	44.1	46.3
24.0	24.0	19.2	67.8	51.9	53.9	59.0	65.4	44.8	46.0	48.3
25.0	25.0	20.0	70.6	54.0	56.2	61.4	68.2	46.7	47.9	50.4
26.0	26.0	20.8	73.4	56.2	58.4	63.9	70.9	48.5	49.8	52.4
27.0	27.0	21.6	76.3	58.4	60.7	66.3	73.6	50.4	51.7	54.4
28.0	28.0	22.4	79.1	60.5	62.9	68.8	76.3	52.3	53.6	56.4
29.0	29.0	23.2	81.9	62.7	65.2	71.2	79.1	54.1	55.6	58.4
30.0	30.0	24.0	84.7	64.9	67.4	73.7	81.8	56.0	57.5	60.4
33.0	33.0	26.4	93.2	71.3	74.2	81.1	90.0	61.6	63.2	66.5
36.0	36.0	28.8	101.7	77.8	80.9	88.4	98.2	67.2	69.0	72.5
39.0	39.0	31.2	110.2	84.3	87.7	95.8	106.3	72.8	74.7	78.6
42.0	42.0	33.6	118.6	90.8	94.4	103.2	114.5	78.4	80.5	84.6
45.0	45.0	36.0	127.1	97.3	101.1	110.5	122.7	84.0	86.2	90.6
48.0	48.0	38.4	135.6	103.8	107.9	117.9	130.9	89.6	92.0	96.7
51.0	51.0	40.8	144.1	110.2	114.6	125.3	139.1	95.2	97.7	102.7

Attention: There is possibility to make surge arresters PROXAR-IIW AC in different nominal and continuous operating voltage.

TOV CHARACTERISTIC



IEC power frequency voltage versus time (U-t) characteristic TOV without prior energy

U_{TOV} for t=1 s 1.09 Ur = 1.363 Uc
U_{TOV} for t=3 s 1.07 Ur = 1.338 Uc
U_{TOV} for t=10 s 1.05 Ur = 1.313 Uc

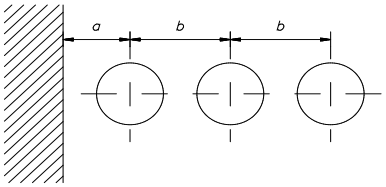
IEC power frequency voltage versus time (U-t) characteristic TOV with prior energy 6.5 kJ/kV Ur; 8.125 kJ/kV Uc

U_{TOV} for t=1 s 1.05 Ur = 1.313 Uc
U_{TOV} for t=3 s 1.03 Ur = 1.288 Uc
U_{TOV} for t=10 s 1.00 Ur = 1.250 Uc

TECHNICAL DATA FOR HOUSING

Us	Type PROXAR-IIW AC	External insulation		Minimal distances		H	Creepage distance	Flash-over distanse	Housing number	Weight
		50 Hz (60s)	1.2/50 µs dry	Distance between arresters „b”	Distance between arrester and the nearest grounded structure „a”					
kV	kV	kV	kV	mm	mm	mm	mm	mm	Nr	kg
	1.3	22	48	64	42	96	97	91	01	0.81
	1.7			66	44					0.82
	2.0			68	46					0.84
	2.3			70	48					0.86
	2.5			72	50					0,88
	3.1			74	52					0.90
	3.4			76	54					0.92
	3.8			98	76					0.94
3.6	4.5			100	78					0.96
	5.0			102	80					0.98
	6.0			109	87					1.00
	1.3	29	63	64	42	125	120	120	02	0.90
	1.7			66	44					0.92
	2.0			68	46					0.94
	2.3			70	48					0.96
	2.5			72	50					0.98
	3.1			74	52					1.00
	3.4			76	54					1.01
	3.8			98	76					1.02
3.6	4.5			100	78					1.03
	5.0			102	80					1.04
	6.0			109	87					1.05
	6.3			114	92					1.06
	7.0	31	69	124	102	137	132	132	03	1.10
	8.0			129	107					1,15
7.2	9.0			134	112					1.20
	10.0			139	117					1.25
	11.0			141	119					1.30
	12.0			143	121					1.35
	7.0	36	79	124	102	155	150	150	04	1.25
	8.0			129	107					1.30
7.2	9.0			134	112					1.35
	10.0			139	117					1.40
	11.0	45	99	141	119	195	190	190	05	1.65
	12.0			143	121					1.70
	13.0			145	123					1.75
	14.0			147	125					1.80
12	15.0			149	127					1.85
	16.0	55	121	169	147	240	235	235	06	1.90
	17.0			174	152					2.00
	18.0			184	162					2.10
	19.0			189	167					2.20
	20.0			194	172					2.30
	21.0			199	177					2.40
17.5	22.0			204	182					2.50
	16.0	65	142	169	147	280	275	275	07	2.00
	17.0			174	152					2.10
	18.0			184	162					2.20
	19.0			189	167					2.30
	20.0			194	172					2.40
	21.0			199	177					2.50
17.5	22.0			204	182					2.60
	23.0	80	175	210	188	345	340	340	08	2.75
	24.0			229	207					2.80
	25.0			239	217					2.85
	26.0			244	222					2.90
	27.0			249	227					3.00
	28.0			254	232					3.10
	29.0			259	237					3.20
24	30.0			264	242					3.30
	33.0	89	195	309	287	386	381	381	09	3.45
	36.0			316	294					3.60
	39.0	108	236	334	312	466	461	461	10	4.50
	42.0			349	327					4.65
36	45.0			360	338					4.80
	48.0	126	276	379	357	546	541	541	11	5.00
40.5	51.0			394	372					5.15

Note: It is possible to make a surge arrester in a different housing than the catalogue version.



Minimal mounting distances for surge arresters

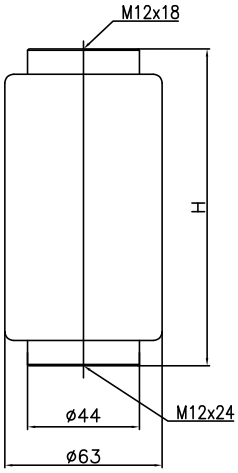


Fig.1

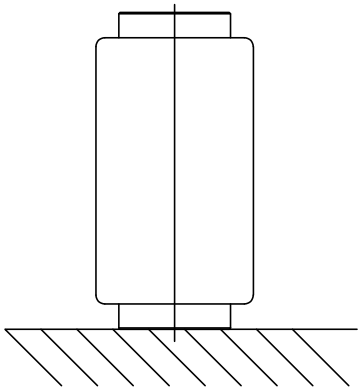


Fig.2

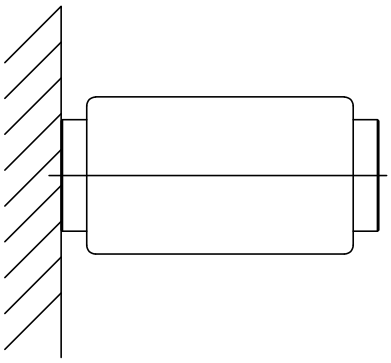


Fig.3

The figure shows the installation of surge arresters type PROXAR-IIW AC. The drawings No 2 – 3 presents different system of assembling surge arresters. Drawings No 2 presents vertical system of assembling. Drawings No 3 presents horizontal system of assembling.
Below the figures are presenting different options line and earth accessories available for use in surge arrester type PROXAR-IIW AC. For horizontal working configuration of surge arresters is this same option like for vertical working.

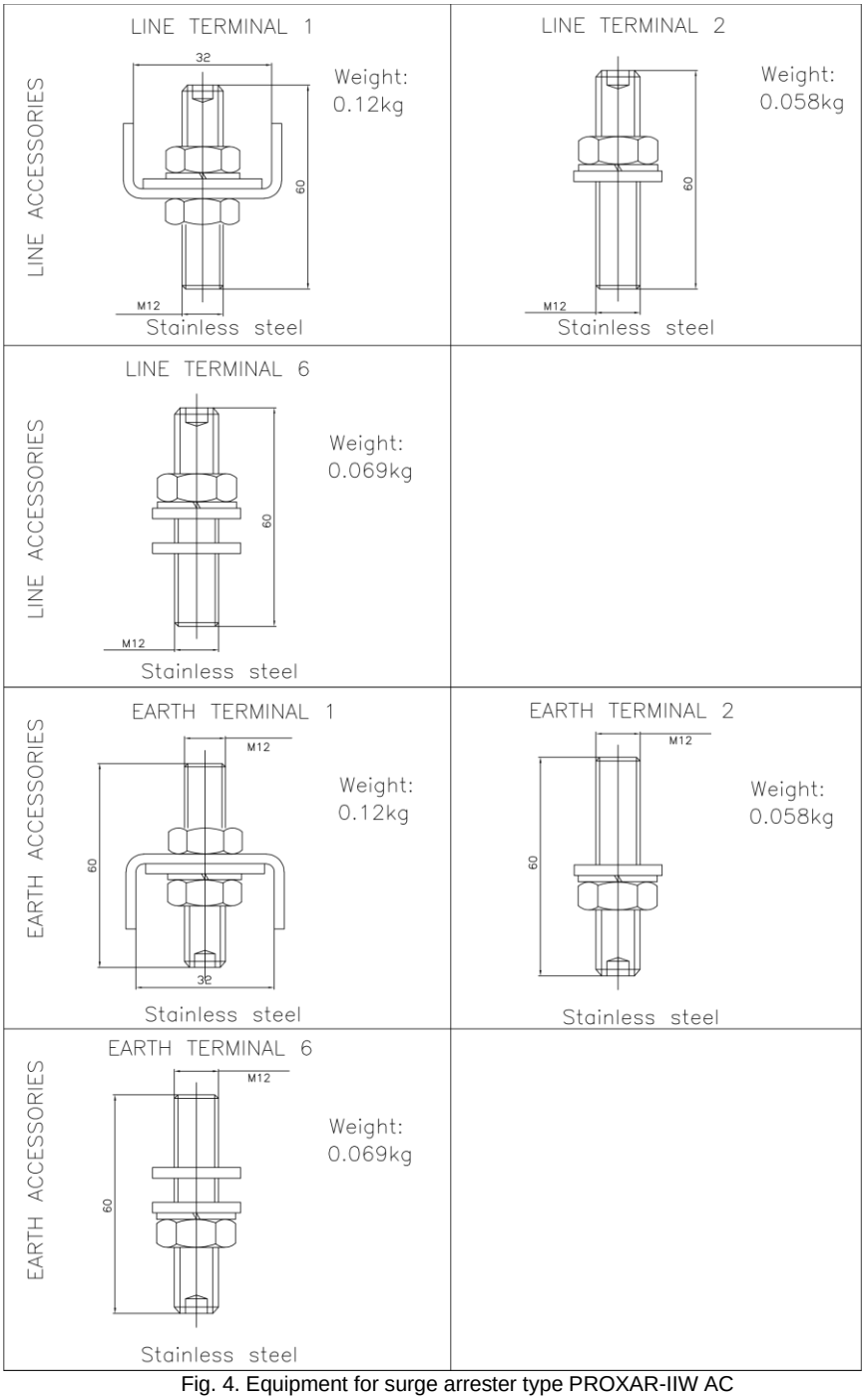


Fig. 4. Equipment for surge arrester type PROXAR-IIW AC

Order configurator**:

1	2	3	4	5	6	7	8	9
PROXAR-IIW		**AC**						

**) Empty fields to fill.

1. Type of product
PROXAR-IIW

2. Rated voltage Ur
See table – ELECTRICAL DATA — **Ur**

3. Voltage type
Alternating voltage (48 – 62 Hz) — **AC**

4. Mounting (according fig. 2, 3)
Vertical (fig. 2) — **1**
Horizontal (fig. 3) — **2**

5. Base (according fig. 4)
Without base — **0**

6. Line terminal (according fig. 4)
Without line terminal — **0**
Line terminal 1 — **1**
Line terminal 2 — **2**
Line terminal 6 — **6**

7. Earth terminal (according fig. 4)
Without earth terminal — **0**
Earth terminal 1 — **1**
Earth terminal 2 — **2**
Earth terminal 6 — **6**

8. Housing number
See table – TECHNICAL DATA FOR HOUSING — **Housing number**

9. Design
– standard — **0**
– non-standard (to be agreed with the manufacturer) — **X**

Order example:

1	2	3	4	5	6	7	8	9
PROXAR-IIW	**9**	**AC**	**1**	**0**	**1**	**1**	**04**	**0**

PROXAR-IIW 9 AC 1011040 – 3 pcs.

Description: Surge arrester type **PROXAR-IIW** of rated voltage Ur=**9.0** kV for **AC** system in vertical mounting version -**1;** without base – **0**; line terminal – **1**; earth terminal – **1;** housing number – **04;** in standard design **0**.

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