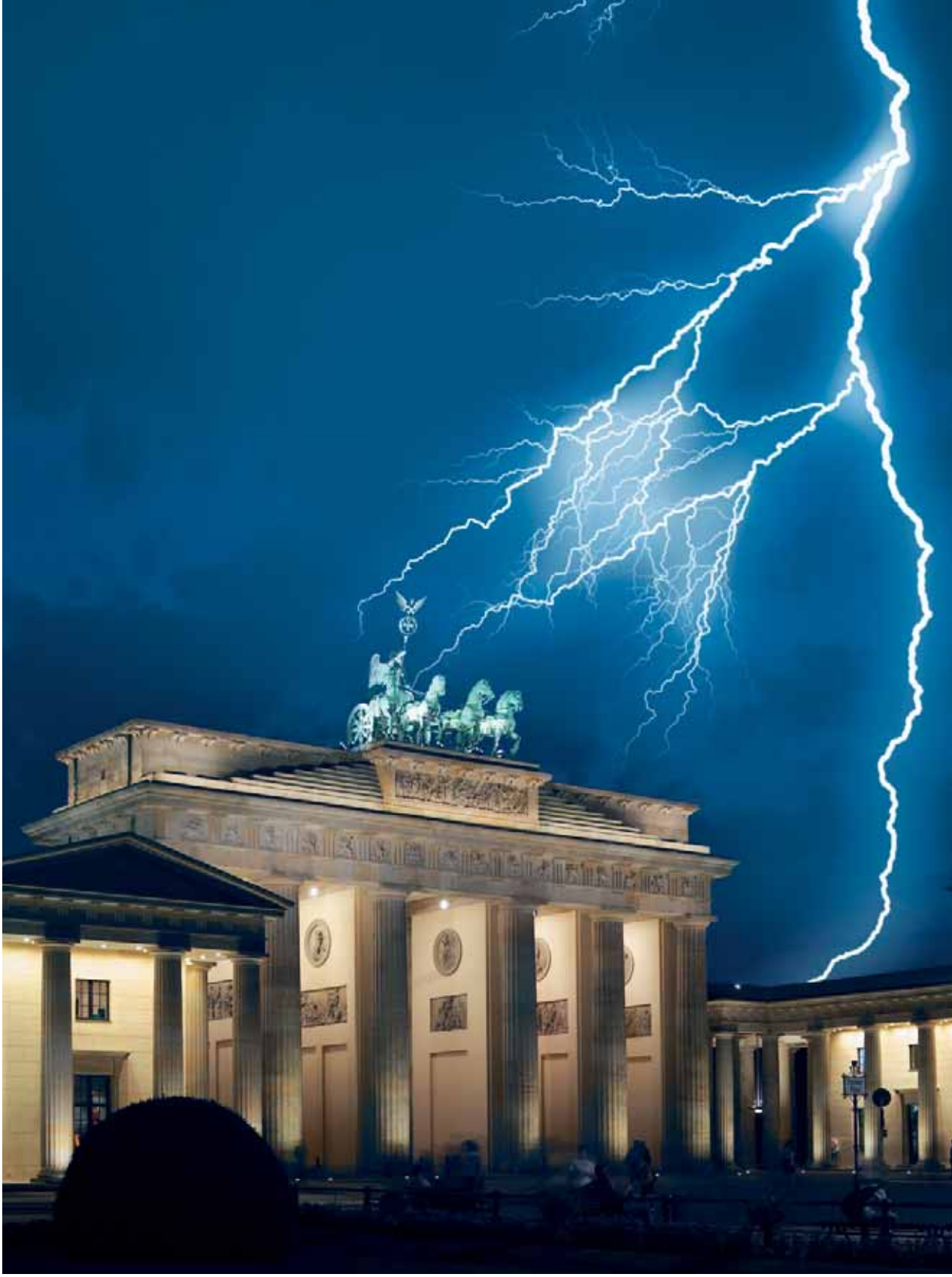
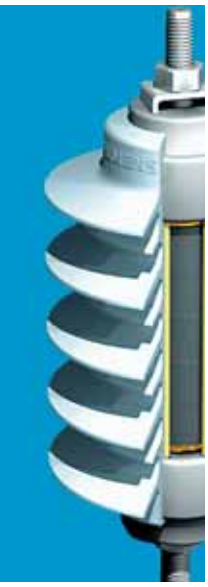


3EK7 Medium Voltage Silicone Insulated Surge Arresters

Answers for energy.

SIEMENS

Setting new Standards



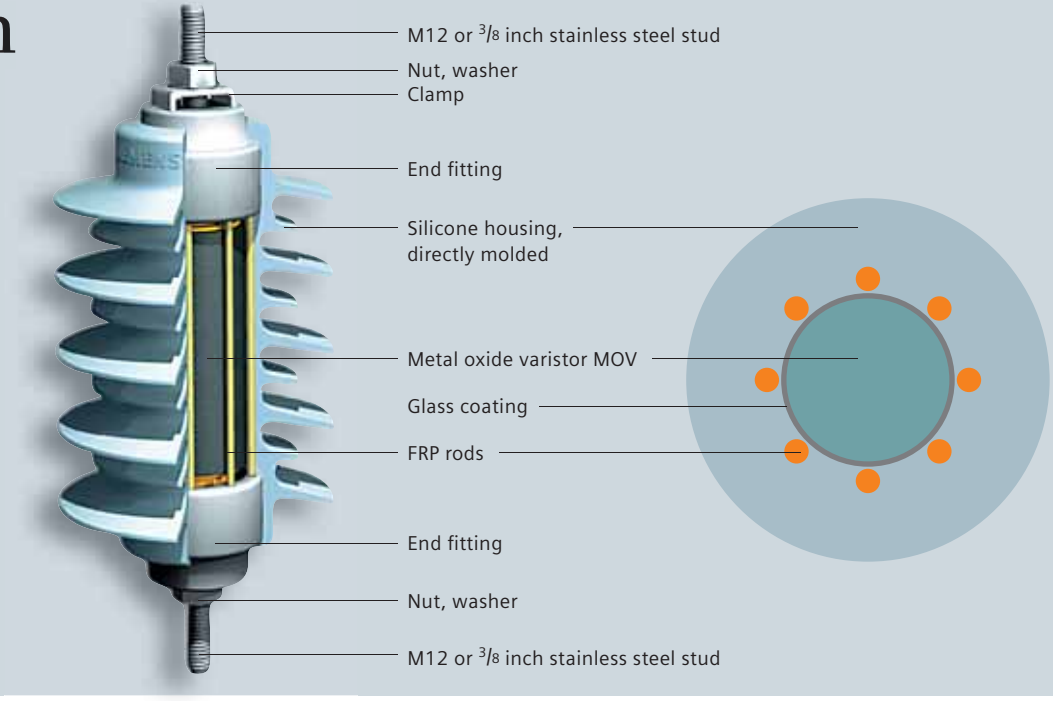
The 3EK7's mechanical features:

- Glass-collared MOV,
- Silicone rubber housing,
- FRP rods and
- Aluminium end fittings.

Three types of 3EK7 surge arresters are available:
3EK7...-. **C** .. surge arresters according to IEC 60099-4 with metric thread,
3EK7...-. **A** .. surge arresters according to IEEE Std C 62.11 with imperial thread.
For special applications:
3EK7...-. **B** .. surge arresters according to IEEE Std C 62.11 with metric thread.

The new 3EK7 surge arrester from Siemens offers superior protection against power surges for the equipment in electrical distribution systems with operating voltages of up to 72.5 kV. Besides being highly resistant to environmental pollution of all kinds, its performance in dealing with earth faults and its excellent short-circuit ratings are setting entirely new standards. The silicone on the new 3EK7 surge arrester refuses to allow any deposits of pollution or films of moisture to form on it. Thus, surface currents caused by pollution will virtually not occur. The 3EK7 arrester is also very lightweight, robust and durable, due to its special cage design.

3EK7 Design



3EK7 a top quality product

- The silicone rubber (SR) housing is molded directly onto the MOV blocks and the protection cage. It provides an excellent sealing system against moisture ingress and partial discharges. In addition, the MOV blocks are glass-collared to prevent aging.
- Highest quality materials. SR is highly hydrophobic and maintains this ability to repel water and any deposits of pollution throughout its entire service life. This results in high tracking and erosion resistance. Furthermore, the SR housing is self-extinguishing and flame-retardant. These advantages provide maintenance free and reliable service life for 3EK7 arresters.
- Manufacturing plants are certified under ISO 9001 and ISO 14001.
- 3EK7 arresters have been type tested by an independent test laboratory.

Secure and reliable design

- The 3EK7 series is based on a cage of pre-stressed fiber-reinforced plastic rods for high mechanical strength, reducing the risk of internal components being ejected. In the extremely rare event of the resistors being overloaded, arcing cannot result in a build-up of critical internal pressure, since the resistors are not enclosed in a sealed mechanical shell. Thus, the arc can escape through the silicone sheath, leaving the mechanical support structure of the enclosure unharmed.
- The cage is lightweight design and yet it offers excellent torsional, tensile and cantilever strength: Maximum working cantilever strength of 350 Nm.
- SR is resistant to UV and ozone exposure as well as to all common organic and non-organic solvents and cleaning agents. Therefore, the 3EK7 is suitable for any environmental conditions of industrial areas as well as in desert or coastal regions.
- 3EK7 arresters are suitable for a temperature range from –55° C to +50° C.
- Application altitude up to 3600 m a.s.l.

Fast delivery

- Flexibility in production and in our global network of service and sales facilities provide fast and prompt supply e. g. shipment ex stocks within six days after your order has been received for the surge arresters marked with asterisk (*) (Refer to table on page 4 and 6).

3EK7 Arresters According to IEC 60099-4 Selection and Main Data

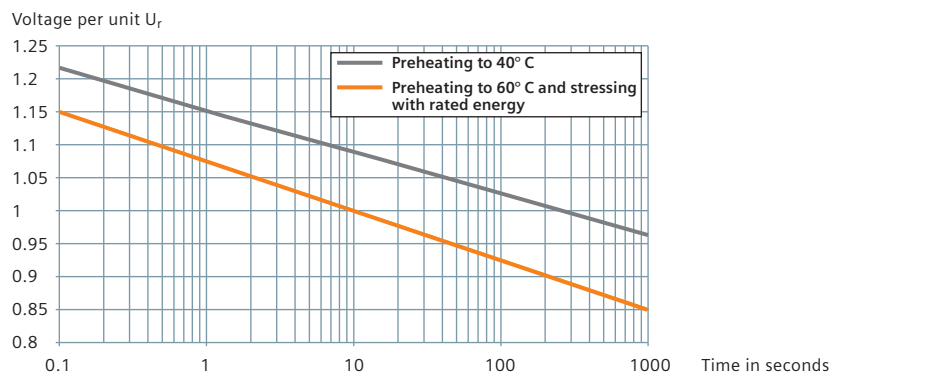


Table 1: *IEC power-frequency voltage versus time characteristic*

Nominal discharge current I_n	5 kA	10 kA
Maximum continous operating voltage U_c	48 kV	48 kV
Rated voltage U_r	60 kV	60 kV
Long duration current impulse	150 A	325 A
High current pressure relief	20 kA	20 kA
Low current pressure relief	600 A	600 A
High-current impulse	65 kA	100 kA
Maximum permisible static service load	280 Nm	350 Nm
Maximum permisible service load (MPSL)	400 Nm	500 Nm
Energy absorption capability	2.2 kJ/kV U_r	3.5 kJ/kV U_r

Table 2: *3EK7 arrester main data*

Highest voltage for equipment U_m [kV]	Rated lightning impulse withstand voltage [kV]	Solidly earthed neutral system	Isolated neutral system	Impedance earthed neutral system	Resonant earthed neutral system
2.75	30; 45; 60	3EK7 030-.C..	3EK7 050-.C..	3EK7 030-.C..	3EK7 050-.C..
3.6	20; 40	3EK7 030-.C..	3EK7 050-.C..	3EK7 030-.C..	3EK7 050-.C..
5.5	45; 60; 75	3EK7 050-.C..	3EK7 090-.C..	3EK7 060-.C..	3EK7 090-.C..
7.2	40; 60	3EK7 060-.C..	3EK7 090-.C..	3EK7 090-.C..	3EK7 090-.C..
8.25	60; 75; 95	3EK7 090-.C..	3EK7 105-.C..	3EK7 090-.C..	3EK7 105-.C..
12	60; 75; 95	3EK7 090-.C.. or 3EK7 105-.C..	3EK7 150-.C..	3EK7 120-.C..	3EK7 150-.C..
15.5	75	3EK7 120-.C..	-	3EK7 150-.C..	-
15.5	85; 110	3EK7 120-.C..	3EK7 210-.C..	3EK7 150-.C..	3EK7 210-.C..
17.5	75	3EK7 150-.C..	-	3EK7 180-.C..	-
17.5	95	3EK7 150-.C..	3EK7 220-.C..	3EK7 180-.C..	3EK7 220-.C..
24	95	3EK7 210-.C..	-	3EK7 240-.C..	-
24	125; 145	3EK7 210-.C..	3EK7 300-.C..	3EK7 240-.C..	3EK7 300-.C..
25	125; 145	3EK7 210-.C..	3EK7 315-.C..	3EK7 250-.C..	3EK7 315-.C..
27	95	3EK7 210-.C..	-	-	-
27	125	3EK7 210-.C..	-	3EK7 270-.C..	-
27	150	3EK7 210-.C..	3EK7 360-.C..	3EK7 270-.C..	3EK7 360-.C..
30	160	3EK7 240-.C..	3EK7 390-.C..	3EK7 300-.C..	3EK7 390-.C..
36	145	3EK7 300-.C..	-	3EK7 360-.C..	-
36	170	3EK7 300-.C..	3EK7 450-.C..	3EK7 360-.C..	3EK7 450-.C..
38	125	3EK7 300-.C..	-	-	-
38	150	3EK7 300-.C..	-	3EK7 390-.C..	-
38	200	3EK7 300-.C..	3EK7 480-.C..	3EK7 390-.C..	3EK7 480-.C..
40.5	190	3EK7 315-.C..	3EK7 510-.C..	3EK7 420-.C..	3EK7 510-.C..
48.3	150	3EK7 390-.C..	-	-	-
48.3	200	3EK7 390-.C..	-	3EK7 480-.C..	-
48.3	250	3EK7 390-.C..	3EK7 600-.C..	3EK7 480-.C..	3EK7 600-.C..
52	250	3EK7 420-.C..	-	3EK7 540-.C..	-
72.5	325	3EK7 570-.C..	-	-	-

Table 3: *Typical 3EK7 arresters for system voltages according to IEC 60099-4*

Rated voltage U_r [kV]	Continuous operating voltage U_c [kV]	Arrester part number	1 kA 8/20 µs [kV cr]
3	2.4	3EK7 030 -2CB4	7.0
6	4.8	3EK7 060 -2CB4	14.0
9*	7.2	3EK7 090 -2CB4	20.9
10.5*	8.4	3EK7 105 -2CB4	24.4
12*	9.6	3EK7 120 -2CC4	27.8
15*	12	3EK7 150 -2CC4	34.7
18	14.4	3EK7 180 -2CD4	41.7
21*	16.8	3EK7 210 -2CD4	48.6
24	19.2	3EK7 240 -2CE4	55.5
27	21.6	3EK7 270 -2CF4	62.6
30	24	3EK7 300 -2CF4	69.3
31.5	25.2	3EK7 315 -2CH4	72.9
33	26.4	3EK7 330 -2CH4	76.4
36	28.8	3EK7 360 -2CH4	83.3
39	31.2	3EK7 390 -2CH4	90.5
42	33.6	3EK7 420 -2CH4	97.4
45	36	3EK7 450 -2CH4	104
48	38.5	3EK7 480 -2CK4	111
51	41	3EK7 510 -2CK4	118
54	43.2	3EK7 540 -2CK4	125
57	45.6	3EK7 570 -2CK4	132
60	48	3EK7 600 -2CK4	139

Table 4: *3EK7 nominal discharge current 5 kA*

Rated voltage U_r [kV]	Continuous operating voltage U_c [kV]	Arrester part number	1 kA 8/20 µs [kV cr]
3	2.4	3EK7 030 -4CB4	6.6
5	4	3EK7 050 -4CB4	10.8
6	4.8	3EK7 060 -4CB4	13.0
9*	7.2	3EK7 090 -4CB4	19.4
10.5*	8.4	3EK7 105 -4CB4	22.8
12*	9.6	3EK7 120 -4CC4	25.9
15*	12	3EK7 150 -4CC4	32.3
18*	14.4	3EK7 180 -4CD4	38.8
21*	16.8	3EK7 210 -4CD4	45.3
22*	17.6	3EK7 220 -4CE4	47.5
24*	19.2	3EK7 240 -4CE4	51.7
25	20	3EK7 250 -4CE4	53.9
27	21.6	3EK7 270 -4CF4	58.2
30*	24	3EK7 300 -4CF4	64.6
31.5	25.2	3EK7 315 -4CH4	67.9
33	26.4	3EK7 330 -4CH4	71.1
36*	28.8	3EK7 360 -4CH4	77.6
39	31.2	3EK7 390 -4CH4	84.2
42	33.6	3EK7 420 -4CH4	90.7
45	36	3EK7 450 -4CH4	97.2
48	38.5	3EK7 480 -4CK4	104
50.5*	40.5	3EK7 505 -4CK4	107
51	41	3EK7 510 -4CK4	110
54	43.2	3EK7 540 -4CK4	117
57	45.6	3EK7 570 -4CK4	123
60	48	3EK7 600 -4CK4	130

Table 5: *3EK7 nominal discharge current 10 kA*

Maximum discharge voltage							Creepage distance	Flashover distance	Lightning impulse withstand voltage	Height "H" [1]	Net weight	Packed weight	Pallet weight	Qty. per pallet
3 kA 8/20 µs [kV cr]	5 kA 8/20 µs [kV cr]	10 kA 8/20 µs [kV cr]	15 kA 8/20 µs [kV cr]	20 kA 8/20 µs [kV cr]	125 A 30/60 µs [kV cr]	500 A 30/60 µs [kV cr]	[mm]	[mm]	[kV]	[mm]	[kg]	[kg]	[kg]	[pcs]
7.7	8.1	8.8	9.6	10.4	6.2	6.6	372	180	104	170	1.5	2.1	488	221
15.3	16.1	17.5	19.0	20.6	12.2	13.2	372	180	104	170	1.5	2.1	488	221
22.8	24.0	26.2	28.3	30.7	18.2	19.7	372	180	104	170	1.6	2.2	510	221
26.7	28.1	30.6	33.2	36.0	21.4	23.0	372	180	104	170	1.6	2.2	510	221
30.4	32.0	34.9	37.8	41.0	24.3	26.2	485	210	122	200	1.8	2.4	494	195
37.9	39.9	43.5	47.1	51.1	30.3	32.7	485	210	122	200	1.9	2.5	514	195
45.5	47.9	52.2	56.5	61.3	36.4	39.3	605	248	144	240	2.2	2.8	506	169
53.1	55.9	60.9	66.0	71.6	42.5	45.8	605	248	144	240	2.3	2.9	523	169
60.6	63.8	69.5	75.3	81.7	48.5	52.3	775	286	166	270	2.6	3.3	535	156
68.3	71.9	78.4	84.8	92.0	54.6	59.0	900	318	184	300	2.9	3.6	491	130
75.7	79.7	86.9	94.0	102	60.6	65.4	900	318	184	300	2.9	3.6	491	130
79.6	83.8	91.3	98.9	107	63.7	68.7	1230	418	242	400	3.7	4.4	545	117
83.4	87.8	95.7	104	112	66.7	72.0	1230	418	242	400	3.7	4.4	545	117
91.0	95.8	104	113	123	72.8	78.6	1230	418	242	400	3.8	4.5	557	117
98.8	104	113	123	133	79.0	85.3	1230	418	242	400	3.8	4.5	557	117
106	112	122	132	143	85.1	91.8	1230	418	242	400	3.9	4.6	569	117
114	120	131	142	154	91.2	98.4	1230	418	242	400	3.9	4.6	569	117
122	128	140	151	164	97.3	105	1595	520	302	510	4.8	5.6	464	78
129	136	148	161	174	103	112	1595	520	302	510	4.8	5.6	464	78
137	144	157	170	184	109	118	1595	520	302	510	4.9	5.7	471	78
144	152	166	179	195	116	125	1595	520	302	510	4.9	5.7	471	78
152	160	174	189	205	122	131	1595	520	302	510	5.0	5.8	479	78

Maximum discharge voltage							Creepage distance	Flashover distance	Lightning impulse withstand voltage	Height "H" [1]	Net weight	Packed weight	Pallet weight	Qty. per pallet
3 kA 8/20 µs [kV cr]	5 kA 8/20 µs [kV cr]	10 kA 8/20 µs [kV cr]	15 kA 8/20 µs [kV cr]	20 kA 8/20 µs [kV cr]	125 A 30/60 µs [kV cr]	500 A 30/60 µs [kV cr]	[mm]	[mm]	[kV]	[mm]	[kg]	[kg]	[kg]	[pcs]
7.1	7.5	8.1	8.7	9.3	5.8	6.2	372	180	104	170	1.5	2.1	488	221
11.7	12.4	13.3	14.4	15.3	9.4	10.1	372	180	104	170	1.6	2.2	510	221
14.2	15.0	16.1	17.4	18.5	11.4	12.2	372	180	104	170	1.6	2.2	510	221
21.1	22.3	24.0	25.9	27.6	17.0	18.2	372	180	104	170	1.7	2.3	532	221
24.7	26.1	28.1	30.3	34.6	20.0	22.7	372	180	104	170	1.7	2.3	532	221
28.2	29.8	32.0	34.6	36.8	22.7	24.3	485	210	122	200	2.0	2.6	533	195
35.1	37.1	39.9	43.1	45.9	28.3	30.3	485	210	122	200	2.1	2.7	553	195
42.2	44.5	47.9	51.7	55.1	34.0	36.4	605	248	144	240	2.4	3.0	540	169
49.2	52.0	55.9	60.4	64.3	39.7	42.5	605	248	144	240	2.5	3.1	557	169
51.6	54.5	58.6	63.3	67.4	41.6	44.5	775	286	166	270	2.8	3.5	566	156
56.1	59.3	63.8	68.9	73.4	45.3	48.5	775	286	166	270	2.8	3.5	566	156
58.5	61.8	66.5	71.8	76.5	47.2	50.5	775	286	166	270	2.9	3.6	581	156
63.3	66.9	71.9	77.7	82.7	51.0	54.6	775	318	184	300	3.2	3.9	530	130
70.1	74.1	79.7	86.1	91.7	56.6	60.6	775	318	184	300	3.2	3.9	530	130
73.7	77.9	83.8	90.5	96.4	59.5	63.7	1230	418	242	400	4.0	4.7	581	117
77.3	81.7	87.8	94.8	101	62.3	66.7	1230	418	242	400	4.1	4.8	592	117
84.3	89.1	95.8	104	110	68.0	72.8	1230	418	242	400	4.1	4.8	592	117
91.5	96.7	104	112	120	73.8	79.0	1230	418	242	400	4.2	4.9	604	117
98.6	104	112	121	129	79.5	85.1	1230	418	242	400	4.3	5.0	616	117
106	112	120	130	138	85.2	91.2	1230	418	242	400	4.4	5.1	627	117
113	119	128	138	147	90.9	97.3	1595	520	302	510	5.2	6.0	495	78
116	123	132	143	152	93.7	100	1595	520	302	510	5.3	6.1	503	78
120	127	136	147	156	96.6	103	1595	520	302	510	5.3	6.1	503	78
127	134	144	156	166	102	109	1595	520	302	510	5.4	6.2	510	78
134	141	152	164	175	108	116	1595	520	302	510	5.5	6.3	518	78
141	149	160	173	184	114	122	1595	520	302	510	5.6	6.4	526	78

1) Refer to figure 1 on page 8 (*) Available ex stock

3EK7 Arresters According to IEEE Std C 62.11 Selection and Main Data

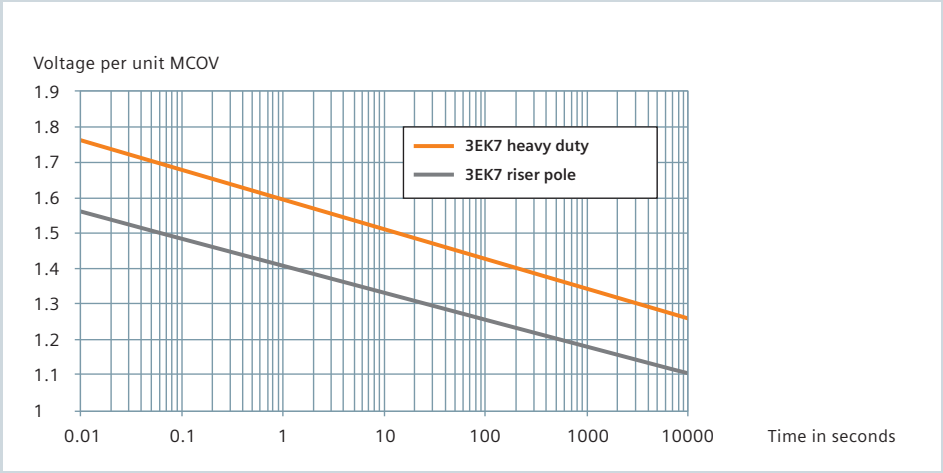


Table 6: *ANSI temporary overvoltage, preheating 60˚ C, no prior duty*

	Normal duty	Heavy duty	Riser pole
Maximum continous operating voltage MCOV	29 kV	29 kV	29 kV
Duty cycle voltage	36 kV	36 kV	36 kV
Low-current, long-duration	75 A	250 A	250 A
High current pressure relief	20 kA	20 kA	20 kA
Low current pressure relief	600 A	600 A	600 A
High-current, short-duration	65 kA	100 kA	100 kA
Coordinating current	5 kA	10 kA	10 kA
Maximum design cantilever load-static (MDCL)	280 Nm	280 Nm	280 Nm
Energy absorption capability	2.7 kJ/kV MCOV	4.6 kJ/kV MCOV	4.6 kJ/kV MCOV

Table 7: *3EK7 distribution arrester main data*

System L-L Voltage [kV]	Four-wire multigrounded neutral wye	Three-wire low impedance grounded neutral circuit	Three-wire high impedance grounded neutral circuit
2.4			3EK7 030-.A..
4.16	3EK7 030-.A..	3EK7 060-.A..	3EK7 060-.A..
4.26			3EK7 060-.A..
4.8			3EK7 060-.A..
6.9			3EK7 090-.A..
8.3	3EK7 060-.A..	3EK7 090-.A..	
12	3EK7 090-.A..	3EK7 120-.A..	
12.47	3EK7 090-.A.. or 3EK7 100-.A..	3EK7 150-.A..	
13.2	3EK7 100-.A..	3EK7 150-.A..	
13.8	3EK7 100-.A.. or 3EK7 120-.A..	3EK7 150-.A..	3EK7 180-.A..
20.78	3EK7 150-.A..	3EK7 210-.A..	
22.86	3EK7 150-.A..	3EK7 210-.A..	
23			3EK7 300-.A..
24.94	3EK7 180-.A..	3EK7 270-.A..	
27.6	3EK7 210-.A..	3EK7 300-.A..	
34.5	3EK7 270-.A..	3EK7 360-.A..	

Table 8: *Typical 3EK7 arresters for system voltages according to the latest IEEE Std C 62.11*

Duty cycle [kV]	MCOV [kV]	Arrester part number	FOW [kV cr]	1.5 kA 8/20 µs [kV cr]
3	2.55	3EK7 030 -2AB4	10.0	8.2
6	5.1	3EK7 060 -2AB4	20.0	16.3
9*	7.65	3EK7 090 -2AB4	30.0	24.5
10*	8.4	3EK7 100 -2AB4	33.3	27.2
12	10.2	3EK7 120 -2AC4	38.8	31.7
15	12.7	3EK7 150 -2AC4	48.4	39.6
18*	15.3	3EK7 180 -2AD4	57.2	46.8
21	17	3EK7 210 -2AD4	66.8	54.6
24	19.5	3EK7 240 -2AE4	73.9	60.4
27*	22	3EK7 270 -2AF4	83.1	68.0
30	24.4	3EK7 300 -2AF4	92.3	75.6
33	27.5	3EK7 330 -2AH4	102	83.1
36	29	3EK7 360 -2AH4	111	90.7

Table 9: *3EK7 normal duty*

Duty cycle [kV]	MCOV [kV]	Arrester part number	FOW [kV cr]	1.5 kA 8/20 µs [kV cr]
3*	2.55	3EK7 030 -3AB4	10.5	8.0
6*	5.1	3EK7 060 -3AB4	21.6	16.5
9*	7.65	3EK7 090 -3AB4	30.9	23.6
10*	8.4	3EK7100 -3AB4	32.3	24.7
12	10.2	3EK7120 -3AC4	41.0	31.3
15*	12.7	3EK7 150 -3AD4	51.3	39.1
18*	15.3	3EK7 180 -3AD4	61.5	47.0
21*	17	3EK7 210 -3AE4	67.3	51.4
24	19.5	3EK7 240 -3AF4	77.6	59.2
27*	22	3EK7 270 -3AF4	87.7	66.9
30*	24.4	3EK7 300 -3AH4	96.6	73.8
33	27.5	3EK7 330 -3AH4	108	82.7
36	29	3EK7 360 -3AH4	119	90.6

Table 10: *3EK7 heavy duty*

Duty cycle [kV]	MCOV [kV]	Arrester part number	FOW [kV cr]	1.5 kA 8/20 µs [kV cr]
3	2.55	3EK7 030 -4AB4	8.9	6.8
6	5.1	3EK7 060 -4AB4	17.7	13.5
9*	7.65	3EK7 090 -4AB4	26.4	20.2
10*	8.4	3EK7 100 -4AC4	29.3	22.3
12	10.2	3EK7 120 -4AD4	35.2	26.9
15	12.7	3EK7 150 -4AD4	43.9	33.5
18*	15.3	3EK7 180 -4AE4	52.7	40.2
21	17	3EK7 210 -4AF4	61.5	47.0
24	19.5	3EK7 240 -4AH4	70.2	53.6
27*	22	3EK7 270 -4AH4	79.1	60.4
30	24.4	3EK7 300 -4AH4	87.7	66.9
33	27.5	3EK7 330 -4AK4	96.6	73.8
36	29	3EK7 360 -4AK4	105	80.5

Table 11: *3EK7 riser pole*

Maximum discharge voltage							Creepage distance	Flashover distance	Lightning impulse withstand voltage	Height "H" [1]	Net weight	Packed weight	Pallet weight	Qty. per pallet
3 kA 8/20 µs [kV cr]	5 kA 8/20 µs [kV cr]	10 kA 8/20 µs [kV cr]	20 kA 8/20 µs [kV cr]	40 kA 8/20 µs [kV cr]	125 A 45/90 µs [kV cr]	500 A 45/90 µs [kV cr]	[mm]	[mm]	[kV]	[mm]	[kg]	[kg]	[kg]	[pcs]
8.6	9.1	9.9	11.6	14.0	6.9	7.4	372	180	104	170	1.4	1.6	393	240
17.3	18.2	19.8	23.3	28.0	13.8	14.9	372	180	104	170	1.4	1.6	406	240
25.9	27.2	29.7	34.9	42.0	20.7	22.3	372	180	104	170	1.5	1.7	419	240
28.8	30.3	33.0	38.8	46.6	23.0	24.8	372	180	104	170	1.6	1.7	426	240
33.5	35.2	38.4	45.1	54.3	26.8	28.9	485	210	122	200	1.8	2.0	375	180
41.8	44.0	48.0	56.4	67.8	33.5	36.1	485	210	122	200	1.8	2.1	385	180
49.4	52.0	56.7	66.6	80.1	39.5	42.7	605	248	144	240	2.2	2.4	444	180
57.7	60.7	66.2	77.7	93.5	46.1	49.8	605	248	144	240	2.2	2.4	454	180
63.8	67.2	73.2	86.0	103	51.0	55.1	775	286	166	270	2.5	2.7	510	180
71.8	75.6	82.4	96.7	116	57.4	62.0	900	318	184	300	2.8	3.1	383	120
79.7	83.9	91.5	107	129	63.8	68.8	900	318	184	300	2.9	3.1	390	120
87.7	92.3	101	118	142	70.2	75.7	1230	418	242	400	3.7	3.9	483	120
95.7	101	110	129	155	76.6	82.6	1230	418	242	400	3.7	3.9	489	120

Maximum discharge voltage							Creepage distance	Flashover distance	Lightning impulse withstand voltage	Height "H" [1]	Net weight	Packed weight	Pallet weight	Qty. per pallet
3 kA 8/20 µs [kV cr]	5 kA 8/20 µs [kV cr]	10 kA 8/20 µs [kV cr]	20 kA 8/20 µs [kV cr]	40 kA 8/20 µs [kV cr]	125 A 45/90 µs [kV cr]	500 A 45/90 µs [kV cr]	[mm]	[mm]	[kV]	[mm]	[kg]	[kg]	[kg]	[pcs]
8.4	8.8	9.5	10.9	12.6	6.7	7.2	372	180	104	170	1.5	1.7	412	240
17.2	18.2	19.6	22.5	26.1	13.9	14.9	372	180	104	170	1.6	1.7	433	240
24.7	26.1	28.1	32.3	37.4	20.0	21.4	372	180	104	170	1.7	1.8	451	240
25.9	27.3	29.4	33.8	39.1	20.9	22.3	372	180	104	170	1.7	1.9	462	240
32.8	34.7	37.3	42.9	49.6	26.5	28.3	485	210	122	200	2.0	2.2	408	180
41.0	43.3	46.6	53.6	62.0	33.1	35.4	605	248	144	240	2.4	2.5	472	180
49.2	52.0	55.9	64.3	74.3	39.7	42.5	605	248	144	240	2.5	2.7	497	180
53.9	56.9	61.2	70.4	81.4	43.5	46.5	775	286	166	270	2.8	3.0	559	180
62.0	65.6	70.5	81.1	93.8	50.1	53.6	900	318	184	300	3.1	3.3	417	120
70.1	74.1	79.7	91.7	106	56.6	60.6	900	318	184	300	3.2	3.5	433	120
77.3	81.7	87.8	101	117	62.3	66.7	1230	418	242	400	4.0	4.2	523	120
86.6	91.5	98.4	113	131	69.9	74.8	1230	418	242	400	4.1	4.3	536	120
94.9	100	108	124	143	76.5	81.9	1230	418	242	400	4.2	4.5	556	120

Maximum discharge voltage							Creepage distance	Flashover distance	Lightning impulse withstand voltage	Height "H" [1]	Net weight	Packed weight	Pallet weight	Qty. per pallet
3 kA 8/20 µs [kV cr]	5 kA 8/20 µs [kV cr]	10 kA 8/20 µs [kV cr]	20 kA 8/20 µs [kV cr]	40 kA 8/20 µs [kV cr]	125 A 45/90 µs [kV cr]	500 A 45/90 µs [kV cr]	[mm]	[mm]	[kV]	[mm]	[kg]	[kg]	[kg]	[pcs]
7.1	7.5	8.1	9.3	10.8	5.8	6.2	372	180	104	170	1.4	1.7	415	240
14.2	15.0	16.1	18.5	21.4	11.4	12.2	372	180	104	170	1.5	1.8	437	240
21.1	22.3	24.0	27.6	31.9	17.0	18.2	372	180	104	170	1.6	1.8	447	240
23.4	24.7	26.6	30.6	35.4	18.9	20.2	485	210	122	200	1.7	1.8	458	240
28.2	29.8	32.0	36.8	42.6	22.7	24.3	605	248	144	240	1.9	2.1	524	240
35.1	37.1	39.9	45.9	53.1	28.3	30.3	605	248	144	240	2.3	2.5	611	240
42.2	44.5	47.9	55.1	63.7	34.0	36.4	775	286	166	270	2.4	2.7	494	180
49.2	52.0	55.9	64.3	74.3	39.7	42.5	900	318	184	300	2.8	3.0	551	180
56.1	59.3	63.8	73.4	84.9	45.3	48.5	1230	418	242	400	3.0	3.3	413	120
63.3	66.9	71.9	82.7	95.6	51.0	54.6	1230	418	242	400	3.2	3.5	430	120
70.1	74.1	79.7	91.7	106	56.6	60.6	1230	418	242	400	4.0	4.2	522	120
77.3	81.7	87.8	101	117	62.3	66.7	1595	520	302	510	4.2	4.4	544	120
84.3	89.1	95.8	110	127	68.0	72.8	1595	520	302	510	4.3	4.5	555	120

1) Refer to figure 1 on page 8; (*) Available ex stock

Drawings and Accessories

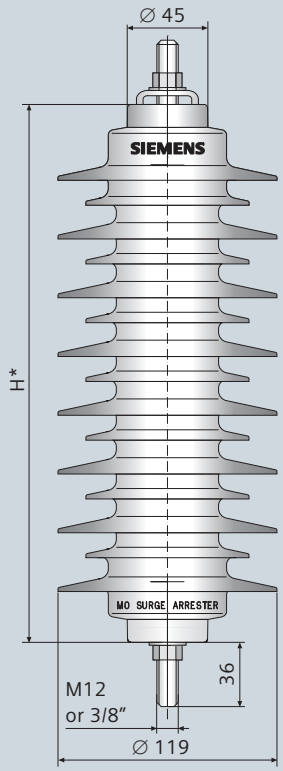


Figure 1: *3EK7 surge arrester main dimensions*
** please see tables on page 5 or 7*

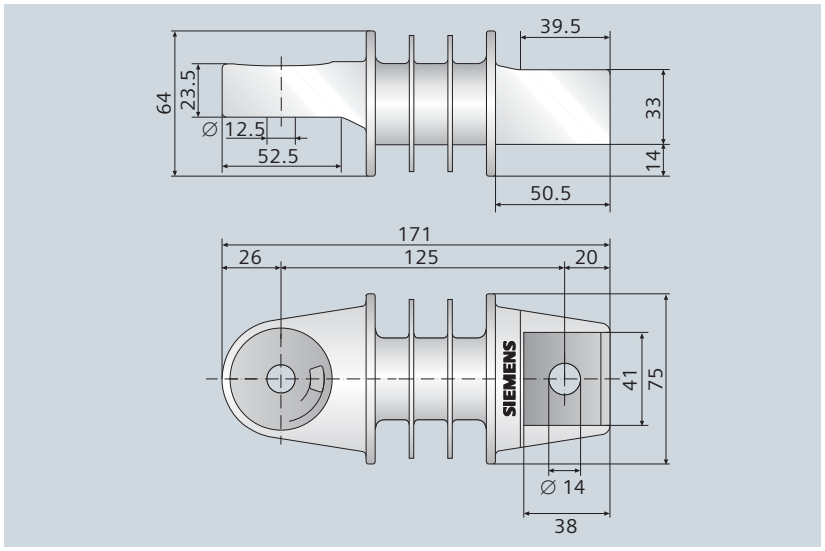


Figure 2: *NEMA insulating bracket for $U_r \leq 21$ kV*
Order code P12; 0.25 kg

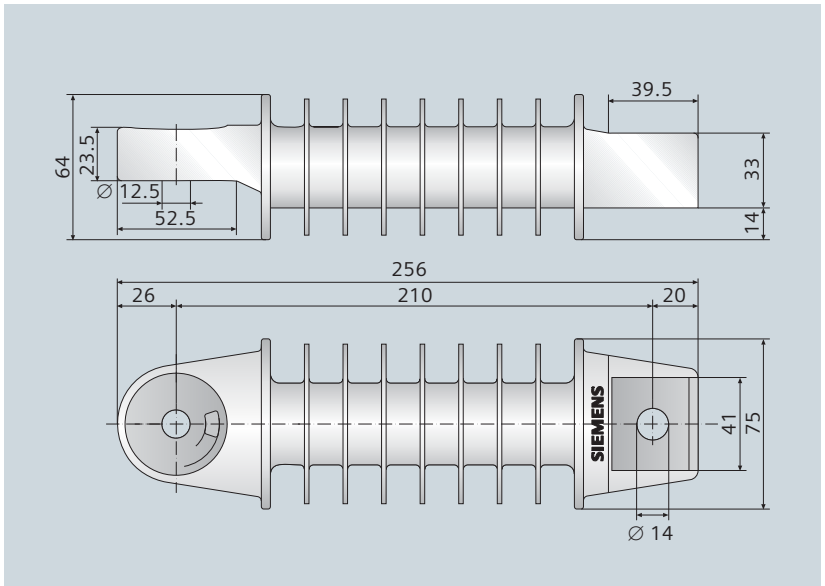


Figure 3: *NEMA insulating bracket for $U_r > 21$ kV*
Order code P12; 0.4 kg

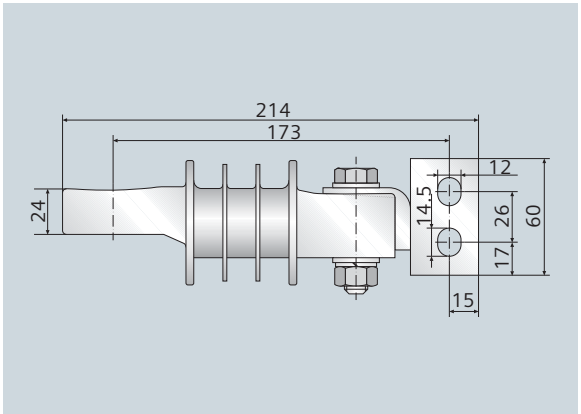


Figure 4: *DIN insulating bracket for $U_r \leq 21$ kV*
Order code P22; 0.85 kg

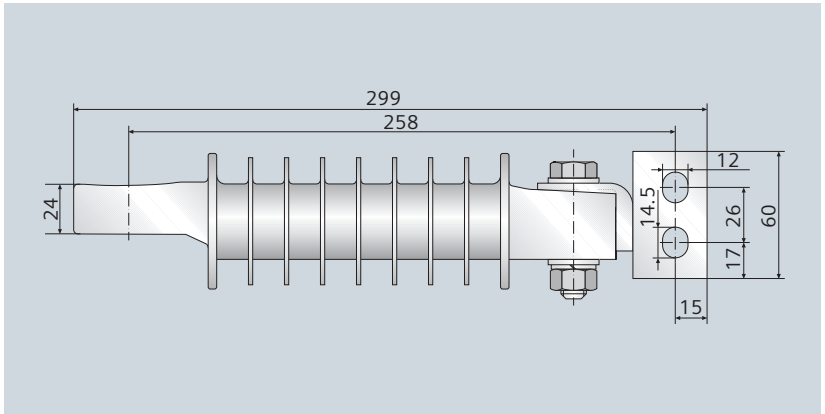


Figure 5: *DIN insulating bracket for $U_r > 21$ kV*
Order code P22; 1 kg

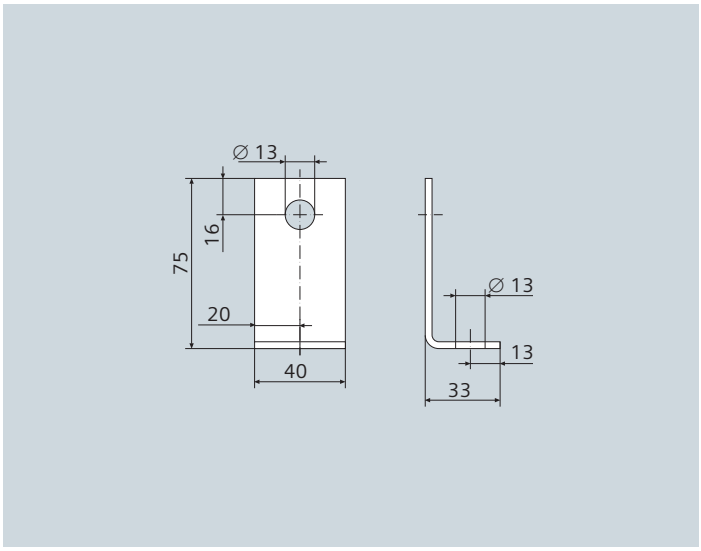


Figure 6: *L-bracket*
Order code M12; 0.1 kg

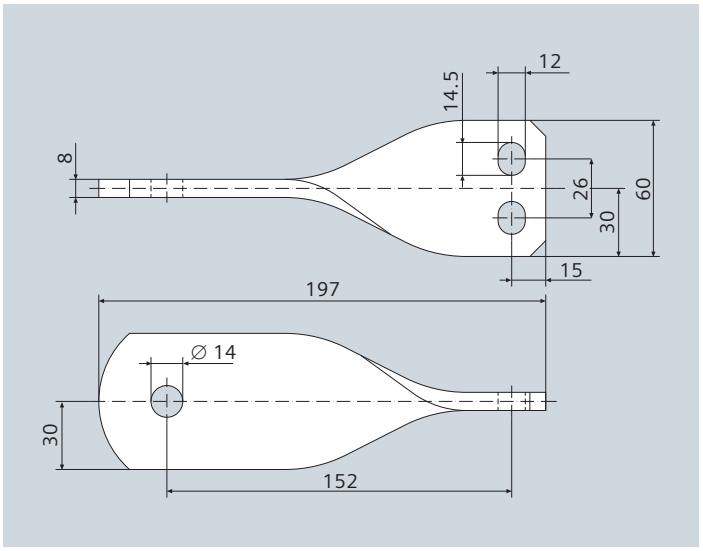


Figure 7: *DIN metal bracket (stainless), Order code P23; 0.6 kg and DIN metal bracket (hot dip galvanised), Order code P21; 0.6 kg*

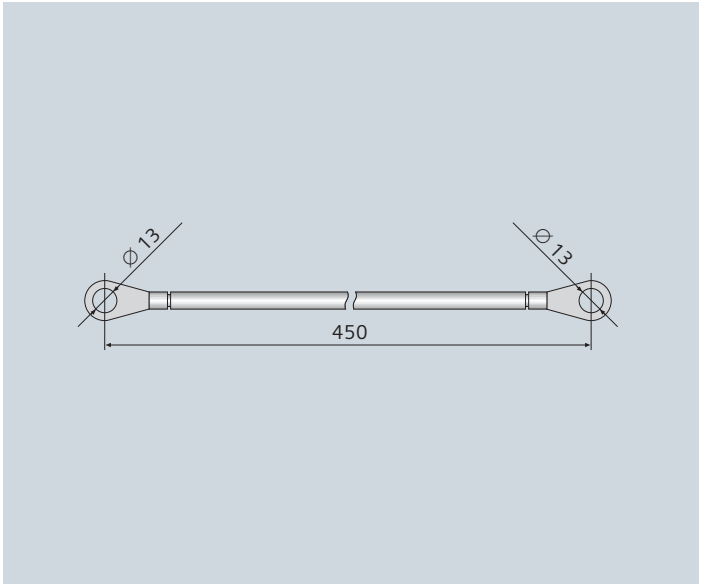


Figure 8: *Insulated ground lead/Insulated line lead*
Order code P51/M51; 0.09 kg, 16 mm²

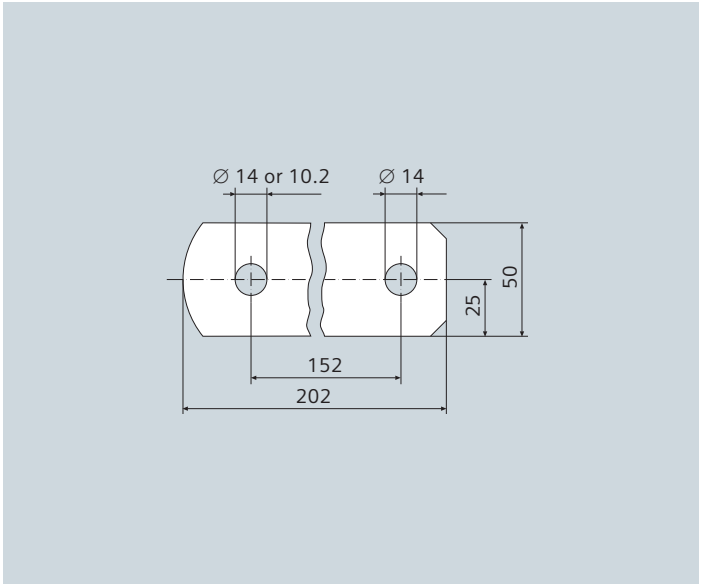


Figure 9: *NEMA metal bracket (hot dip galvanized)*
Order code P11; 0.6 kg

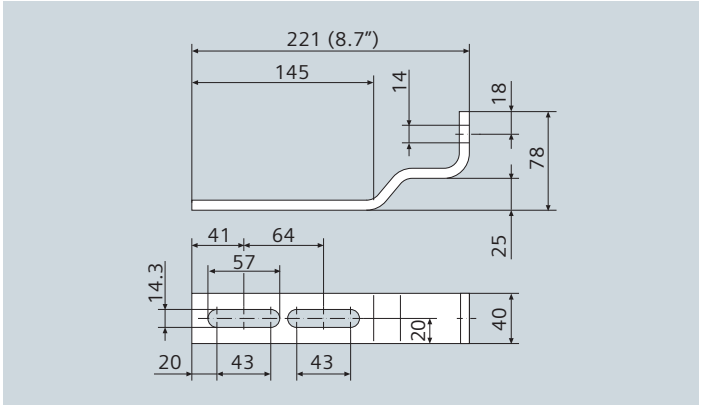


Figure 10: *Transformer bracket 8.7"*
Order code Q11; 0.6 kg

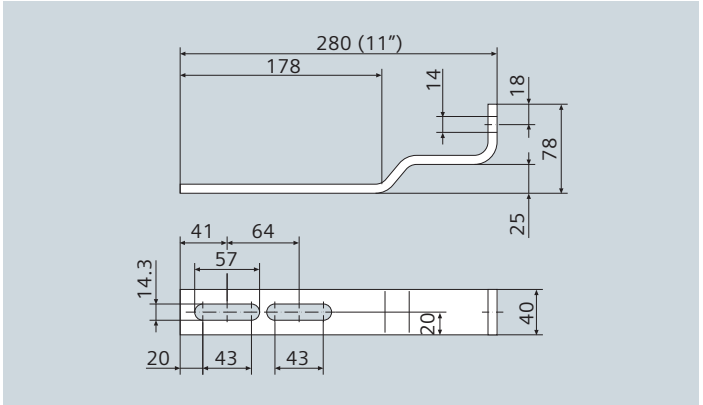


Figure 11: *Transformer bracket 11"*
Order code Q12; 0.7 kg

Drawings and Accessories

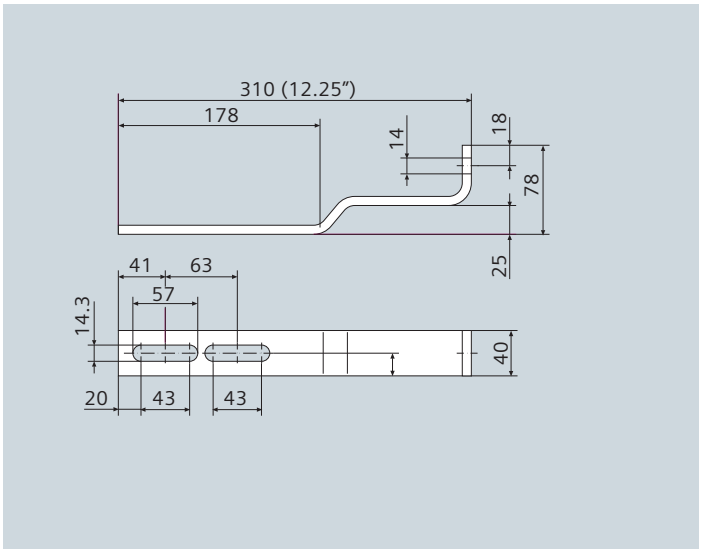


Figure 12: *Transformer bracket 12.25"*
Order code Q13; 0.8 kg

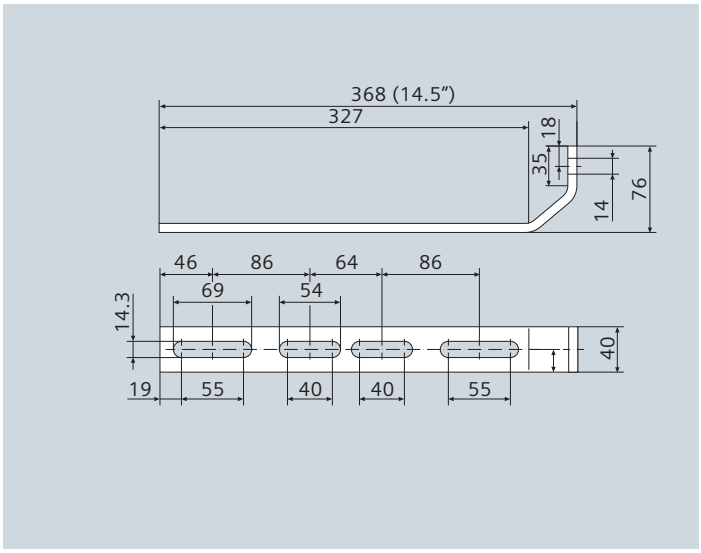


Figure 13: *Transformer bracket 14.5"*
Order code Q14; 0.8 kg

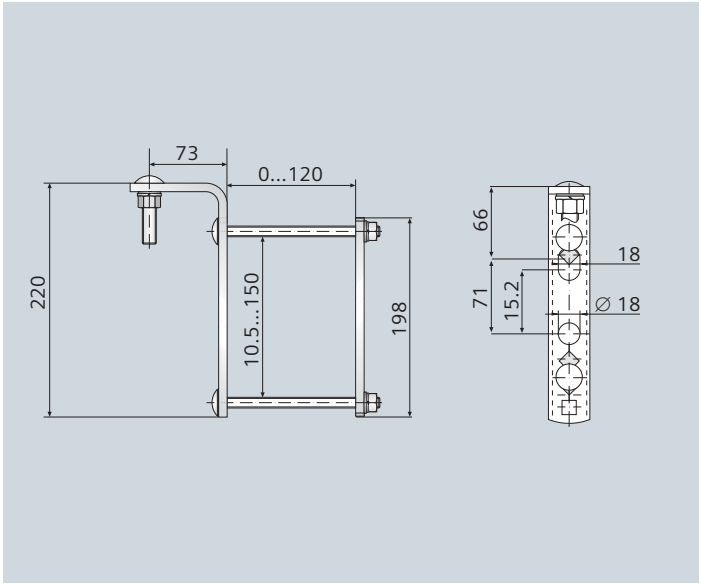


Figure 14: *NEMA X-arm bracket*
Order code Q51; 1.3 kg

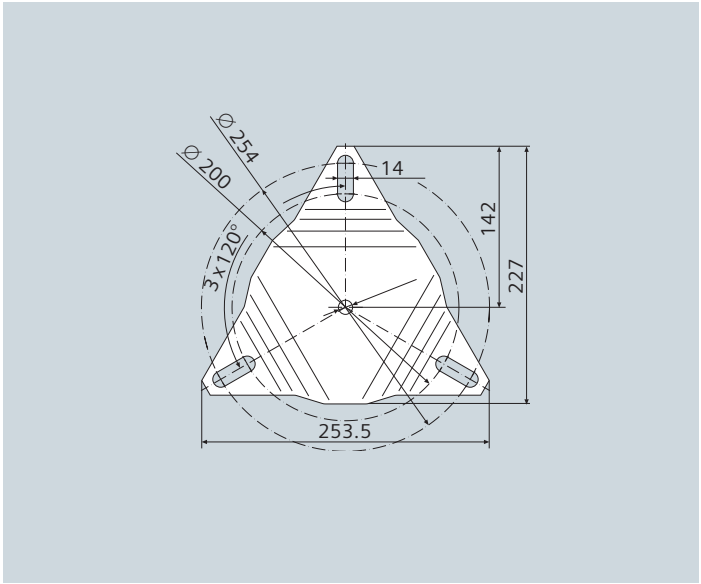


Figure 15: *Mounting plate, 37 mm height*
Order code Q81; 1.6 kg

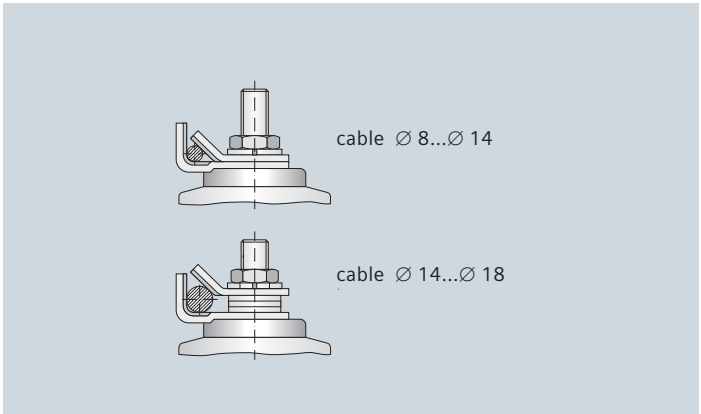


Figure 16: *Line clamp*
Order code M11; 0.1 kg

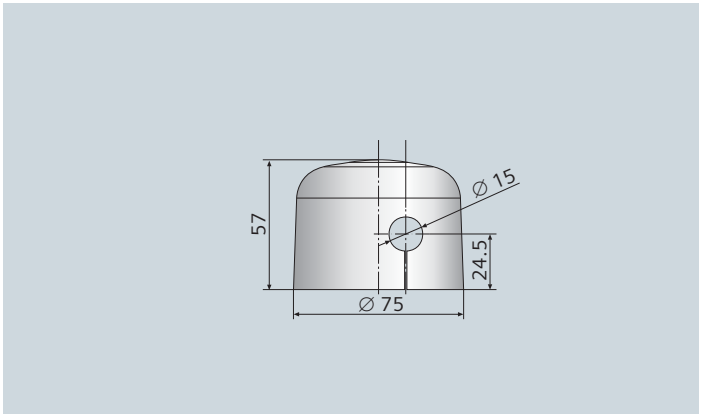


Figure 17: *Bird protection cap*
Order code M81; 50 g

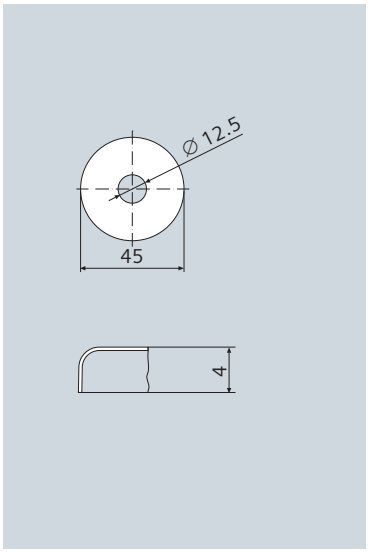


Figure 18: *Stainless steel cap*
Order code M71; 5 g

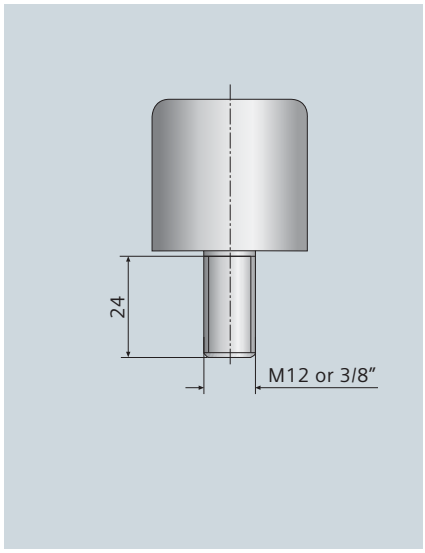


Figure 19: *Disconnector*
Order code P31; 0.1 kg

Outline drawings for common design options are shown in figure 20, 21 and 22

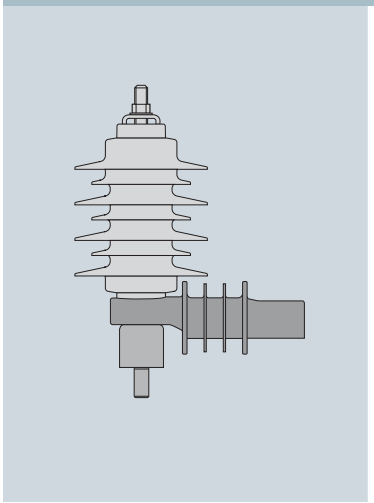


Figure 20: *3EK7 surge arrester with accessories P12 and P31*

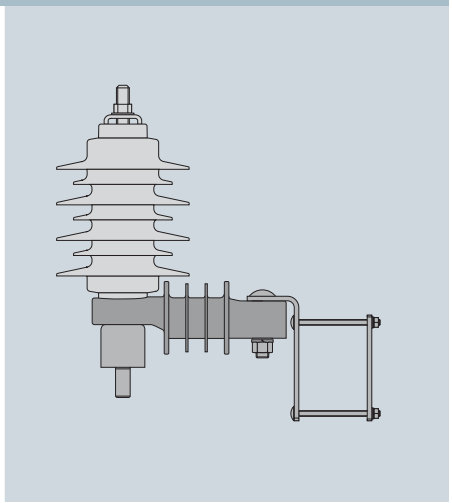


Figure 21: *3EK7 surge arrester with accessories P12, P31 and Q51*

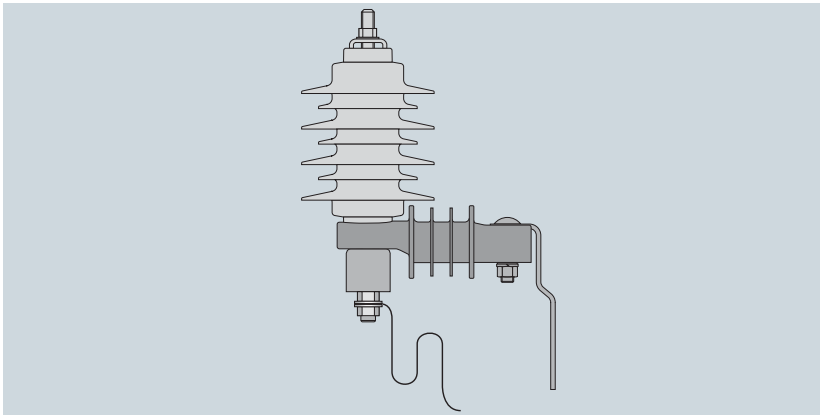


Figure 22: *3EK7 surge arrester with accessories P12, P31, P52 and Q11*

Example

Part number	3 E K 7	300	–	4	C	F	4
Internal use	3 E K 7						
Rated voltage in kV x 10		300					
–			–				
Classification							
Nominal discharge current I_n = 5 kA or distribution class, normal duty				2			
Distribution class, heavy duty				3			
Nominal discharge current I_n = 10 kA or riser pole				4			
Standard							
IEEE Std C 62.11 with imperial-thread terminals					A		
IEEE Std C 62.11 with metric-thread terminals					B		
IEC - 60099-4 with metric-thread terminals					C		
Housing size							
170 mm						B	
200 mm						C	
240 mm						D	
270 mm						E	
300 mm						F	
400 mm						H	
510 mm						K	
Internal use							4

Standard equipped at

- high voltage terminal M12 or 3/8 inch stud with clamp, washer and nut
- earthing terminal M12 or 3/8 inch stud with washer and nut

Example

Part number with mounting accessories	3 E K 7	300	–	4	C	F	4	–	Z	M51	M81	P12	P31
For additional parts only*									Z				
High-voltage terminal equipped with													
Line clamp, washer, nut									M11				
L-bracket, washer, nut									M12				
Line lead, insulated, 450 mm/18 inch, 16 mm²										**M51**			
Stainless steel cap									M71				
Bird-protection cap											**M81**		
Earth terminal equipped with													
NEMA metal bracket (hot dip galvanized steel)									P11				
NEMA insulating bracket												**P12**	
DIN metal bracket (hot dip galvanized steel)									P21				
DIN insulating bracket									P22				
DIN metal bracket (stainless steel)									P23				
Disconnector													**P31**
Ground lead, insulated, 450 mm/18 inch, 16 mm²									P51				
Mounting auxiliaries													
Transformer bracket 8.7 inch									Q11				
Transformer bracket 11 inch									Q12				
Transformer bracket 12.25 inch									Q13				
Transformer bracket 14.5 inch									Q14				
X-arm bracket									Q51				
Mounting plate for 200 mm and 10 inch bolt circle									Q81				

*Other additional parts on request
Not all combinations are possible

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