



In 2001, a Limited liability company research-and-production enterprise «ES Polymer» was established in the city of Artyomovsk, Donetsk Region for polymer insulators production, polymer surge suppressors and other types of high-voltage polymer structures.

Products are manufactured on highly productive high-performance equipment using high-quality raw materials from leading European manufacturers.



For the production of insulators, injection molding machines from KLOCKHER DESMA ELASTOMERTECHNIK (Germany), crimping machines from FINN-POWER (Switzerland) and other equipment of leading foreign companies are used, which allows you to fully automate the basic processes of manufacturing insulators.



CATALOG NUMBER KEY

S.70.1145.2.A.S16.B16

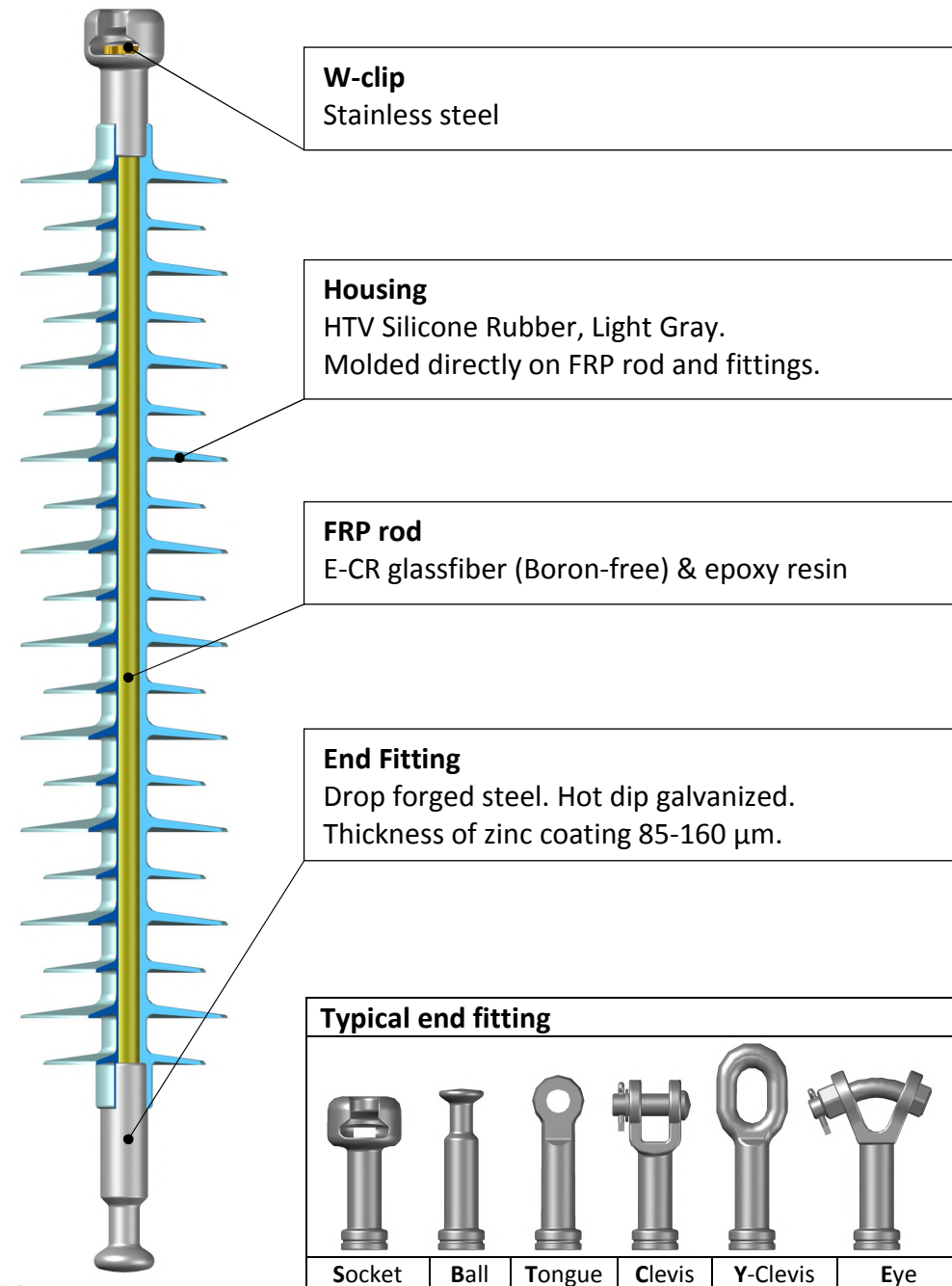
- Ball **16** (IEC 60120) - Lower fitting
- Socket **16** (IEC 60120) - Upper fitting
- The method of sealing the end of the fitting- shell :
 - A** - direct injection molding;
 - Without designation - silicone sealing
- Shell type and diameter of fiberglass rod:
 - 1** - single sheds, rod $\varnothing 16$ mm;
 - 2** - alternating sheds, rod $\varnothing 16$ mm;
 - 3** - single sheds, rod $\varnothing 22$ mm;
 - 4** - alternating sheds, rod $\varnothing 22$ mm;
 - 5** - single sheds, rod $\varnothing 30$ mm;
 - 6** - alternating sheds, rod $\varnothing 30$ mm;
- 1145** - Section length, mm
- 70** - Breaking mechanical force, kN
- Suspension insulator

INSULATORS NUMBERING SCHEME

LK 70 - 110 - D1

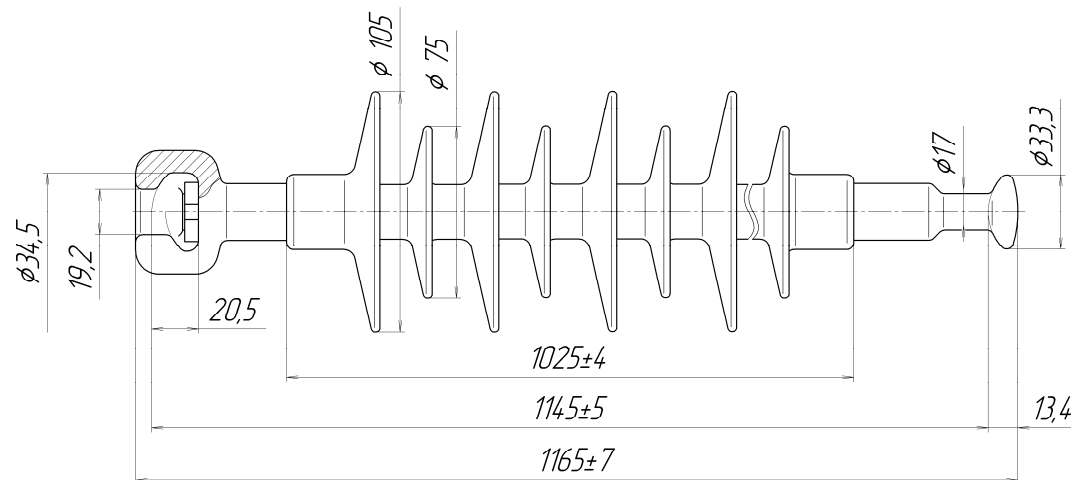
- 1, 2...** - Creepage distance and Section length modification within pollution class
- A** - pollution class IEC 60815 (22 mm/kV)
- B** - pollution class IEC 60815 (28 mm/kV)
- C** - pollution class IEC 60815 (35 mm/kV)
- D** - pollution class IEC 60815 (44 mm/kV)
- E** - pollution class IEC 60815 (55 mm/kV)
- 110** - Rated voltage, kV
- 70** - Breaking mechanical force at tension, kN
- Line composite suspension polymer insulator

PARTS OF A COMPOSITE INSULATOR



Insulator LK 70-110-D

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	70
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	42
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	3150
11	Arching distance, not less than	mm	1050
12	Section length	mm	1145
13	Sheds diameter, big/small	mm	105/75
14	Sheds number, big/small	-	19/19
15	Weight, not more than	kg	3,7
16	Atmosphere pollution level according to IEC 60815	-	D
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		
	- Socket 16 (IEC 60120)	-	Forged steel
	- Ball 16 (IEC 60120)	-	Hot-dip galvanizing
	- W-clip (IEC 60372)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

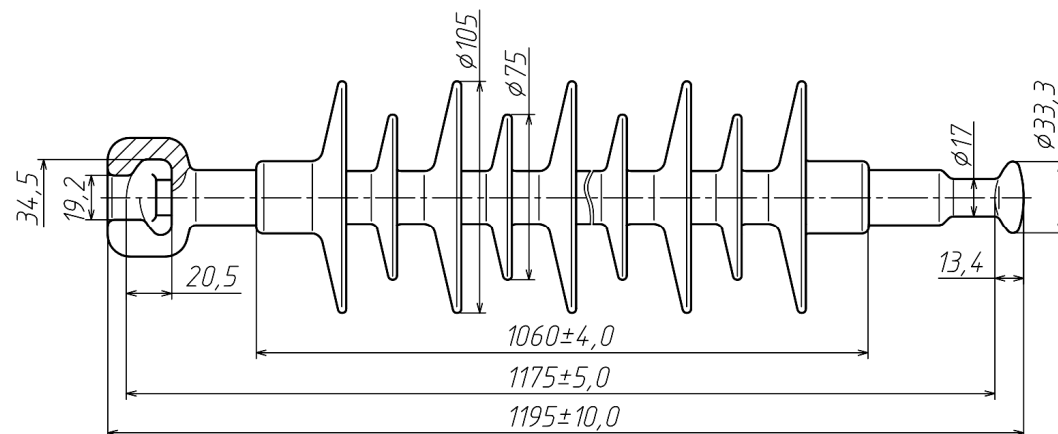


Insulator LK 70-110-D (Cat.№ S.70.1145.2.A.S16.B16)



Insulator LK 70-110-D1

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	70
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	42
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	3350
11	Arching distance, not less than	mm	1095
12	Section length	mm	1175
13	Sheds diameter, big/small	mm	105/75
14	Sheds number, big/small	-	20/19
15	Weight, not more than	kg	3,7
16	Atmosphere pollution level according to IEC 60815	-	D
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		
	- Socket 16 (IEC 60120)	-	Forged steel Hot-dip galvanizing
	- Ball 16 (IEC 60120)	-	
	- W-clip (IEC 60372)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

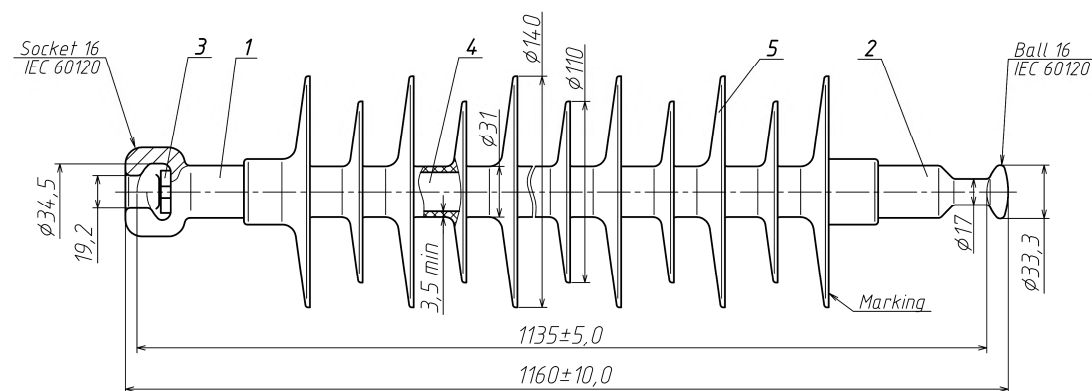


Insulator LK 70-110-D1 (Cat.№ S.70.1175.2.A.S16.B16)



Insulator LK 70-110-E

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	70
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	42
	Moisture penetration	hours	42
9	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	3755
11	Arching distance, not less than	mm	1075
12	Section length	mm	1135
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	16/15
15	Weight, not more than	kg	4,7
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		
	- Socket 16 (IEC 60120)	-	Forged steel
	- Ball 16 (IEC 60120)	-	Hot-dip galvanizing
	- W-clip (IEC 60372)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

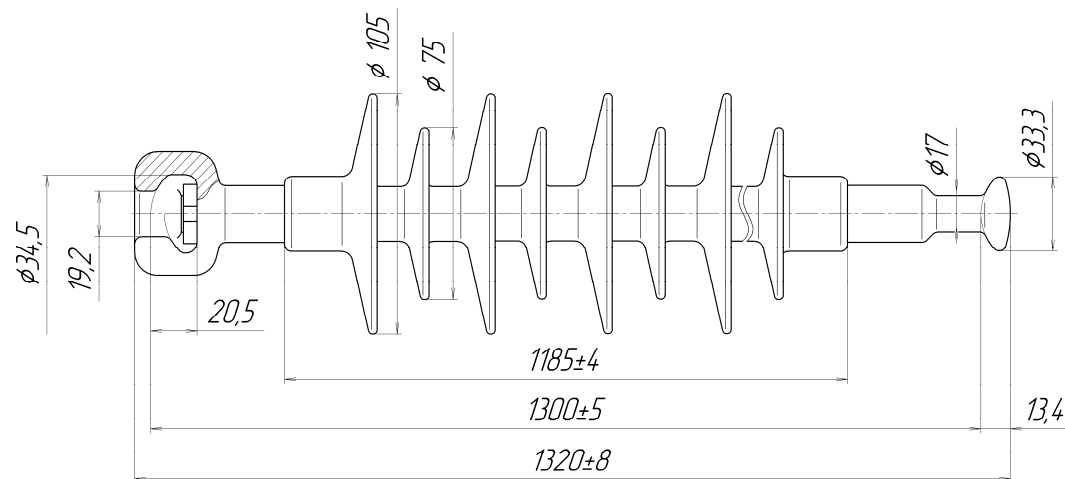


Insulator LK 70-110-E (Cat.№ S.70.1135.4.A.S16.B16)



Insulator LK 70-110-E1

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage	kV	110
2	Max. voltage		123
3	Breaking mechanical force at tension, not less than	kN	70
4	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
5	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
6	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
7	Track and erosion resistance, not less than	hours	1000
8	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
9	Thermo-mechanical capacity	kN	42
	Moisture penetration	hours	42
10	Impulse test voltage with steep front, not less than	kV/ μ s	1000
11	Creepage distance, not less than	mm	3760
12	Arching distance, not less than	mm	1215
13	Section length	mm	1300
14	Sheds diameter, big/small	mm	105/75
15	Sheds number, big/small	-	22/22
16	Weight, not more than	kg	4,1
17	Atmosphere pollution level according to IEC 60815	-	E
18	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μ m	85/160
19	End fittings:		Forged steel
	- Socket 16 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 16 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

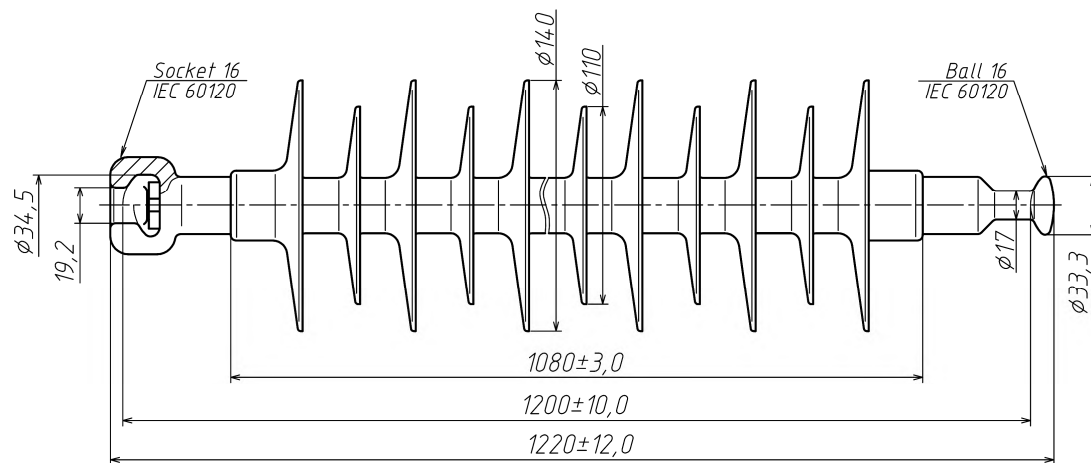


Insulator LK 70-110-E1 (Cat.№ S.70.1300.2.A.S16.B16)



Insulator LK 70-110-E2

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	70
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	42
	Moisture penetration	hours	42
9	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	3900
11	Arching distance, not less than	mm	1135
12	Section length	mm	1200
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	17/16
15	Weight, not more than	kg	4,9
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		
	- Socket 16 (IEC 60120)	-	Forged steel
	- Ball 16 (IEC 60120)	-	Hot-dip galvanizing
	- W-clip (IEC 60372)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

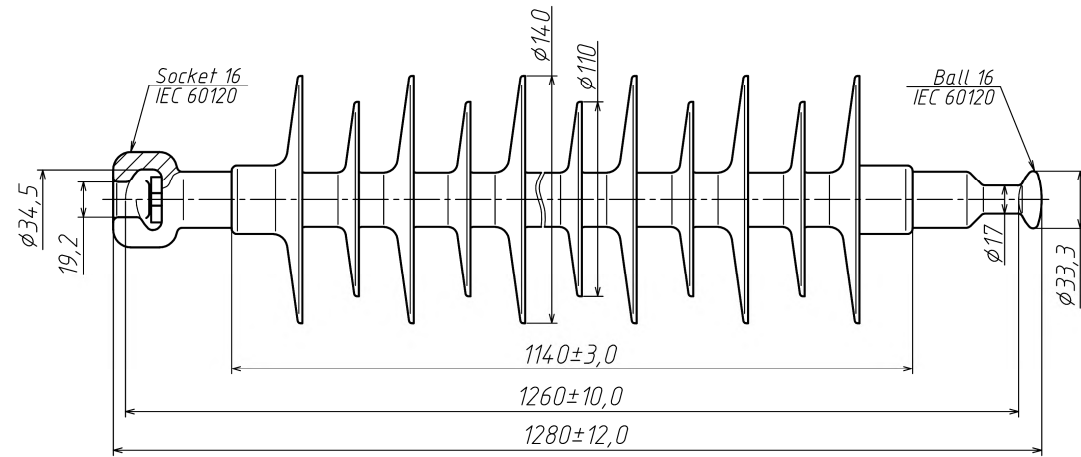


Insulator LK 70-110-E2 (Cat.№ S.70.1200.4.A.S16.B16)



Insulator LK 70-110-E4

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	70
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	42
	Moisture penetration	hours	42
9	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	4160
11	Arching distance, not less than	mm	1200
12	Section length	mm	1260
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	18/17
15	Weight, not more than	kg	5,1
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		Forged steel
	- Socket 16 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 16 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

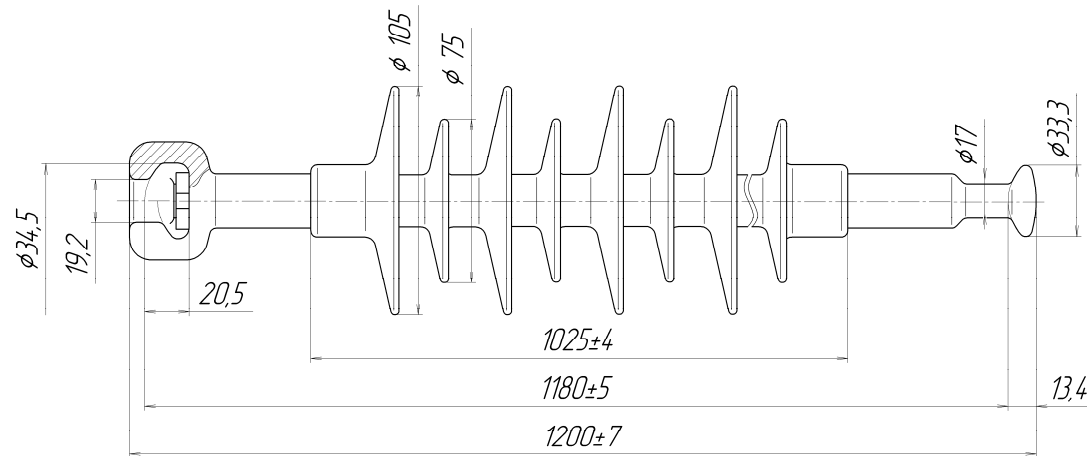


Insulator LK 70-110-E4 (Cat.№ S.70.1260.4.A.S16.B16)



Insulator LK 120-110-D

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	120
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	72
	Moisture penetration	hours	42
9	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	3150
11	Arching distance, not less than	mm	1050
12	Section length	mm	1180
13	Sheds diameter, big/small	mm	105/75
14	Sheds number, big/small	-	19/19
15	Weight, not more than	kg	3,75
16	Atmosphere pollution level according to IEC 60815	-	D
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		
	- Socket 16 (IEC 60120)	-	Forged steel
	- Ball 16 (IEC 60120)	-	Hot-dip galvanizing
	- W-clip (IEC 60372)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

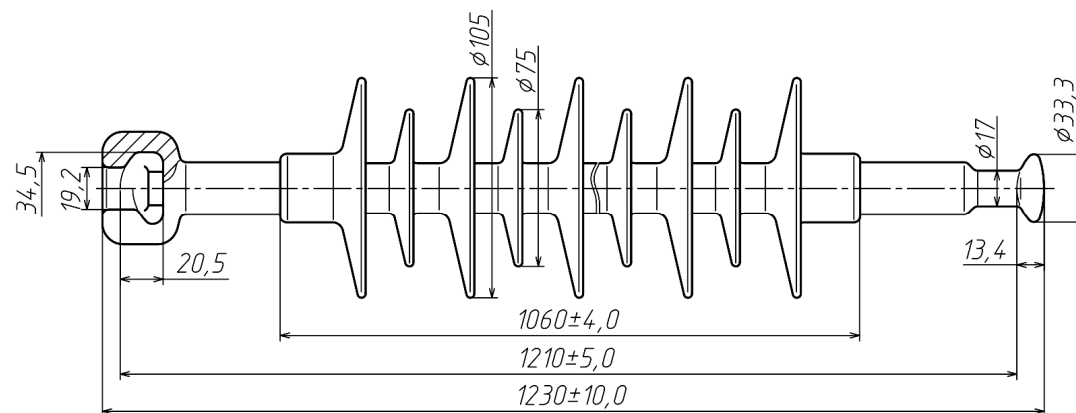


Insulator LK 120-110-D (Cat.№ S.120.1180.2.A.S16.B16)



Insulator LK 120-110-D1

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	120
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	72
	Moisture penetration	hours	42
9	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	3350
11	Arching distance, not less than	mm	1095
12	Section length	mm	1210
13	Sheds diameter, big/small	mm	105/75
14	Sheds number, big/small	-	20/19
15	Weight, not more than	kg	3,75
16	Atmosphere pollution level according to IEC 60815	-	D
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		Forged steel
	- Socket 16 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 16 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

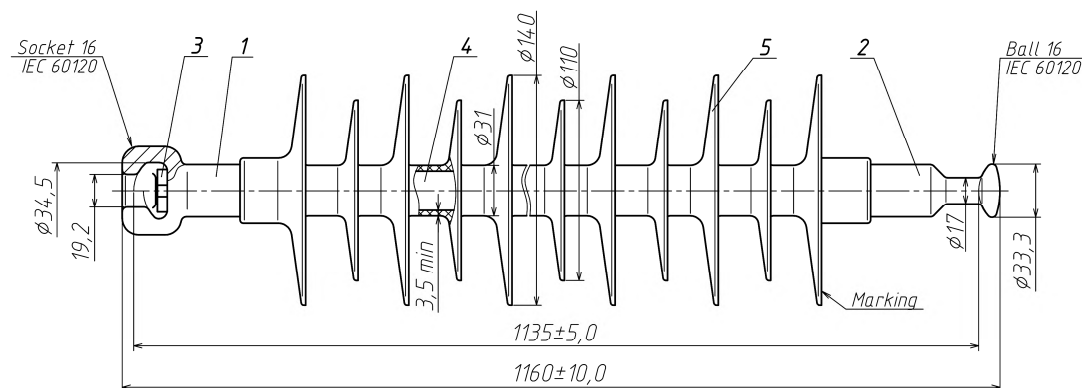


Insulator LK 120-110-D1 (Cat.№ S.120.1210.2.A.S16.B16)



Insulator LK 120-110-E

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage	kV	110
	Max. voltage		123
2	Breaking mechanical force at tension, not less than	kN	120
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	72
	Moisture penetration	hours	42
9	Impulse test voltage with steep front, not less than	kV/ μ s	1000
10	Creepage distance, not less than	mm	3755
11	Arching distance, not less than	mm	1075
12	Section length	mm	1135
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	16/15
15	Weight, not more than	kg	4,7
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μ m	85/160
18	End fittings:		Forged steel
	- Socket 16 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 16 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

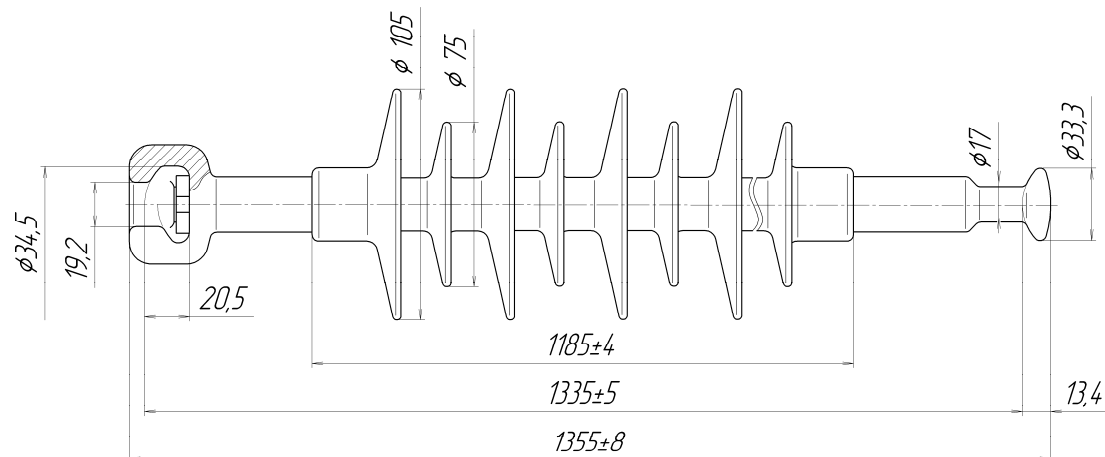


Insulator LK 120-110-E (Cat.№ S.120.1135.4.A.S16.B16)



Insulator LK 120-110-E1

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage	kV	110
	Max. voltage		123
2	Breaking mechanical force at tension, not less than	kN	120
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	72
	Moisture penetration	hours	42
9	Impulse test voltage with steep front, not less than	kV/ μ s	1000
10	Creepage distance, not less than	mm	3760
11	Arching distance, not less than	mm	1215
12	Section length	mm	1335
13	Sheds diameter, big/small	mm	105/75
14	Sheds number, big/small	-	22/22
15	Weight, not more than	kg	4,2
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μ m	85/160
18	End fittings:		Forged steel
	- Socket 16 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 16 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

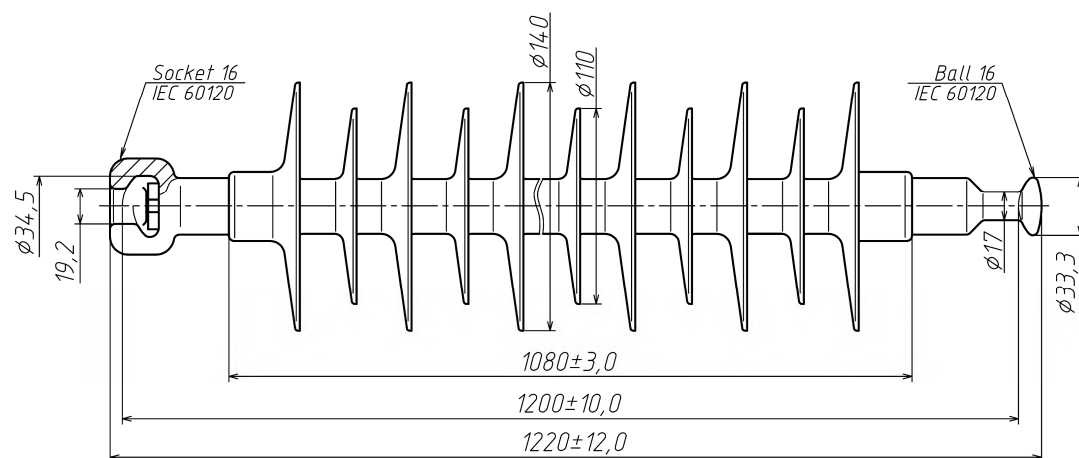


Insulator LK 120-110-E1 (Cat.№ S.120.1335.2.A.S16.B16)



Insulator LK 120-110-E2

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	120
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	72
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	3900
11	Arching distance, not less than	mm	1135
12	Section length	mm	1200
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	17/16
15	Weight, not more than	kg	4,9
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		Forged steel
	- Socket 16 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 16 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

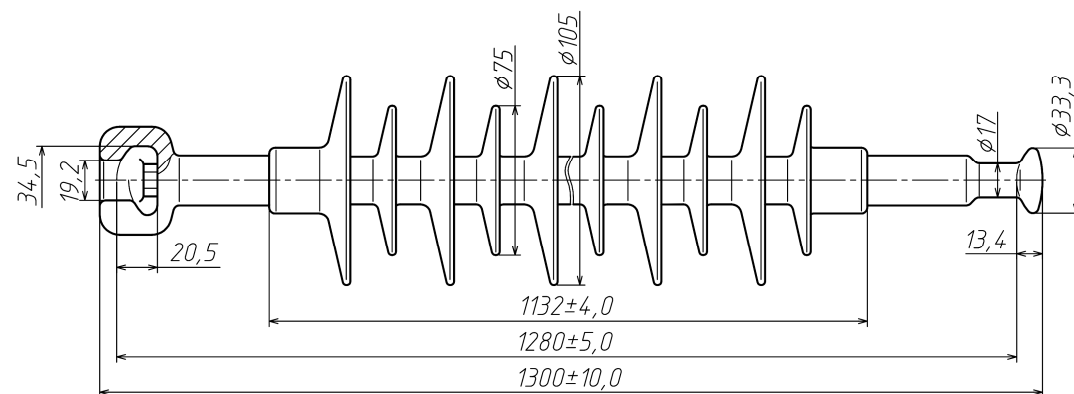


Insulator LK 120-110-E2 (Cat.№ S.120.1200.4.A.S16.B16)



Insulator LK 120-110-E3

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	120
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	72
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	3550
11	Arching distance, not less than	mm	1160
12	Section length	mm	1280
13	Sheds diameter, big/small	mm	105/75
14	Sheds number, big/small	-	21/21
15	Weight, not more than	kg	4,0
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		Forged steel
	- Socket 16 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 16 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

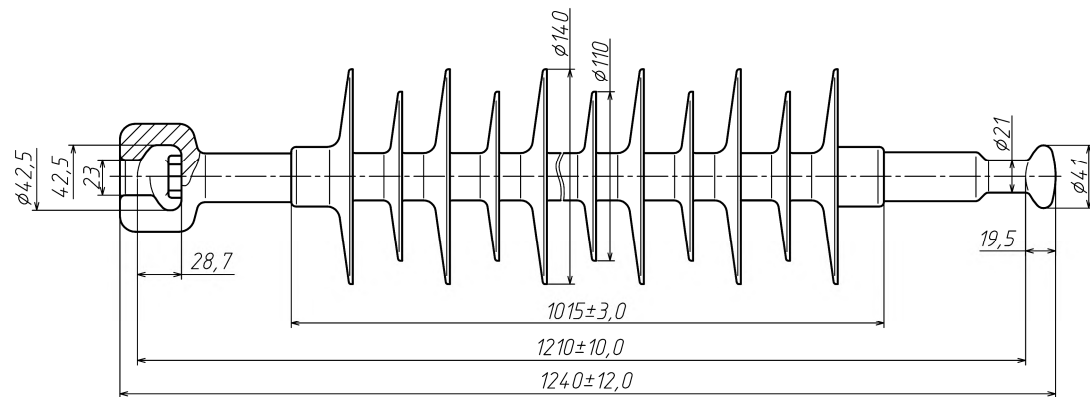


Insulator LK 120-110-E3 (Cat.№ S.120.1280.2.A.S16.B16)



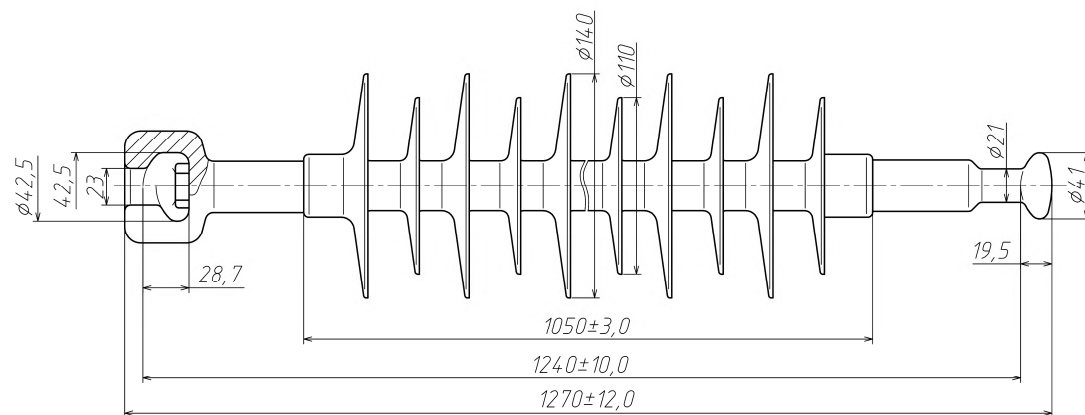
Insulator LK 160-110-D

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	160
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	96
	Moisture penetration	hours	42
9	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	3700
11	Arching distance, not less than	mm	1070
12	Section length	mm	1210
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	16/15
15	Weight, not more than	kg	5,6
16	Atmosphere pollution level according to IEC 60815	-	D
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings: - Socket 20 (IEC 60120) - Ball 20 (IEC 60120)	-	Forged steel Hot-dip galvanizing
	- W-clip 20 (IEC 60372)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466 Tests acc. to IEC 61109			

**Insulator LK 160-110-D (Cat.No S.160.1210.4.A.S20.B20)**

Insulator LK 160-110-E

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	160
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	96
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/ μ s	1000
10	Creepage distance, not less than	mm	3800
11	Arching distance, not less than	mm	1095
12	Section length	mm	1240
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	16/16
15	Weight, not more than	kg	5,6
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μ m	85/160
18	End fittings:		
	- Socket 20 (IEC 60120)	-	Forged steel
	- Ball 20 (IEC 60120)	-	Hot-dip galvanizing
	- W-clip 20 (IEC 60372)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

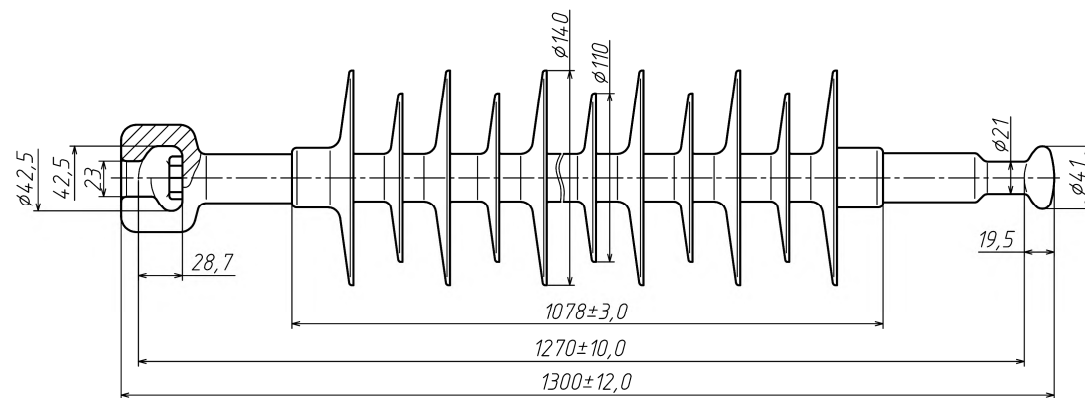


Insulator LK 160-110-E (Cat.№ S.160.1240.4.A.S20.B20)



Insulator LK 160-110-E1

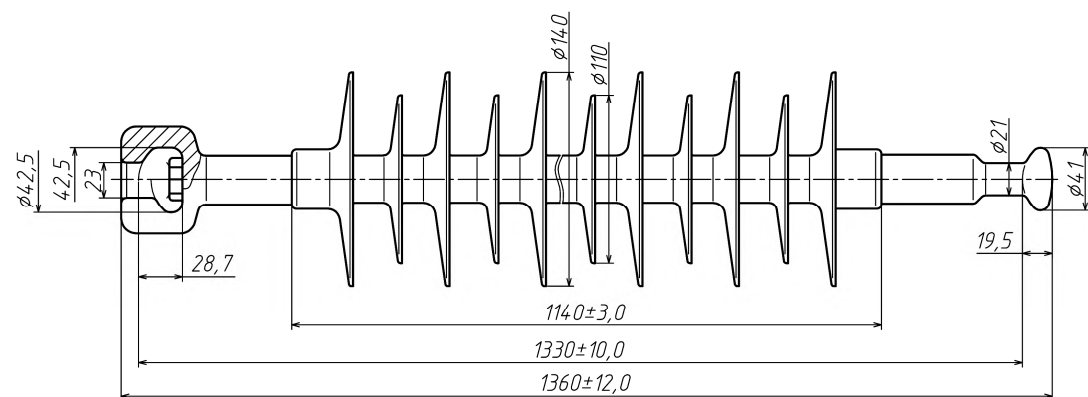
№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	160
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	96
	Moisture penetration	hours	42
9	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	3920
11	Arching distance, not less than	mm	1135
12	Section length	mm	2170
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	17/16
15	Weight, not more than	kg	5,8
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings: - Socket 20 (IEC 60120) - Ball 20 (IEC 60120)	-	Forged steel Hot-dip galvanizing
	- W-clip 20 (IEC 60372)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466 Tests acc. to IEC 61109			



Insulator LK 160-110-E1 (Cat.No S.160.1270.4.A.S20.B20)

Insulator LK 160-110-E2

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	160
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	96
	Moisture penetration	hours	42
9	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	4160
11	Arching distance, not less than	mm	1200
12	Section length	mm	1330
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	18/17
15	Weight, not more than	kg	6,0
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		Forged steel
	- Socket 20 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 20 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

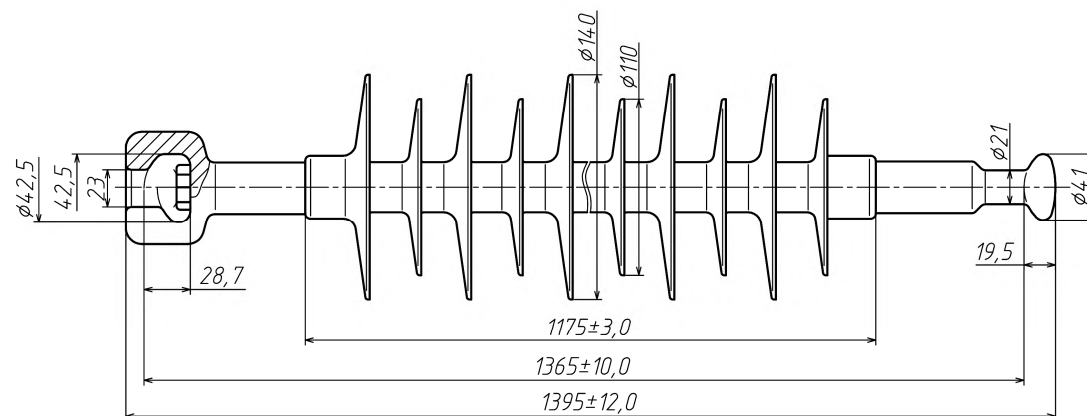


Insulator LK 160-110-E2 (Cat.№ S.160.1330.4.A.S20.B20)



Insulator LK 160-110-E3

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	160
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	96
	Moisture penetration	hours	42
9	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	4280
11	Arching distance, not less than	mm	1222
12	Section length	mm	1365
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	18/18
15	Weight, not more than	kg	6,1
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		Forged steel
	- Socket 20 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 20 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

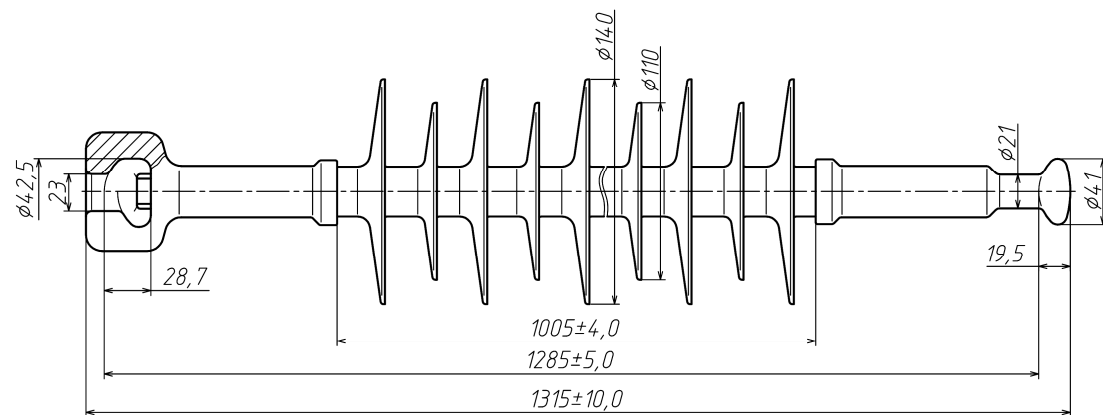


Insulator LK 160-110-E3 (Cat.№ S.160.1365.4.A.S20.B20)



Insulator LK 210-110-D

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	210
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	126
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	3700
11	Arching distance, not less than	mm	1060
12	Section length	mm	1285
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	16/15
15	Weight, not more than	kg	5,75
16	Atmosphere pollution level according to IEC 60815	-	D
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		
	- Socket 20 (IEC 60120)	-	Forged steel
	- Ball 20 (IEC 60120)	-	Hot-dip galvanizing
	- W-clip 20 (IEC 60372)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

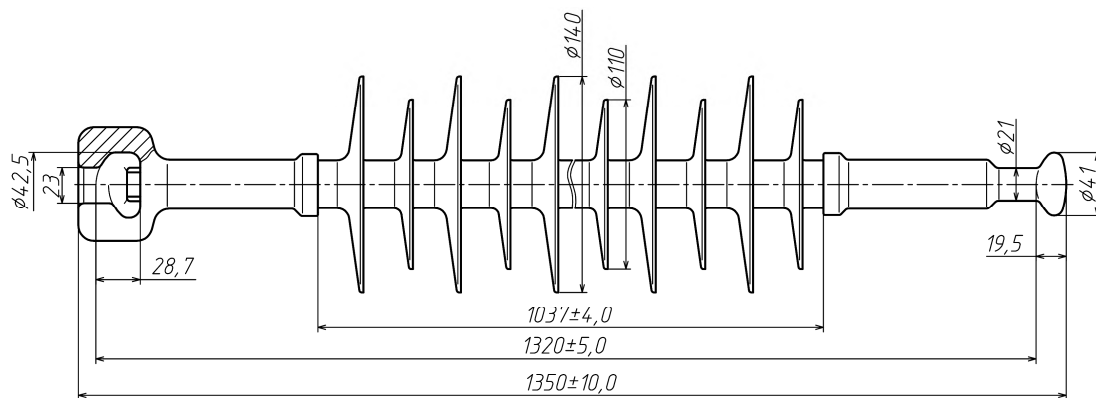


Insulator LK 210-110-D (Cat.№ S.210.1285.4.S20.B20)



Insulator LK 210-110-E

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	210
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	126
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	3800
11	Arching distance, not less than	mm	1085
12	Section length	mm	1320
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	16/16
15	Weight, not more than	kg	5,8
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		Forged steel
	- Socket 20 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 20 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

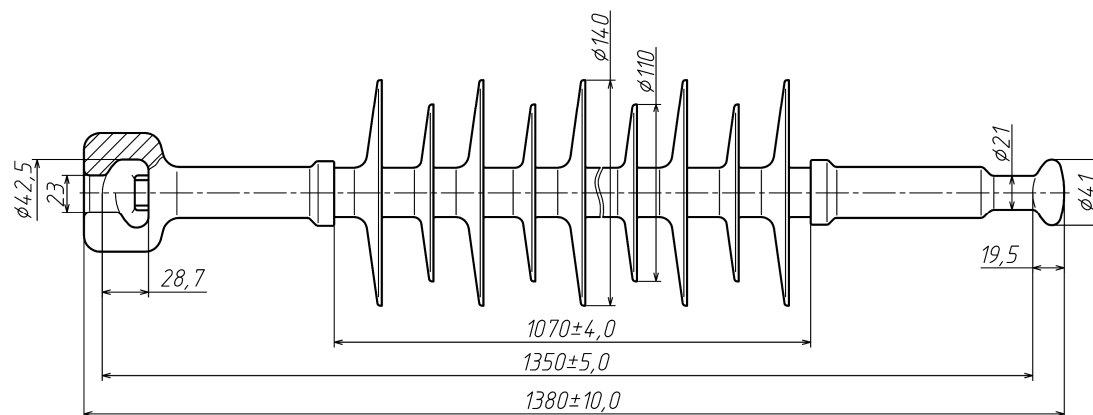


Insulator LK 210-110-E (Cat.№ S.210.1320.4.S20.B20)



Insulator LK 210-110-E1

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	210
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	650
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	126
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	3900
11	Arching distance, not less than	mm	1125
12	Section length	mm	1350
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	17/16
15	Weight, not more than	kg	6,0
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		Forged steel
	- Socket 20 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 20 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

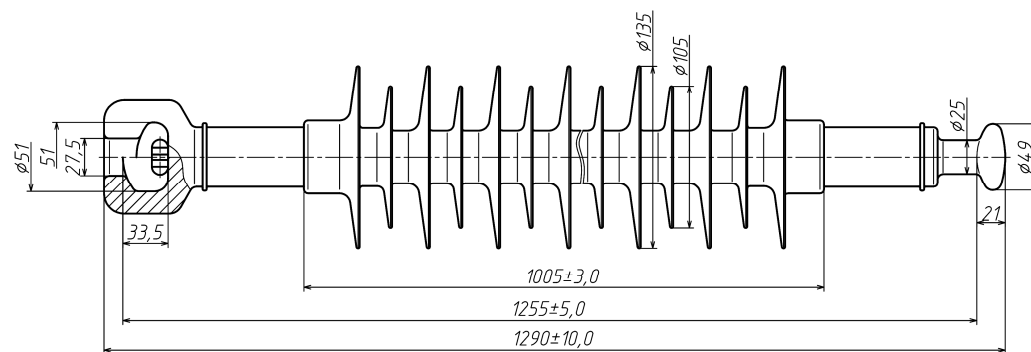


Insulator LK 210-110-E1 (Cat.№ S.210.1350.4.S20.B20)



Insulator LK 300-110-D

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	300
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	550
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	180
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	3720
11	Arching distance, not less than	mm	1050
12	Section length	mm	1255
13	Sheds diameter, big/small	mm	135/105
14	Sheds number, big/small	-	19/18
15	Weight, not more than	kg	8,5
16	Atmosphere pollution level according to IEC 60815	-	D
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		
	- Socket 24 (IEC 60120)	-	Forged steel
	- Ball 24 (IEC 60120)	-	Hot-dip galvanizing
	- V-clip 24 (IEC 60372)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

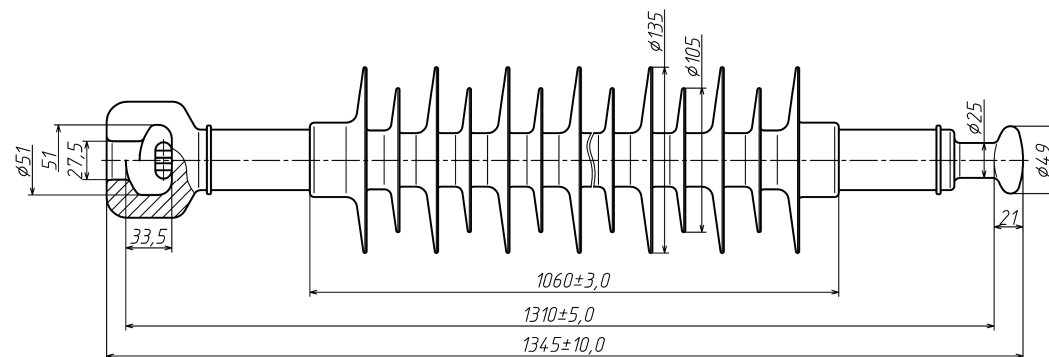


Insulator LK 300-110-D (Cat.№ S.300.1255.6.A.S24.B24)



Insulator LK 300-110-E

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	300
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	550
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	180
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	3920
11	Arching distance, not less than	mm	1100
12	Section length	mm	1310
13	Sheds diameter, big/small	mm	135/105
14	Sheds number, big/small	-	20/19
15	Weight, not more than	kg	8,7
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		Forged steel
	- Socket 24 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 24 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

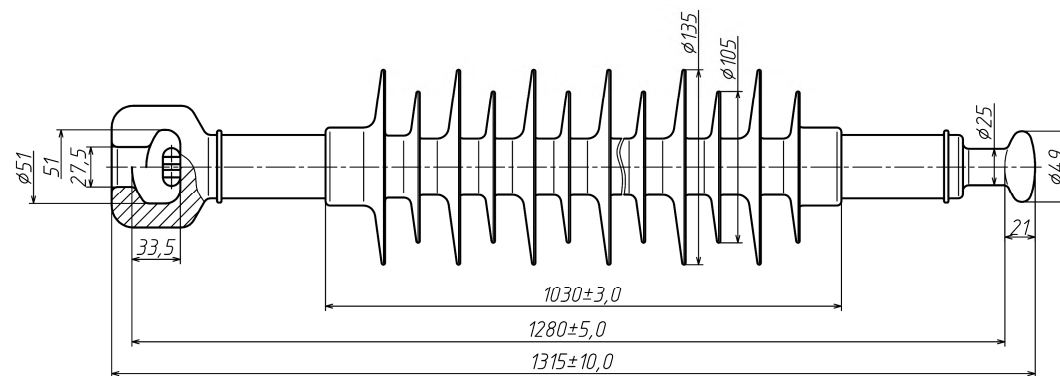


Insulator LK 300-110-E (Cat.№ S.300.1310.6.A.S24.B24)



Insulator LK 300-110-E1

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	300
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	550
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	180
	Moisture penetration	hours	42
9	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	3720
11	Arching distance, not less than	mm	1050
12	Section length	mm	1255
13	Sheds diameter, big/small	mm	135/105
14	Sheds number, big/small	-	19/18
15	Weight, not more than	kg	8,5
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		Forged steel
	- Socket 24 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 24 (IEC 60120)	-	Stainless steel
	- V-clip 24 (IEC 60372)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

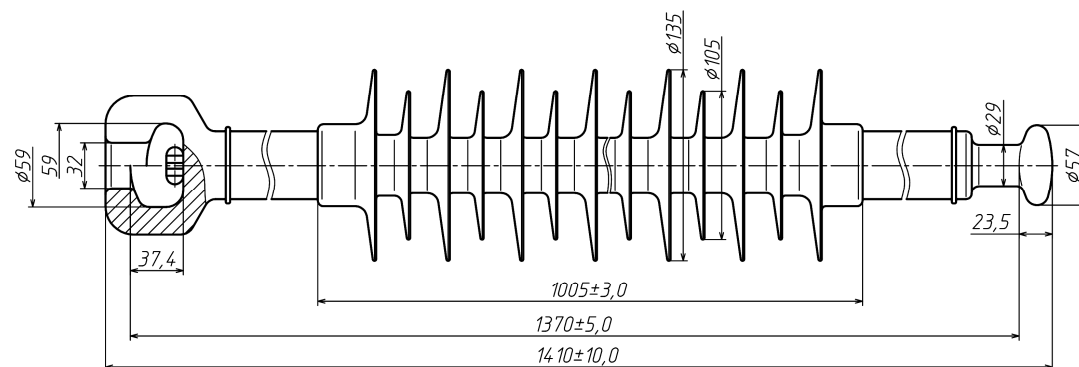


Insulator LK 300-110-E1 (Cat.№ S.300.1280.6.A.S24.B24)



Insulator LK 400-110-D

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	400
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	550
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	240
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	3720
11	Arching distance, not less than	mm	1045
12	Section length	mm	1370
13	Sheds diameter, big/small	mm	135/105
14	Sheds number, big/small	-	19/18
15	Weight, not more than	kg	11,0
16	Atmosphere pollution level according to IEC 60815	-	D
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		
	- Socket 28 (IEC 60120)	-	Forged steel
	- Ball 28 (IEC 60120)	-	Hot-dip galvanizing
	- V-clip 28 (IEC 60372)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

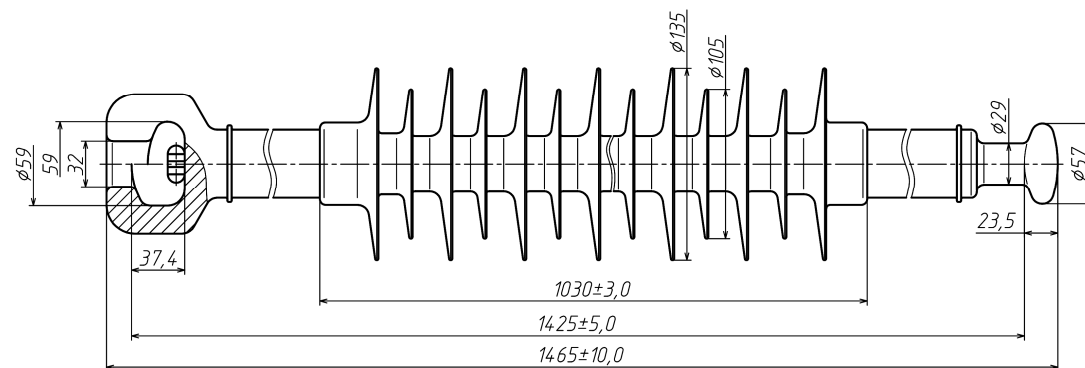


Insulator LK 400-110-D (Cat.№ S.400.1370.6.A.S28.B28)



Insulator LK 400-110-E

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	400
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	550
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	240
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	3920
11	Arching distance, not less than	mm	1100
12	Section length	mm	1425
13	Sheds diameter, big/small	mm	135/105
14	Sheds number, big/small	-	20/19
15	Weight, not more than	kg	11,3
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		Forged steel
	- Socket 28 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 28 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

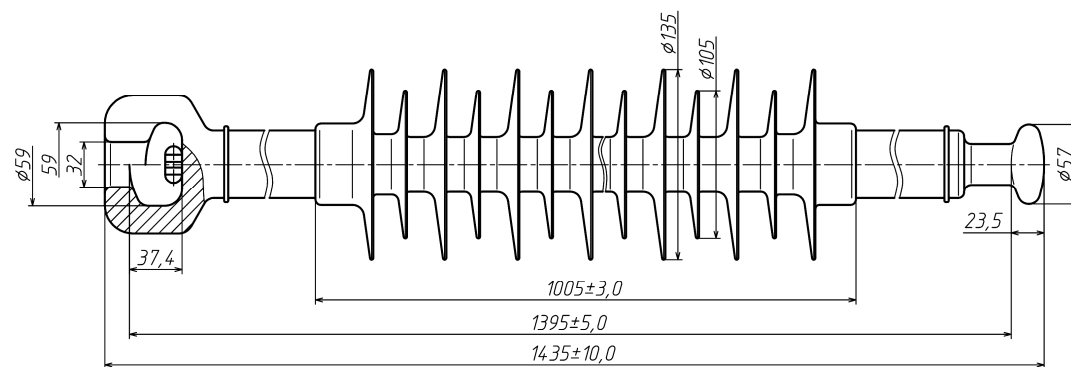


Insulator LK 400-110-E (Cat.№ S.400.1425.6.A.S28.B28)



Insulator LK 400-110-E1

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	110/123
2	Breaking mechanical force at tension, not less than	kN	400
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	325/275
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	550
5	Wet switching impulse withstand voltage «250/2500», positive, not less than	kV	330
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	240
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	3800
11	Arching distance, not less than	mm	1065
12	Section length	mm	1395
13	Sheds diameter, big/small	mm	135/105
14	Sheds number, big/small	-	19/19
15	Weight, not more than	kg	11,1
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		Forged steel
	- Socket 28 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 28 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

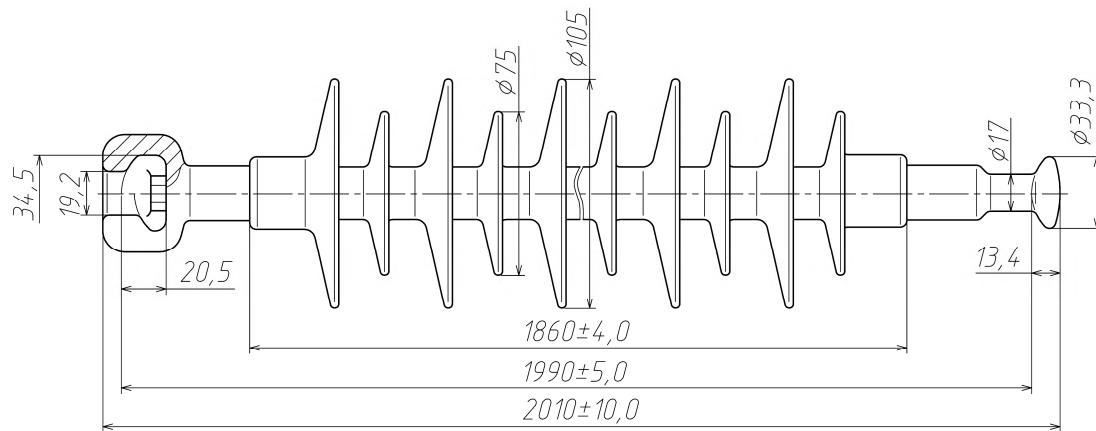


Insulator LK 400-110-E1 (Cat.№ S.400.1395.6.A.S28.B28)



Insulator LK 70-220-D

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	220/252
2	Breaking mechanical force at tension, not less than	kN	70
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	550/460
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	1050
5	Track and erosion resistance, not less than	hours	1000
6	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
7	Thermo-mechanical capacity	kN	42
8	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
9	Creepage distance, not less than	mm	5850
10	Arching distance, not less than	mm	1890
11	Section length	mm	1990
12	Sheds diameter, big/small	mm	105/75
13	Sheds number, big/small	-	35/35
14	Weight, not more than	kg	6,0
15	Atmosphere pollution level according to IEC 60815	-	D
16	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
17	End fittings:		Forged steel
	- Socket 16 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 16 (IEC 60120)	-	Stainless steel
	- W-clip 16 (IEC 60372)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

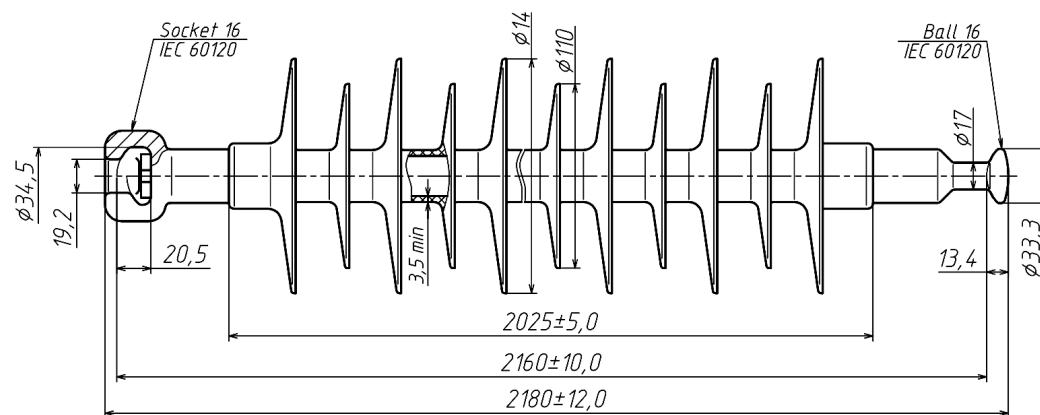


Insulator LK 70-220-D (Cat.№ S.70.1990.2.A.S16.B16)



Insulator LK 70-220-E

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	220/252
2	Breaking mechanical force at tension, not less than	kN	70
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	610/530
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	1205
5	Switching impulse withstand voltage, not less than	kV	640
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	42
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	7510
11	Arching distance, not less than	mm	2080
12	Section length	mm	2160
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	32/31
15	Weight, not more than	kg	8,4
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		Forged steel
	- Socket 16 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 16 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

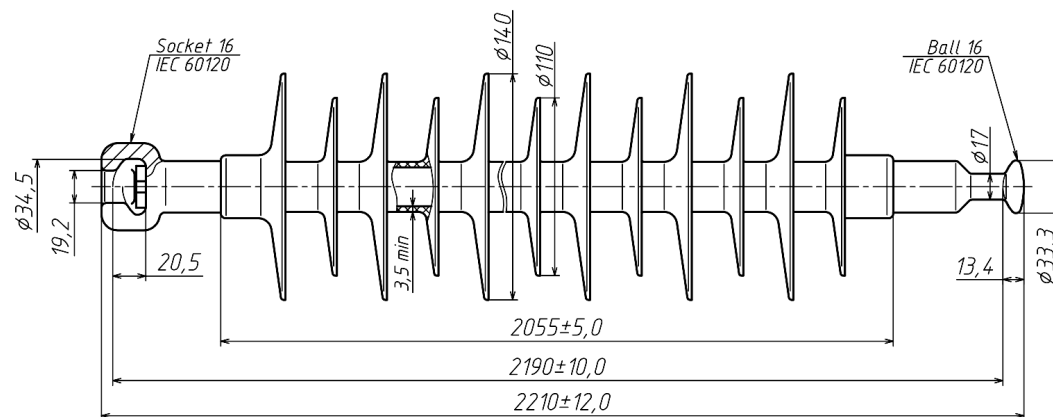


Insulator LK 70-220-E (Cat.№ S.70.2160.4.A.S16.B16)



Insulator LK 70-220-E1

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	220/252
2	Breaking mechanical force at tension, not less than	kN	70
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	630/550
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	1275
5	Switching impulse withstand voltage, not less than	kV	660
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	42
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	7600
11	Arching distance, not less than	mm	2100
12	Section length	mm	2190
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	32/32
15	Weight, not more than	kg	8,5
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		Forged steel
	- Socket 16 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 16 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

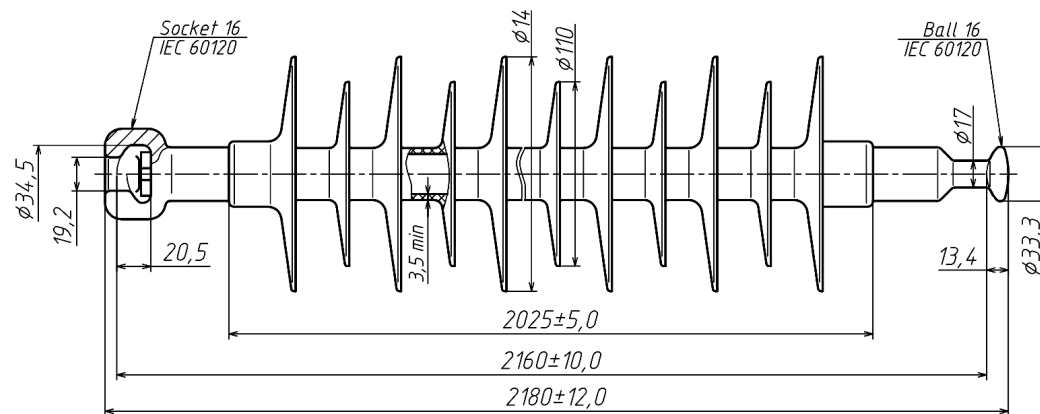


Insulator LK 70-220-E1 (Cat.№ S.70.2190.4.A.S16.B16)



Insulator LK 120-220-E

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	220/252
2	Breaking mechanical force at tension, not less than	kN	120
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	610/530
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	1205
5	Switching impulse withstand voltage, not less than	kV	640
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	72
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	7510
11	Arching distance, not less than	mm	2080
12	Section length	mm	2160
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	32/31
15	Weight, not more than	kg	8,4
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		
	- Socket 16 (IEC 60120)	-	Forged steel
	- Ball 16 (IEC 60120)	-	Hot-dip galvanizing
	- W-clip 16 (IEC 60372)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

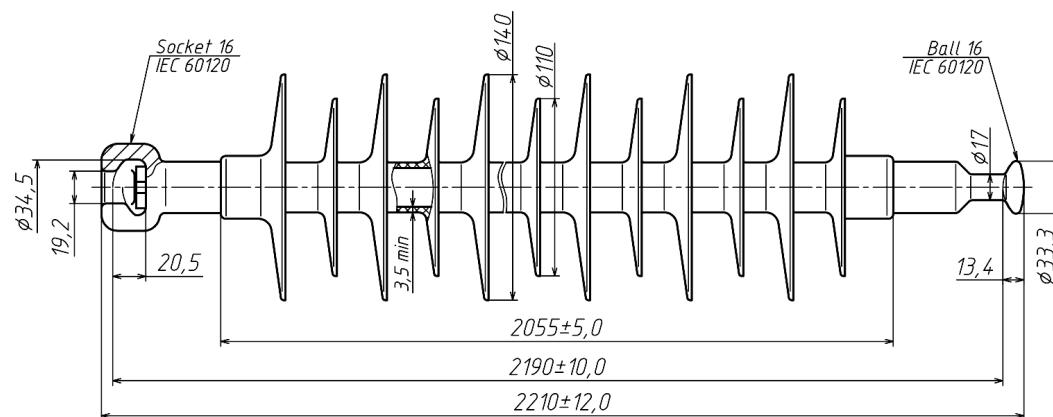


Insulator LK 120-220-E (Cat.№ S.120.2160.4.A.S16.B16)



Insulator LK 120-220-E1

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	220/252
2	Breaking mechanical force at tension, not less than	kN	120
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	630/550
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	1275
5	Switching impulse withstand voltage, not less than	kV	660
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	72
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	7600
11	Arching distance, not less than	mm	2100
12	Section length	mm	2190
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	32/32
15	Weight, not more than	kg	8,5
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		Forged steel
	- Socket 16 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 16 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

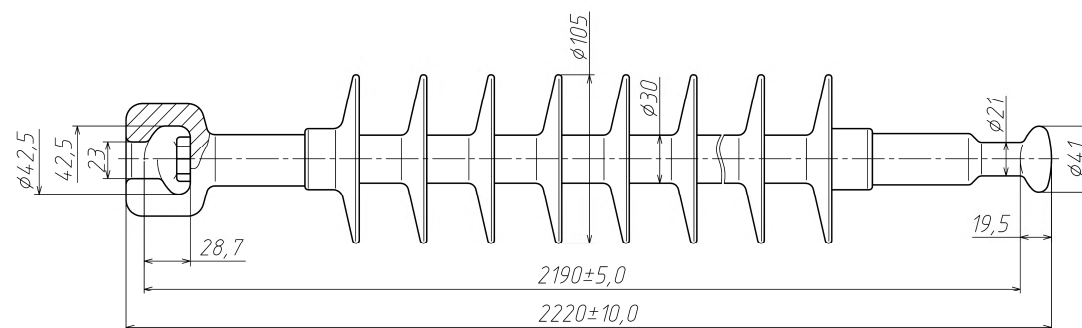


Insulator LK 120-220-E1 (Cat.№ S.120.2190.4.A.S16.B16)



Insulator LK 160-220-C

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	220/252
2	Breaking mechanical force at tension, not less than	kN	160
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	550/460
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	1050
5	Track and erosion resistance, not less than	hours	1000
6	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
7	Thermo-mechanical capacity	kN	96
8	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
9	Creepage distance, not less than	mm	5000
10	Arching distance, not less than	mm	1990
11	Section length	mm	2190
12	Sheds diameter, big/small	mm	105
13	Sheds number, big/small	-	46
14	Weight, not more than	kg	7,9
15	Atmosphere pollution level according to IEC 60815	-	C
16	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
17	End fittings:		Forged steel
	- Socket 20 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 20 (IEC 60120)	-	Stainless steel
	- W-clip 20 (IEC 60372)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

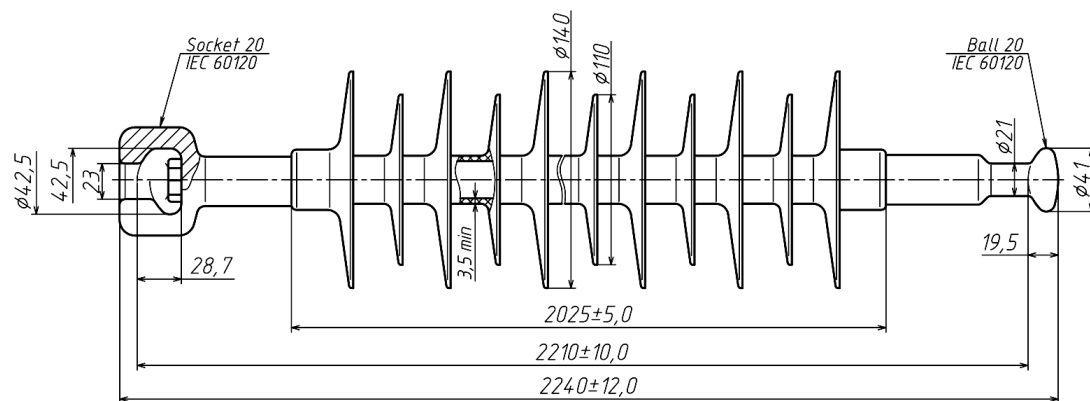


Insulator LK 160-220-C (Cat.№ S.160.2190.4.S20.B20)



Insulator LK 160-220-E

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	220/252
2	Breaking mechanical force at tension, not less than	kN	160
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	610/530
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	1205
5	Switching impulse withstand voltage, not less than	kV	640
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	96
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	7510
11	Arching distance, not less than	mm	2080
12	Section length	mm	2210
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	32/31
15	Weight, not more than	kg	9,2
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		Forged steel
	- Socket 20 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 20 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

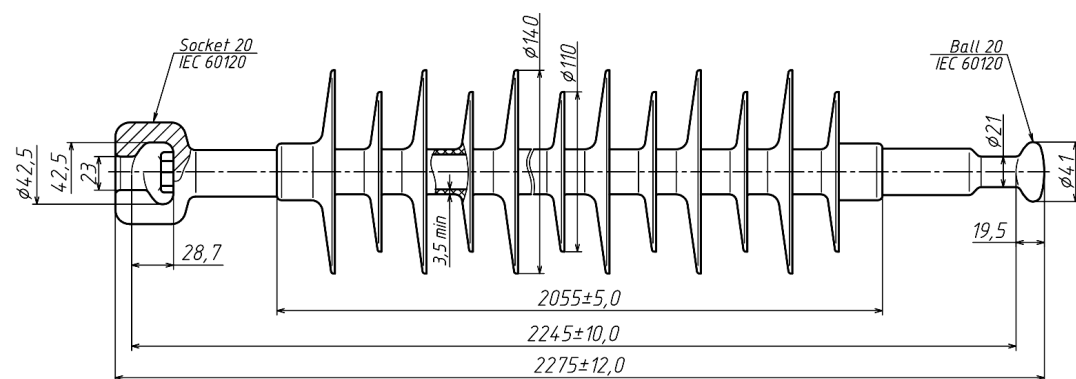


Insulator LK 160-220-E (Cat.№ S.160.2210.4.A.S20.B20)



Insulator LK 160-220-E1

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	220/252
2	Breaking mechanical force at tension, not less than	kN	160
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	630/550
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	1275
5	Switching impluse withstand voltage, not less than	kV	660
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	96
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	7600
11	Arching distance, not less than	mm	2100
12	Section length	mm	2245
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	32/32
15	Weight, not more than	kg	9,3
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		Forged steel
	- Socket 20 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 20 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

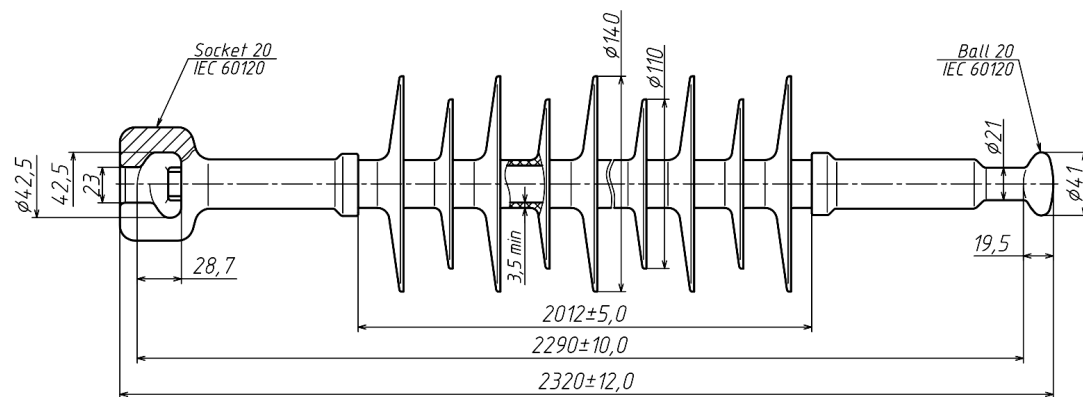


Insulator LK 160-220-E1 (Cat.№ S.160.2245.4.A.S20.B20)



Insulator LK 210-220-E

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	220/252
2	Breaking mechanical force at tension, not less than	kN	210
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	610/530
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	1205
5	Switching impluse withstand voltage, not less than	kV	640
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	126
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	7510
11	Arching distance, not less than	mm	2070
12	Section length	mm	2290
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	32/31
15	Weight, not more than	kg	9,4
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		Forged steel
	- Socket 20 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 20 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

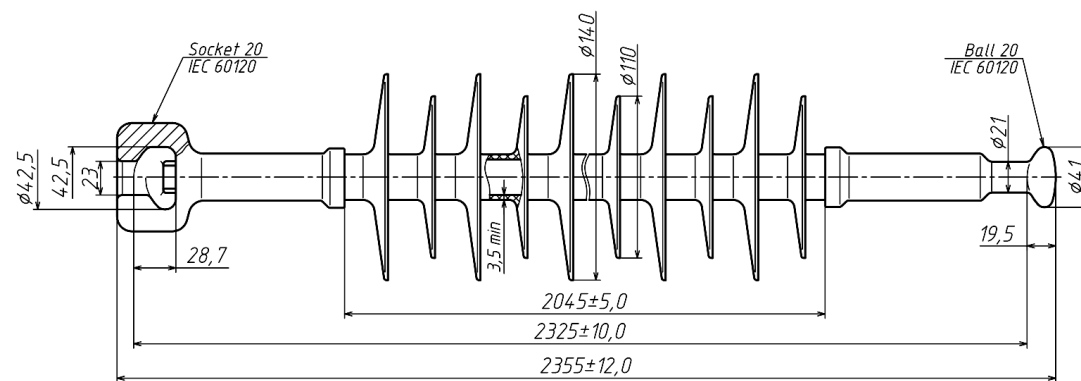


Insulator LK 210-220-E (Cat.№ S.210.2290.4.A.S20.B20)



Insulator LK 210-220-E1

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	220/252
2	Breaking mechanical force at tension, not less than	kN	160
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	630/550
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	1275
5	Switching impluse withstand voltage, not less than	kV	660
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	126
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/ μ s	1000
10	Creepage distance, not less than	mm	7600
11	Arching distance, not less than	mm	2095
12	Section length	mm	2325
13	Sheds diameter, big/small	mm	140/110
14	Sheds number, big/small	-	32/32
15	Weight, not more than	kg	9,5
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μ m	85/160
18	End fittings:		Forged steel
	- Socket 20 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 20 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

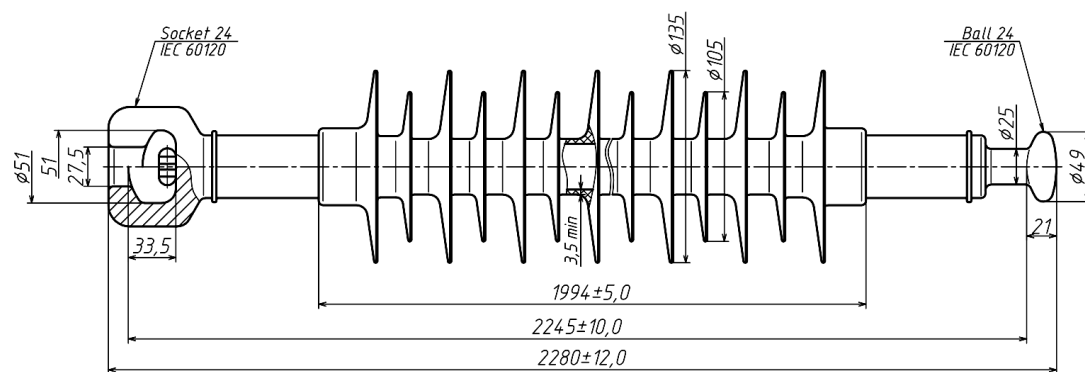


Insulator LK 210-220-E1 (Cat.№ S.210.2325.4.A.S20.B20)



Insulator LK 300-220-E

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	220/252
2	Breaking mechanical force at tension, not less than	kN	300
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	610/530
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	1205
5	Switching impluse withstand voltage, not less than	kV	640
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	180
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/ μ s	1000
10	Creepage distance, not less than	mm	7520
11	Arching distance, not less than	mm	2040
12	Section length	mm	2245
13	Sheds diameter, big/small	mm	135/105
14	Sheds number, big/small	-	38/37
15	Weight, not more than	kg	12,9
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μ m	85/160
18	End fittings:		Forged steel
	- Socket 24 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 24 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

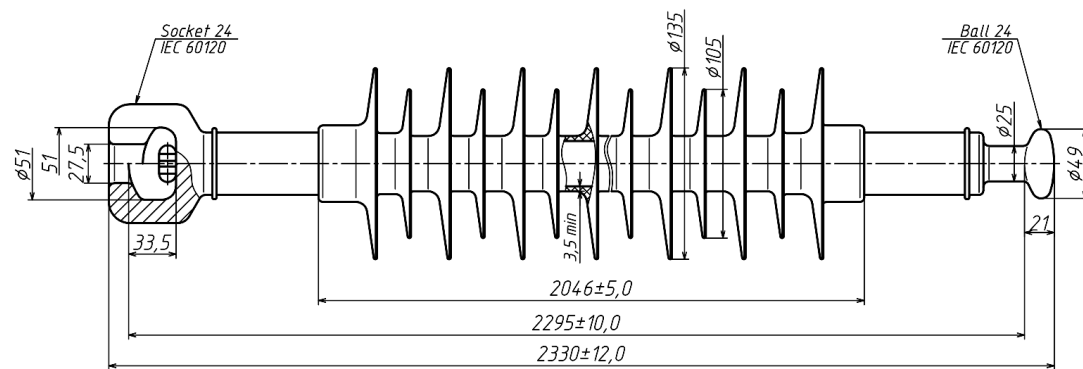


Insulator LK 300-220-E (Cat.№ S.300.2245.6.A.S24.B24)



Insulator LK 300-220-E1

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	220/252
2	Breaking mechanical force at tension, not less than	kN	300
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	630/550
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	1275
5	Switching impulse withstand voltage, not less than	kV	660
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	180
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	7720
11	Arching distance, not less than	mm	2090
12	Section length	mm	2295
13	Sheds diameter, big/small	mm	135/105
14	Sheds number, big/small	-	39/38
15	Weight, not more than	kg	13,1
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		Forged steel
	- Socket 24 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 24 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

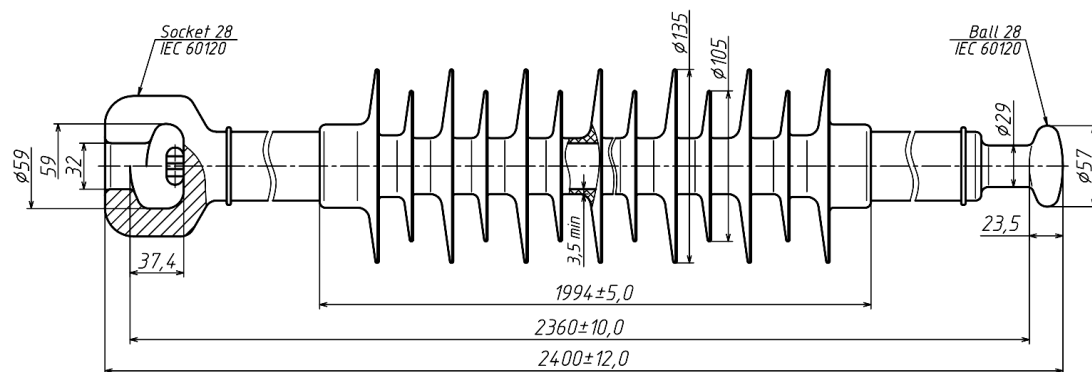


Insulator LK 300-220-E1 (Cat.№ S.300.2295.6.A.S24.B24)



Insulator LK 400-220-E

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	220/252
2	Breaking mechanical force at tension, not less than	kN	400
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	610/530
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	1205
5	Switching impulse withstand voltage, not less than	kV	640
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	240
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
10	Creepage distance, not less than	mm	7510
11	Arching distance, not less than	mm	2035
12	Section length	mm	2360
13	Sheds diameter, big/small	mm	135/105
14	Sheds number, big/small	-	38/37
15	Weight, not more than	kg	15,4
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
18	End fittings:		
	- Socket 28 (IEC 60120)	-	Forged steel
	- Ball 28 (IEC 60120)	-	Hot-dip galvanizing
	- V-clip 28 (IEC 60372)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

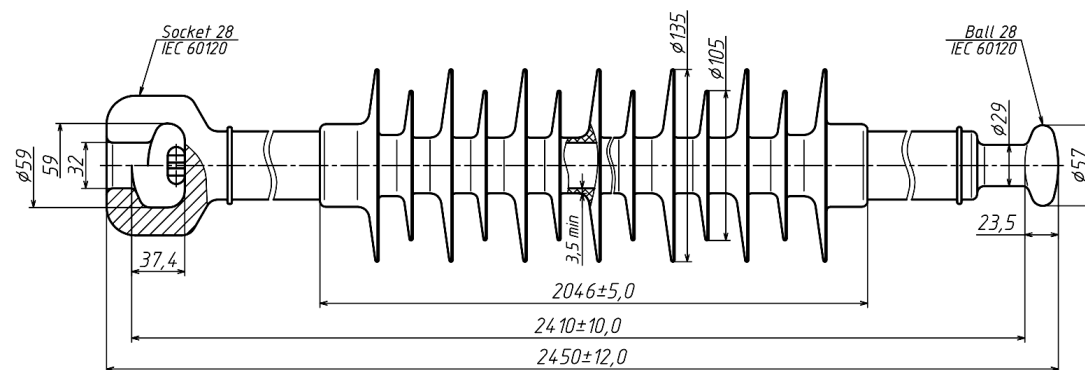


Insulator LK 400-220-E (Cat.№ S.400.2360.6.A.S28.B28)



Insulator LK 400-220-E1

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	220/252
2	Breaking mechanical force at tension, not less than	kN	400
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	630/550
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	1275
5	Switching impulse withstand voltage, not less than	kV	660
6	Track and erosion resistance, not less than	hours	1000
7	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
8	Thermo-mechanical capacity	kN	240
9	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/ μ s	1000
10	Creepage distance, not less than	mm	7710
11	Arching distance, not less than	mm	2085
12	Section length	mm	2410
13	Sheds diameter, big/small	mm	135/105
14	Sheds number, big/small	-	39/38
15	Weight, not more than	kg	15,7
16	Atmosphere pollution level according to IEC 60815	-	E
17	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μ m	85/160
18	End fittings:		Forged steel
	- Socket 28 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 28 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

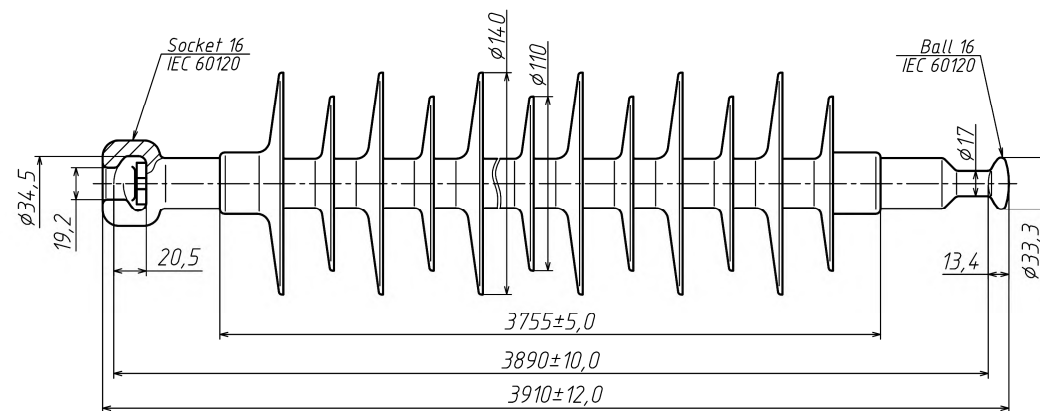


Insulator LK 400-220-E1 (Cat.№ S.400.2410.6.A.S28.B28)



Insulator LK 70-500-D

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	500/525
2	Breaking mechanical force at tension, not less than	kN	70
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	1135/825
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	2050
5	Track and erosion resistance, not less than	hours	1000
6	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
7	Thermo-mechanical capacity	kN	42
8	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/ μ s	1000
9	Creepage distance, not less than	mm	13950
10	Arching distance, not less than	mm	3800
11	Section length	mm	3890
12	Sheds diameter, big/small	mm	140/110
13	Sheds number, big/small	-	59/59
14	Weight, not more than	kg	14,7
15	Atmosphere pollution level according to IEC 60815	-	D
16	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μ m	85/160
17	End fittings:		Forged steel
	- Socket 16 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 16 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

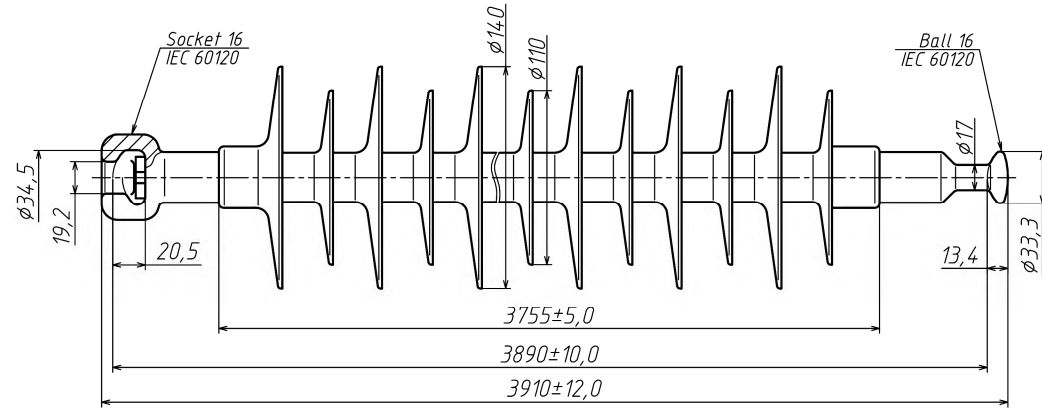


Insulator LK 70-500-D (Cat.№ S.70.3890.4.A.S16.B16)



Insulator LK 120-500-D

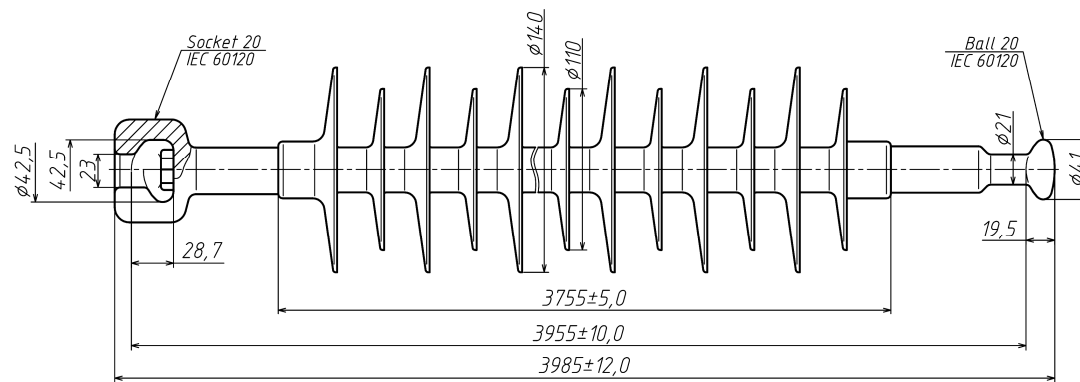
№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	500/525
2	Breaking mechanical force at tension, not less than	kN	120
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	1135/825
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	2050
5	Track and erosion resistance, not less than	hours	1000
6	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
7	Thermo-mechanical capacity	kN	72
8	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
9	Creepage distance, not less than	mm	13950
10	Arching distance, not less than	mm	3800
11	Section length	mm	3890
12	Sheds diameter, big/small	mm	140/110
13	Sheds number, big/small	-	59/59
14	Weight, not more than	kg	14,7
15	Atmosphere pollution level according to IEC 60815	-	D
16	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
17	End fittings: - Socket 16 (IEC 60120) - Ball 16 (IEC 60120)	-	Forged steel Hot-dip galvanizing
	- W-clip 16 (IEC 60372)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466 Tests acc. to IEC 61109			



Insulator LK 120-500-D (Cat.No S.120.3890.4.A.S16.B16)

Insulator LK 160-500-D

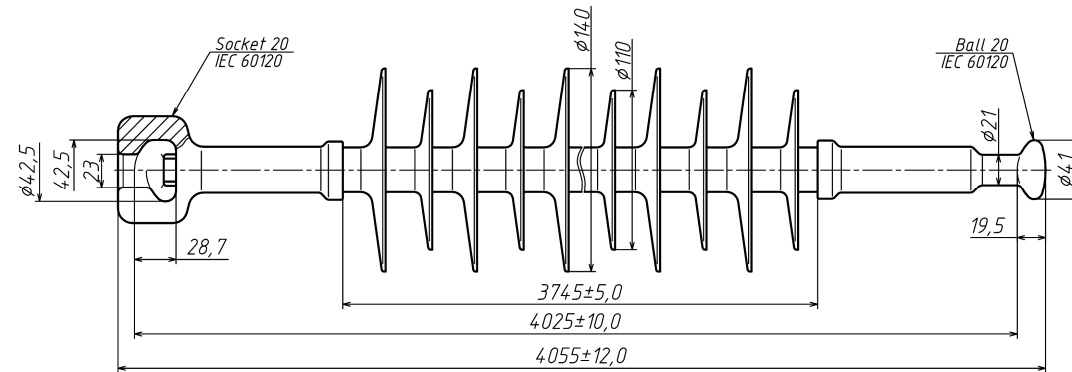
№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	500/525
2	Breaking mechanical force at tension, not less than	kN	160
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	1135/825
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	2050
5	Track and erosion resistance, not less than	hours	1000
6	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
7	Thermo-mechanical capacity	kN	72
8	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
9	Creepage distance, not less than	mm	13950
10	Arching distance, not less than	mm	3800
11	Section length	mm	3955
12	Sheds diameter, big/small	mm	140/110
13	Sheds number, big/small	-	59/59
14	Weight, not more than	kg	15,6
15	Atmosphere pollution level according to IEC 60815	-	D
16	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
17	End fittings: - Socket 20 (IEC 60120) - Ball 20 (IEC 60120)	-	Forged steel Hot-dip galvanizing
	- W-clip 20 (IEC 60372)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466 Tests acc. to IEC 61109			



Insulator LK 160-500-D (Cat.No S.160.3955.4.A.S20.B20)

Insulator LK 210-500-D

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	500/525
2	Breaking mechanical force at tension, not less than	kN	210
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	1135/825
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	2050
5	Track and erosion resistance, not less than	hours	1000
6	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
7	Thermo-mechanical capacity	kN	126
8	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
9	Creepage distance, not less than	mm	13950
10	Arching distance, not less than	mm	3795
11	Section length	mm	4025
12	Sheds diameter, big/small	mm	140/110
13	Sheds number, big/small	-	59/59
14	Weight, not more than	kg	15,8
15	Atmosphere pollution level according to IEC 60815	-	D
16	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
17	End fittings:		Forged steel
	- Socket 20 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 20 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

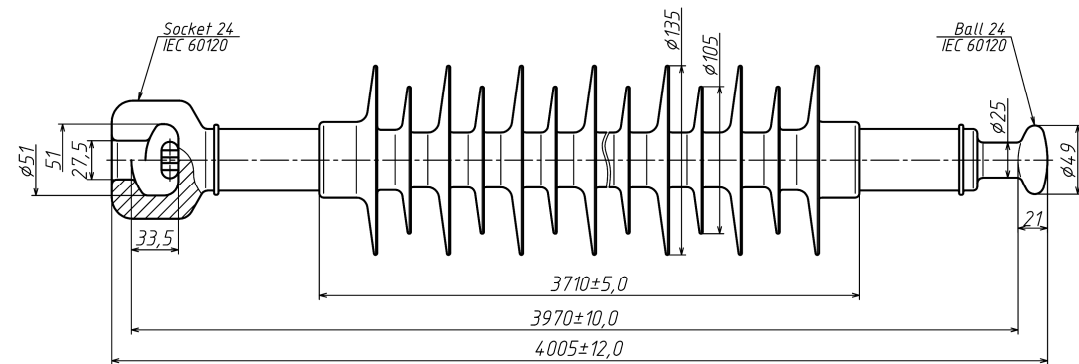


Insulator LK 210-500-D (Cat.№ S.210.4025.4.A.S20.B20)



Insulator LK 300-500-D

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	500/525
2	Breaking mechanical force at tension, not less than	kN	300
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	1135/825
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	2050
5	Track and erosion resistance, not less than	hours	1000
6	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
7	Thermo-mechanical capacity	kN	180
8	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
9	Creepage distance, not less than	mm	14050
10	Arching distance, not less than	mm	3755
11	Section length	mm	3970
12	Sheds diameter, big/small	mm	135/105
13	Sheds number, big/small	-	71/70
14	Weight, not more than	kg	20,7
15	Atmosphere pollution level according to IEC 60815	-	D
16	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
17	End fittings:		Forged steel
	- Socket 24 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 24 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			

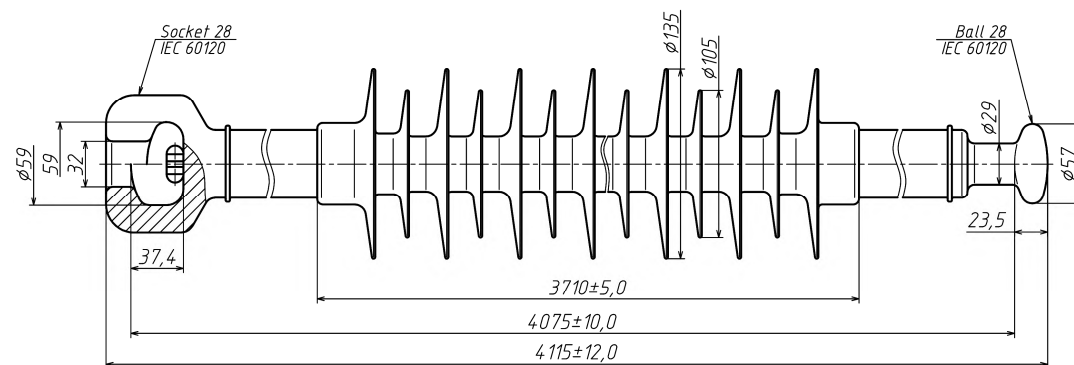


Insulator LK 300-500-D (Cat.№ S.300.3970.6.A.S24.B24)



Insulator LK 400-500-D

№	Name of characteristics	Unit of measurement	Parameters
1	Rated voltage/max voltage	kV	500/525
2	Breaking mechanical force at tension, not less than	kN	400
3	Dry/Wet power frequency withstand voltage during 1 minute, not less than:	kV	1135/825
4	Dry lightning impulse withstand voltage, «1,2/50», not less than	kV	2050
5	Track and erosion resistance, not less than	hours	1000
6	The level of radio interference voltage equal to 1.1 of nominal phase voltage, no more than	dB	60
7	Thermo-mechanical capacity	kN	240
8	Moisture penetration	hours	42
	Impulse test voltage with steep front, not less than	kV/μs	1000
9	Creepage distance, not less than	mm	14040
10	Arching distance, not less than	mm	3750
11	Section length	mm	4075
12	Sheds diameter, big/small	mm	135/105
13	Sheds number, big/small	-	71/70
14	Weight, not more than	kg	23,3
15	Atmosphere pollution level according to IEC 60815	-	D
16	Thickness of zinc coating acc.to EN ISO 1461:2009, min/max	μm	85/160
17	End fittings:		Forged steel
	- Socket 28 (IEC 60120)	-	Hot-dip galvanizing
	- Ball 28 (IEC 60120)	-	Stainless steel
Standards: IEC 60815, 61109, 62217, 61466			
Tests acc. to IEC 61109			



Insulator LK 400-500-D (Cat.№ S.400.4075.6.A.S28.B28)





In 2001, a Limited liability company research-and-production enterprise «ES Polymer» was established in the city of Artyomovsk (Bakmut), Donetsk Region for polymer insulators production, polymer surge suppressors and other types of high-voltage polymer structures.

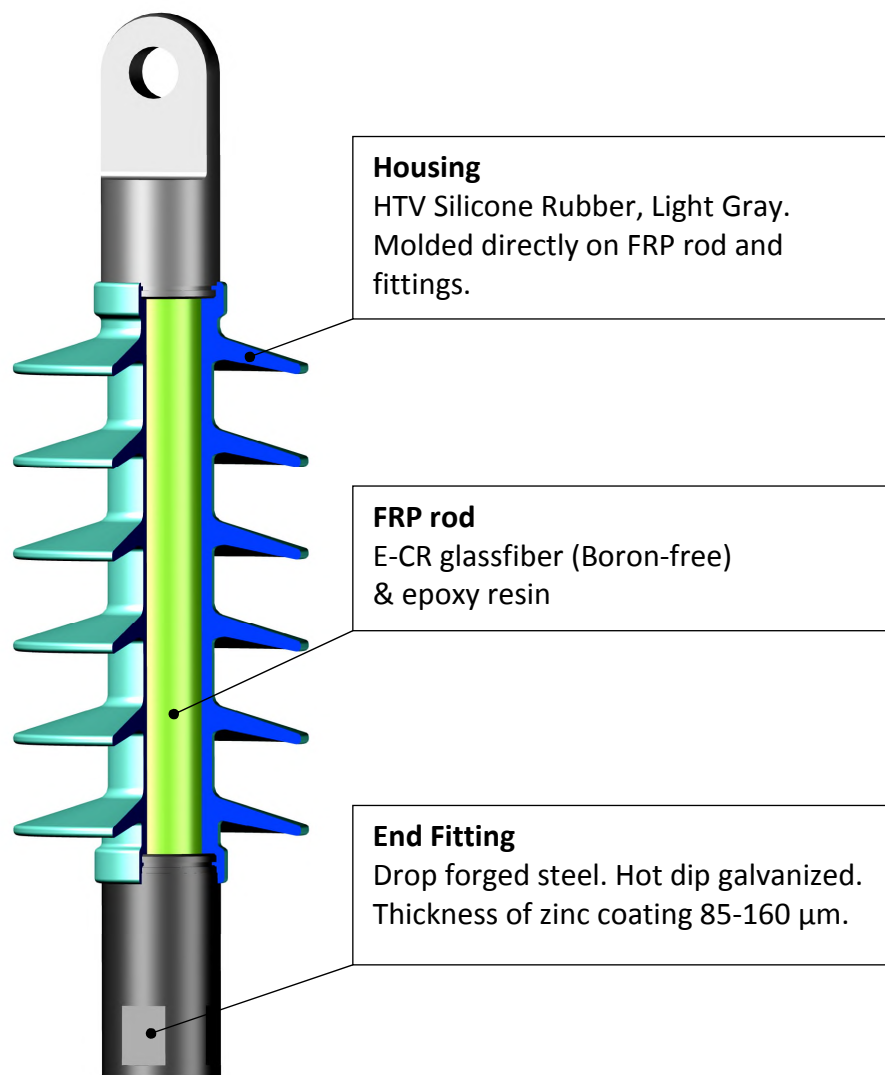
Products are manufactured on highly productive high-performance equipment using high-quality raw materials from leading European manufacturers.



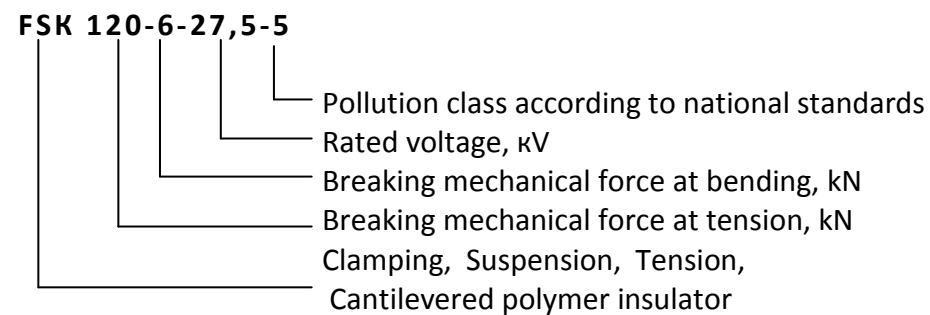
For the production of insulators, injection molding machines from KLOCKHER DESMA ELASTOMERTECHNIK (Germany), crimping machines from FINN-POWER (Switzerland) and other equipment of leading foreign companies are used, which allows to fully automate the basic processes of manufacturing insulators.



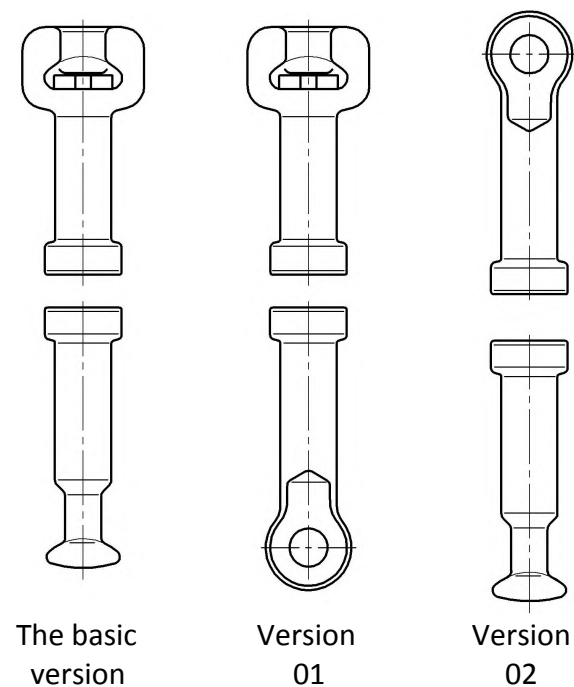
PARTS OF POLYMER INSULATOR



INSULATORS NUMBERING SCHEME



Suspension railway insulator Typical end fitting

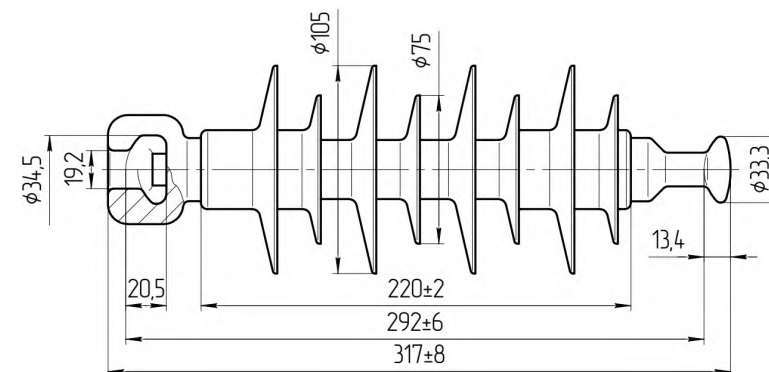


Insulator PSK 70-3,3-7

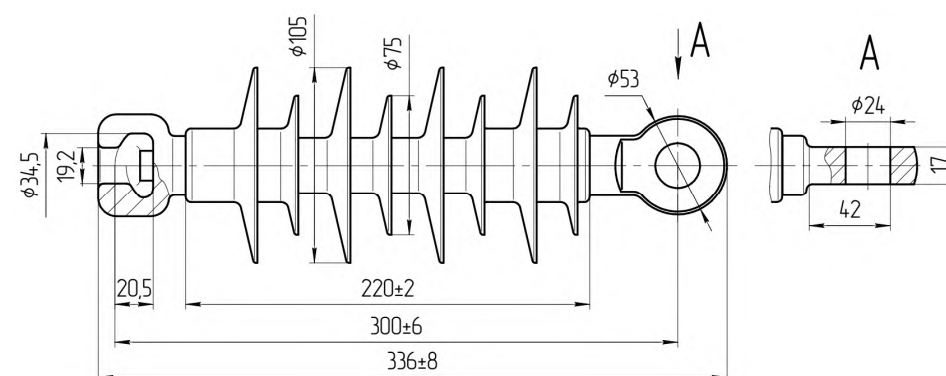
Parameter name		Parameter value
Rated voltage, kV		3,3
Breaking mechanical force at tension, kN, not less, then		70
Creepage distance, not less, then		600
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		60/60
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		125
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (50±5,0) μSm	10
Weight, kg		1,7

The Weight of Insulators may vary depending on the types of end fittings used.

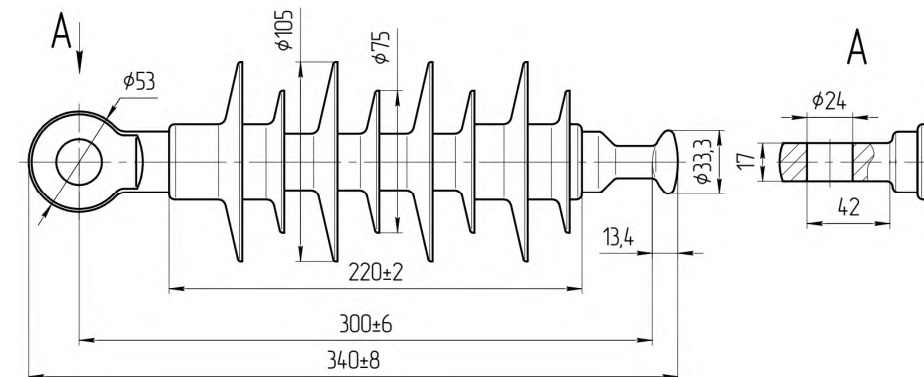
The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator PSK 70-3,3-7



Insulator PSK 70-3,3-7 Version 01



Insulator PSK 70-3,3-7 Version 02

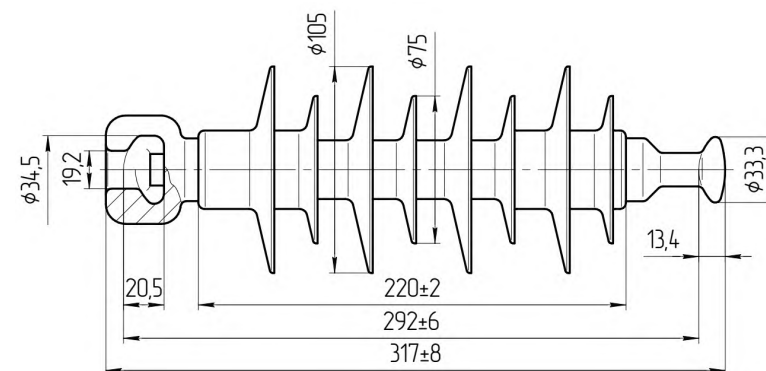


Insulator PSK 120-3,3-7

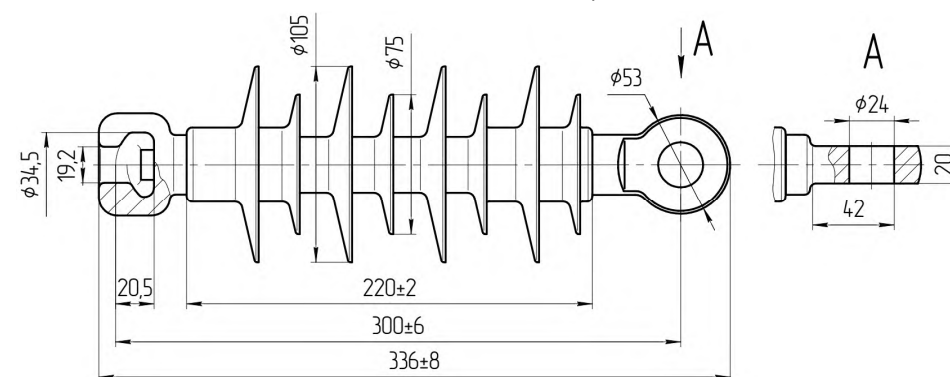
Parameter name		Parameter value
Rated voltage, kV		3,3
Breaking mechanical force at tension, kN, not less, then		120
Creepage distance, not less, then		600
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		60/60
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		125
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (50±5,0) μSm	10
Weight, kg		1,8

The Weight of Insulators may vary depending on the types of end fittings used.

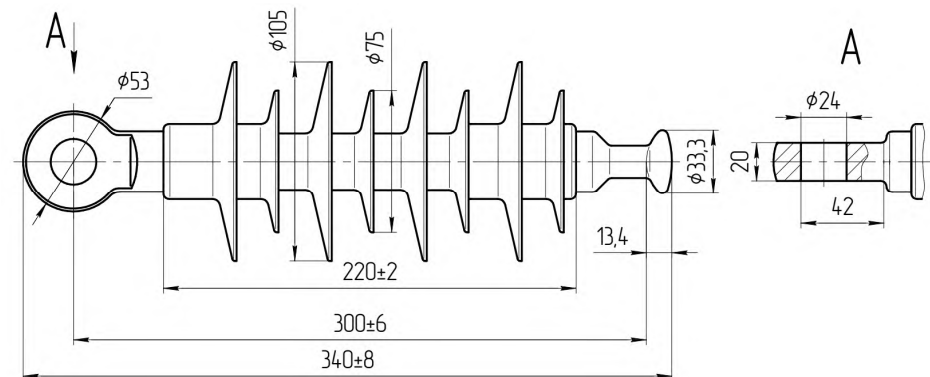
The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator PSK 120-3,3-7



Insulator PSK 120-3,3-7 Version 01



Insulator PSK 120-3,3-7 Version 02

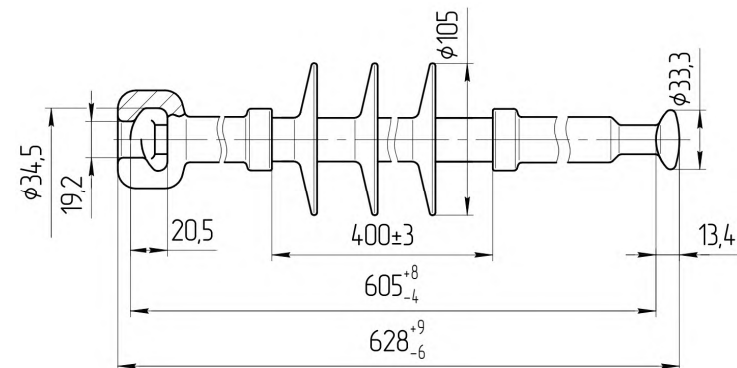


Insulator PSK 70-27,5-4

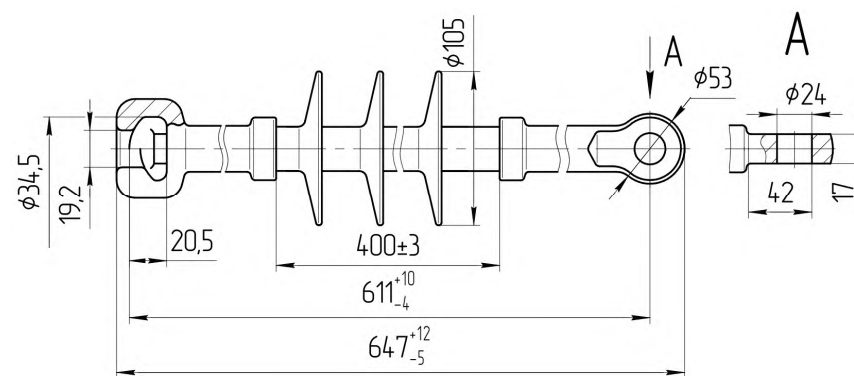
Parameter name		Parameter value
Rated voltage, kV		27,5
Breaking mechanical force at tension, kN, not less, then		70
Creepage distance, not less, then		950
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		130/110
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		220
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (10±1,0) µSm	42
Weight, kg		2,6

The Weight of Insulators may vary depending on the types of end fittings used.

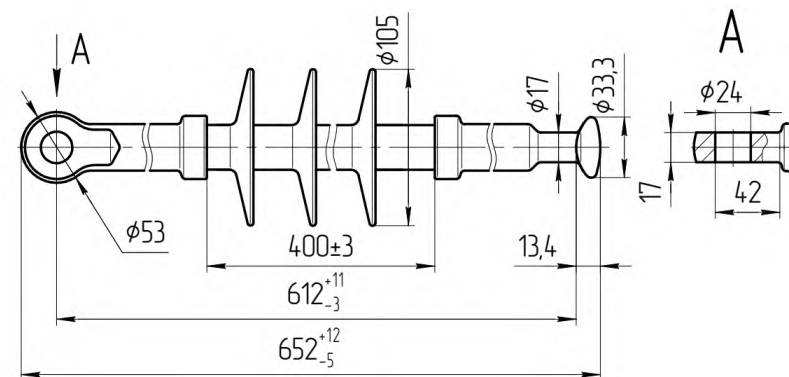
The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator PSK 70-27,5-4



Insulator PSK 70-27,5-4 Version 01



Insulator PSK 70-27,5-4 Version 02

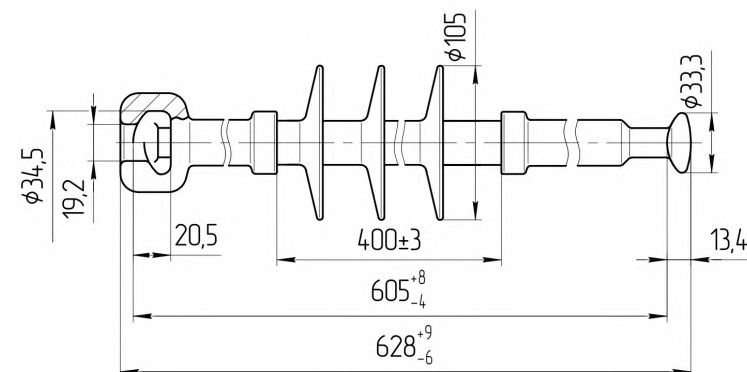


Insulator PSK 120-27,5-4

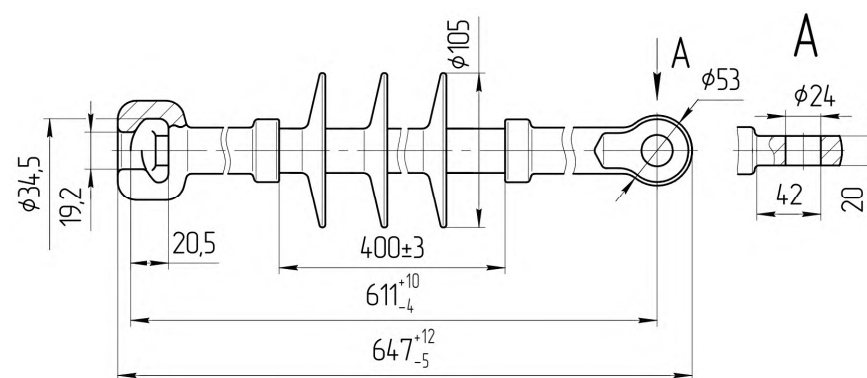
Parameter name		Parameter value
Rated voltage, kV		27,5
Breaking mechanical force at tension, kN, not less, then		120
Creepage distance, not less, then		950
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		130/110
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		220
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (10±1,0) µSm	42
Weight, kg		2,7

The Weight of Insulators may vary depending on the types of end fittings used.

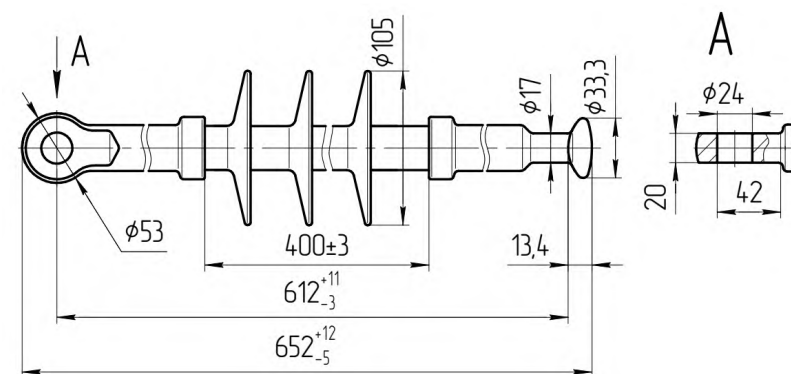
The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator PSK 120-27,5-4



Insulator PSK 120-27,5-4 Version 01



Insulator PSK 120-27,5-4 Version 02

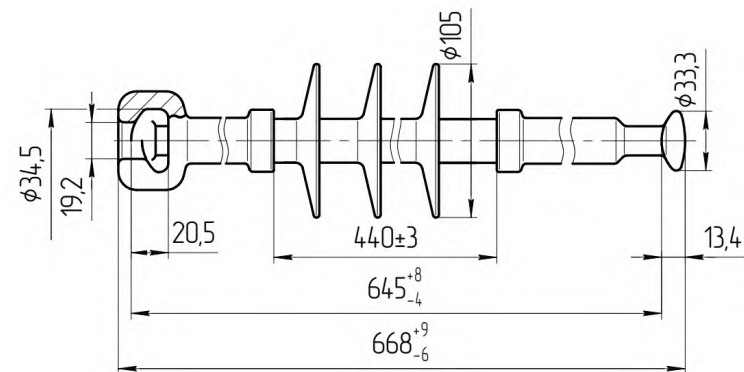


Insulator PSK 70-27,5-5

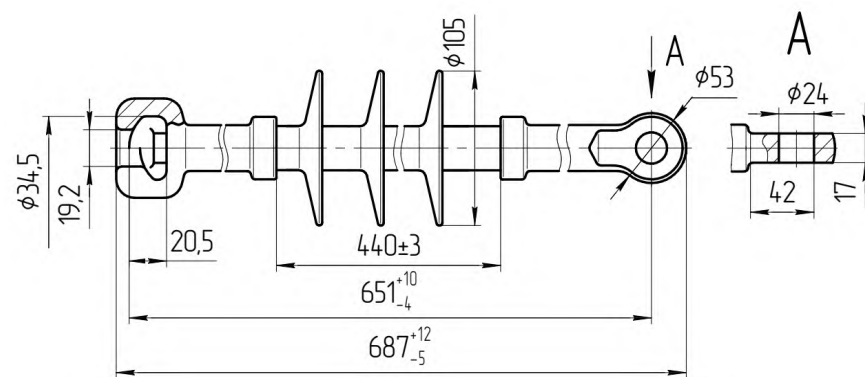
Parameter name		Parameter value
Rated voltage, kV		27,5
Breaking mechanical force at tension, kN, not less, then		70
Creepage distance, not less, then		1100
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		130/110
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		220
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) µSm	42
Weight, kg		2,7

The Weight of Insulators may vary depending on the types of end fittings used.

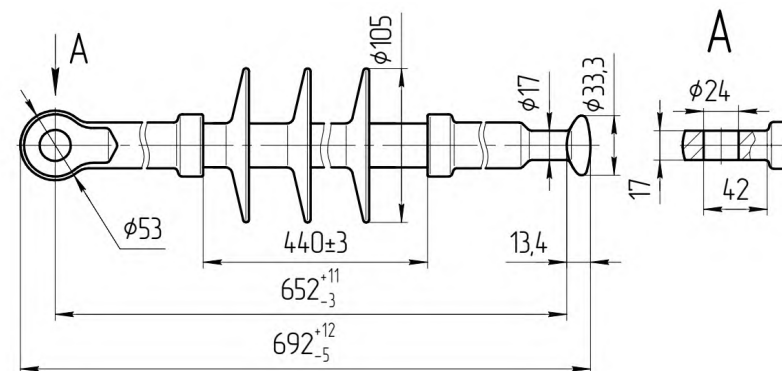
The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator PSK 70-27,5-5



Insulator PSK 70-27,5-5 Version 01



Insulator PSK 70-27,5-5 Version 02

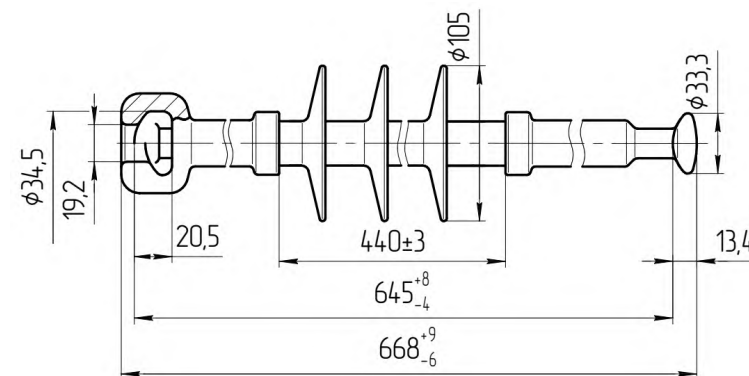


Insulator PSK 120-27,5-5

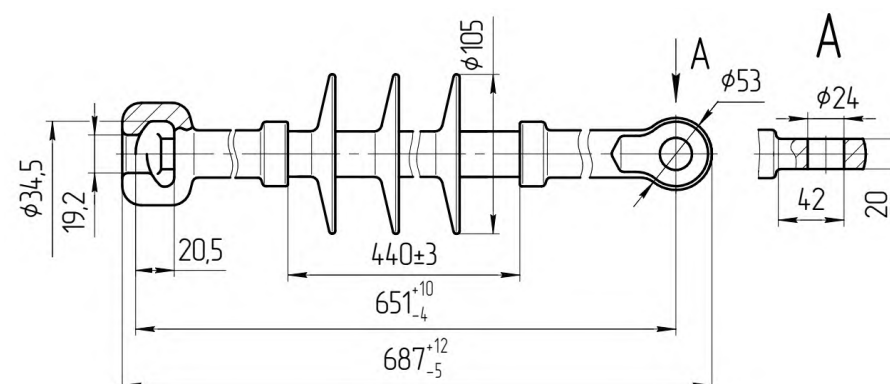
Parameter name		Parameter value
Rated voltage, kV		27,5
Breaking mechanical force at tension, kN, not less, then		120
Creepage distance, not less, then		1100
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		130/110
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		220
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) µSm	42
Weight, kg		2,7

The Weight of Insulators may vary depending on the types of end fittings used.

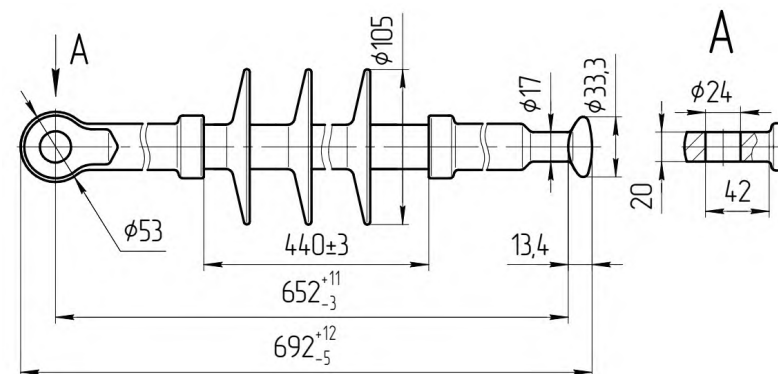
The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator PSK 120-27,5-5



Insulator PSK 120-27,5-5 Version 01



Insulator PSK 120-27,5-5 Version 02

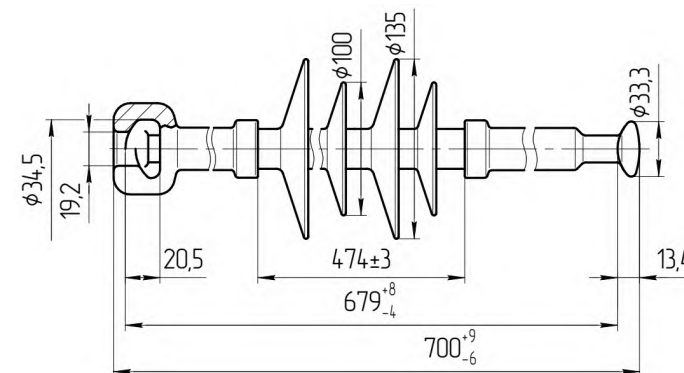


Insulator PSK 70-27,5-7

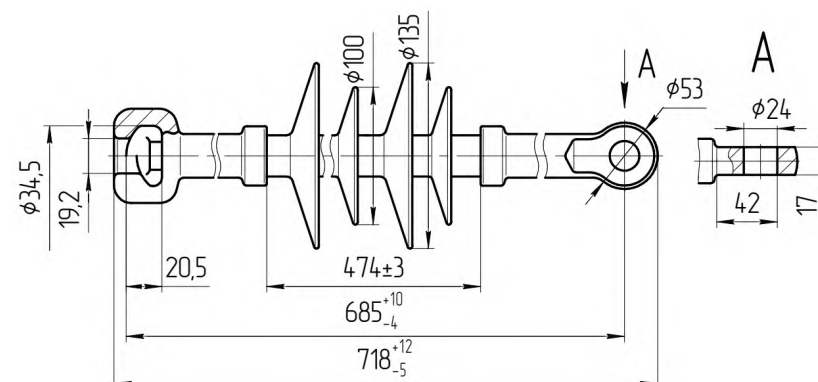
Parameter name		Parameter value
Rated voltage, kV		27,5
Breaking mechanical force at tension, kN, not less, then		70
Creepage distance, not less, then		1500
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		130/110
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		220
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (50±5,0) μSm	42
Weight, kg		3,3

The Weight of Insulators may vary depending on the types of end fittings used.

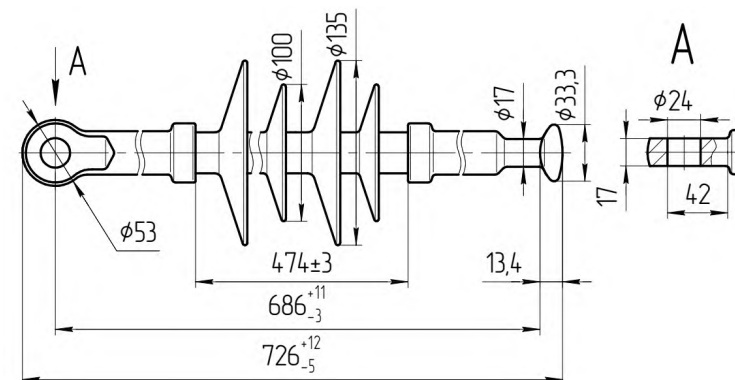
The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator PSK 70-27,5-7



Insulator PSK 70-27,5-7 Version 01



Insulator PSK 70-27,5-7 Version 02

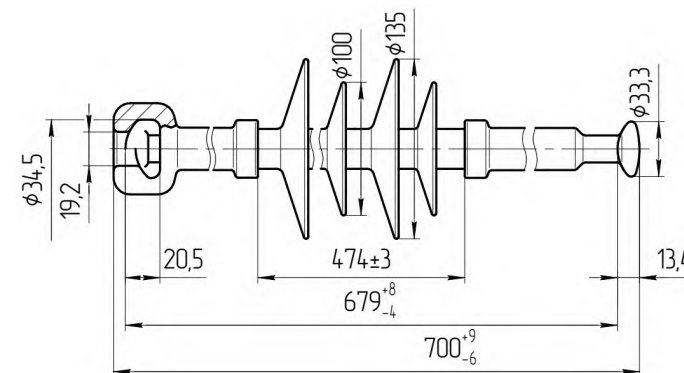


Insulator PSK 120-27,5-7

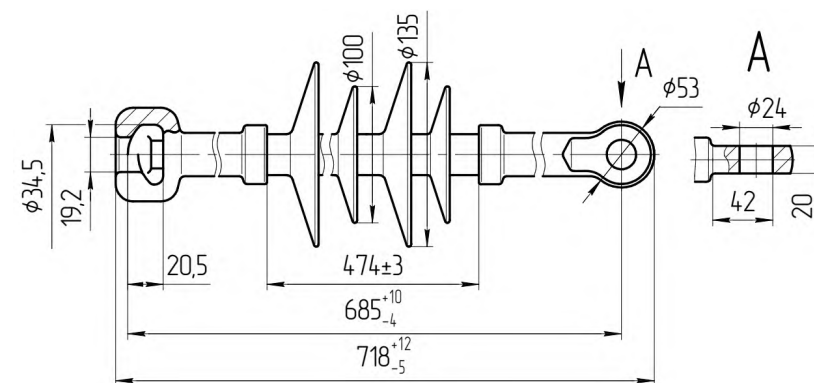
Parameter name		Parameter value
Rated voltage, kV		27,5
Breaking mechanical force at tension, kN, not less, then		120
Creepage distance, not less, then		1500
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		130/110
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		220
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (50±5,0) µSm	42
Weight, kg		3,3

The Weight of Insulators may vary depending on the types of end fittings used.

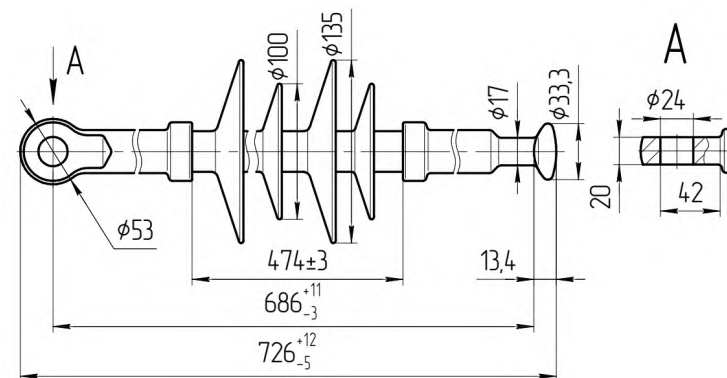
The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator PSK 120-27,5-7



Insulator PSK 120-27,5-7 Version 01



Insulator PSK 120-27,5-7 Version 02

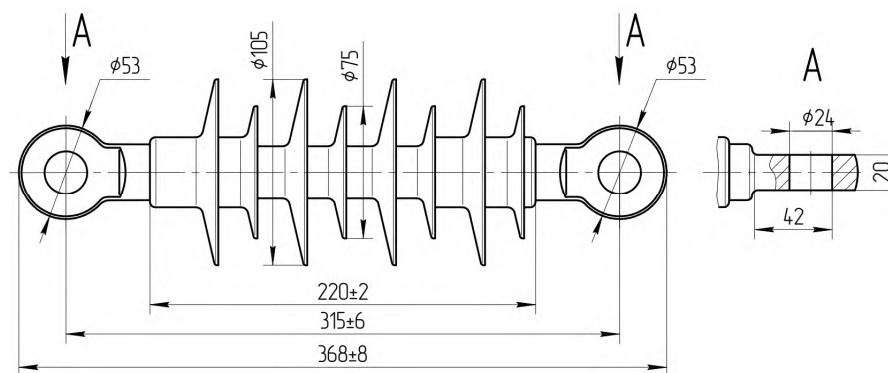


Insulator NSK 120-3,3-7

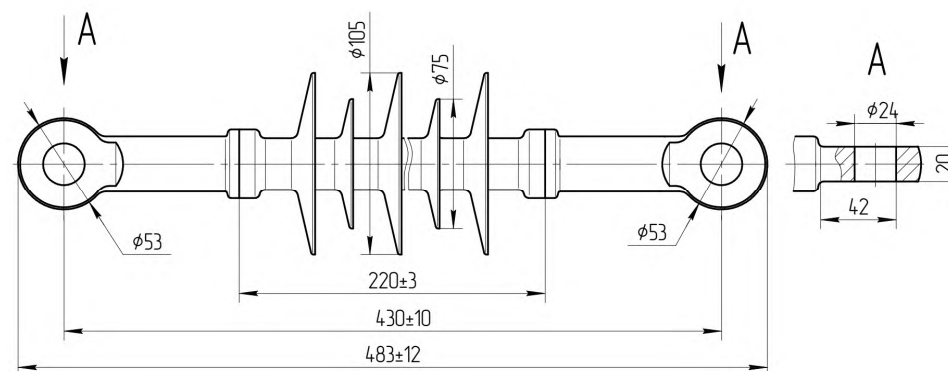
Parameter name		Parameter value
Rated voltage, кV		3,3
Breaking mechanical force at tension, кN, not less, then		120
Creepage distance, not less, then		600
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		60/60
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		125
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, кV	at specific surface conductivity of the pollution layer (50±5,0) μSm	10
Weight, kg		1,6

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator NSK 120-3,3-7



Insulator PSK 120-3,3-7 Version 01

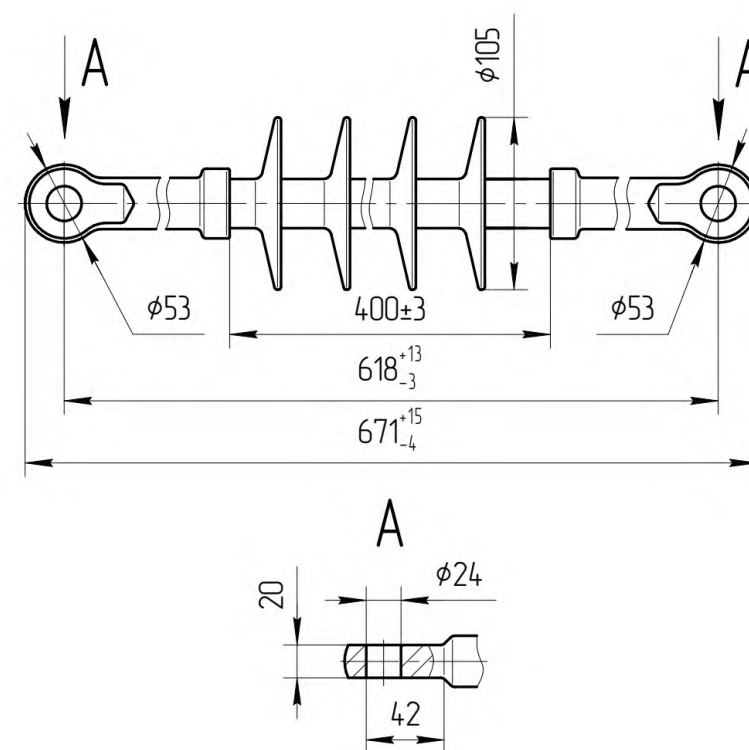


Insulator NSK 120-27,5-4

Parameter name		Parameter value
Rated voltage, kV		27,5
Breaking mechanical force at tension, kN, not less, then		120
Creepage distance, not less, then		950
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		130/110
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		220
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (10±1,0) μSm	42
Weight, kg		2,5

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator NSK 120-27,5-4

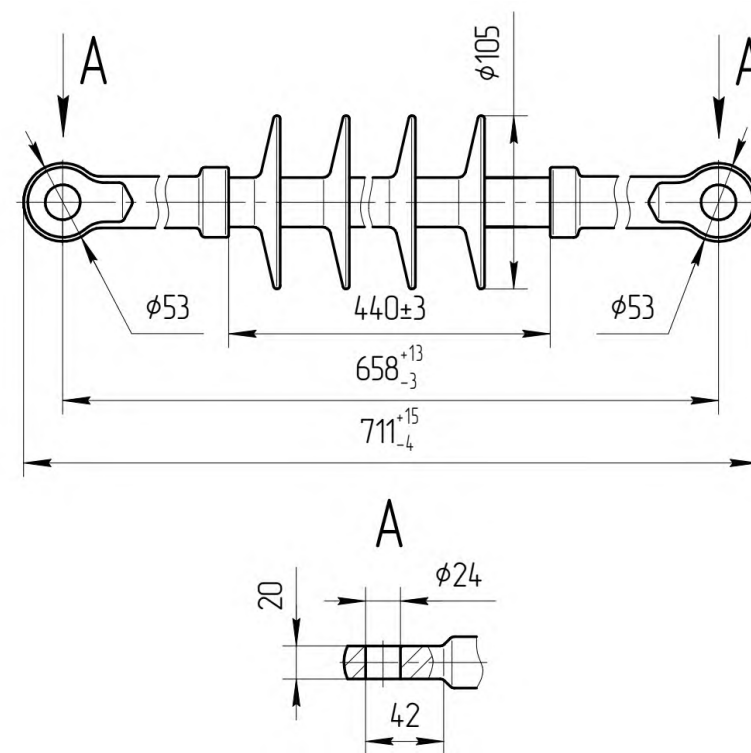


Insulator NSK 120-27,5-5

Parameter name		Parameter value
Rated voltage, kV		27,5
Breaking mechanical force at tension, kN, not less, then		120
Creepage distance, not less, then		1100
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		130/110
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		220
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) µSm	42
Weight, kg		2,6

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator NSK 120-27,5-5

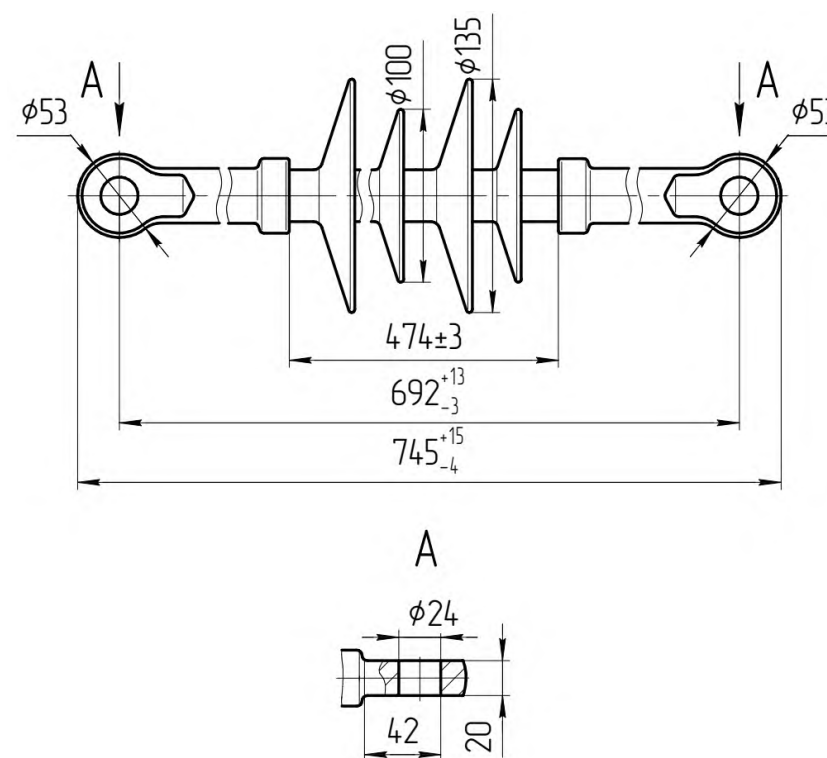


Insulator NSK 120-27,5-7

Parameter name		Parameter value
Rated voltage, kV		27,5
Breaking mechanical force at tension, kN, not less, then		120
Creepage distance, not less, then		1500
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		130/110
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		220
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (50±5,0) µSm	42
Weight, kg		2,9

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator NSK 120-27,5-7

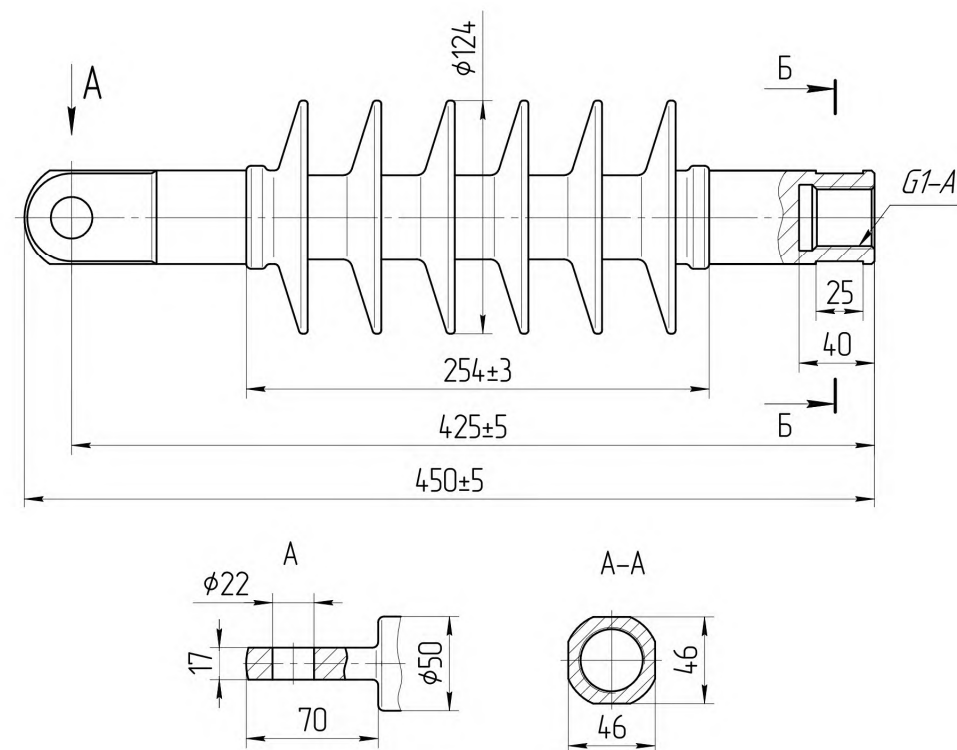


Insulator FSK 70-6-3,3-7

Parameter name		Parameter value
Rated voltage, кV		3,3
Breaking mechanical force at tension, кN, not less, then		70
Breaking mechanical force at bending, кN, not less, then		6
Creepage distance, not less, then		600
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		60/60
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		125
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, кV	at specific surface conductivity of the pollution layer (50±5,0) μSm	10
Weight, kg		3,2

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator FSK 70-6-3,3-7

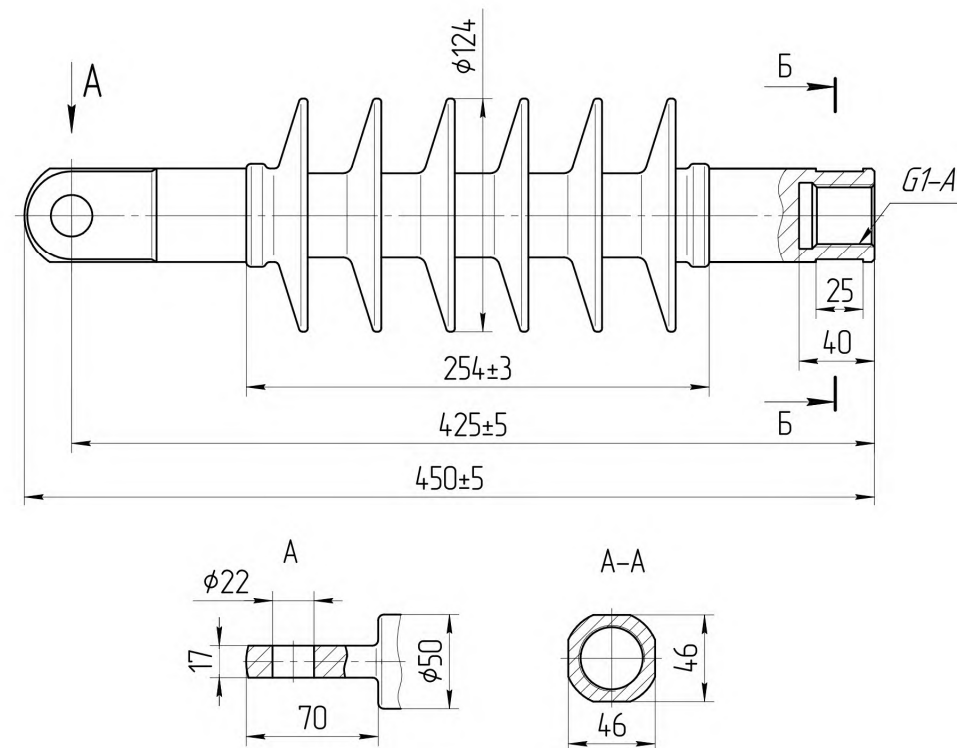


Insulator FSK 120-6-3,3-7

Parameter name		Parameter value
Rated voltage, kV		3,3
Breaking mechanical force at tension, kN, not less, then		120
Breaking mechanical force at bending, kN, not less, then		6
Creepage distance, not less, then		600
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		60/60
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		125
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (50±5,0) µSm	10
Weight, kg		3,2

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator FSK 120-6-3,3-7

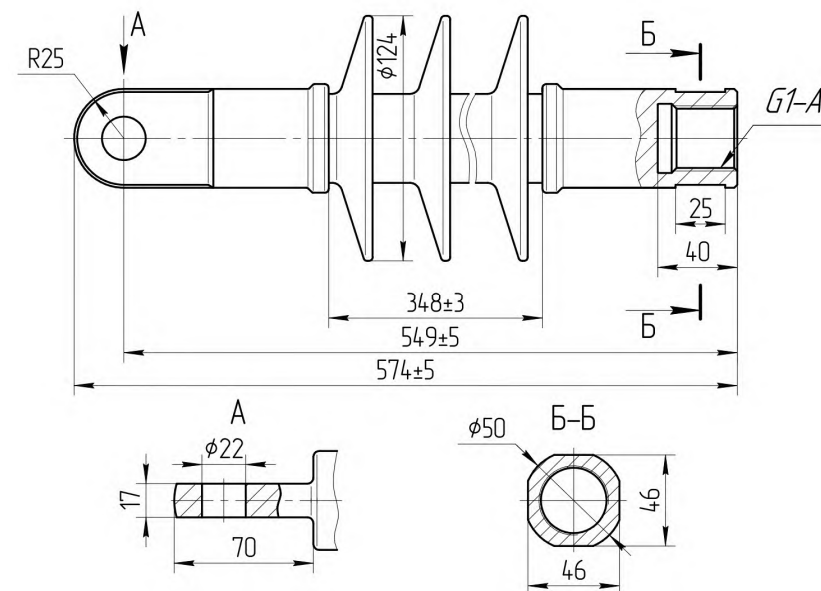


Insulator FSK 70-6-27,5-4

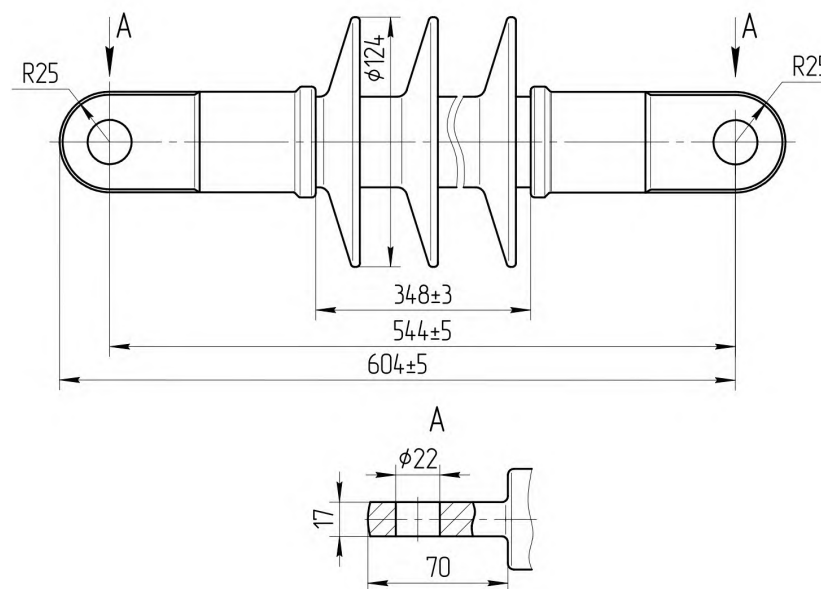
Parameter name		Parameter value
Rated voltage, kV		27,5
Breaking mechanical force at tension, kN, not less, then		70
Breaking mechanical force at bending, kN, not less, then		6
Creepage distance, not less, then		950
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		130/110
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		220
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (10±1,0) μSm	42
Weight, kg		3,9

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator FSK 70-6-27,5-4



Insulator FSK 70-6-27,5-4 Version 01

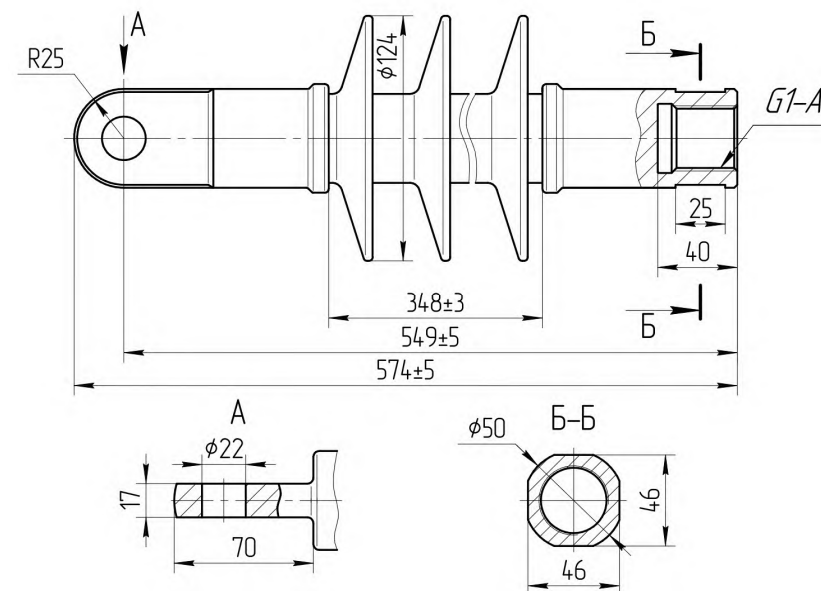


Insulator FSK 120-6-27,5-4

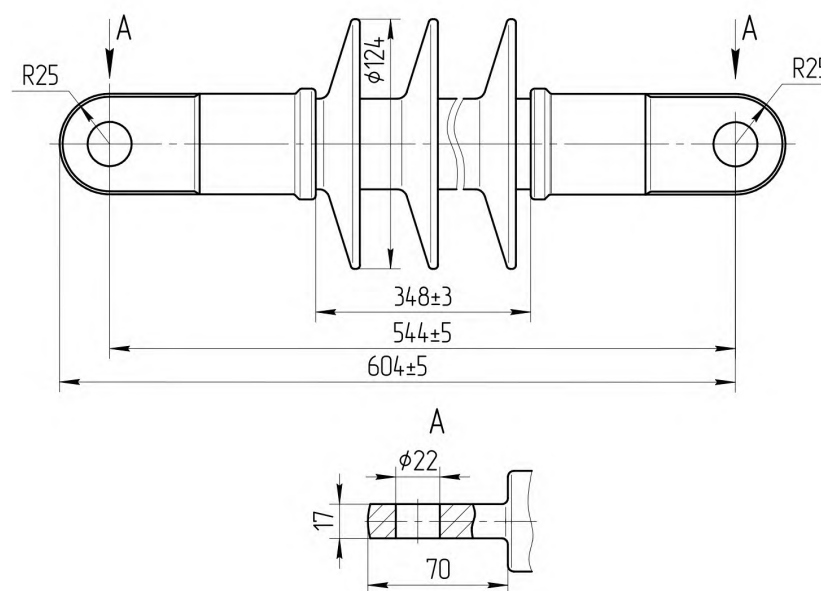
Parameter name		Parameter value
Rated voltage, kV		27,5
Breaking mechanical force at tension, kN, not less, then		120
Breaking mechanical force at bending, kN, not less, then		6
Creepage distance, not less, then		950
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		130/110
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		220
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (10±1,0) μSm	42
Weight, kg		3,9

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator FSK 120-6-27,5-4



Insulator FSK 120-6-27,5-4 Version 01

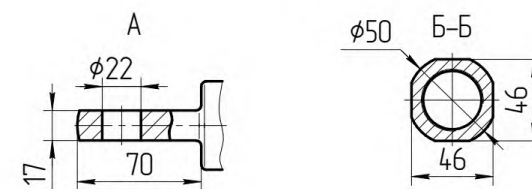
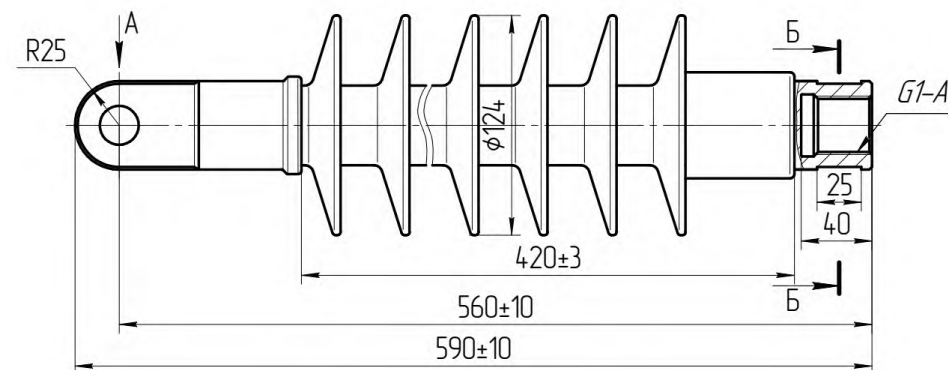


Insulator FSK 70-6-27,5-5

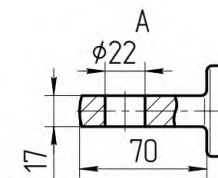
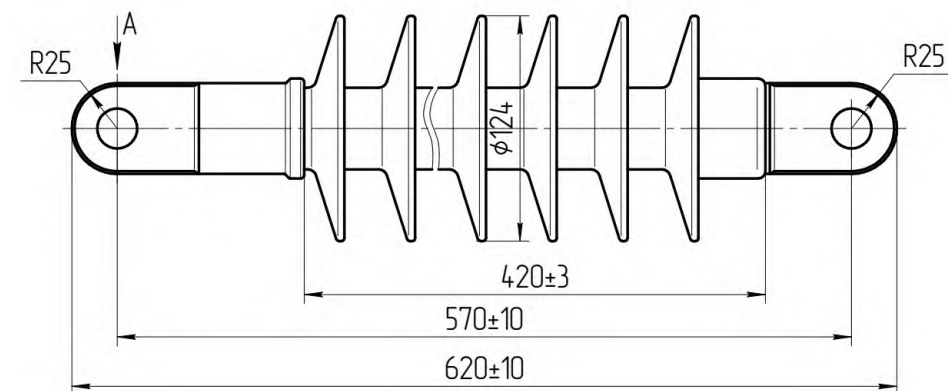
Parameter name		Parameter value
Rated voltage, kV		27,5
Breaking mechanical force at tension, kN, not less, then		70
Breaking mechanical force at bending, kN, not less, then		6
Creepage distance, not less, then		1100
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		130/110
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		220
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) µSm	42
Weight, kg		4,1

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator FSK 70-6-27,5-5



Insulator FSK 70-6-27,5-5 Version 01

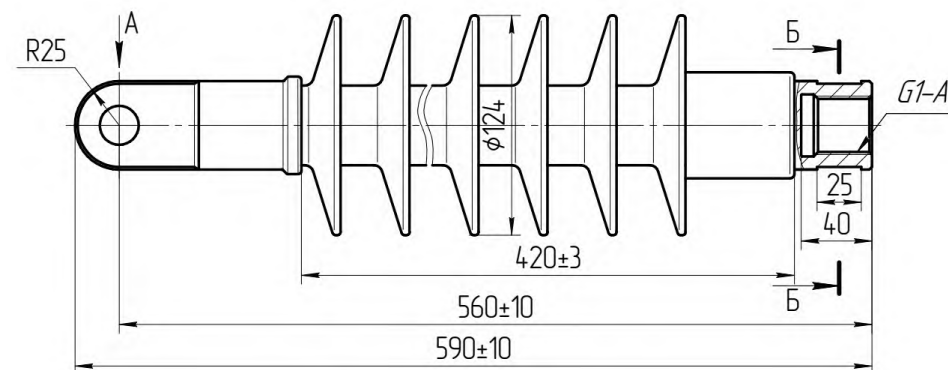


Insulator FSK 120-6-27,5-5

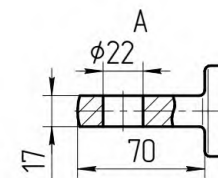
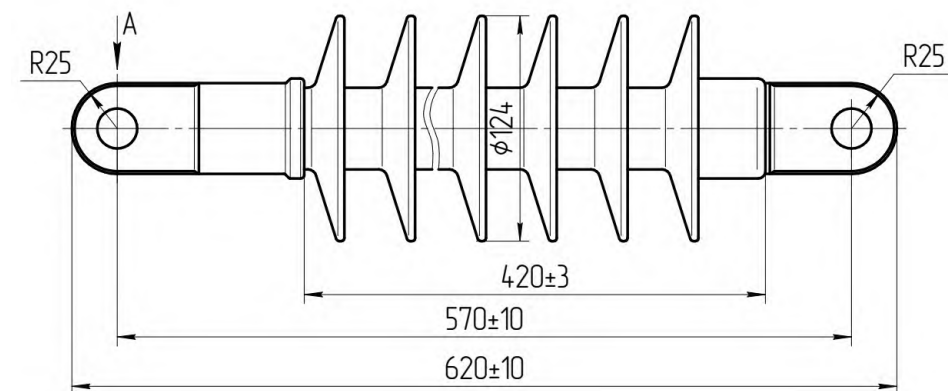
Parameter name		Parameter value
Rated voltage, kV		27,5
Breaking mechanical force at tension, kN, not less, then		120
Breaking mechanical force at bending, kN, not less, then		6
Creepage distance, not less, then		1100
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		130/110
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		220
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) µSm	42
Weight, kg		4,1

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator FSK 70-6-27,5-5



Insulator FSK 70-6-27,5-5 Version 01

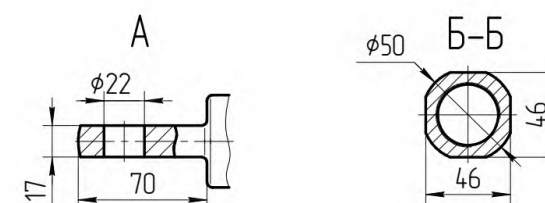
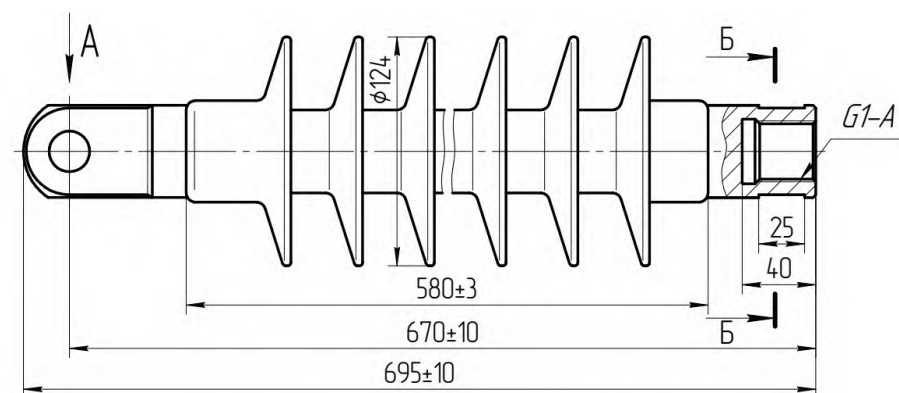


Insulator FSK 70-6-27,5-7

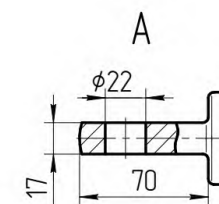
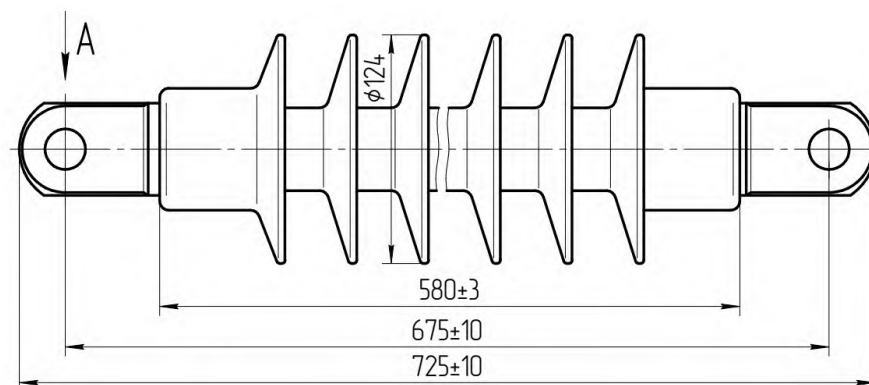
Parameter name		Parameter value
Rated voltage, kV		27,5
Breaking mechanical force at tension, kN, not less, then		70
Breaking mechanical force at bending, kN, not less, then		6
Creepage distance, not less, then		1100
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		130/110
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		220
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (50±5,0) µSm	42
Weight, kg		4,8

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator FSK 70-6-27,5-7



Insulator FSK 70-6-27,5-7 Version 01

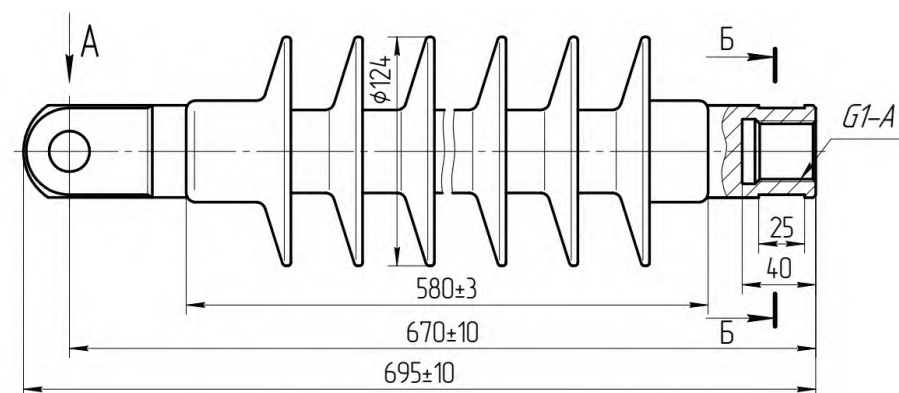


Insulator FSK 120-6-27,5-7

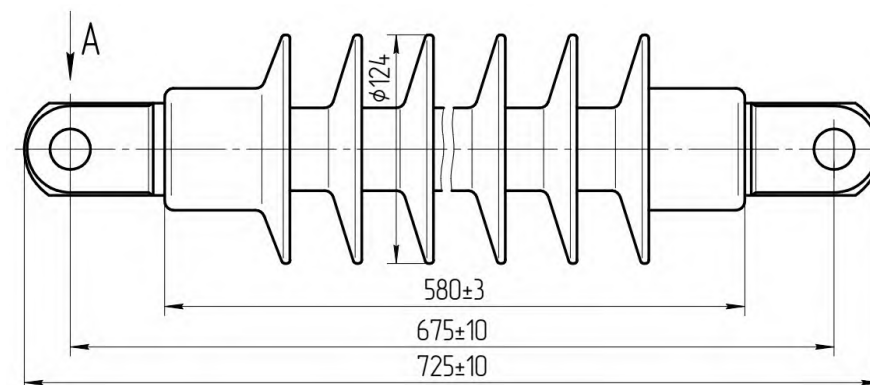
Parameter name		Parameter value
Rated voltage, kV		27,5
Breaking mechanical force at tension, kN, not less, then		120
Breaking mechanical force at bending, kN, not less, then		6
Creepage distance, not less, then		1100
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		130/110
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		220
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (50±5,0) µSm	42
Weight, kg		4,8

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator FSK 120-6-27,5-7



Insulator FSK 120-6-27,5-7 Version 01

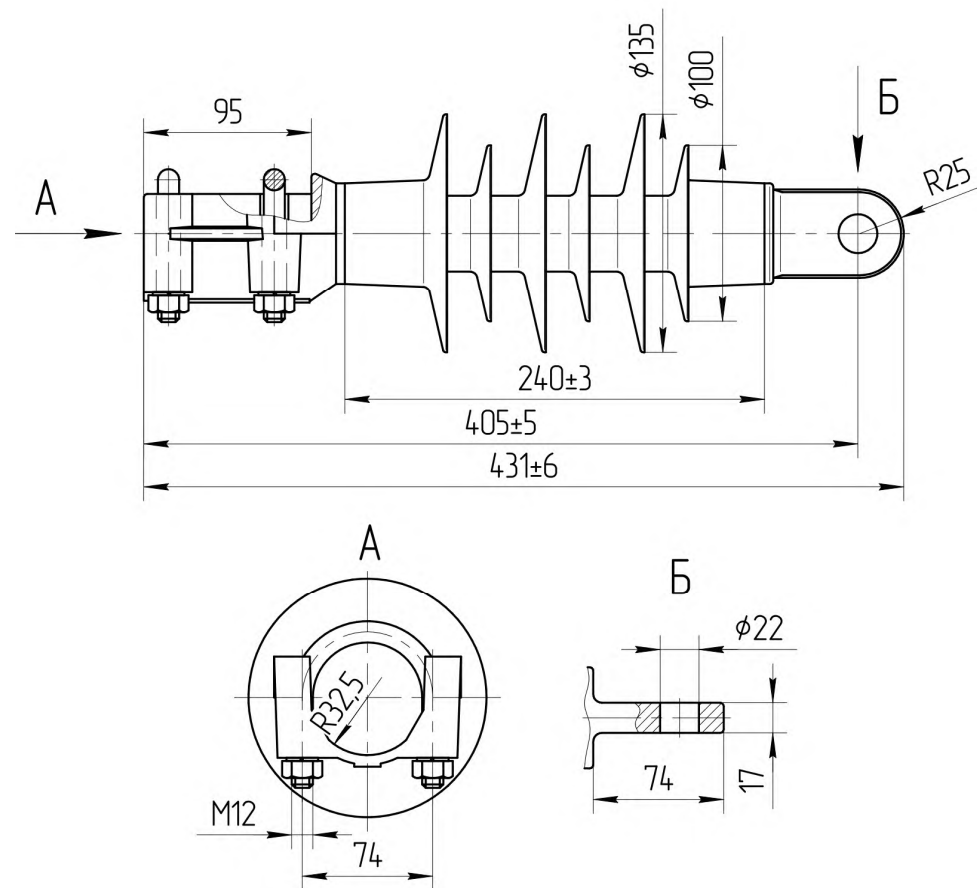


Insulator KSK 120-8-3,3-7

Parameter name		Parameter value
Rated voltage, кV		3,3
Breaking mechanical force at tension, кN, not less, then		120
Breaking mechanical force at bending, кN, not less, then		8
Creepage distance, not less, then		600
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		60/60
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		125
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, кV	at specific surface conductivity of the pollution layer (50±5,0) μSm	10
Weight, kg		4,1

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator KSK 120-8-3,3-7

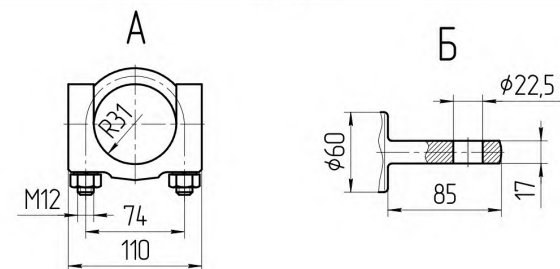
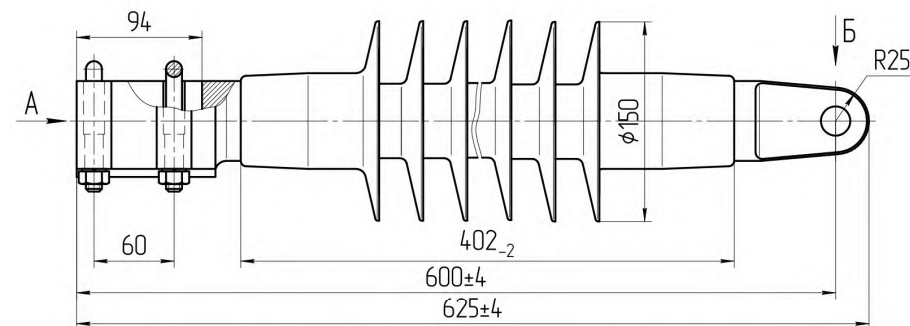


Insulator KSK 120-8-27,5-4

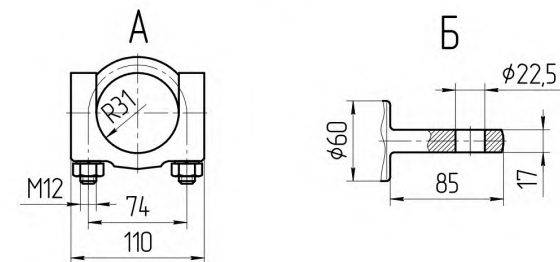
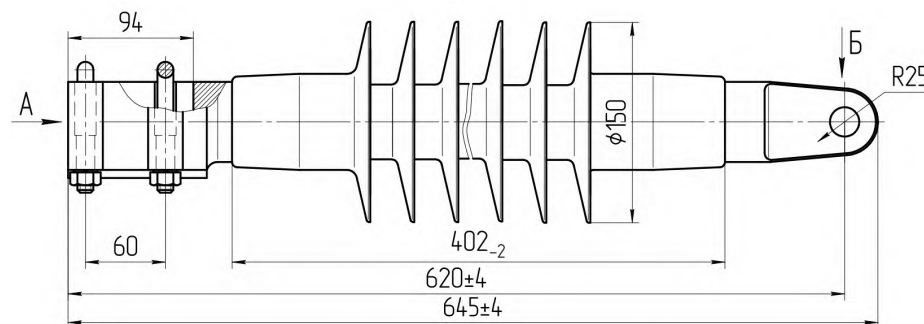
Parameter name		Parameter value
Rated voltage, kV		27,5
Breaking mechanical force at tension, kN, not less, then		120
Breaking mechanical force at bending, kN, not less, then		8
Creepage distance, not less, then		950
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		130/110
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		220
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (10±1,0) μSm	42
Weight, kg		7,9

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator KSK 120-8-27,5-4



Insulator KSK 120-8-27,5-4 Version 01

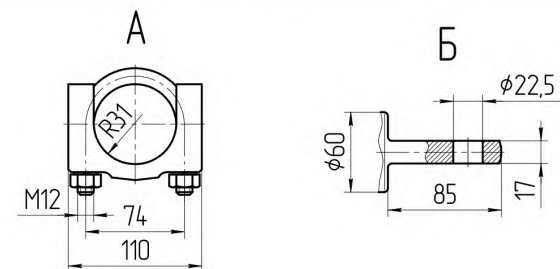
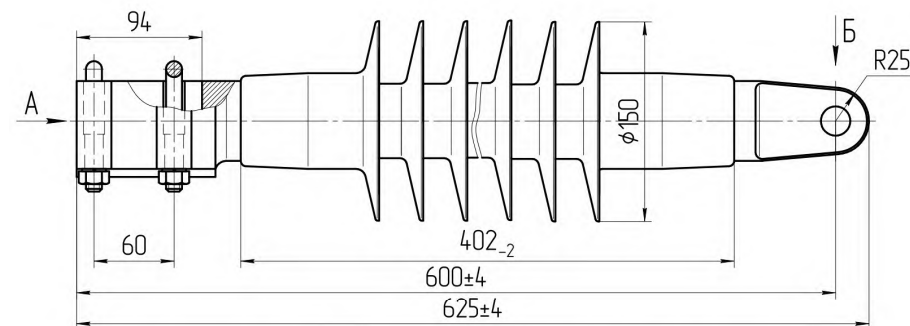


Insulator KSK 120-8-27,5-5

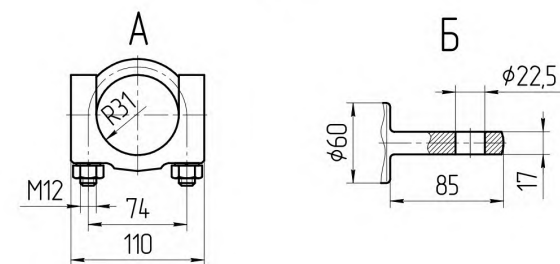
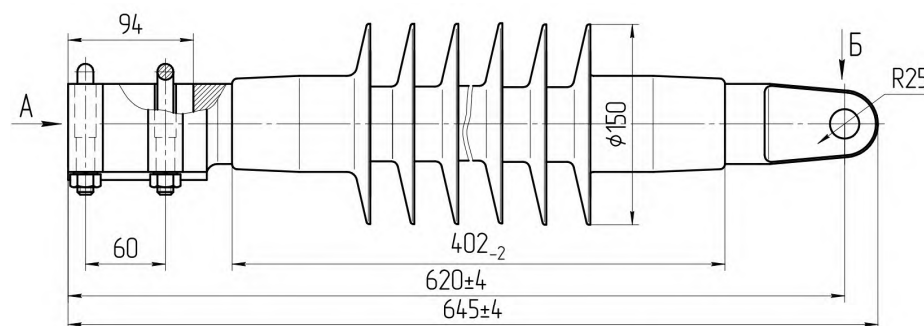
Parameter name		Parameter value
Rated voltage, kV		27,5
Breaking mechanical force at tension, kN, not less, then		120
Breaking mechanical force at bending, kN, not less, then		8
Creepage distance, not less, then		1100
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		130/110
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		220
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) μSm	42
Weight, kg		8,0

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator KSK 120-8-27,5-5



Insulator KSK 120-8-27,5-5 Version 01

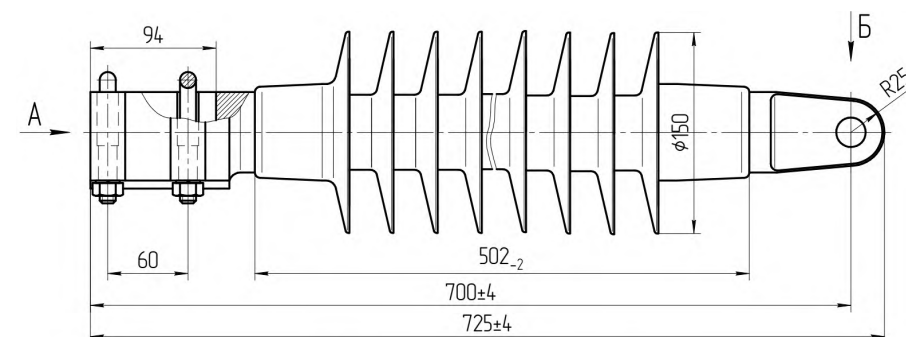


Insulator KSK 120-8-27,5-7

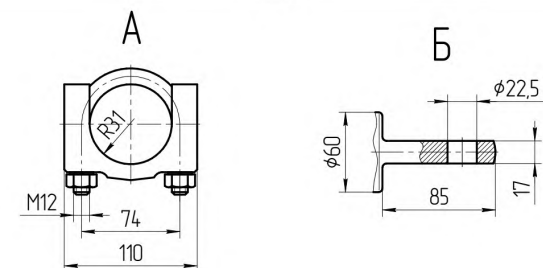
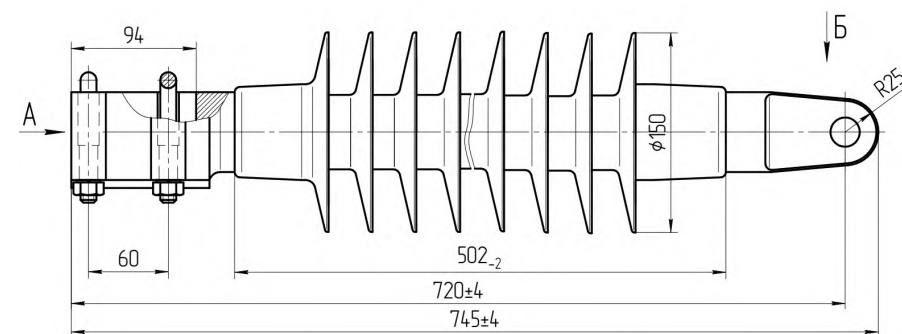
Parameter name		Parameter value
Rated voltage, кV		27,5
Breaking mechanical force at tension, кN, not less, then		120
Breaking mechanical force at bending, кN, not less, then		8
Creepage distance, not less, then		1500
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		130/110
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		220
50% discharge voltage of industrial frequency in humidified and contaminated state not less than, кV	at specific surface conductivity of the pollution layer (50±5,0) μSm	42
Weight, kg		8,8

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-006:2005, DSTU 3024-95. The actual parameters are specified in the respective protocols.



Insulator KSK 120-8-27,5-7



Insulator KSK 120-8-27,5-7 Version 01



This image shows a full page of a worksheet designed for handwriting practice. It features 18 horizontal rows, each consisting of three dashed lines. The top row is slightly larger than the others, providing extra space at the beginning of the document. The rest of the page is filled with uniform rows of dashed lines, intended to help children learn letter formation and alignment through repeated tracing or writing exercises.





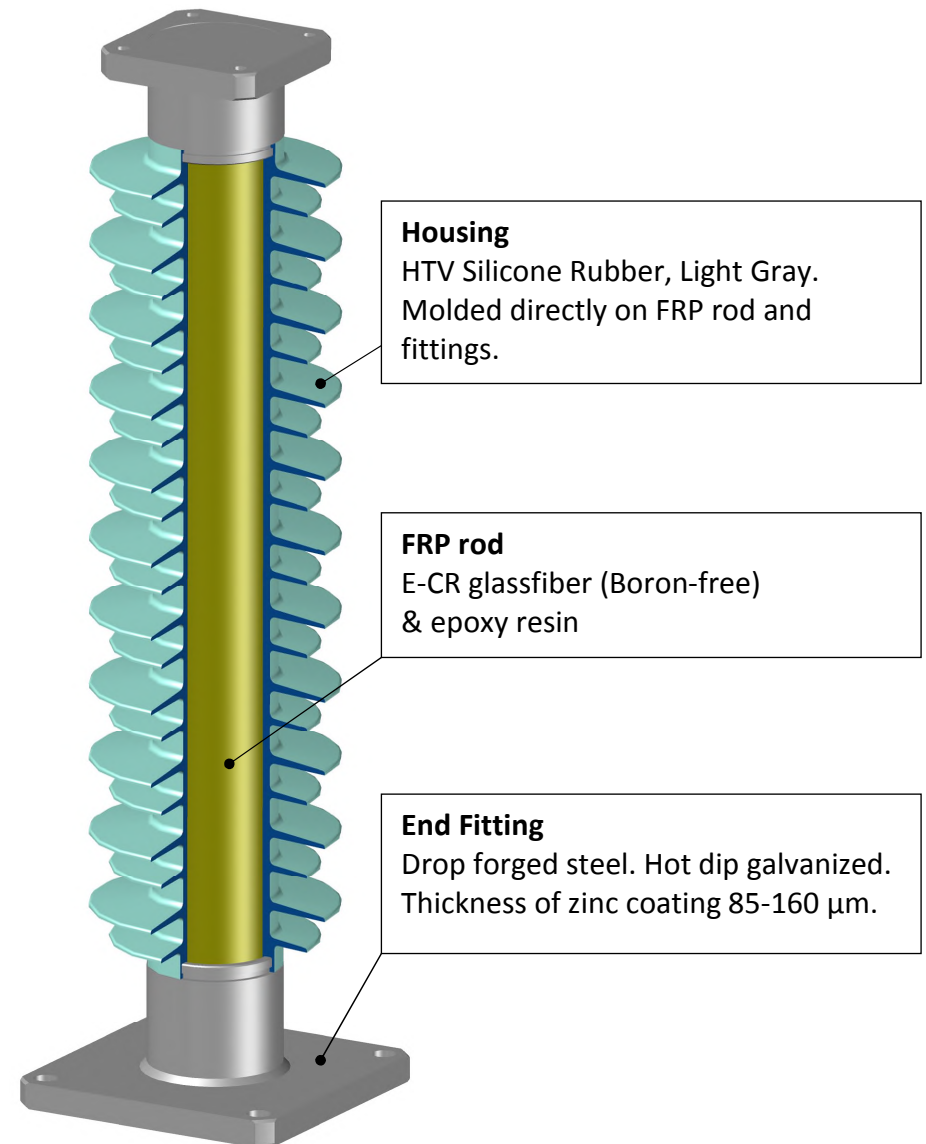
In 2001, a Limited liability company research-and-production enterprise «ES Polymer» was established in the city of Artyomovsk (Bakhmut), Donetsk Region for polymer insulators production, polymer surge suppressors and other types of high-voltage polymer structures.

Products are manufactured on highly productive high-performance equipment using high-quality raw materials from leading European manufacturers.



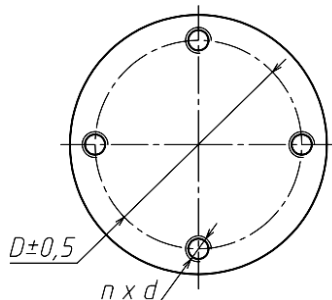
For the production of insulators, injection molding machines from KLOCKHER DESMA ELASTOMERTECHNIK (Germany), crimping machines from FINN-POWER (Switzerland) and other equipment of leading foreign companies are used, which allows to fully automate the basic processes of manufacturing insulators.

PARTS OF A LINE POST POLYMER INSULATOR

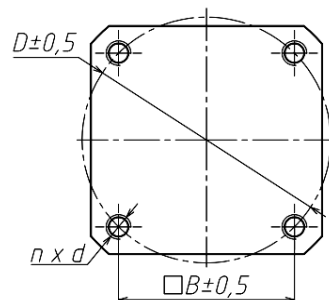


Basic mounting dimensions

Intercenter distance <i>D</i> or <i>B</i>	Qty and holes diameter <i>n x d</i>	Intercenter distance <i>D</i> or <i>B</i>	Qty and holes diameter <i>n x d</i>	Intercenter distance <i>D</i> or <i>B</i>	Qty and holes diameter <i>n x d</i>
0	1xM10	Ø127	4xM12	Ø225	4xØ18
0	1xM12	Ø127	4xØ13	Ø254	8xØ18
0	1xM16	Ø127	4xM16	Ø300	8xØ18
Ø18	2xM8	Ø127	4xØ18	□100	4xM10
Ø23	2xM6	Ø140	2xM6	□100	4xM12
Ø23	2xM10	Ø140	4xM10	□120	4xM12
Ø25	2xM12	Ø140	4xM12	□120	4xØ13
Ø30	2xM8	Ø140	4xØ13	□120	4xØ18
Ø36	2xM6	Ø140	4xØ15	□140	4xM12
Ø36	2xM8	Ø140	4xM16	□140	4xM16
Ø40	4xM12	Ø140	4xØ18	□140	4xØ18
Ø50	2xM10	Ø178	4xM16	□155	4xØ15
Ø70	2xM10	Ø178	4xØ18	□160	4xM16
Ø76	4xM12	Ø190	6xØ13	□160	4xØ18
Ø120	4xM12	Ø200	4xM16	□180	4xØ18
Ø120	4xØ15	Ø200	4xØ18	□194	4xØ20



Flange Type "R",
Round

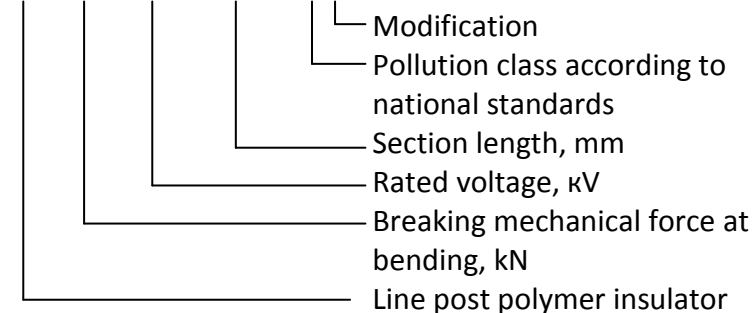


Flange Type "S",
Square

The catalog contains insulators with basic types of flanges.
At the request of the customer, it is possible to manufacture
insulators with a combination of types of flanges made to order

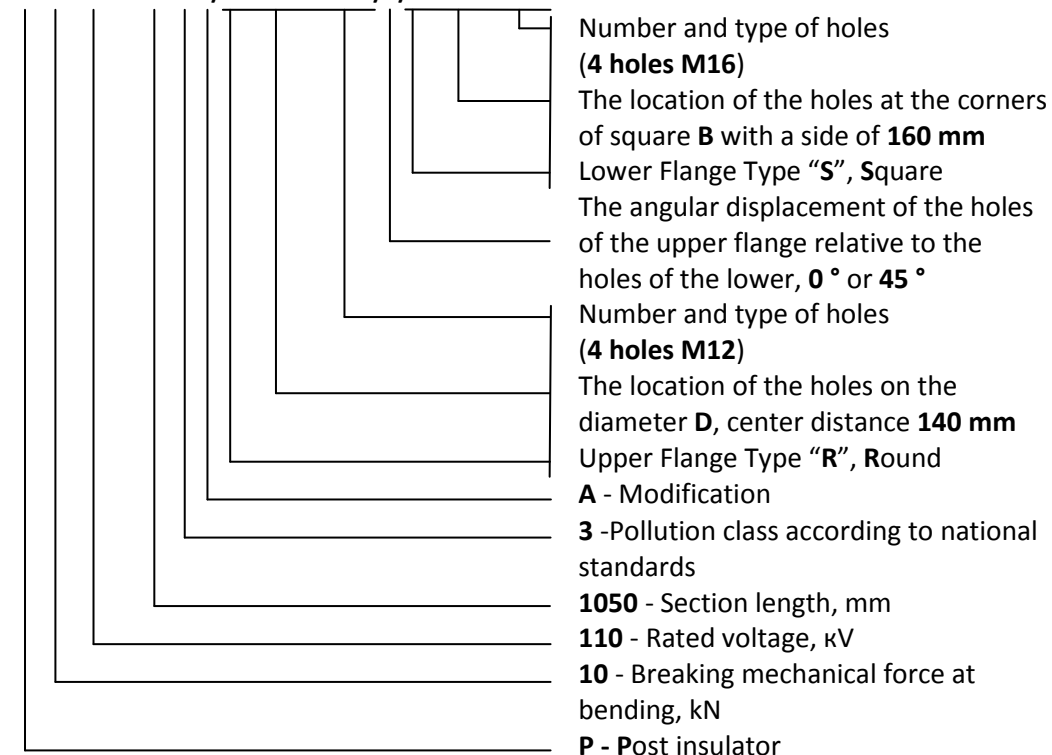
INSULATORS NUMBERING SCHEME

IOSK 10 – 110 – 1050 – 3A



CATALOGUE NUMBER KEY

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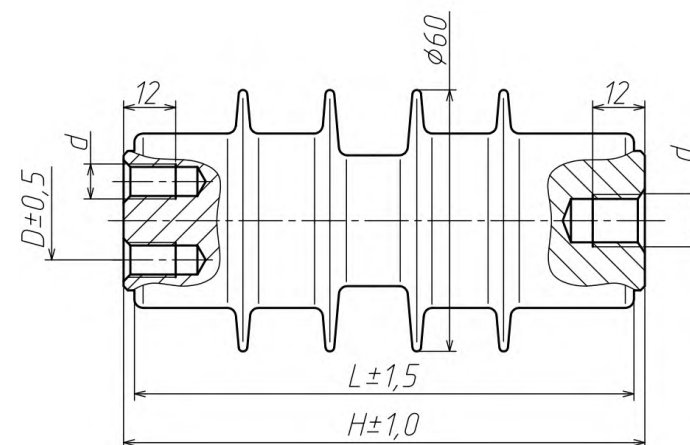


Insulator IOSK 4-10-120-1

Parameter name		Parameter value
Rated voltage, kV		10
Breaking mechanical force at bending, kN, not less, then		4,0
Creepage distance, not less, then		200
Section length H, mm		120
Insulation length L, mm		115
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		42/28
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		75
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (5±0,5) μSm	13
Weight, kg		0,5

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D	d	D	d
P.4.10.120.1/R.D0.M10/0/R.D0.M12	IOR-10-3,75-I	-	M10	-	M12
P.4.10.120.1/R.D18.2M8/0/R.D0.M12	IOR-10-3,75-II	18	M8	-	M12

Execution of flanges with other connecting dimensions - as agreed with the customer.

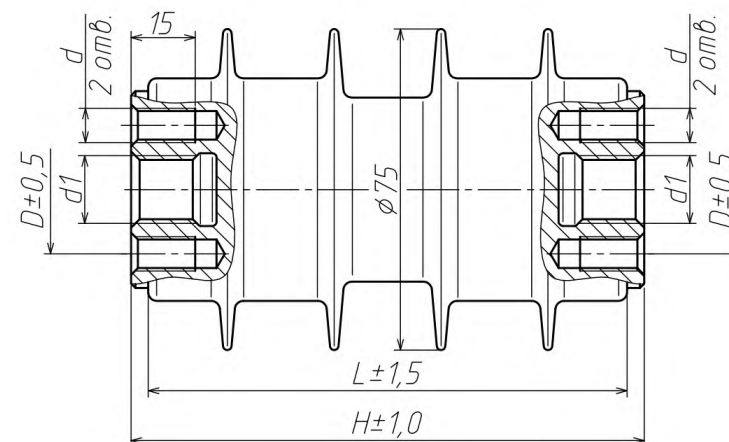


Insulator IOSK 10-10-120(124; 130)-1

Parameter name	IOSK 10-10-120-1	IOSK 10-10-124-1	IOSK 10-10-130-1
Rated voltage, кV	10		
Breaking mechanical force at bending, кN, not less, then	10,0		
Creepage distance, not less, then	190		
Section length H, mm	120	124	130
Insulation length L, mm	112		
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV	42/28		
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV	75		
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	13		
at specific surface conductivity of the pollution layer (5±0,5) μSm			
Weight, kg	1,1		

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Insulator Catalog number	Porcelain analog	Upper flange			Lower flange		
		D	d	d1	D	d	d1
P.10.10.120.1/R.D23.2M10/0/R.D0.M16	IOR-10-7,5-II	23	M10	–	–	–	M16
P.10.10.120.1/R.D30.2M8.D0.M16/0/R.D30.2M8.D0.M16	IOR-10-7,5-III	30	M8	M16	30	M8	M16
P.10.10.120.1/R.D23.2M10/0/R.D23.2M10	By agreement	23	M10	–	23	M10	–
P.10.10.120.1/R.D0.M10/0/R.D0.M12	IOR-10-3,75-I	–	–	M10	–	–	M12
P.10.10.120.1/R.D18.2M8/0/R.D0.M12	IOR-10-3,75-II	18	M8	–	–	–	M12
P.10.10.124.1/R.D23.2M10/0/R.D0.M16	IOR-10-7,5-I	23	M10	–	–	–	M16
P.10.10.130.1/R.D36.2M6.D0.M12/0/R.D0.M16	I-4-80	36	M6	M12	–	–	M16
P.10.10.130.1/R.D0.M12/0/R.D0.M16	By agreement	–	–	M12	–	–	M16

Execution of flanges with other connecting dimensions - as agreed with the customer.

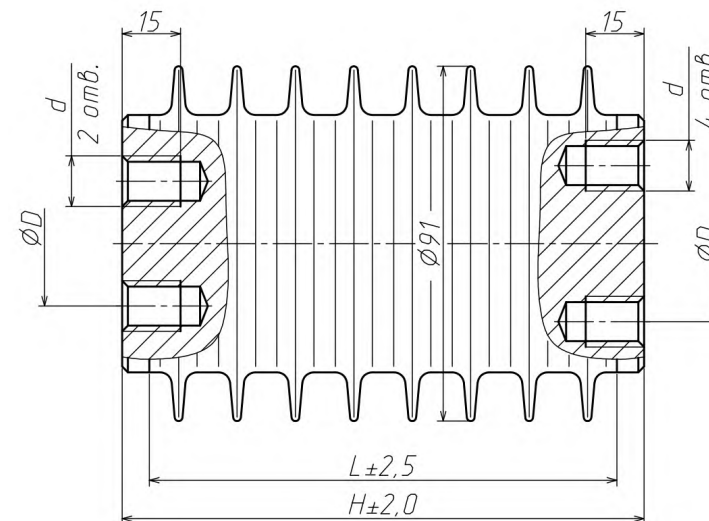


Insulator IOSK 20-10-134-1

Parameter name		Parameter value
Rated voltage, kV		10
Breaking mechanical force at bending, kN, not less, then		10,0
Creepage distance, not less, then		270
Section length H, mm		134
Insulation length L, mm		120
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		42/28
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		75
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (5±0,5) μSm	13
Weight, kg		2,4

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D	d	D	d
P.20.10.134.1/R.D25.2M12/0/R.D40.4M16	IO-10-20,00	25	M12	40	M12

Execution of flanges with other connecting dimensions - as agreed with the customer.

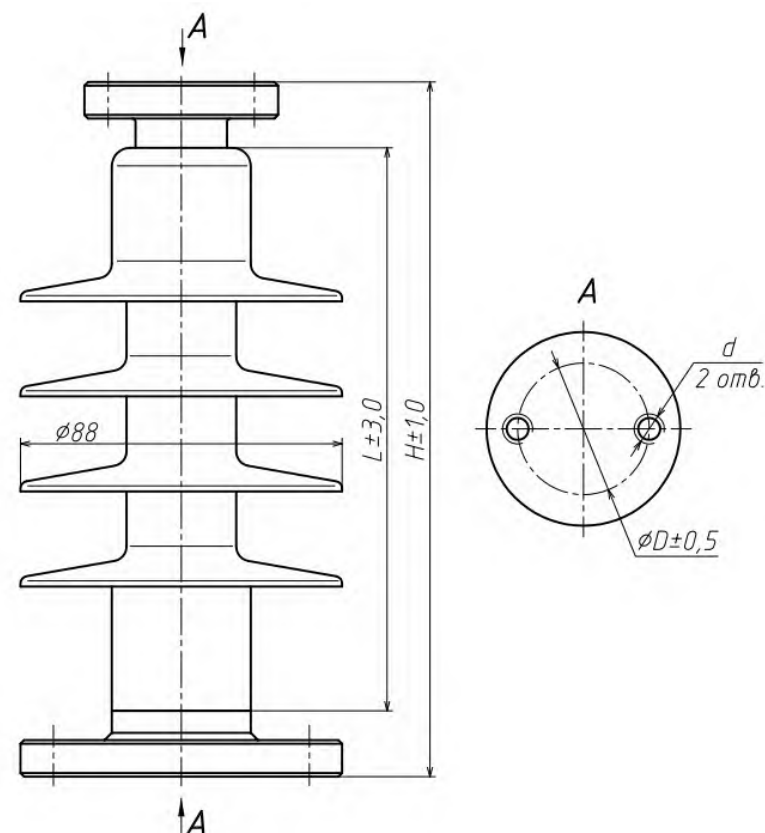


Insulator IOSK 5-10-190-3

Parameter name		Parameter value
Rated voltage, kV		10
Breaking mechanical force at bending, kN, not less, then		5,0
Creepage distance, not less, then		350
Section length H, mm		190
Insulation length L, mm		154
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		42/28
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		75
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) μSm	13
Weight, kg		1,5

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D	d	D	d
P.5.10.190.3/R.D36.2M8/0/R.D70.2M10	C 4-80-I IOS 10-500	Ø36	M8	Ø70	M10

Execution of flanges with other connecting dimensions - as agreed with the customer.

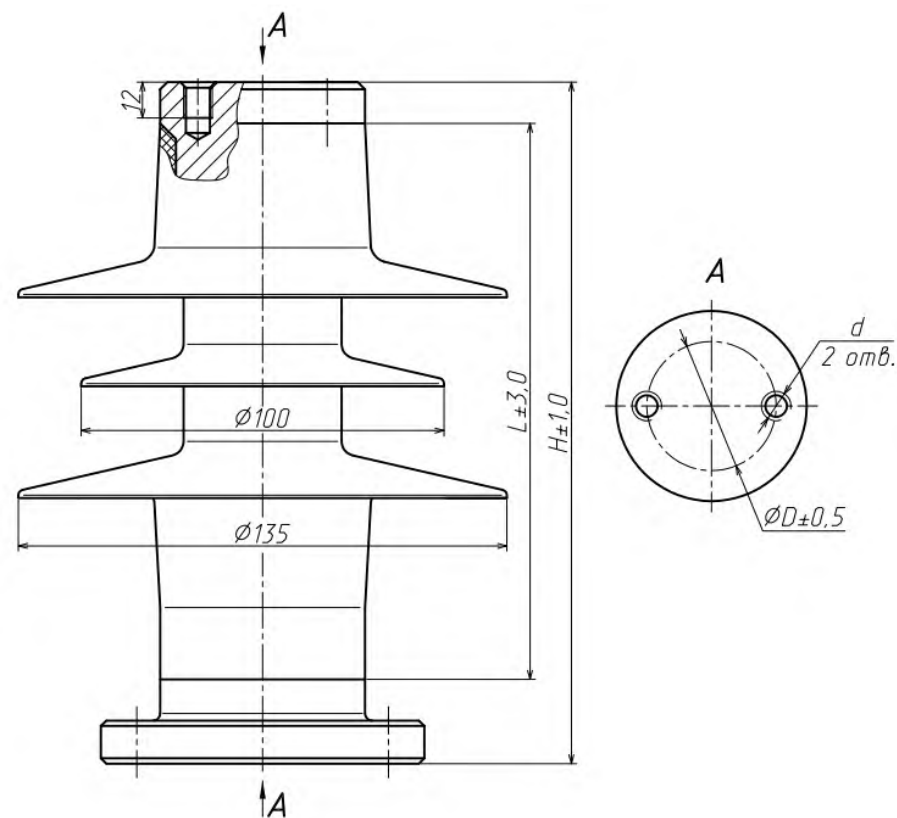


Insulator IOSK 12,5-10-190-3

Parameter name		Parameter value
Rated voltage, kV		10
Breaking mechanical force at bending, kN, not less, then		12,5
Creepage distance, not less, then		350
Section length H, mm		190
Insulation length L, mm		155
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		42/28
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		75
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) μSm	13
Weight, kg		2,6

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D	d	D	d
P.12,5.10.190.3/R.D36.2M8/0/R.D70.2M10	C 4-80-I IOS 10-500	Ø36	M8	Ø70	M10

Execution of flanges with other connecting dimensions - as agreed with the customer.

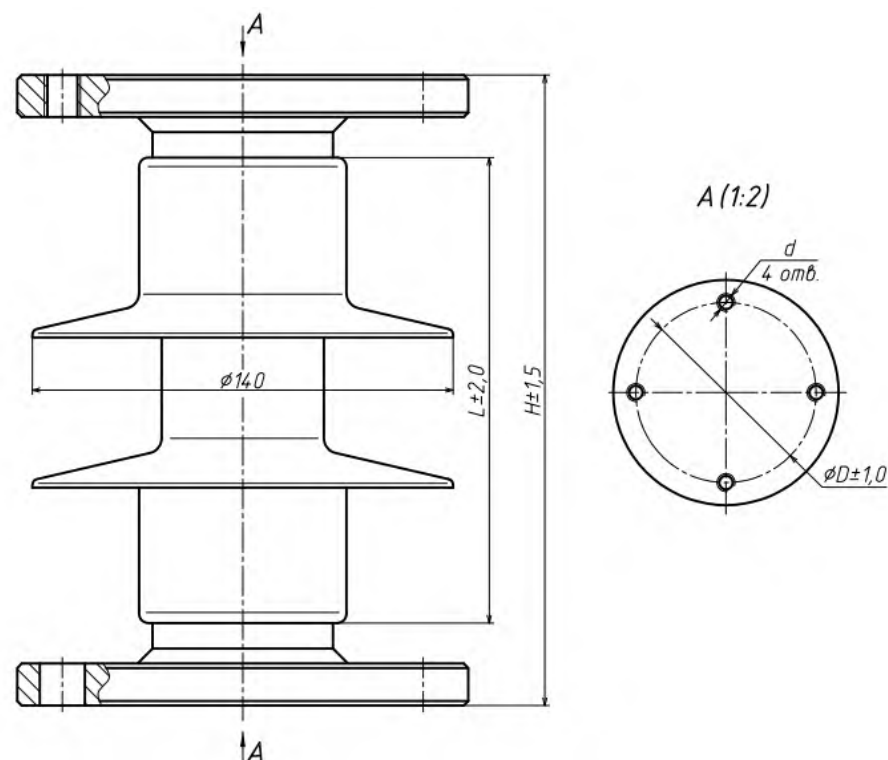


Insulator IOSK 20-10-210-2

Parameter name		Parameter value
Rated voltage, kV		10
Breaking mechanical force at bending, kN, not less, then		20,0
Creepage distance, not less, then		300
Section length H, mm		210
Insulation length L, mm		155
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		42/28
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		75
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (10±1,0) μSm	13
Weight, kg		6,1

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D	d	D	d
P.20.10.210.2/R.D120.4M12/0/R.D120.4x15	ONSH 10-2000	Ø120	M12	Ø120	Ø15

Execution of flanges with other connecting dimensions - as agreed with the customer.

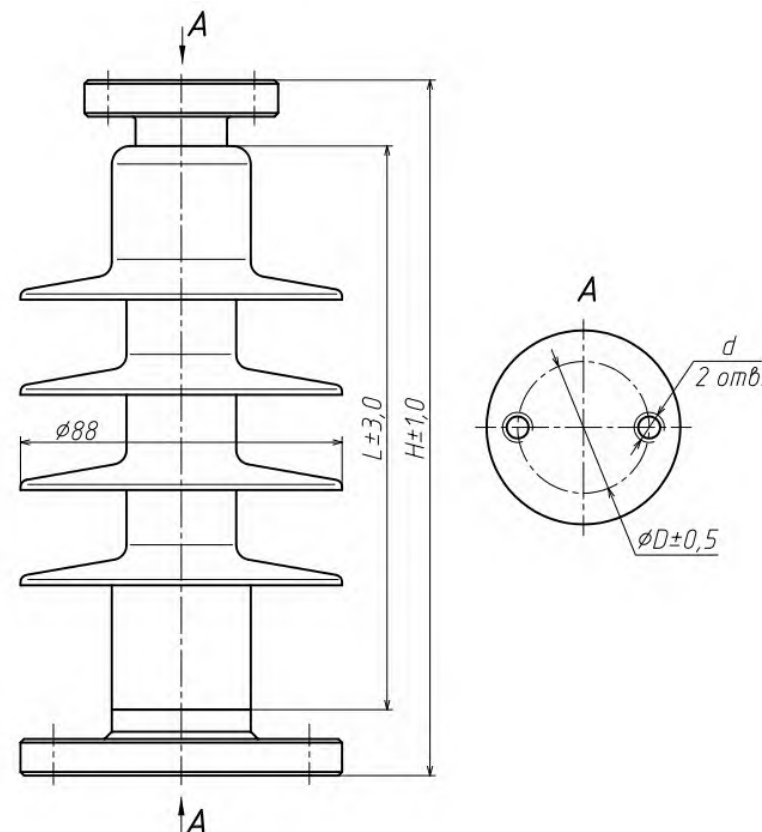


Insulator IOSK 4-10-215-4

Parameter name		Parameter value
Rated voltage, кV		10
Breaking mechanical force at bending, kN, not less, then		4,0
Creepage distance, not less, then		425
Section length H, mm		215
Insulation length L, mm		180
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		42/28
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		75
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (30±3,0) μSm	13
Weight, kg		1,6

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D	d	D	d
P.4.10.215.4/R.D36.2M8/0/R.D70.2M10	C 4-80-II	Ø36	M8	Ø70	M10

Execution of flanges with other connecting dimensions - as agreed with the customer.

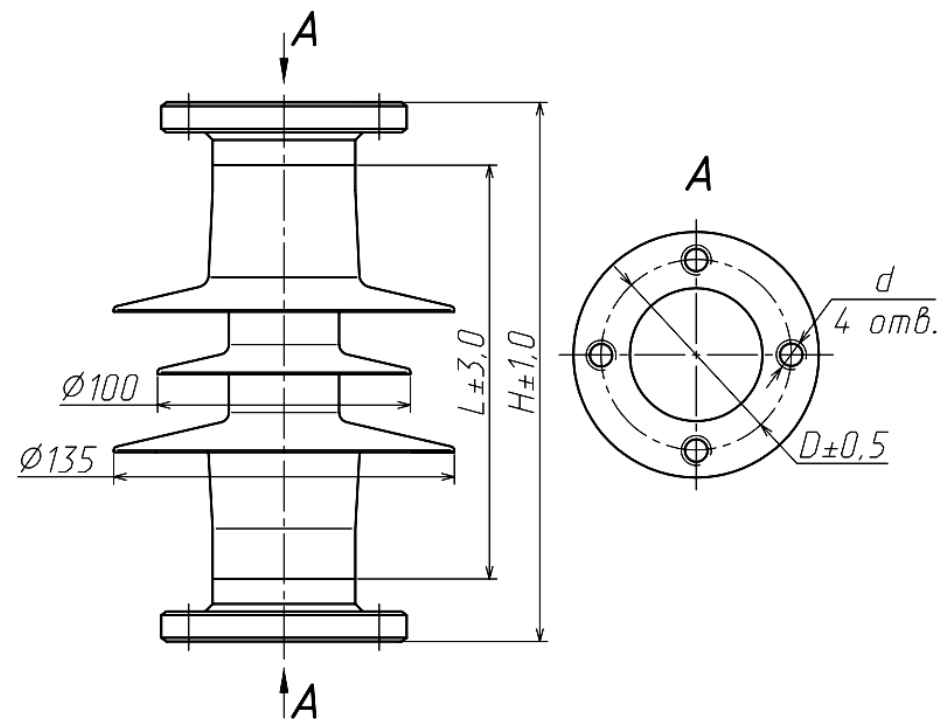


Insulator IOSK 12,5-10-215-3

Parameter name		Значение параметра
Rated voltage, кV		10
Breaking mechanical force at bending, kN, not less, then		12,5
Creepage distance, not less, then		360
Section length H, mm		215
Insulation length L, mm		165
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		42/28
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		75
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (20±2,0) μSm	13
Weight, kg		3,2

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D	d	D	d
P.6.10.215.3/R.D76.4M12/0/R.D76.4M12	C 6-80-I	Ø76	M12	Ø76	M12
P.8.10.215.3/R.D76.4M12/0/R.D76.4M12					
P.10.10.215.3/R.D76.4M12/0/R.D76.4M12	C 10-80-I	Ø76	M12	Ø76	M12
P.12,5.10.215.3/R.D76.4M12/0/R.D76.4M12					

Execution of flanges with other connecting dimensions - as agreed with the customer.

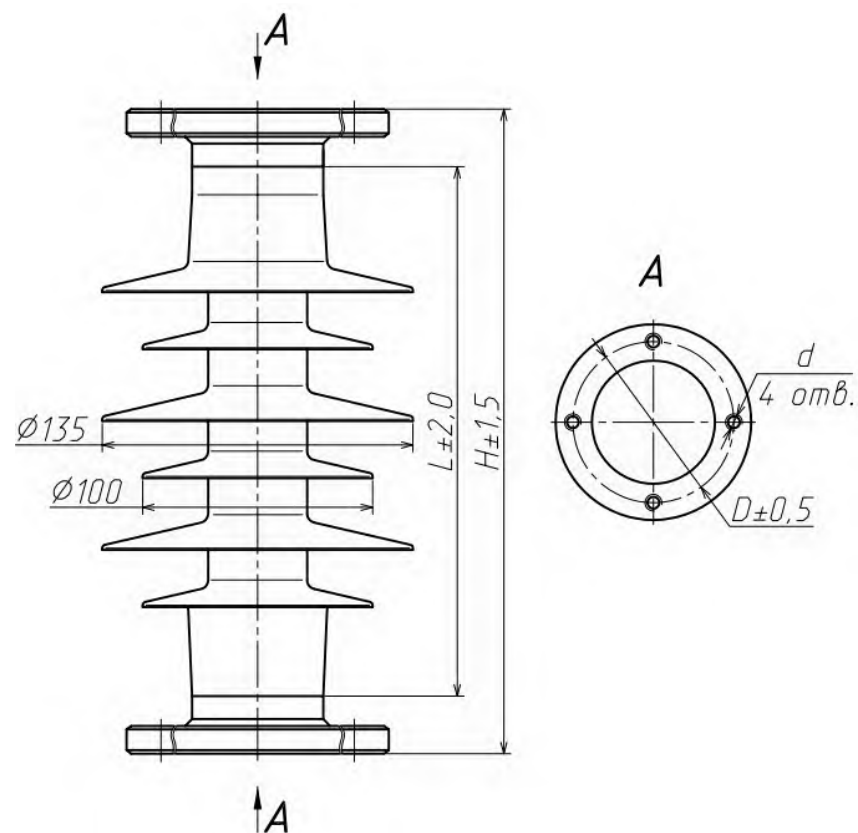


Insulator IOSK 10-10-280-4

Parameter name		Parameter value
Rated voltage, kV		10
Breaking mechanical force at bending, kN, not less, then		10,0
Creepage distance, not less, then		620
Section length H, mm		280
Insulation length L, mm		230
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		42/28
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		75
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (30±3,0) μSm	13
Weight, kg		6,0

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D	d	D	d
P.10.10.280.4/R.D140.4M12/0/R.D140.4x15	By agreement	Ø140	M12	Ø140	Ø15

Execution of flanges with other connecting dimensions - as agreed with the customer.

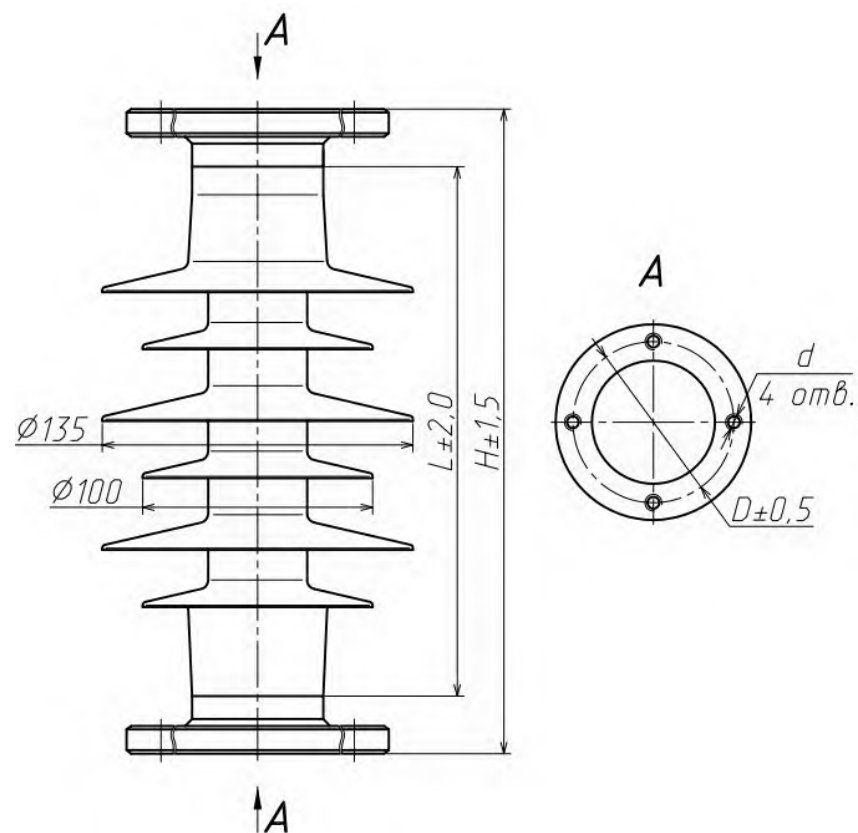


Insulator IOSK 12,5-10-285-4

Parameter name		Parameter value
Rated voltage, kV		10
Breaking mechanical force at bending, kN, not less, then		12,5
Creepage distance, not less, then		620
Section length H, mm		285
Insulation length L, mm		235
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		42/28
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		75
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (30±3,0) μSm	13
Weight, kg		3,9

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D	d	D	d
P.12,5.10.285.4/R.D76.4M12/0/R.D76.4M12	C 12,5-80-I	Ø76	M12	Ø76	M12

Execution of flanges with other connecting dimensions - as agreed with the customer.

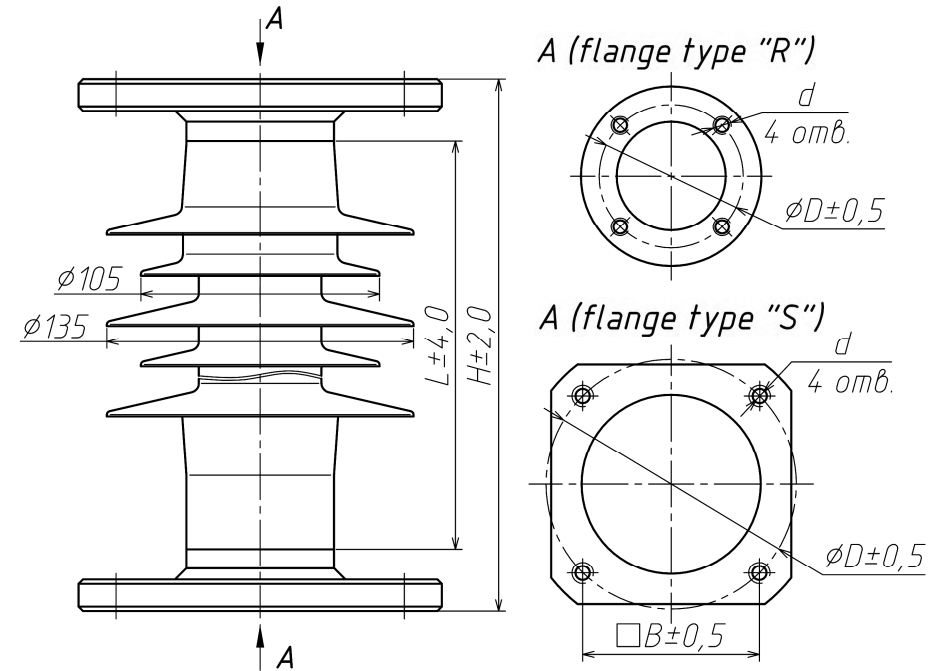


Insulator IOSK 20-10-285-4

Parameter name		Parameter value
Rated voltage, kV		10
Breaking mechanical force at bending, kN, not less, then		20,0
Creepage distance, not less, then		620
Section length H, mm		285
Insulation length L, mm		230
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		42/28
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		75
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (30±3,0) μSm	13
Weight, kg		11,5

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.20.10.285.4/S.B160.4x18/0/S.B160.4x18	IOS 10-2000	□160	Ø18	□160	Ø18
P.20.10.285.4/R.D76.4M12/0/R.D76.4M12	C 16-80-I	Ø76	M12	Ø76	M12

Execution of flanges with other connecting dimensions - as agreed with the customer.

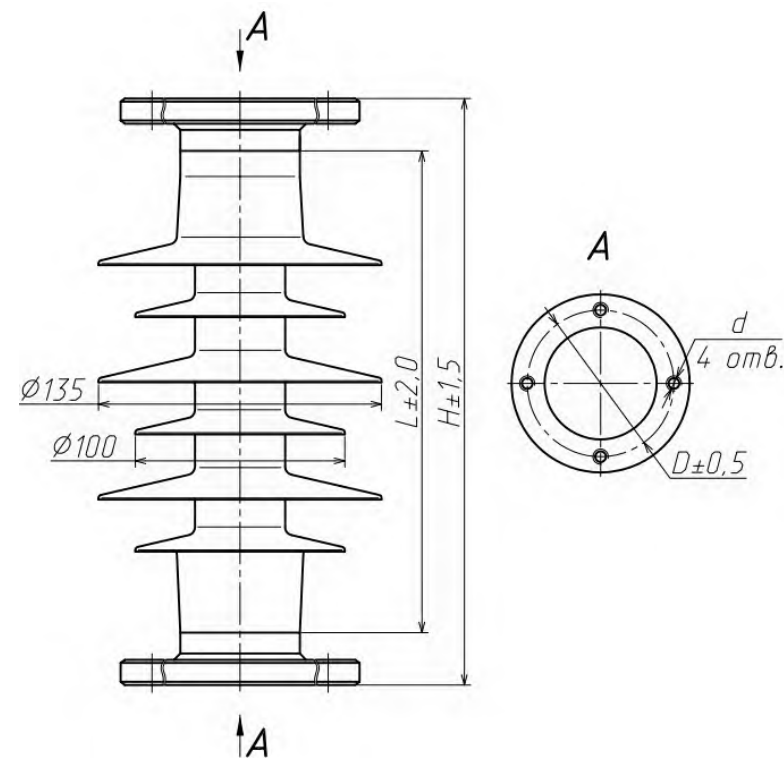


Insulator IOSK 10-10-292-4

Parameter name		Parameter value
Rated voltage, kV		10
Breaking mechanical force at bending, kN, not less, then		10,0
Creepage distance, not less, then		620
Section length H, mm		292
Insulation length L, mm		242
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		42/28
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		75
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (30±3,0) μSm	13
Weight, kg		6,1

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D	d	D	d
P.10.10.292.4/R.D140.4M12/0/R.D140.4x13	IOS 10-600	Ø140	M12	Ø140	Ø13

Execution of flanges with other connecting dimensions - as agreed with the customer.

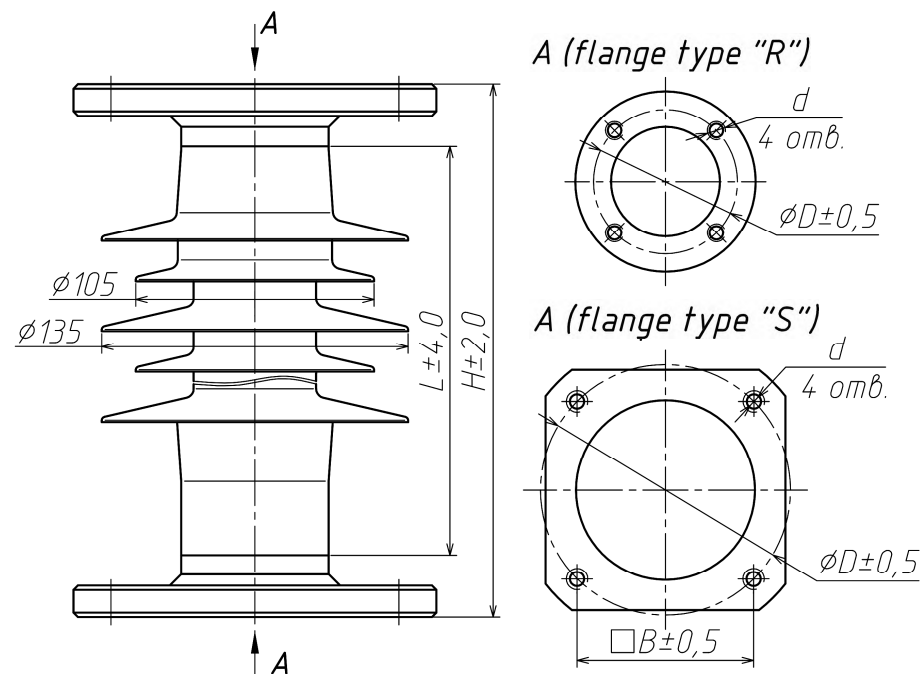


Insulator IOSK 20-10-292-4

Parameter name		Parameter value
Rated voltage, kV		10
Breaking mechanical force at bending, kN, not less, then		20,0
Creepage distance, not less, then		645
Section length H, mm		292
Insulation length L, mm		237
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		42/28
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		75
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (30±3,0) μSm	13
Weight, kg		6,4

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.20.10.292.4/S.D140.4M12/0/S.D140.4x13	IOS 10-600	$\phi 140$	M12	$\phi 140$	$\phi 13$

Execution of flanges with other connecting dimensions - as agreed with the customer.

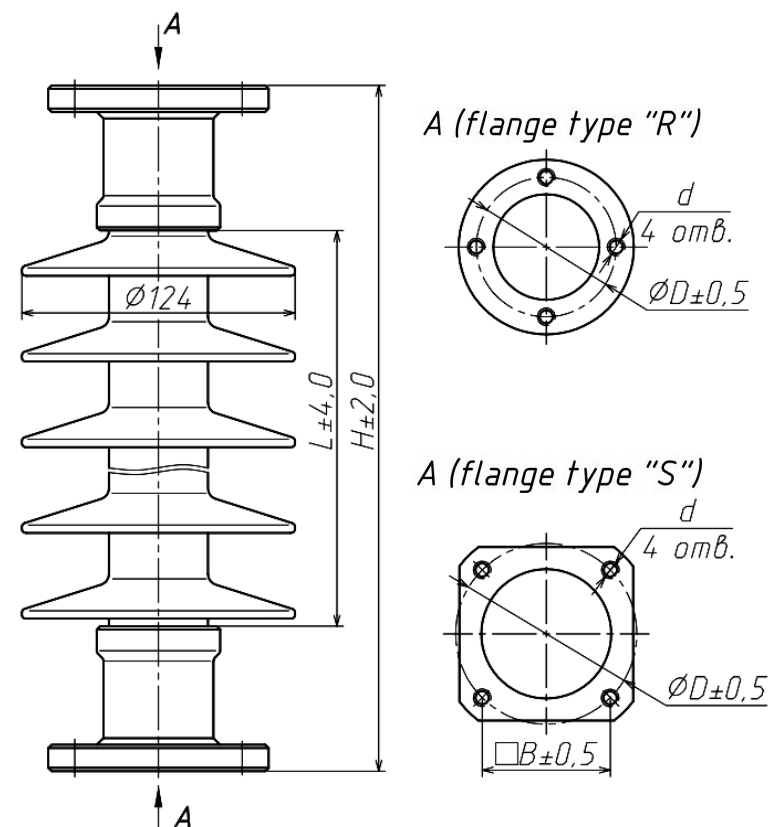


Insulator IOSK 10-10-350-4

Parameter name		Значение параметра
Rated voltage, kV		10
Breaking mechanical force at bending, kN, not less, then		10,0
Creepage distance, not less, then		630
Section length H, mm		350
Insulation length L, mm		220
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		42/28
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		75
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (30±3,0) μSm	13
Weight, kg		5,4

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.10.10.350.4/S.D140.4M12/45/S.D140.4x13	IOS 10-800	$\varnothing 140$	M12	$\varnothing 140$	$\varnothing 13$
P.10.10.350.4/R.D76.4M12/0/R.D76.4M12	SK 10-3,3-125-V-01	$\varnothing 76$	M12	$\varnothing 76$	M12

Execution of flanges with other connecting dimensions - as agreed with the customer.

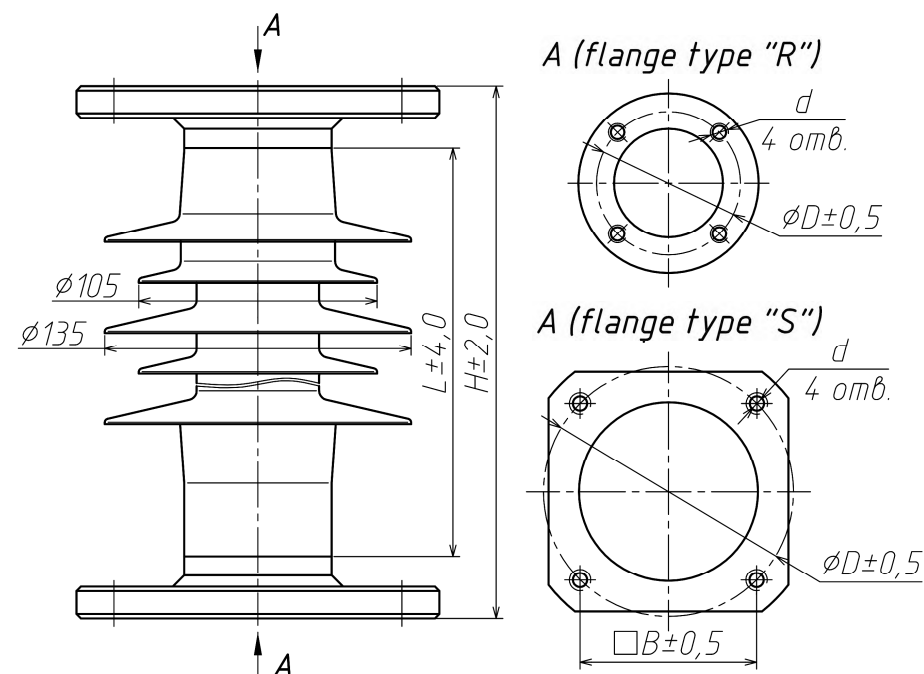


Insulator IOSK 20-10-350-4

Parameter name		Значение параметра
Rated voltage, kV		10
Breaking mechanical force at bending, kN, not less, then		20,0
Creepage distance, not less, then		870
Section length H, mm		350
Insulation length L, mm		295
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		42/28
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		75
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (30±3,0) μSm	13
Weight, kg		6,8

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.20.10.350.4/S.D140.4M12/45/S.D140.4x13	IOS 10-800	Ø140	M12	Ø140	Ø13

Execution of flanges with other connecting dimensions - as agreed with the customer.

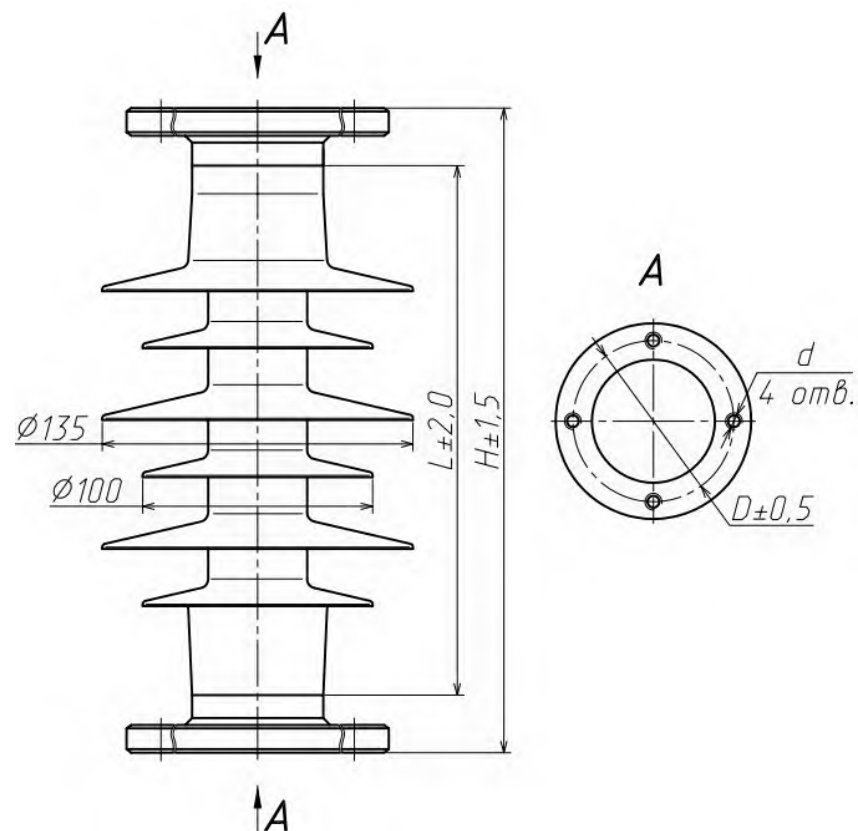


Insulator IOSK 10-20-280-2

Parameter name		Parameter value
Rated voltage, kV		20
Breaking mechanical force at bending, kN, not less, then		10,0
Creepage distance, not less, then		620
Section length H, mm		280
Insulation length L, mm		230
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		65/50
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		125
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (10±1,0) μSm	26
Weight, kg		6,0

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D	d	D	d
P.10.20.280.2/R.D140.4M12/0/R.D140.4x15	By agreement	Ø140	M12	Ø140	Ø15

Execution of flanges with other connecting dimensions - as agreed with the customer.

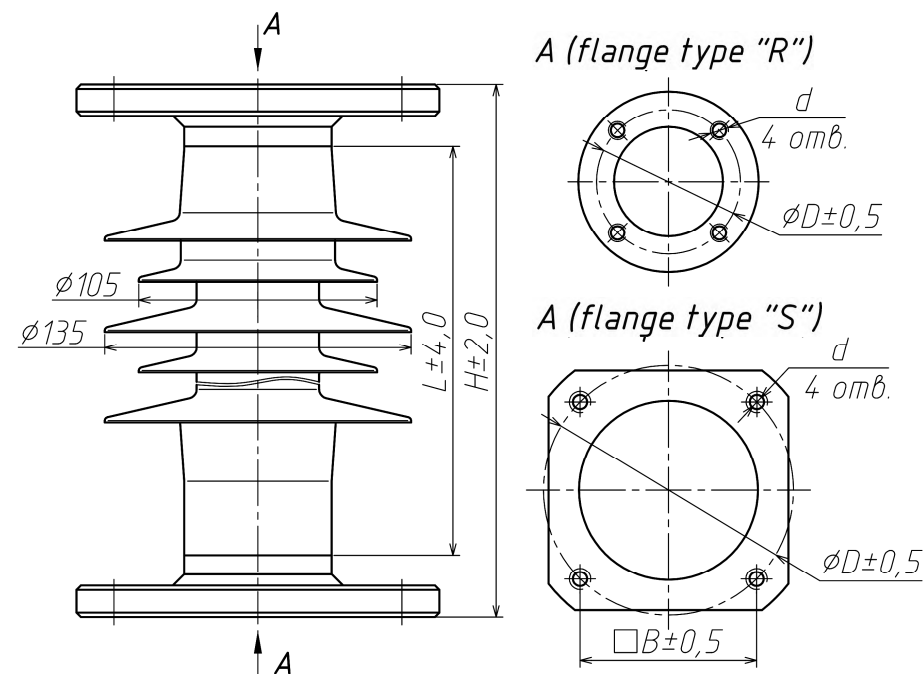


Insulator IOSK 20-20-280-2(3)

Parameter name	IOSK 20-20-280-2	IOSK 20-20-280-3
Rated voltage, kV	20	
Breaking mechanical force at bending, kN, not less, then	20,0	
Creepage distance, not less, then	620	720
Section length H, mm	280	
Insulation length L, mm	225	
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV	65/50	
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV	125	
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (10±1,0) μSm (20±2,0) μSm	26 26
Weight, kg	8,0	8,2

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.20.20.280.2/R.D140.4M12/0/R.D140.4x15	ONSH 20-1000	Ø140	M12	Ø140	Ø15
P.20.20.280.3/R.D140.4M12/0/R.D140.4x15		Ø140	M12	Ø140	Ø15

Execution of flanges with other connecting dimensions - as agreed with the customer.

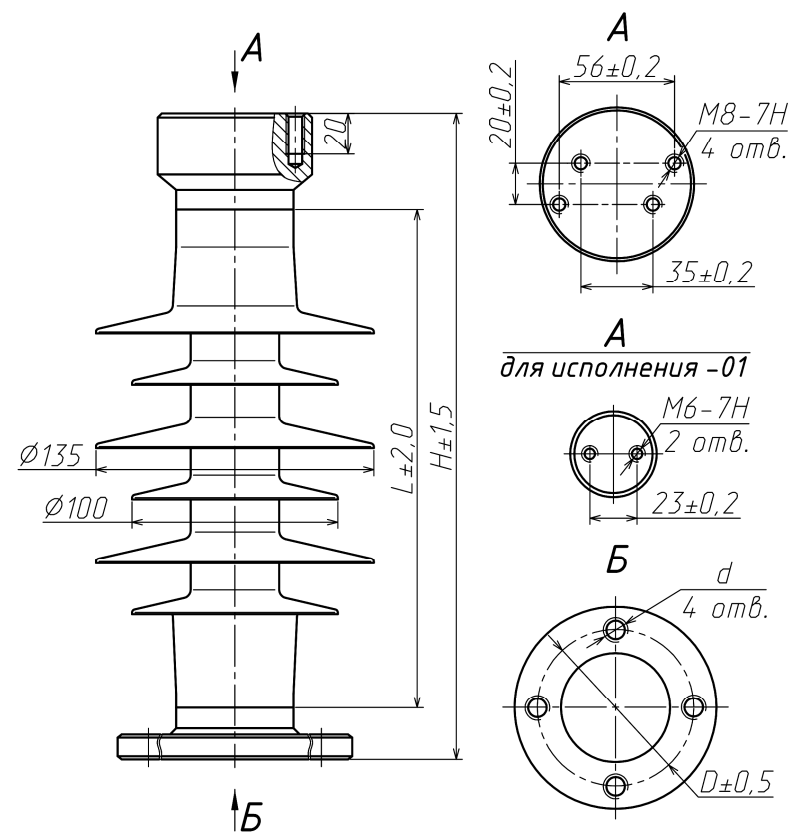


Insulator IOSK 10-20-315-2

Parameter name		Значение параметра
Rated voltage, кV		20
Breaking mechanical force at bending, кN, not less, then		10,0
Creepage distance, not less, then		620
Section length H, mm		315
Insulation length L, mm		243
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		65/50
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		125
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (10±1,0) μSm	26
Weight, kg		5,2

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D	d	D	d
P.10.20.315.2/R.20x35x56.4M8/0/R.D140.4M12	IOS 20-500-01	-	M8	$\phi 140$	M12
P.10.20.315.2/R.D23.4M6/0/R.D140.4M12	IOS 20-500-02	23	M6	$\phi 140$	M12

Execution of flanges with other connecting dimensions - as agreed with the customer.

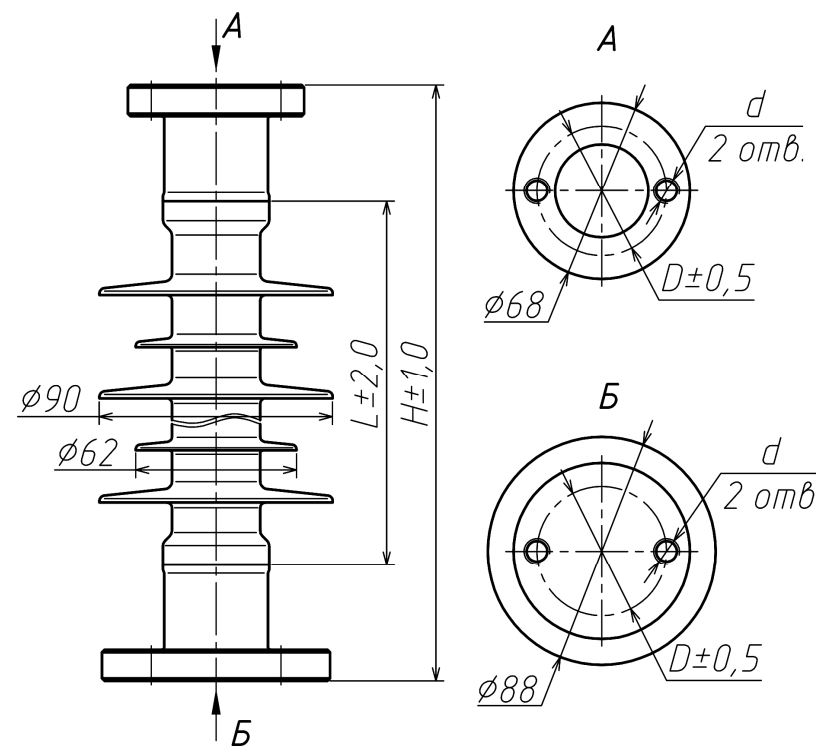


Insulator IOSK 4-20-350-2

Parameter name		Parameter value
Rated voltage, кV		20
Breaking mechanical force at bending, кN, not less, then		4,0
Creepage distance, not less, then		680
Section length H, mm		350
Insulation length L, mm		260
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		65/50
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		125
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (10±1,0) μSm	26
Weight, kg		2,0

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D	d	D	d
P.4.20.350.2/R.D50.2M10/0/ R.D50.2M10	By agreement	Ø 50	M10	Ø 50	M10

Execution of flanges with other connecting dimensions - as agreed with the customer.

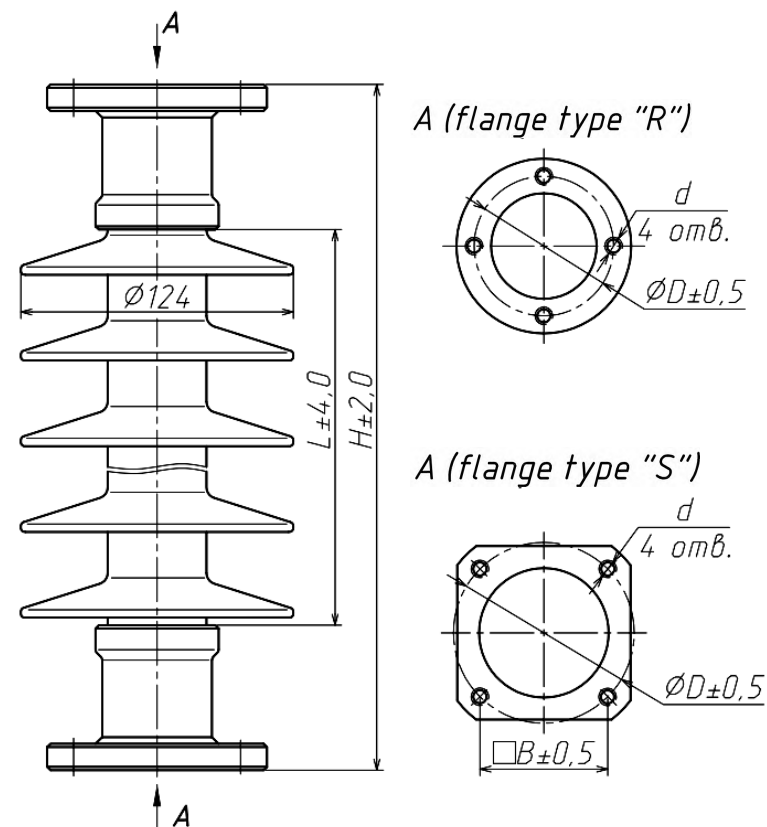


Insulator IOSK 10-20-350-2

Parameter name		Значение параметра
Rated voltage, кV		20
Breaking mechanical force at bending, кN, not less, then		10,0
Creepage distance, not less, then		630
Section length H, mm		350
Insulation length L, mm		220
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		65/50
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		125
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (10±1,0) μSm	26
Weight, kg		3,8

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Insulator Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.8.20.350.2/S.D140.4M12/45/S.D140.4x13	By agreement	$\phi 140$	M12	$\phi 140$	$\phi 13$
P.10.20.350.2/R.D76.4M12/0/R.D76.4M12	By agreement	$\phi 76$	M12	$\phi 76$	M12

Execution of flanges with other connecting dimensions - as agreed with the customer.

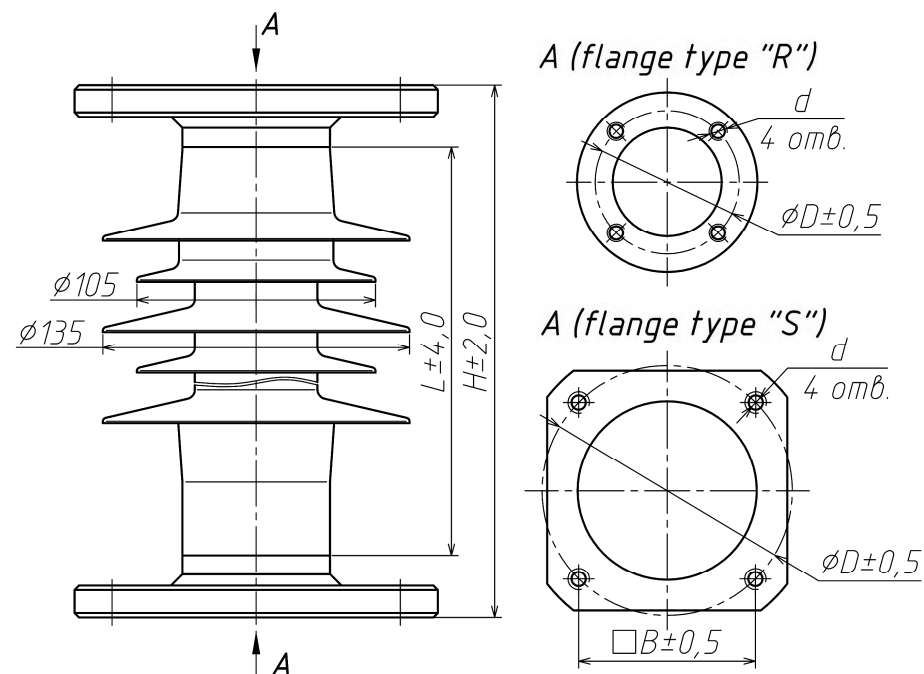


Insulator IOSK 20-20-355-4

Parameter name		Значение параметра
Rated voltage, кV		20
Breaking mechanical force at bending, kN, not less, then		20,0
Creepage distance, not less, then		920
Section length H, mm		355
Insulation length L, mm		300
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		65/50
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		125
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (30±3,0) μSm	26
Weight, kg		9,5

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.20.20.355.4/R.D127.4M16/0/R.D127.4M16	C16-125-I	$\phi 127$	M16	$\phi 127$	M16
P.20.20.355.4/S.D140.4M12/0/S.B160.4x18	IOS-20-2000 ONS 20-2000	$\phi 140$	M12	$\square 160$	$\phi 18$

Execution of flanges with other connecting dimensions - as agreed with the customer.

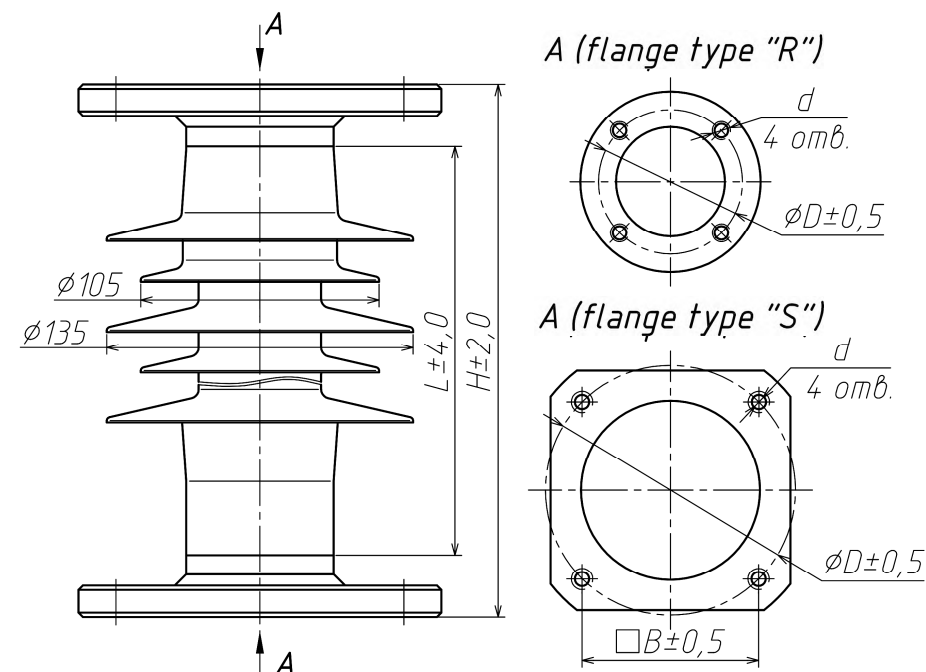


Insulator IOSK 20-20-360-4

Parameter name		Значение параметра
Rated voltage, kV		20
Breaking mechanical force at bending, kN, not less, then		20,0
Creepage distance, not less, then		920
Section length H, mm		360
Insulation length L, mm		305
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		65/50
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		125
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (30±3,0) μSm	26
Weight, kg		12,5

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.20.20.360.4/S.D140.4M12/0/S.D140.4x18	ONS 20-1000	$\phi 140$	M12	$\phi 140$	$\phi 18$
P.20.20.360.4/S.B160.4x18/0/S.B160.4x18	IOS-20-2000-01	$\square 160$	$\phi 18$	$\square 160$	$\phi 18$

Execution of flanges with other connecting dimensions - as agreed with the customer.

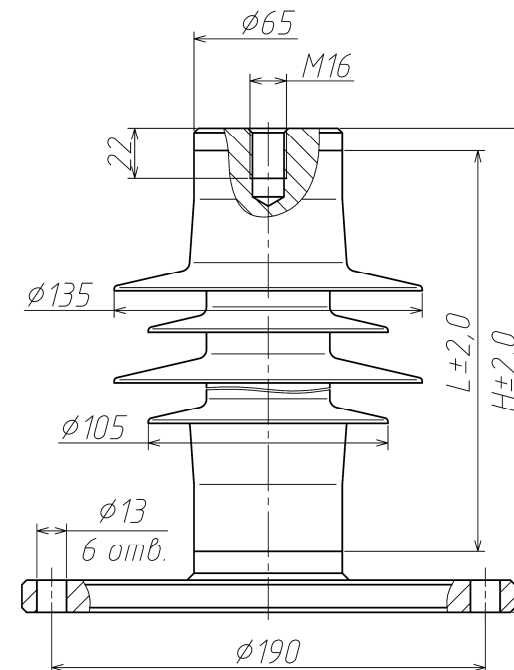


Insulator IOSK 16-35-356-2

Parameter name		Значение параметра
Rated voltage, кV		35
Breaking mechanical force at bending, кN, not less, then		16,0
Creepage distance, not less, then		1000
Section length H, mm		356
Insulation length L, mm		315
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		95/80
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		190
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (10±1,0) μSm	42
Weight, kg		7,7

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D	d	D	d
P.16.35.356.2/R.D0.M16/0/R.D190.4x13	OFR-35-4-II	-	M16	Ø190	Ø13

Execution of flanges with other connecting dimensions - as agreed with the customer.

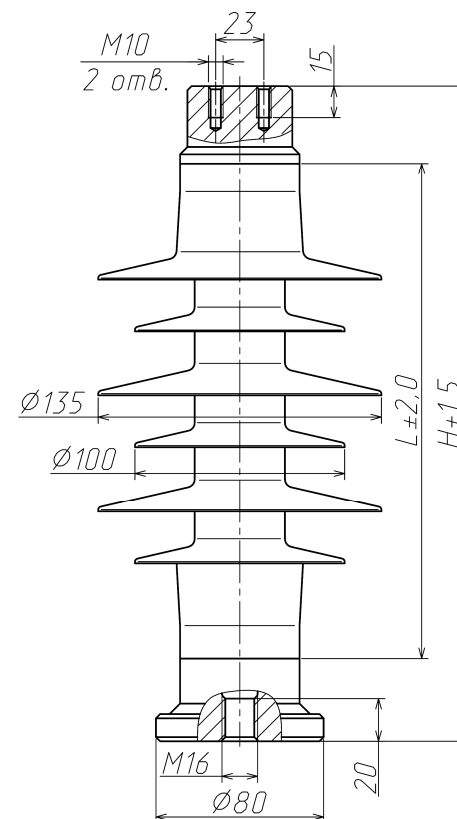


Insulator IOSK 8-35-372-1

Parameter name		Значение параметра
Rated voltage, кV		35
Breaking mechanical force at bending, kN, not less, then		8,0
Creepage distance, not less, then		800
Section length H, mm		372
Insulation length L, mm		295
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		95/80
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		190
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (5±0,5) μSm	42
Weight, kg		3,7

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D	d	D	d
P.8.35.372.1/R.D23.2M10/0/R.D0.M16	IOR 35-3,75 IOR 35-7,5	23	M10	-	M16

Execution of flanges with other connecting dimensions - as agreed with the customer.

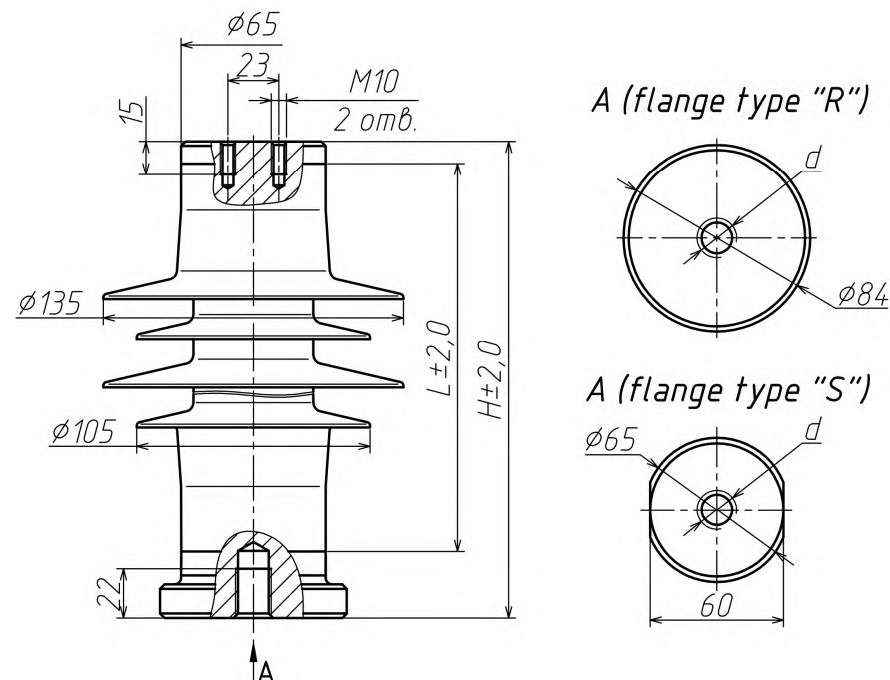


Insulator IOSK 16-35-372-2

Parameter name		Значение параметра
Rated voltage, кV		35
Breaking mechanical force at bending, kN, not less, then		16,0
Creepage distance, not less, then		1040
Section length H, mm		372
Insulation length L, mm		335
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		95/80
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		190
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (10±1,0) μSm	42
Weight, kg		4,7

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D	d	D	d
P.16.35.372.2/R.D23.2M10/0/R.D0.M16	IOR-35-7,5	23	M10	-	M16
P.16.35.372.2/R.D23.2M10/0/S.D0.M16					

Execution of flanges with other connecting dimensions - as agreed with the customer.

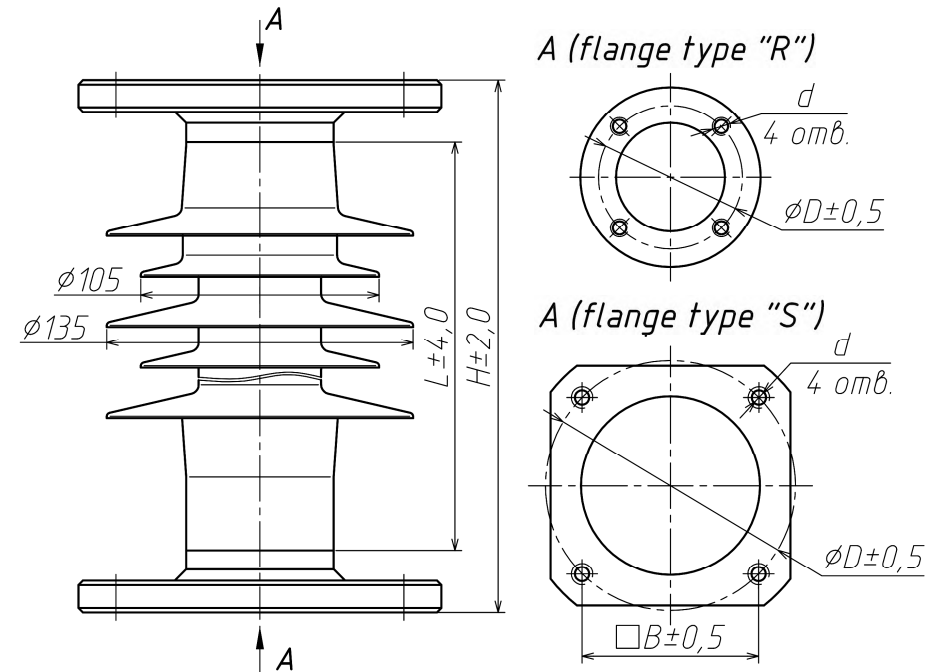


Insulator IOSK 20-35-400-2(3)

Parameter name		IOSK 20-35-400-2	IOSK 20-35-400-3
Rated voltage, kV		35	
Breaking mechanical force at bending, kN, not less, then		20	
Creepage distance, not less, then		1100	1215
Section length H, mm		400	
Insulation length L, mm		345	
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		95/80	
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		190	
50% discharge voltage of industrial frequency in humidified and contaminated state, not less than, kV	at specific surface conductivity of the pollution layer (10±1,0) μSm	42	42
	(20±2,0) μSm		
Weight, kg		8,5	8,7

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.20.35.400.2/S.D140.4M16/0/S.D140.4x18	ONSH 35-1000 ONSH 35-2000	Ø140	M16	Ø140	Ø18
P.20.35.400.3/S.D140.4M16/0/S.D140.4x18					
P.20.35.400.2/S.D140.4M12/45/S.B155.4x15	ONVP 35-1000	Ø140	M12	□155	Ø15
P.20.35.400.3/S.D140.4M12/45/S.B155.4x15					

Execution of flanges with other connecting dimensions - as agreed with the customer.

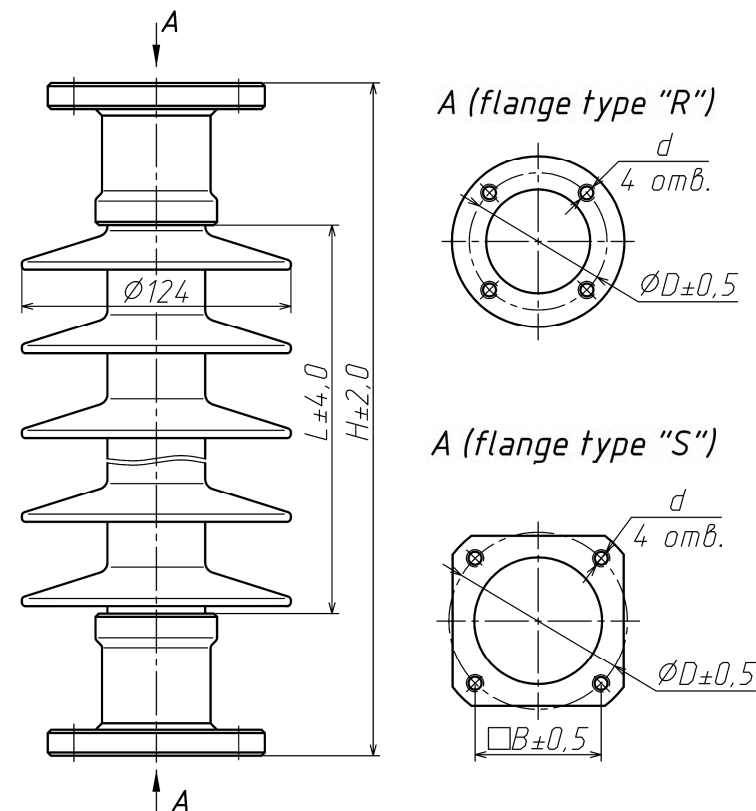


Insulator IOSK 5-35-420-2

Parameter name		Значение параметра
Rated voltage, кV		35
Breaking mechanical force at bending, кN, not less, then		4,0
Creepage distance, not less, then		950
Section length H, mm		420
Insulation length L, mm		330
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		95/80
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		190
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (10±1,0) μSm	42
Weight, kg		6,6

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.5.35.420.2/R.D140.4M12/0/R.D140.4M12	ONS 35-500 ST-35	$\varnothing 140$	M12	$\varnothing 140$	M12

Execution of flanges with other connecting dimensions - as agreed with the customer.

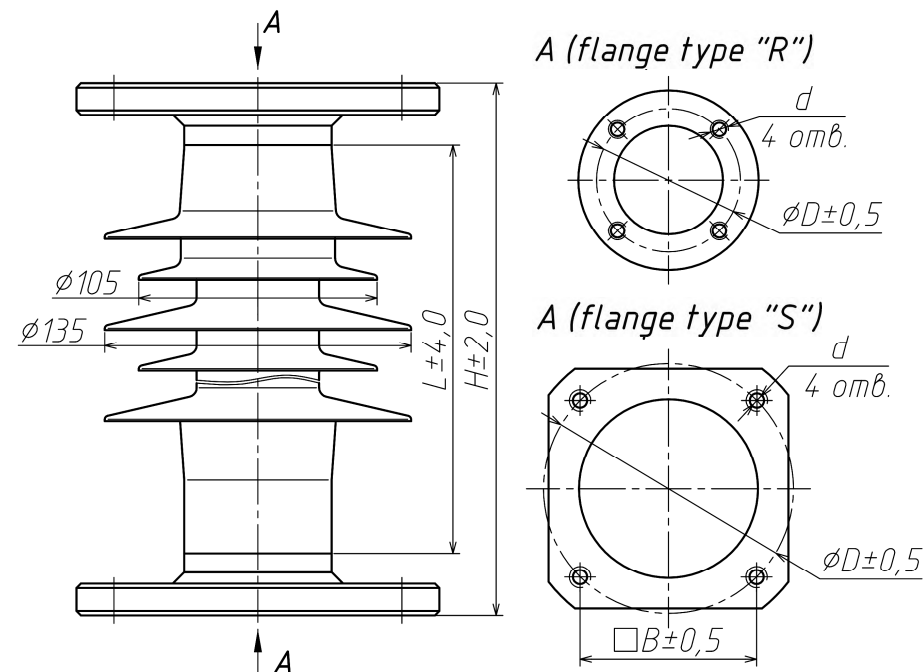


Insulator IOSK 12,5-35-420-3

Parameter name		Значение параметра
Rated voltage, kV		35
Breaking mechanical force at bending, kN, not less, then		12,5
Creepage distance, not less, then		1160
Section length H, mm		420
Insulation length L, mm		365
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		95/80
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		190
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) μSm	42
Weight, kg		7,3

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.12,5.35.420.3/S.D140.4M12/0/S.D140.4M12	ON S 35-500 ST-35	Ø140	M12	Ø140	M12

Execution of flanges with other connecting dimensions - as agreed with the customer.

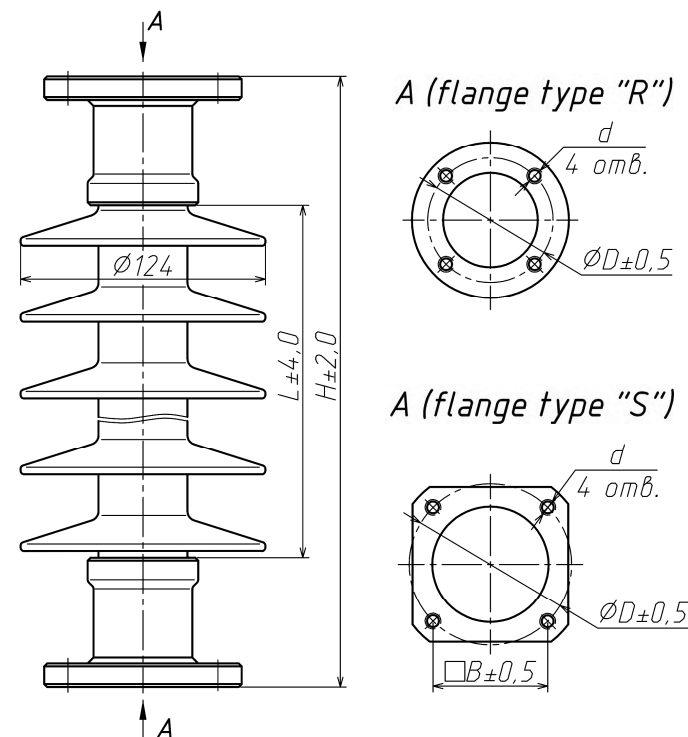


Insulator IOSK 5-35-440-2

Parameter name		Значение параметра
Rated voltage, kV		35
Breaking mechanical force at bending, kN, not less, then		5,0
Creepage distance, not less, then		950
Section length H, mm		440
Insulation length L, mm		348
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		95/80
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		190
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (10±1,0) μSm	42
Weight, kg		6,1

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.5.35.440.2/R.D76.4M12/0/R.D76.4M12	C4-170-I	Ø76	M12	Ø76	M12
P.5.35.440.2/R.D127.4x13/0/R.D127.4x13	C4-195-I	Ø127	Ø13	Ø127	Ø13
P.5.35.440.2/R.D140.4M12/0/R.D140.4M12	IOS 35-500-01	Ø140	M12	Ø140	M12

Execution of flanges with other connecting dimensions - as agreed with the customer.

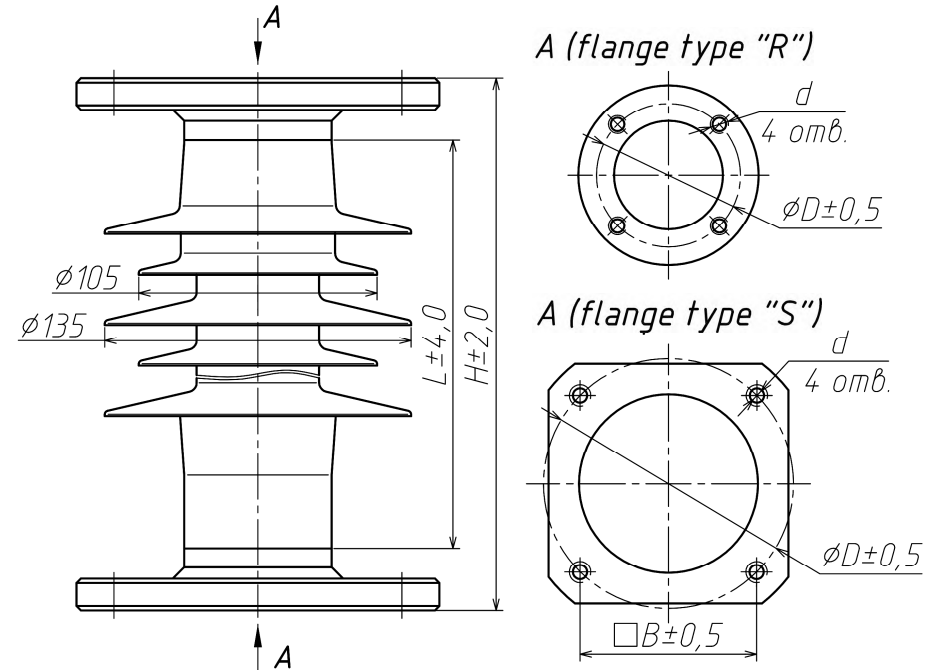


Insulator IOSK 12,5-35-440-3(4)

Parameter name		IOSK 35-440-3	IOSK 35-440-4
Rated voltage, kV		35	
Breaking mechanical force at bending, kN, not less, then		12,5	
Creepage distance, not less, then		1260	1350
Section length H, mm		440	
Insulation length L, mm		385	
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		95/80	
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		190	
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) μSm	42	42
	(30±3,0) μSm		
Weight, kg		7,6	7,7

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Insulator Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.12,5.35.440.3/S.D140.4M12/0/S.D140.4M12	IOS 35-500-01	Ø140	M12	Ø140	M12
P.12,5.35.440.4/S.D140.4M12/0/S.D140.4M12		Ø140	M12	Ø140	M12
P.12,5.35.440.3/R.D76.4M12/0/R.D76.4M12	C4(6;;8;10)-170-I	Ø76	M12	Ø76	M12
P.12,5.35.440.4/R.D76.4M12/0/R.D76.4M12		Ø76	M12	Ø76	M12
P.12,5.35.440.3/R.D127.4x13/0/R.D127.4x13	C4-195- I C4-195- II	Ø127	Ø13	Ø127	Ø13
P.12,5.35.440.4/R.D127.4x13/0/R.D127.4x13		Ø127	Ø13	Ø127	Ø13
P.12,5.35.440.3/S.D140.4x13/0/S.D140.4x13	OSK 27,5-8-A-3	Ø140	Ø13	Ø140	Ø13
P.12,5.35.440.4/S.D140.4x13/0/S.D140.4x13		Ø140	Ø13	Ø140	Ø13
P.12,5.35.440.3/R.D127.4M16/0/R.D127.4M16	C12,5-170-I	Ø127	M16	Ø127	M16
P.12,5.35.440.4/R.D127.4M16/0/R.D127.4M16		Ø127	M16	Ø127	M16

Execution of flanges with other connecting dimensions - as agreed with the customer.

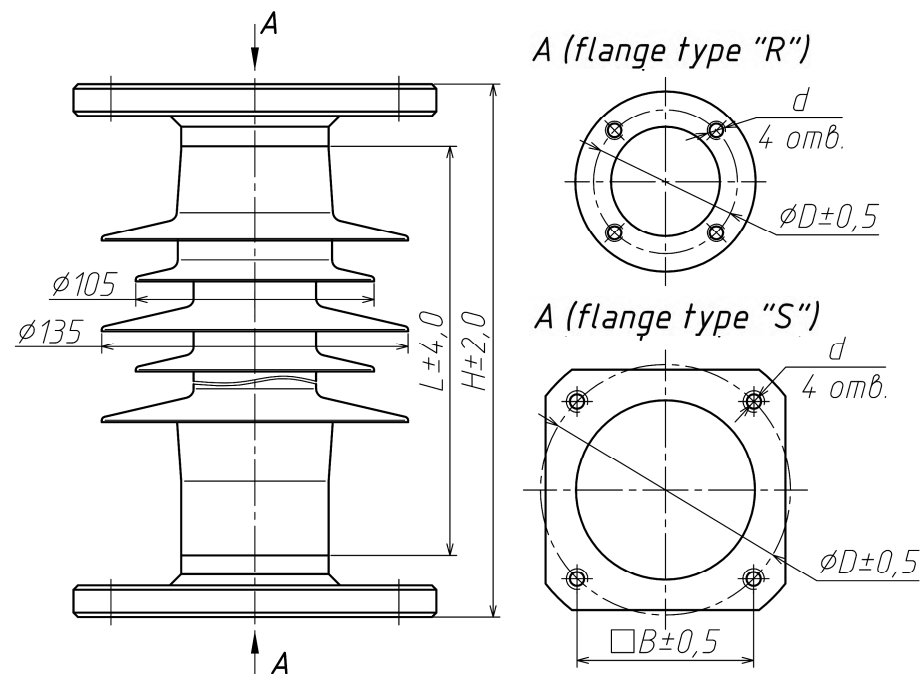


Insulator IOSK 12,5-35-450-3

Parameter name		Значение параметра
Rated voltage, кV		35
Breaking mechanical force at bending, kN, not less, then		12,5
Creepage distance, not less, then		1270
Section length H, mm		450
Insulation length L, mm		395
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		95/80
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		190
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) μSm	42
Weight, kg		8,1

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.12,5.35.450.3/S.D140.4M12/0/S.D140.4x13	IOS 27,5-400	Ø140	M12	Ø140	Ø13

Execution of flanges with other connecting dimensions - as agreed with the customer.

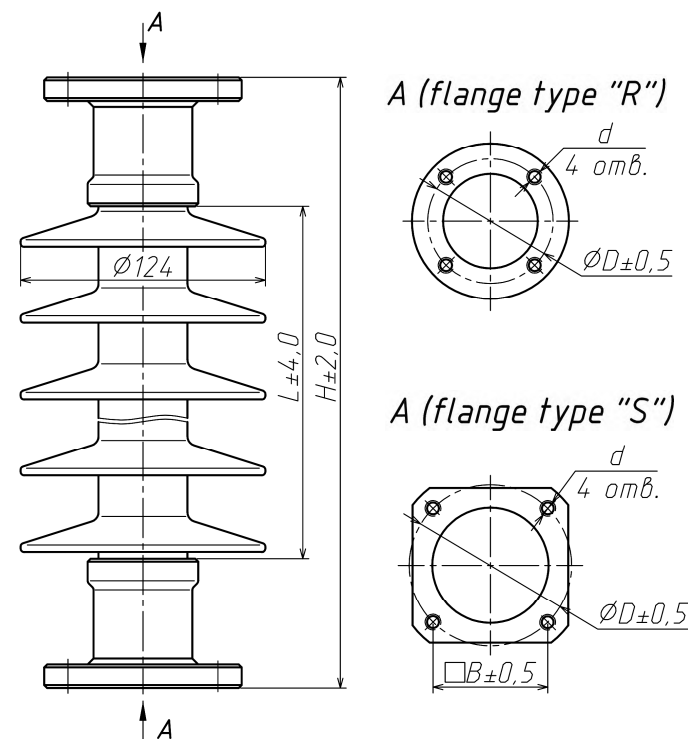


Insulator IOSK 4-35-475-2

Parameter name		Значение параметра
Rated voltage, кV		35
Breaking mechanical force at bending, кN, not less, then		4,0
Creepage distance, not less, then		950
Section length H, mm		475
Insulation length L, mm		344
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		95/80
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		190
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (10±1,0) μSm	42
Weight, kg		4,3

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.4.35.475.2/R.D76.4M12/0/R.D76.4M12	C4-200-I	$\phi 76$	M12	$\phi 76$	M12

Execution of flanges with other connecting dimensions - as agreed with the customer.

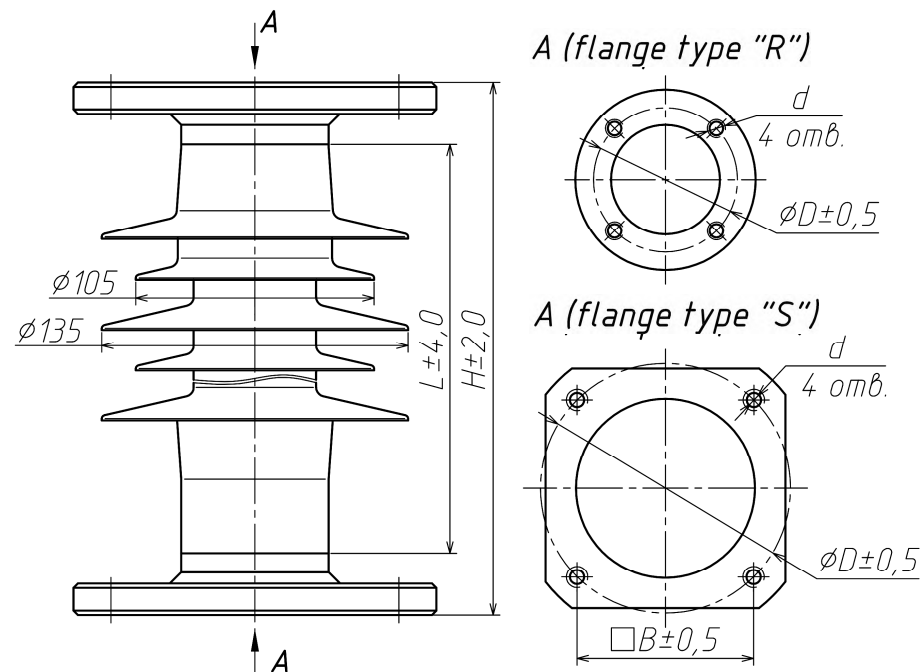


Insulator IOSK 12,5-35-475-3

Parameter name		Значение параметра
Rated voltage, kV		35
Breaking mechanical force at bending, kN, not less, then		12,5
Creepage distance, not less, then		1340
Section length H, mm		475
Insulation length L, mm		420
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		95/80
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		190
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) µSm	42
Weight, kg		7,4

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.12,5.35.475.2/R.D76.4M12/0/R.D76.4M12	C4(6,8,10)-200-I	$\phi 76$	M12	$\phi 76$	M12
P.12,5.35.450.3/S.D127.4M12/0/S.D127.4M12	C12,5-200-I	$\phi 127$	M12	$\phi 127$	M12

Execution of flanges with other connecting dimensions - as agreed with the customer.

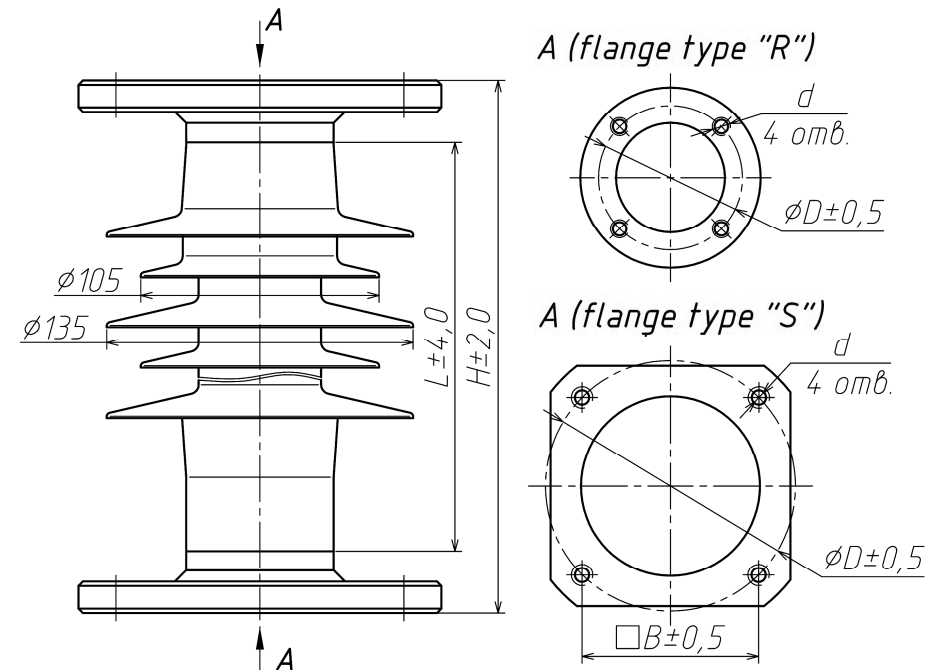


Insulator IOSK 12,5-35-500-4

Parameter name		Значение параметра
Rated voltage, кV		35
Breaking mechanical force at bending, кN, not less, then		12,5
Creepage distance, not less, then		1440
Section length H, mm		500
Insulation length L, mm		445
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		95/80
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		190
50% discharge voltage of industrial frequency in humidified and contaminated state, not less than, кV	at specific surface conductivity of the pollution layer (30±3,0) μSm	42
Weight, kg		12,8

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.12,5.35.500.4/S.B160.4x18/0/S.B160.4x18	IOS 35-1000	160	18	160	18

Execution of flanges with other connecting dimensions - as agreed with the customer.

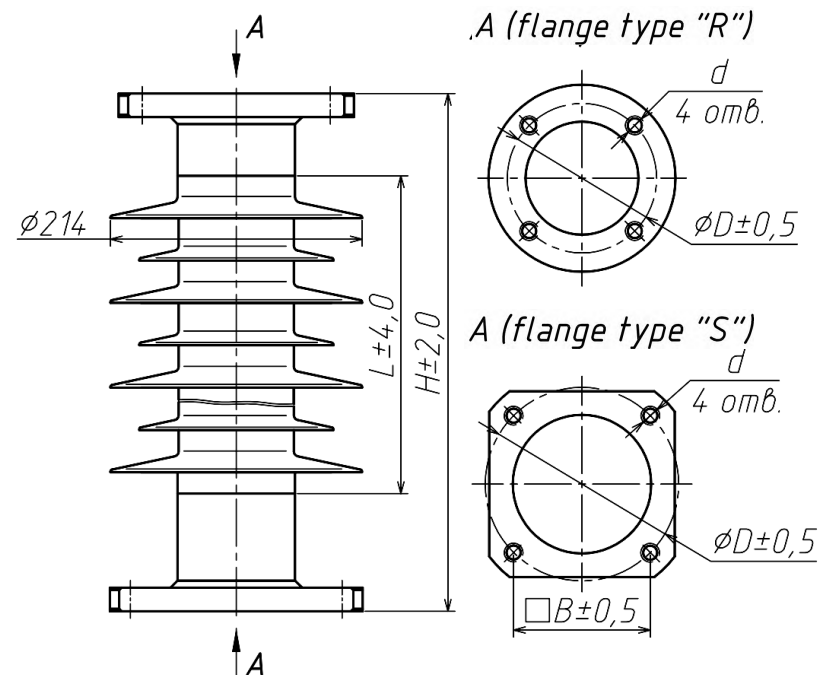


Insulator IOSK 20-35-500-2A

Parameter name		Значение параметра
Rated voltage, kV		35
Breaking mechanical force at bending, kN, not less, then		20,0
Creepage distance, not less, then		1115
Section length H, mm		500
Insulation length L, mm		332
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		95/80
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		190
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (10±1,0) μSm	42
Weight, kg		23,2

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.20.35.500.2A/S.B160.4x18/0/S.B180.4x18	IOS 35-2000	□160	Ø18	□180	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

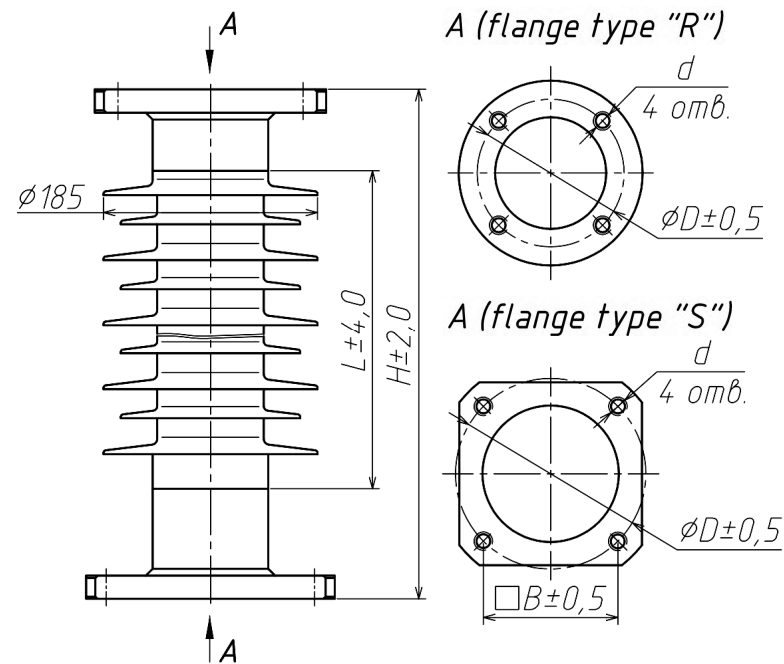


Insulator IOSK 20-35-500-3

Parameter name		Значение параметра
Rated voltage, кV		35
Breaking mechanical force at bending, kN, not less, then		20,0
Creepage distance, not less, then		1185
Section length H, mm		500
Insulation length L, mm		332
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		95/80
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		190
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) μSm	42
Weight, kg		22,7

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.20.35.500.3/S.B160.4x18/0/S.B180.4x18	IOS 35-2000	□160	Ø18	□180	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

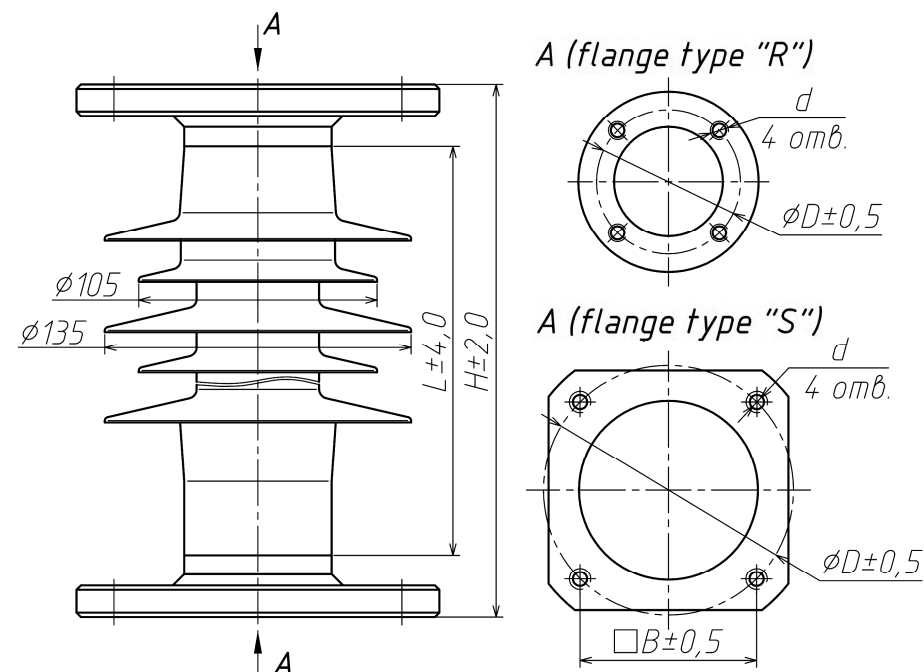


Insulator IOSK 10-35-540-4

Parameter name		Значение параметра
Rated voltage, кV		35
Breaking mechanical force at bending, кN, not less, then		10,0
Creepage distance, not less, then		1440
Section length H, mm		540
Insulation length L, mm		485
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		95/80
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		190
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (30±3,0) μSm	42
Weight, kg		9,0

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.10.35.540.4/R.D127.4x13/0/ R.D127.4x13	By agreement	Ø127	Ø13	Ø127	Ø13

Execution of flanges with other connecting dimensions - as agreed with the customer.

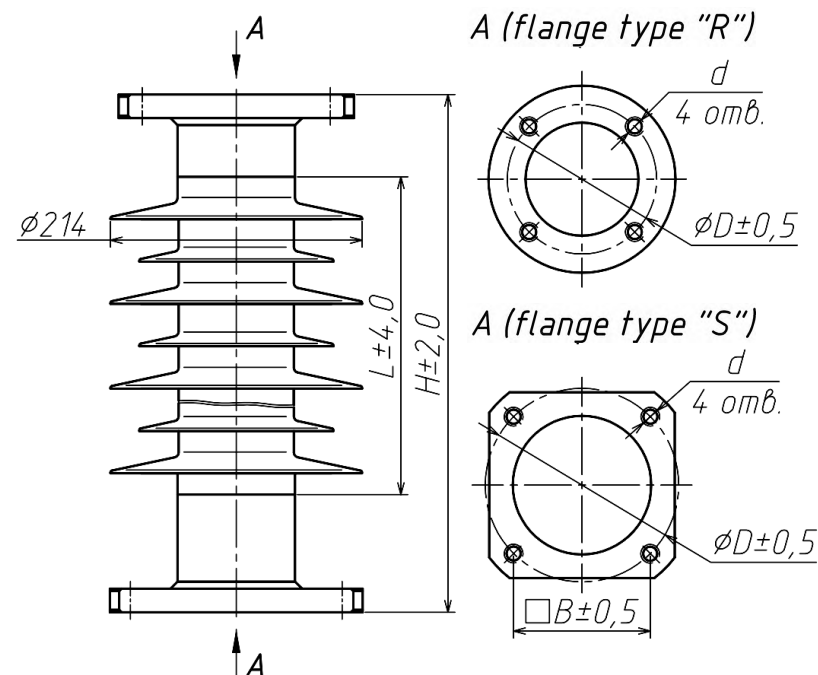


Insulator IOSK 20-35-560-3A

Parameter name		Значение параметра
Rated voltage, кV		35
Breaking mechanical force at bending, кN, not less, then		20,0
Creepage distance, not less, then		1230
Section length H, mm		560
Insulation length L, mm		392
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		95/80
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		190
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (20±2,0) μSm	42
Weight, kg		17,2

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.20.35.560.3A/R.D127.4M16/0/R.D127.4M16	C 16-200-I	Ø127	M16	Ø127	M16

Execution of flanges with other connecting dimensions - as agreed with the customer.

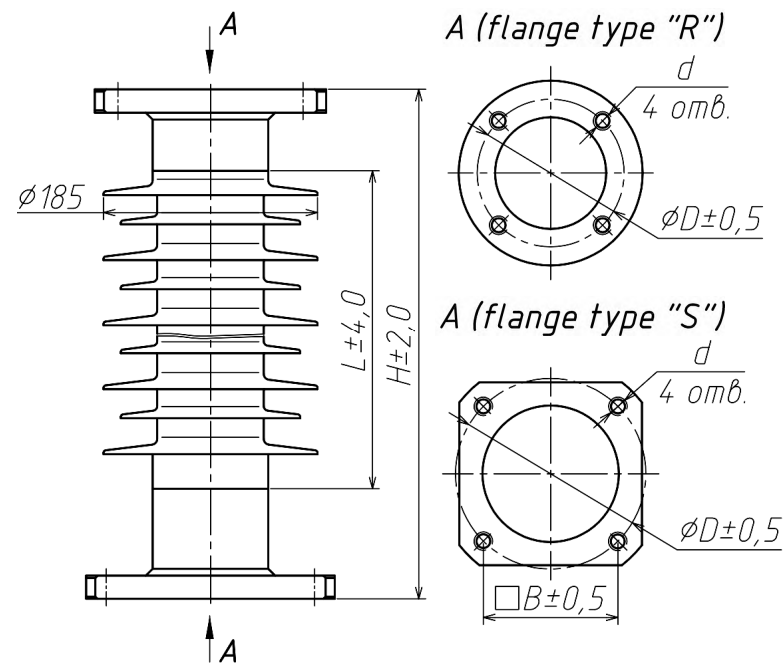


Insulator IOSK 20-35-560-4

Parameter name		Значение параметра
Rated voltage, кV		35
Breaking mechanical force at bending, kN, not less, then		20,0
Creepage distance, not less, then		1400
Section length H, mm		560
Insulation length L, mm		392
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		95/80
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		190
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (30±3,0) μSm	42
Weight, kg		16,7

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.20.35.560.4/R.D127.4M16/0/R.D127.4M16	C 16-200-I	$\phi 127$	M16	$\phi 127$	M16

Execution of flanges with other connecting dimensions - as agreed with the customer.

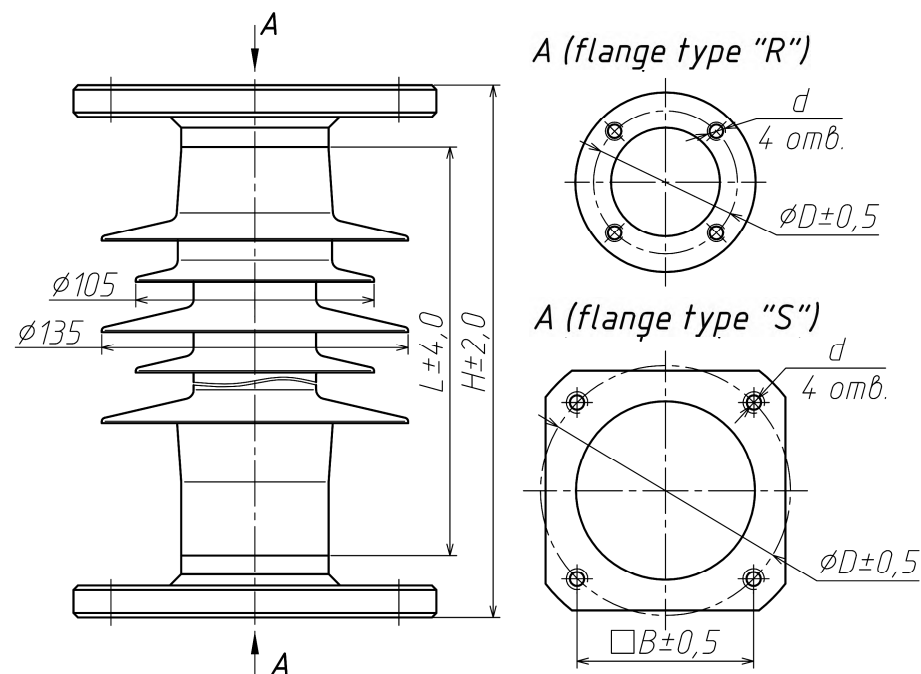


Insulator IOSK 10-35-570-4

Parameter name		Значение параметра
Rated voltage, kV		35
Breaking mechanical force at bending, kN, not less, then		10,0
Creepage distance, not less, then		1675
Section length H, mm		570
Insulation length L, mm		515
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		95/80
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		190
50% discharge voltage of industrial frequency in humidified and contaminated state, not less than, kV	at specific surface conductivity of the pollution layer (30±3,0) μSm	42
Weight, kg		10,5

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.10.35.570.4/S.B99.4M12/0/S.B140.4x18	IOS 35-500-03	$\square 99$	M12	$\square 140$	$\phi 18$
P.10.35.570.4/S.D140.4M6/0/S.B140.4x18	IOS 35-500-04	$\phi 140$	M6	$\square 140$	$\phi 18$

Execution of flanges with other connecting dimensions - as agreed with the customer.

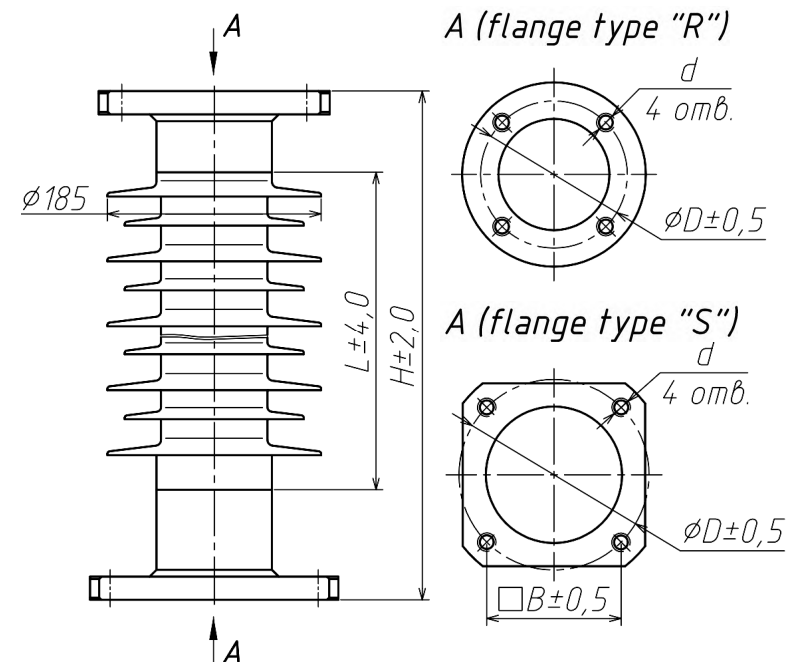


Insulator IOSK 20-35-800-4

Parameter name		Значение параметра
Rated voltage, кV		35
Breaking mechanical force at bending, kN, not less, then		20,0
Creepage distance, not less, then		2200
Section length H, mm		800
Insulation length L, mm		630
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		95/80
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		190
50% discharge voltage of industrial frequency in humidified and contaminated state, not less than, kV	at specific surface conductivity of the pollution layer (30±3,0) μSm	42
Weight, kg		21,5

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.20.35.800.4A/R.D140.4M16/0/R.D140.4x18	2xONSH 35-2000	Ø140	M16	Ø140	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

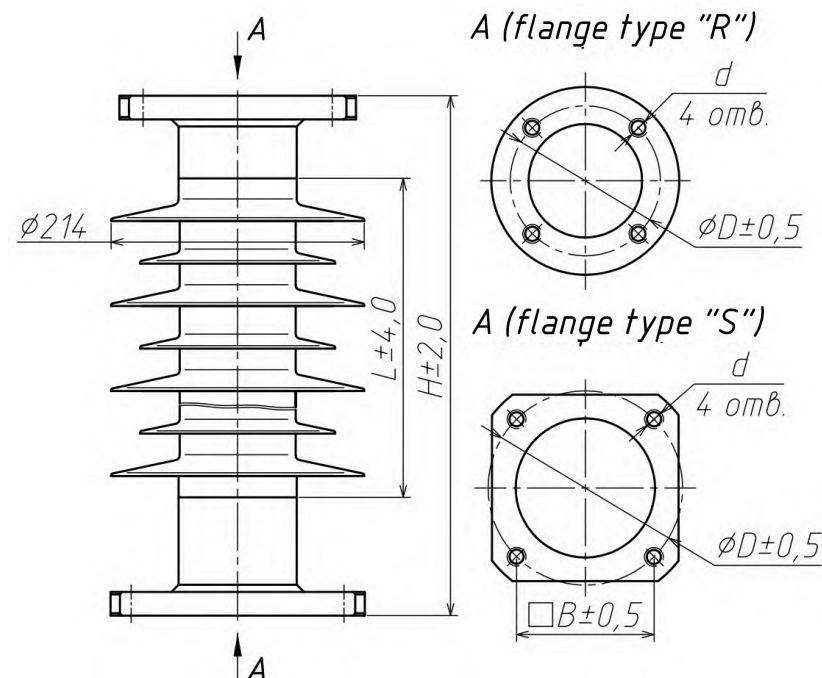


Insulator IOSK 20-35-800-4A

Parameter name		Значение параметра
Rated voltage, kV		35
Breaking mechanical force at bending, kN, not less, then		20,0
Creepage distance, not less, then		2100
Section length H, mm		800
Insulation length L, mm		630
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		95/80
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		190
50% discharge voltage of industrial frequency in humidified and contaminated state, not less than, kV	at specific surface conductivity of the pollution layer (30±3,0) μSm	42
Weight, kg		22,8

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.20.35.800.4A/R.D140.4M16/0/R.D140.4x18	2xONSH 35-2000	$\phi 140$	M16	$\phi 140$	$\phi 18$

Execution of flanges with other connecting dimensions - as agreed with the customer.

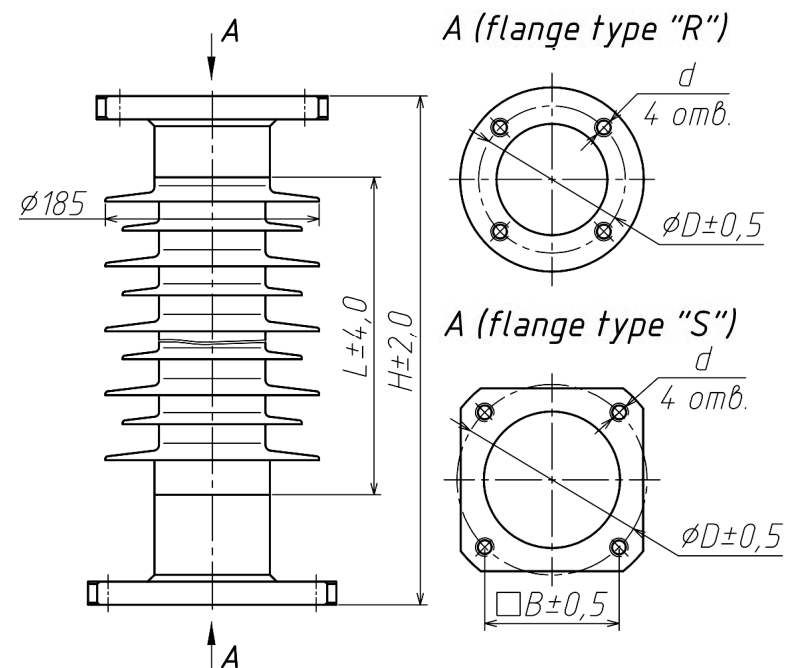


Insulator IOSK 16-110-1020-2

Parameter name		Значение параметра
Rated voltage, kV		110
Breaking mechanical force at bending, kN, not less, then		16,0
Creepage distance, not less, then		3000
Section length H, mm		1020
Insulation length L, mm		852
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		230/230
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		450
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (10±1,0) μSm	110
Weight, kg		26,5

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.16.110.1020.2/S.D178.4x18/0/S.D178.4x18	IOS 110-300	Ø178	Ø18	Ø178	Ø18
P.16.110.1020.2/R.D127.4M16/0/S.D178.4x18	C 4-450 C 6-450	Ø127	M16	Ø178	Ø18
P.16.110.1020.2/R.D127.4M16/0/S.D200.4x18	C 8-450	Ø127	M16	Ø200	Ø18
P.16.110.1020.2/R.D127.4M16/0/S.D225.4x18	C 10-450	Ø127	M16	Ø225	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

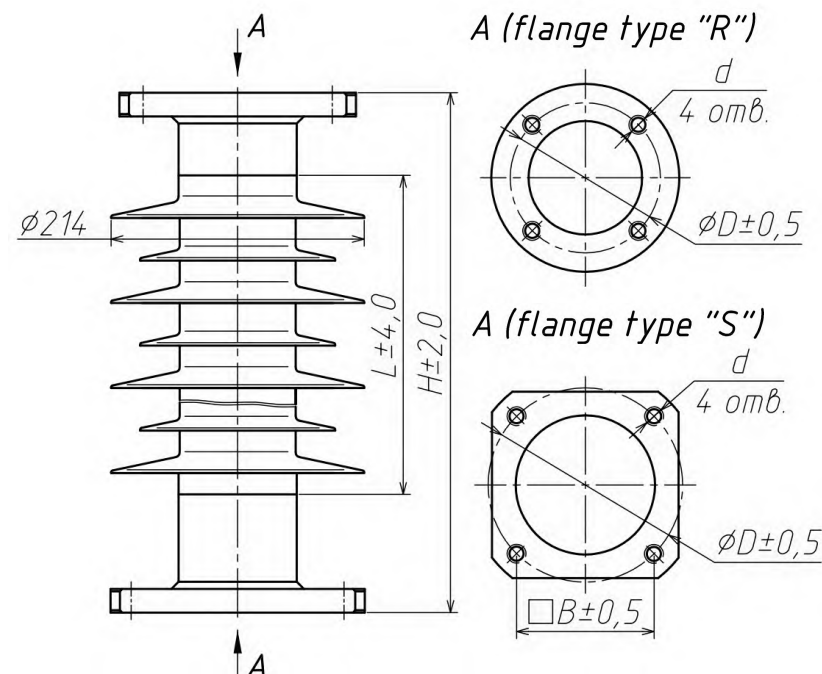


Insulator IOSK 16-110-1020-2A

Parameter name		Значение параметра
Rated voltage, kV		110
Breaking mechanical force at bending, kN, not less, then		16,0
Creepage distance, not less, then		2800
Section length H, mm		1020
Insulation length L, mm		852
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		230/230
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		450
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (10±1,0) μSm	110
Weight, kg		26,8

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.16.110.1020.2A/S.D178.4x18/0/S.D178.4x18	IOS 110-300	$\phi 178$	$\phi 18$	$\phi 178$	$\phi 18$
P.16.110.1020.2A/R.D127.4M16/0/S.D178.4x18	C 4-450 C 6-450	$\phi 127$	M16	$\phi 178$	$\phi 18$
P.16.110.1020.2A/R.D127.4M16/0/S.D200.4x18	C 8-450	$\phi 127$	M16	$\phi 200$	$\phi 18$
P.16.110.1020.2A/R.D127.4M16/0/S.D225.4x18	C 10-450	$\phi 127$	M16	$\phi 225$	$\phi 18$

Execution of flanges with other connecting dimensions - as agreed with the customer.

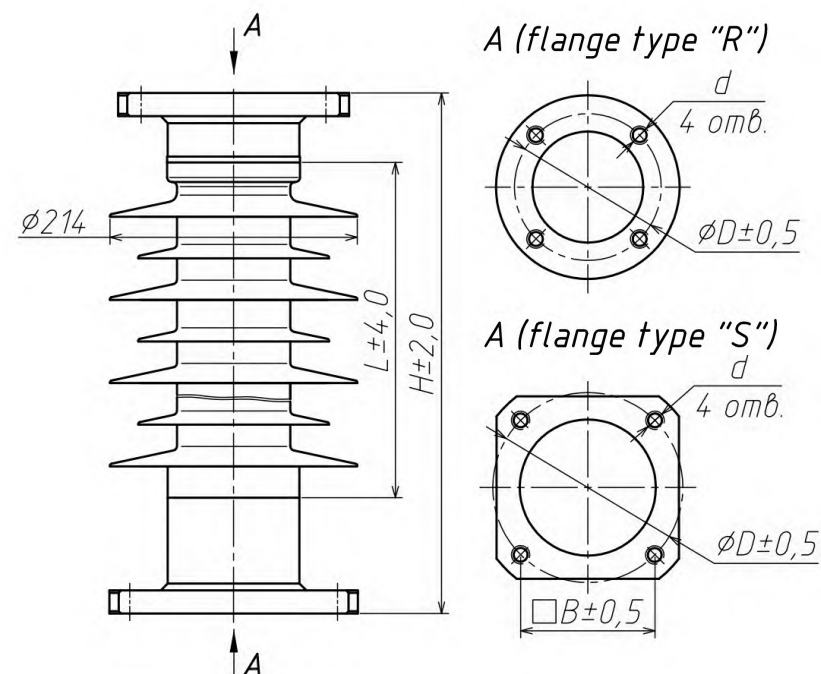


Insulator IOSK 20-110-1020-2B

Parameter name		Значение параметра
Rated voltage, kV		110
Breaking mechanical force at bending, kN, not less, then		20,0
Creepage distance, not less, then		2850
Section length H, mm		1020
Insulation length L, mm		870
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		230/230
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		450
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (10±1,0) μSm	110
Weight, kg		29,5

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.20.110.1020.2B/S.D178.4x18/0/S.D178.4x18	IOS 110-300	Ø178	Ø18	Ø178	Ø18
P.20.110.1020.2B/R.D127.4M16/0/S.D178.4x18	C 4-450 C 6-450	Ø127	M16	Ø178	Ø18
P.20.110.1020.2B/R.D127.4M16/0/S.D200.4x18	C 8-450	Ø127	M16	Ø200	Ø18
P.20.110.1020.2B/R.D127.4M16/0/S.D225.4x18	C 10-450 C 12,5-450	Ø127	M16	Ø225	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

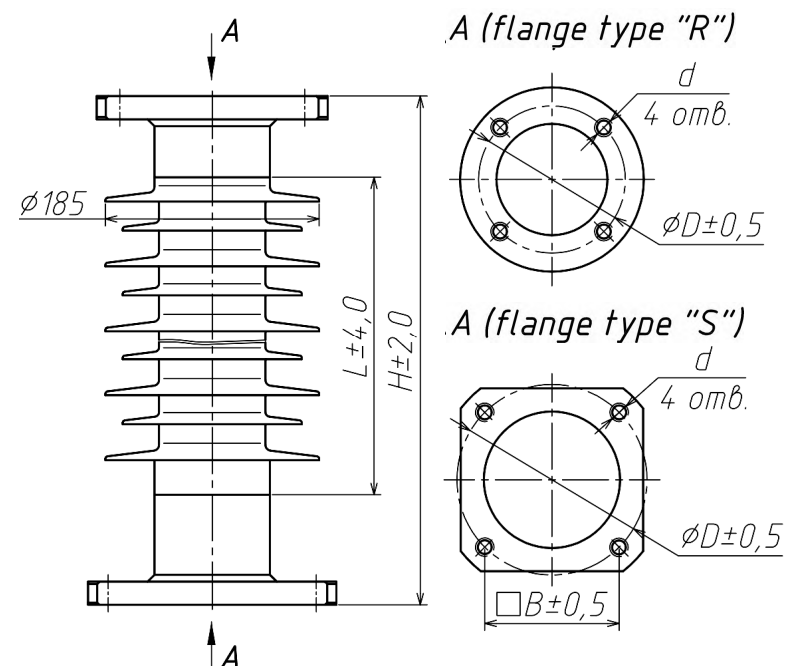


Insulator IOSK 12,5-110-1050-3

Parameter name		Значение параметра
Rated voltage, кV		110
Breaking mechanical force at bending, кN, not less, then		12,5
Creepage distance, not less, then		3150
Section length H, mm		1050
Insulation length L, mm		882
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		230/230
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		450
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (20±2,0) μSm	110
Weight, kg		28,1

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.12,5.110.1050.3/S.B120.4M12/0/S.B160.4x18	IOS 110-400	□120	M12	□160	Ø18
P.12,5.110.1050.3/S.D140.4M12/0/S.B160.4x18	ONS 110-300	Ø140	M12	□160	Ø18
P.12,5.110.1050.3/S.B160.4x18/0/S.B160.4x18	ONS 110-1000 UST 110	□160	Ø18	□160	Ø18
P.12,5.110.1050.3/R.D127.4M16/0/S.D178.4x18	C 4-480 C 6-480	Ø127	M16	Ø178	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

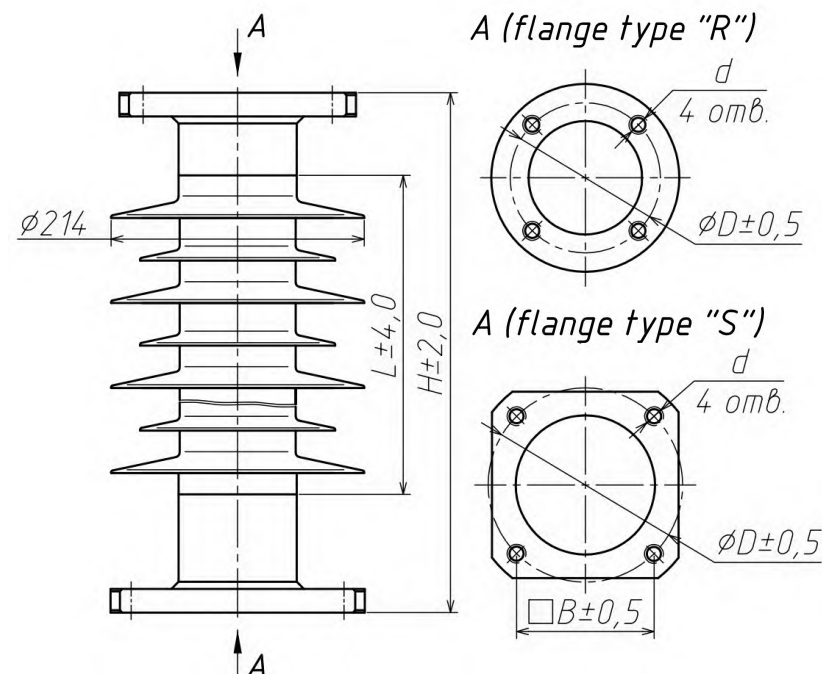


Insulator IOSK 12,5-110-1050-2A

Parameter name		Значение параметра
Rated voltage, kV		110
Breaking mechanical force at bending, kN, not less, then		12,5
Creepage distance, not less, then		2900
Section length H, mm		1050
Insulation length L, mm		882
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		230/230
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		450
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) µSm	110
Weight, kg		30,0

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.12,5.110.1050.2A/S.B120.4M12/0/S.B160.4x18	IOS 110-400	□120	M12	□160	Ø18
P.12,5.110.1050.2A/S.D140.4M12/0/S.B160.4x18	ONS 110-300	Ø140	M12	□160	Ø18
P.12,5.110.1050.2A/S.B160.4x18/0/S.B160.4x18	ONS 110-1000 UST 110	□160	Ø18	□160	Ø18
P.12,5.110.1050.2A/R.D127.4M16/0/S.D178.4x18	C 4-480 C 6-480	Ø127	M16	Ø178	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

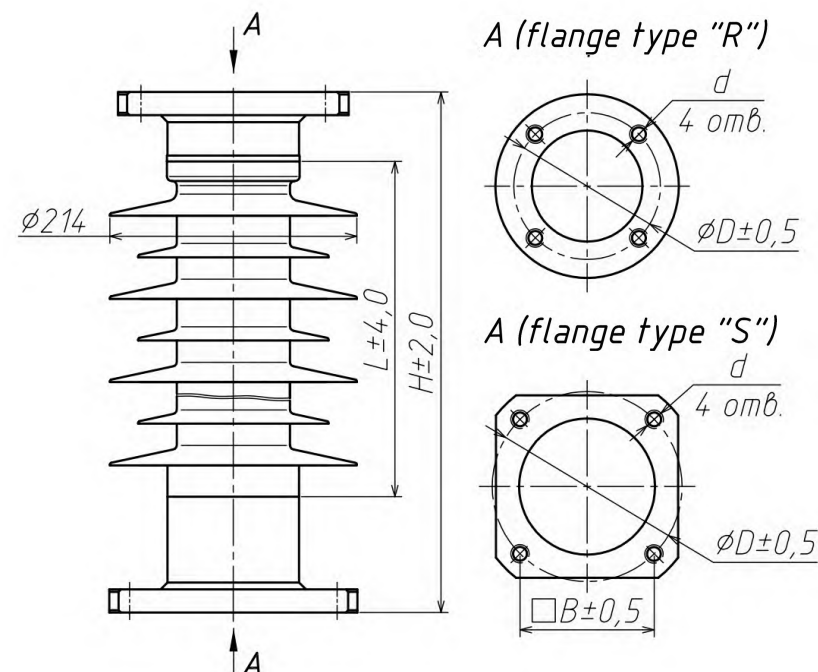


Insulator IOSK 16-110-1050-2B

Parameter name		Значение параметра
Rated voltage, кV		110
Breaking mechanical force at bending, кN, not less, then		16,0
Creepage distance, not less, then		2950
Section length H, mm		1050
Insulation length L, mm		900
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		230/230
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		450
50% discharge voltage of industrial frequency in humidified and contaminated state, not less than, кV	at specific surface conductivity of the pollution layer (10±1,0) μSm	110
Weight, kg		32,0

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.16.110.1050.2B/S.B120.4M12/0/S.B160.4x18	IOS 110-400	□120	M12	□160	Ø18
P.16.110.1050.2B/S.D140.4M12/0/S.B160.4x18	ONS 110-300	Ø140	M12	□160	Ø18
P.16.110.1050.2B/S.B160.4x18/0/S.B160.4x18	ONS 110-1000 UST 110	□160	Ø18	□160	Ø18
P.16.110.1050.2B/R.D127.4M16/0/S.D178.4x18	C 4-480 C 6-480	Ø127	M16	Ø178	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

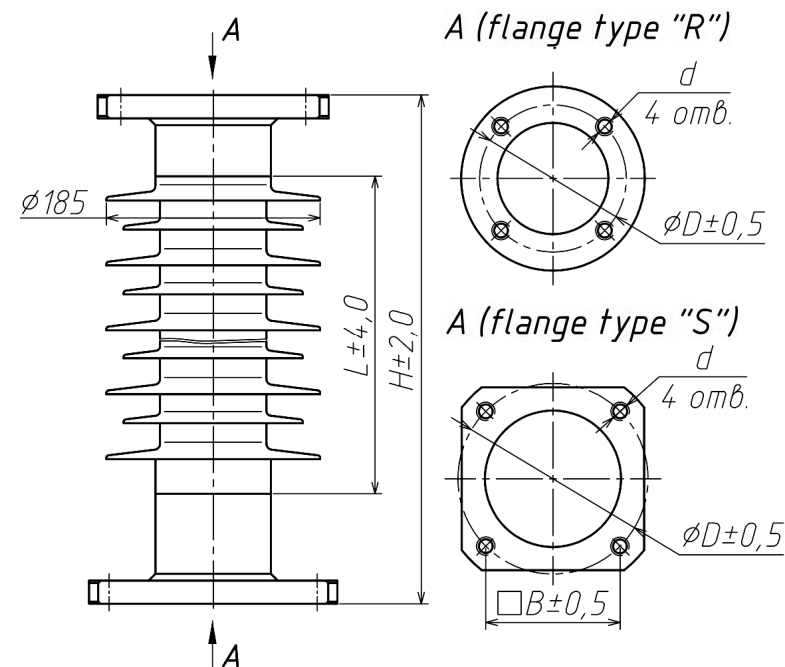


Insulator IOSK 12,5-110-1100-3

Parameter name		Значение параметра
Rated voltage, кV		110
Breaking mechanical force at bending, кN, not less, then		12,5
Creepage distance, not less, then		3300
Section length H, mm		1100
Insulation length L, mm		932
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		230/230
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		450
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (20±2,0) μSm	110
Weight, kg		32,2

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.12,5.110.1100.3/S.B160.4x18/0/S.B160.4x18	IOS 110-600 IOS 110-1000	□160	Ø18	□160	Ø18
P.12,5.110.1100.3/S.B160.4x18/0/S.B180.4x18	IOS 110-1250	Ø160	Ø18	□180	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

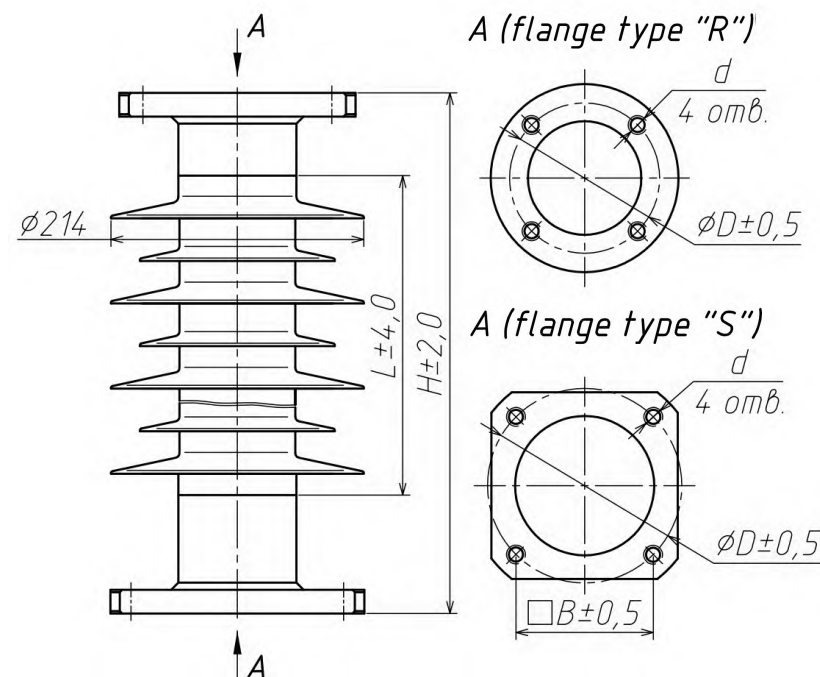


Insulator IOSK 12,5-110-1100-3A

Parameter name		Значение параметра
Rated voltage, кV		110
Breaking mechanical force at bending, kN, not less, then		12,5
Creepage distance, not less, then		3100
Section length H, mm		1100
Insulation length L, mm		932
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		230/230
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		450
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) μSm	110
Weight, kg		34,4

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.12,5.110.1100.3A/S.B160.4x18/0/S.B160.4x18	IOS 110-600 IOS 110-1000	$\square 160$	$\phi 18$	$\square 160$	$\phi 18$
P.12,5.110.1100.3A/S.B160.4x18/0/S.B180.4x18	IOS 110-1250	$\phi 160$	$\phi 18$	$\square 180$	$\phi 18$

Execution of flanges with other connecting dimensions - as agreed with the customer.

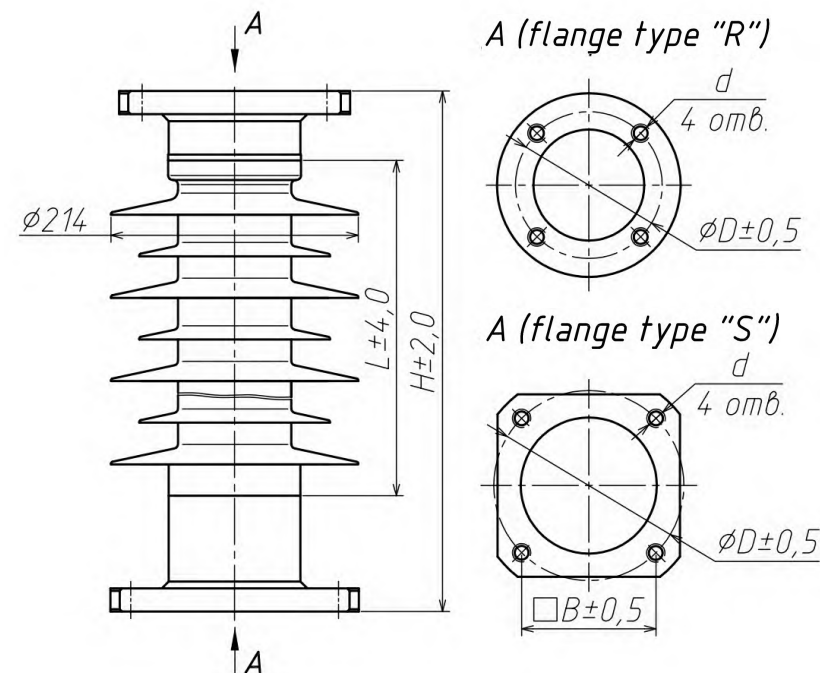


Insulator IOSK 16-110-1100-3B

Parameter name		Значение параметра
Rated voltage, кV		110
Breaking mechanical force at bending, кN, not less, then		16,0
Creepage distance, not less, then		3150
Section length H, mm		1100
Insulation length L, mm		950
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		230/230
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		450
50% discharge voltage of industrial frequency in humidified and contaminated state, not less than, кV	at specific surface conductivity of the pollution layer (20±2,0) μSm	110
Weight, kg		35,2

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.16.110.1100.3B/S.B160.4x18/0/S.B160.4x18	IOS 110-600 IOS 110-1000	□160	Ø18	□160	Ø18
P.16.110.1100.3B/S.B160.4x18/0/S.B180.4x18	IOS 110-1250	□160	Ø18	□180	Ø18

Исполнение фланцев с круглым или квадратным основанием и другими присоединительными dimensions - as agreed with the customer.

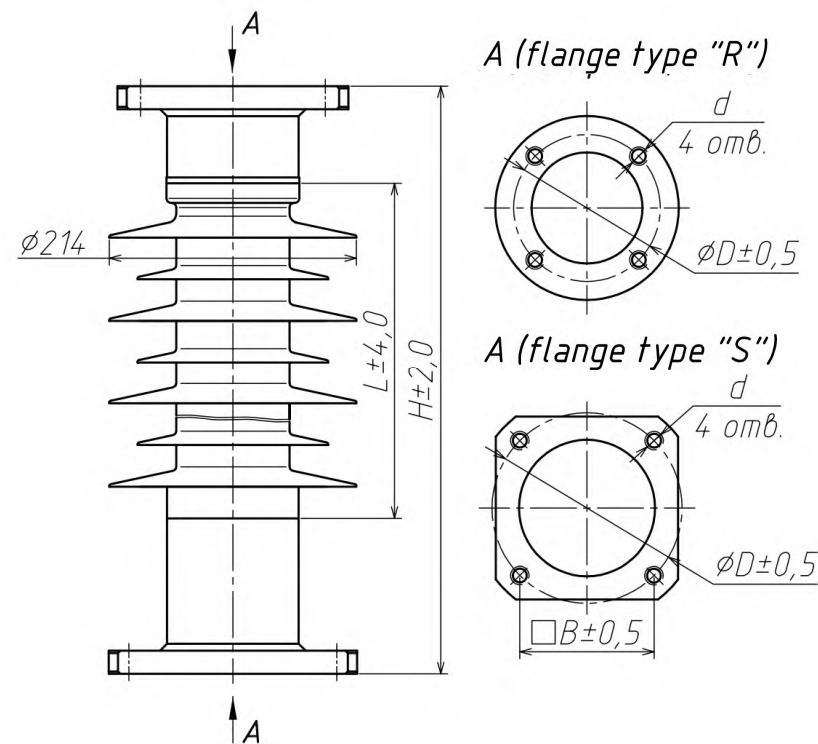


Insulator IOSK 20-110-1100-2B

Parameter name		Значение параметра
Rated voltage, kV		110
Breaking mechanical force at bending, kN, not less, then		20,0
Creepage distance, not less, then		2900
Section length H, mm		1100
Insulation length L, mm		890
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		230/230
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		450
50% discharge voltage of industrial frequency in humidified and contaminated state, not less than, kV	at specific surface conductivity of the pollution layer (10±1,0) μSm	110
Weight, kg		37,2

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.20.110.1100.2B/S.B180.4x18/0/S.B194.4x18	IOS 110-2000	□180	Ø18	□194	Ø18
P.20.110.1100.2B/S.B194.4x18/0/S.B194.4x18	IOS 110-2000-01	Ø194	Ø18	□194	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

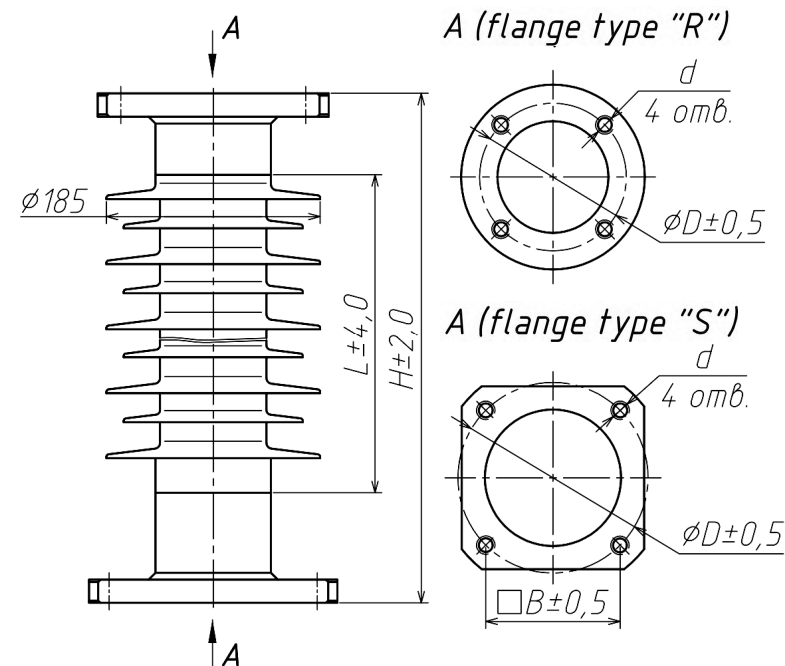


Insulator IOSK 12,5-110-1200-3

Parameter name		Значение параметра
Rated voltage, кV		110
Breaking mechanical force at bending, кN, not less, then		12,5
Creepage distance, not less, then		3600
Section length H, mm		1200
Insulation length L, mm		1032
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		230/230
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		450
50% discharge voltage of industrial frequency in humidified and contaminated state, not less than, кV	at specific surface conductivity of the pollution layer (20±2,0) μSm	110
Weight, kg		26,9

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.12,5.110.1200.3/S.D140.4M12/0/S.D140.4x18	3xONSH 35-2000	Ø140	4M16	Ø140	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

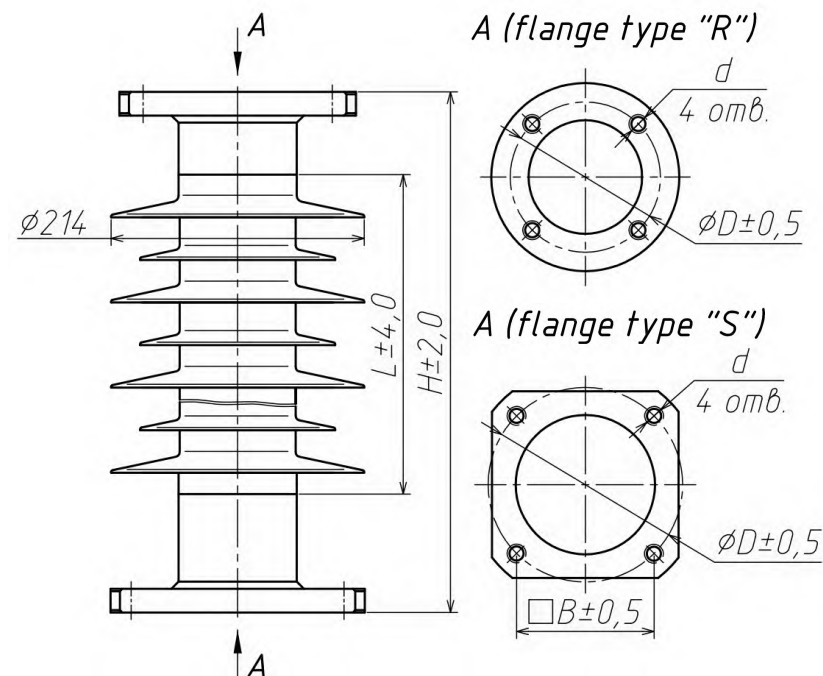


Insulator IOSK 12,5-110-1200-3A

Parameter name		Значение параметра
Rated voltage, кV		110
Breaking mechanical force at bending, kN, not less, then		12,5
Creepage distance, not less, then		3400
Section length H, mm		1200
Insulation length L, mm		1032
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		230/230
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		450
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) μSm	110
Weight, kg		30,5

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.12,5.110.1200.3A/S.D140.4M12/0/S.D140.4x18	3xONSH 35-2000	Ø140	4M16	Ø140	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

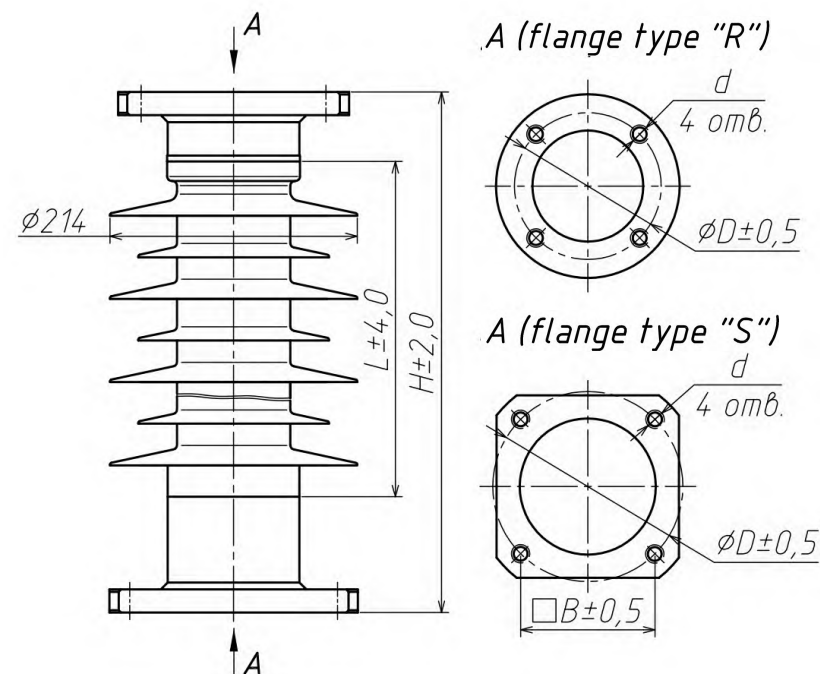


Insulator IOSK 16-110-1200-3B

Parameter name		Значение параметра
Rated voltage, kV		110
Breaking mechanical force at bending, kN, not less, then		16,0
Creepage distance, not less, then		3450
Section length H, mm		1200
Insulation length L, mm		1050
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		230/230
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		450
50% discharge voltage of industrial frequency in humidified and contaminated state, not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) µSm	110
Weight, kg		32,2

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.16.110.1200.3/S.D140.4M12/0/S.D140.4x18	3xONSH 35-2000	Ø140	4M16	Ø140	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

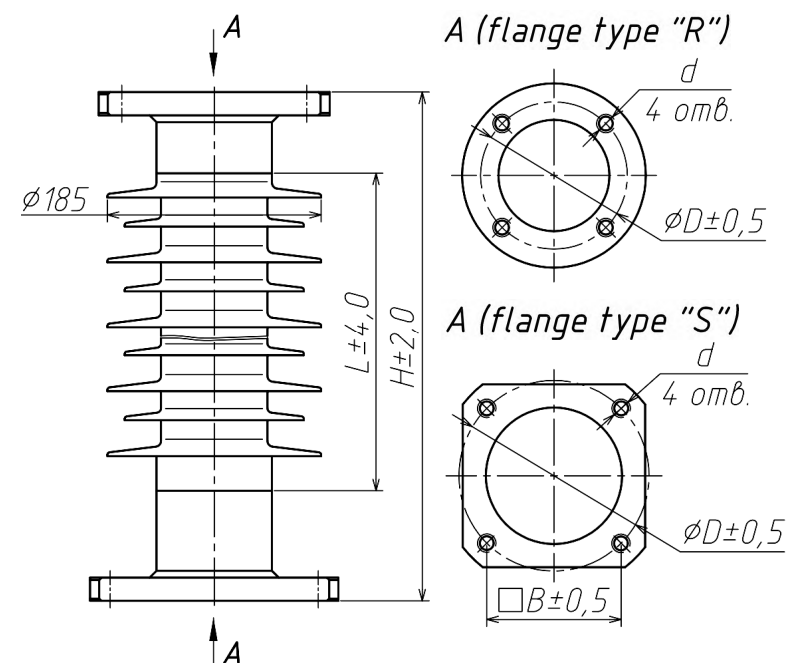


Insulator IOSK 12,5-110-1220-3

Parameter name		Значение параметра
Rated voltage, кV		110
Breaking mechanical force at bending, кN, not less, then		12,5
Creepage distance, not less, then		3700
Section length H, mm		1220
Insulation length L, mm		1052
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		230/230
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		450
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (20±2,0) μSm	110
Weight, kg		29,0

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.12,5.110.1220.A3/R.D127.4M16/0/S.D178.4x18	C 4-550	Ø127	4M16	Ø178	Ø18
P.12,5.110.1220.A3/R.D127.4M16/0/S.D200.4x18	C 6-550 C 8-550	Ø127	4M16	Ø200	Ø18
P.12,5.110.1220.A3/R.D127.4M16/0/S.D225.4x18	C 10-550 C 12,5-550	Ø127	4M16	Ø225	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

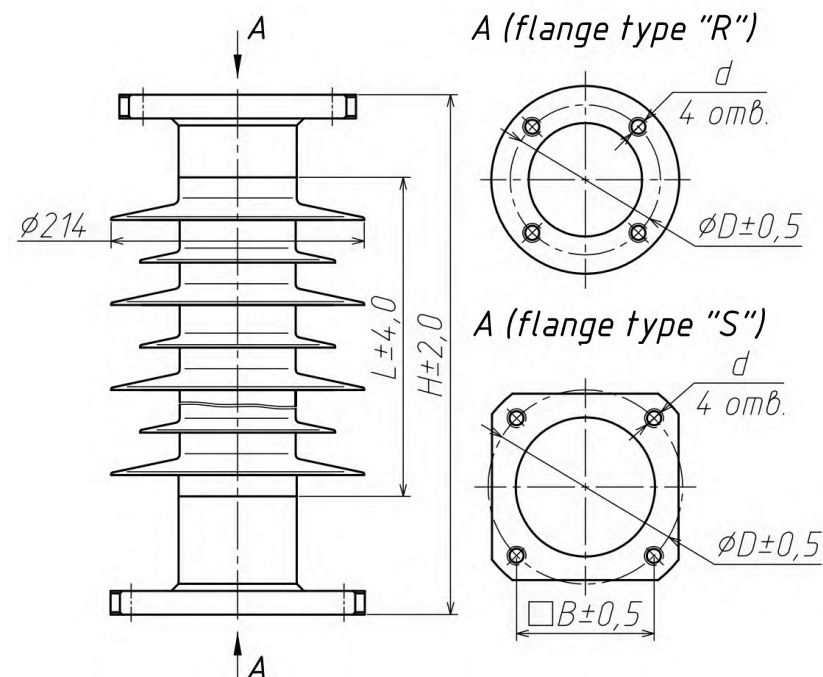


Insulator IOSK 12,5-110-1220-3A

Parameter name		Значение параметра
Rated voltage, кV		110
Breaking mechanical force at bending, kN, not less, then		12,5
Creepage distance, not less, then		3500
Section length H, mm		1220
Insulation length L, mm		1052
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		230/230
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		450
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) μSm	110
Weight, kg		30,7

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.12,5.110.1220.3A/R.D127.4M16/0/S.D178.4x18	C 4-550	Ø127	4M16	Ø178	Ø18
P.12,5.110.1220.3A/R.D127.4M16/0/S.D200.4x18	C 6-550 C 8-550	Ø127	4M16	Ø200	Ø18
P.12,5.110.1220.3A/R.D127.4M16/0/S.D225.4x18	C 10-550 C 12,5-550	Ø127	4M16	Ø225	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

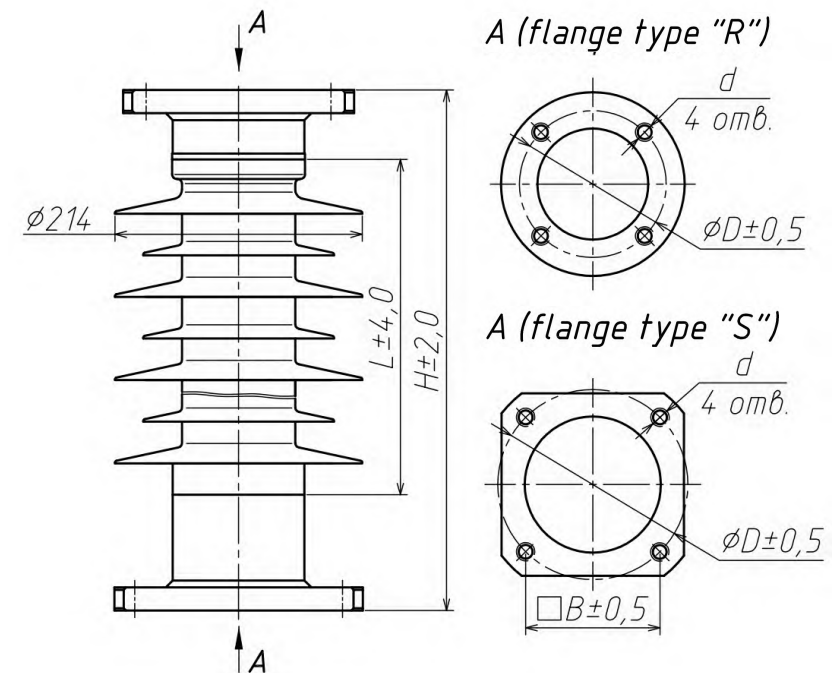


Insulator IOSK 16-110-1220-3B

Parameter name		Значение параметра
Rated voltage, кV		110
Breaking mechanical force at bending, kN, not less, then		16,0
Creepage distance, not less, then		3550
Section length H, mm		1220
Insulation length L, mm		1070
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		230/230
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		450
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) μSm	110
Weight, kg		32,4

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.16.110.1220.3B/R.D127.4M16/0/S.D178.4x18	C 4-550	Ø127	4M16	Ø178	Ø18
P.16.110.1220.3B/R.D127.4M16/0/S.D200.4x18	C 6-550 C 8-550	Ø127	4M16	Ø200	Ø18
P.16.110.1220.3B/R.D127.4M16/0/S.D225.4x18	C 10-550 C 12,5-550	Ø127	4M16	Ø225	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

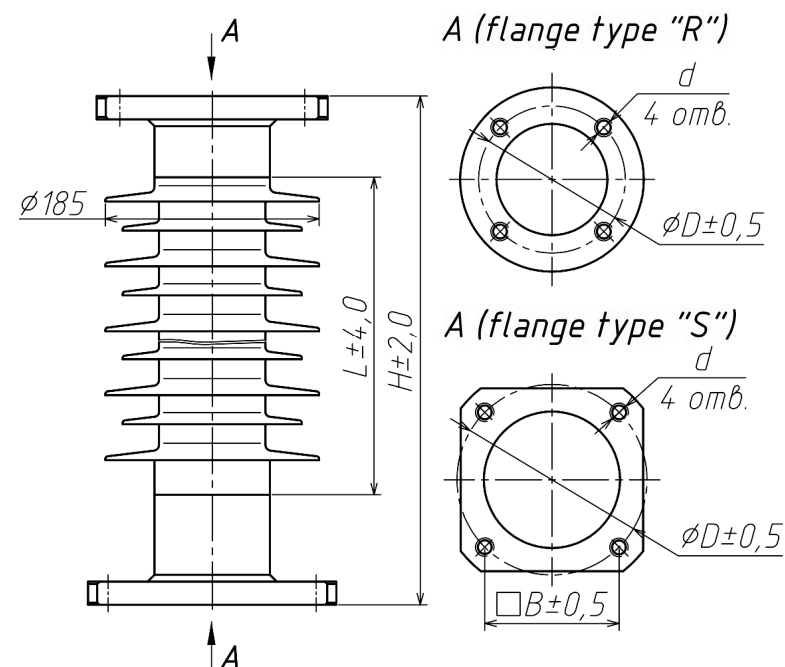


Insulator IOSK 10-110-1380-4

Parameter name		Значение параметра
Rated voltage, кV		110
Breaking mechanical force at bending, кN, not less, then		10,0
Creepage distance, not less, then		4200
Section length H, mm		1380
Insulation length L, mm		1190
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		230/230
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		450
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (30±3,0) μSm	110
Weight, kg		34,0

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.10.110.1380.4/S.D140.4M12/0/S.B160.4x18	By agreement	Ø140	4M12	□160	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

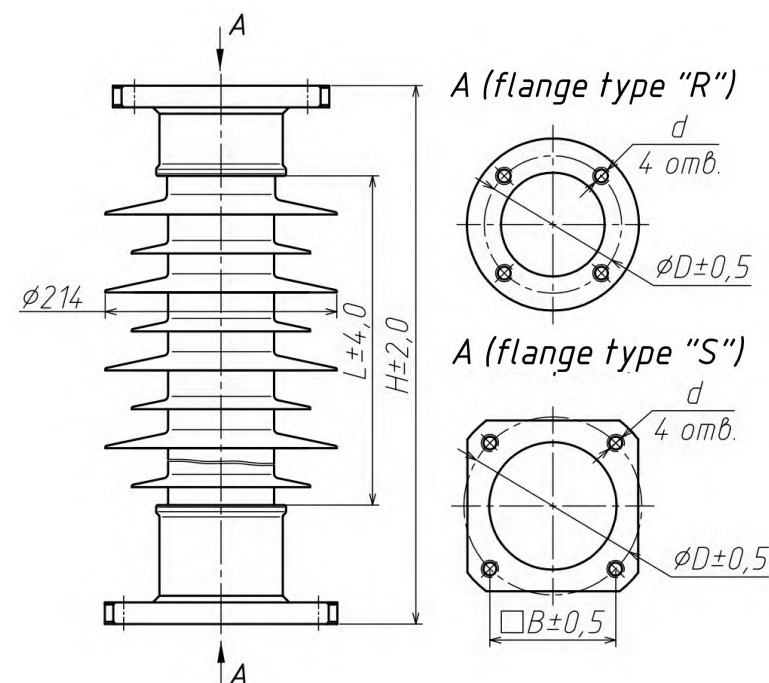


Insulator IOSK 12,5-110-1380-4A

Parameter name		Значение параметра
Rated voltage, кV		110
Breaking mechanical force at bending, kN, not less, then		12,5
Creepage distance, not less, then		3900
Section length H, mm		1380
Insulation length L, mm		1175
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		230/230
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		450
50% discharge voltage of industrial frequency in humidified and contaminated state, not less than, kV	at specific surface conductivity of the pollution layer (30±3,0) μSm	110
Weight, kg		38,2

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.12,5.110.1380.4/S.D140.4M12/0/S.B160.4x18	By agreement	Ø140	4M12	□160	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

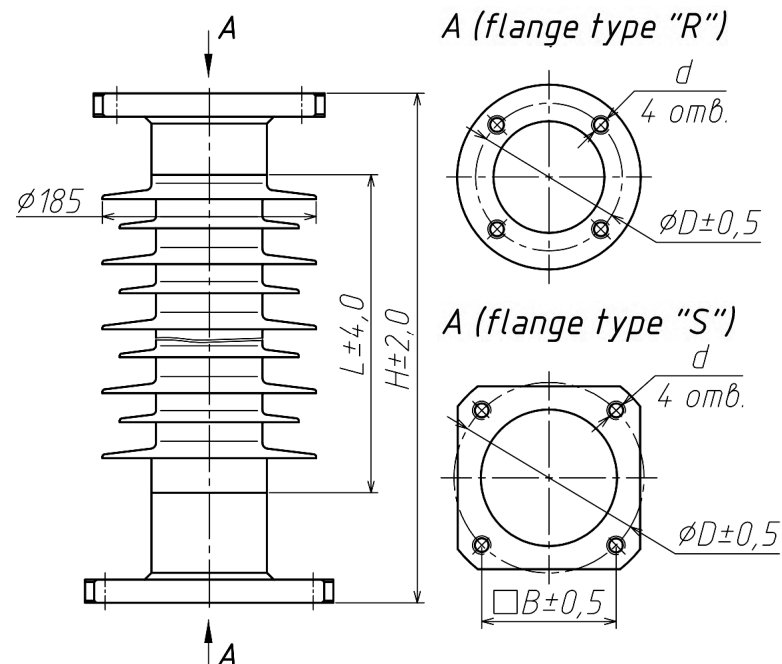


Insulator IOSK 10-150-1500-3

Parameter name		Значение параметра
Rated voltage, кV		150
Breaking mechanical force at bending, kN, not less, then		10,0
Creepage distance, not less, then		4600
Section length H, mm		1500
Insulation length L, mm		1310
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		300/300
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		650
50% discharge voltage of industrial frequency in humidified and contaminated state, not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) μSm	150
Weight, kg		33,4

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.10.150.1500.A3/R.D127.4M16/0/R.D127.4M16	C 6-650	Ø127	4M16	Ø127	4M16

Execution of flanges with other connecting dimensions - as agreed with the customer.

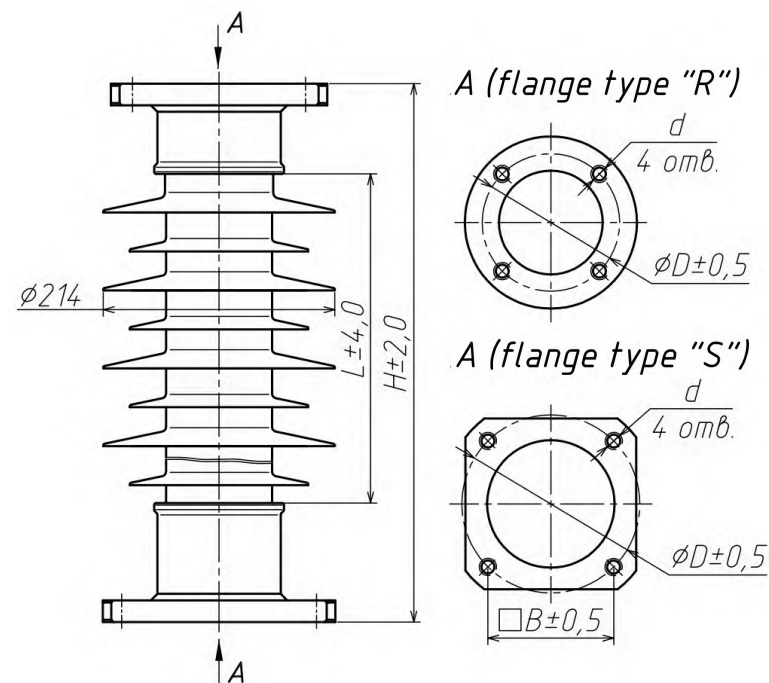


Insulator IOSK 12,5-150-1500-3A

Parameter name		Значение параметра
Rated voltage, кV		150
Breaking mechanical force at bending, kN, not less, then		12,5
Creepage distance, not less, then		4350
Section length H, mm		1500
Insulation length L, mm		1320
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		300/300
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		650
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) μSm	150
Weight, kg		37,0

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.12,5.150.1500.3A/R.D127.4M16/0/R.D127.4M16	C 6-650	Ø127	4M16	Ø127	4M16

Execution of flanges with other connecting dimensions - as agreed with the customer.

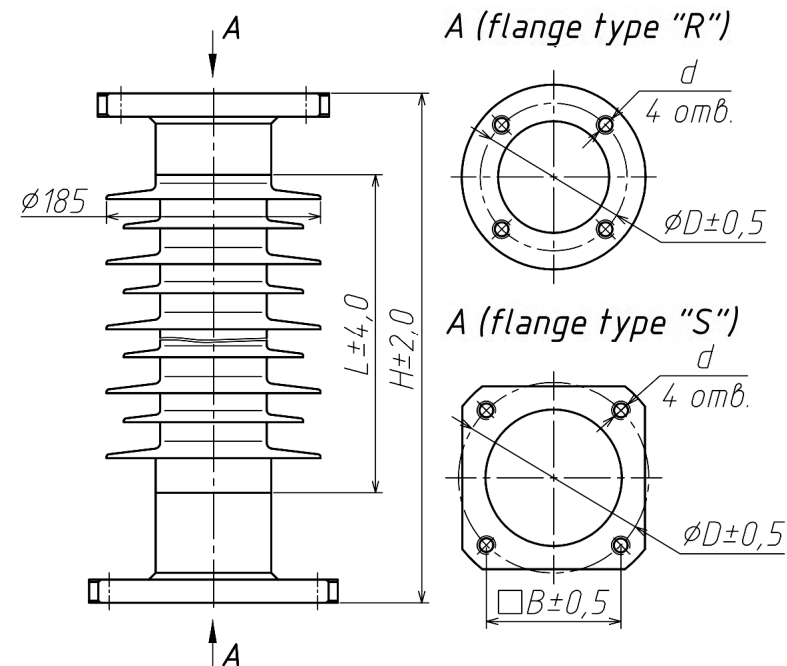


Insulator IOSK 10-150-1550-3

Parameter name		Значение параметра
Rated voltage, кV		150
Breaking mechanical force at bending, кN, not less, then		10,0
Creepage distance, not less, then		4800
Section length H, mm		1550
Insulation length L, mm		1360
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		300/300
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		650
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (20±2,0) μSm	150
Weight, kg		37,7

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.10.150.1550.3/S.B120.4M12/0/S.B160.4x18	By agreement	□120	M12	□160	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

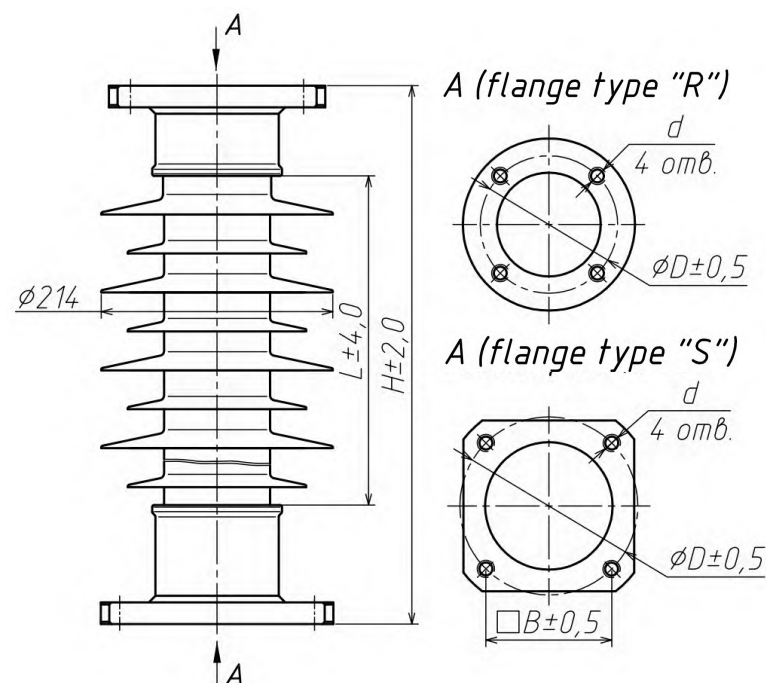


Insulator IOSK 12,5-150-1550-3A

Parameter name		Значение параметра
Rated voltage, кV		150
Breaking mechanical force at bending, кN, not less, then		12,5
Creepage distance, not less, then		4600
Section length H, mm		1550
Insulation length L, mm		1370
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		300/300
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		650
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (20±2,0) μSm	150
Weight, kg		40,0

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.12,5.150.1550.3A/S.B120.4M12/0/S.B160.4x18	By agreement	□120	M12	□160	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

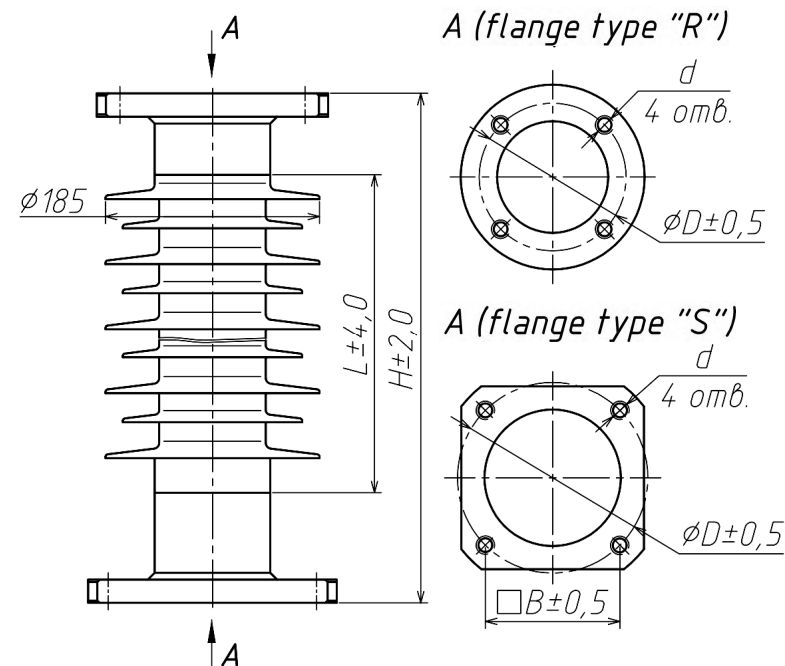


Insulator IOSK 10-150-1600-3

Parameter name		Значение параметра
Rated voltage, kV		150
Breaking mechanical force at bending, kN, not less, then		10,0
Creepage distance, not less, then		4990
Section length H, mm		1600
Insulation length L, mm		1410
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		300/300
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		650
50% discharge voltage of industrial frequency in humidified and contaminated state, not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) μSm	150
Weight, kg		37,1

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.10.150.1600.3/S.D140.4M12/0/S.D140.4x18	4xONSH 35-2000	$\phi 140$	M16	$\phi 140$	$\phi 18$

Execution of flanges with other connecting dimensions - as agreed with the customer.

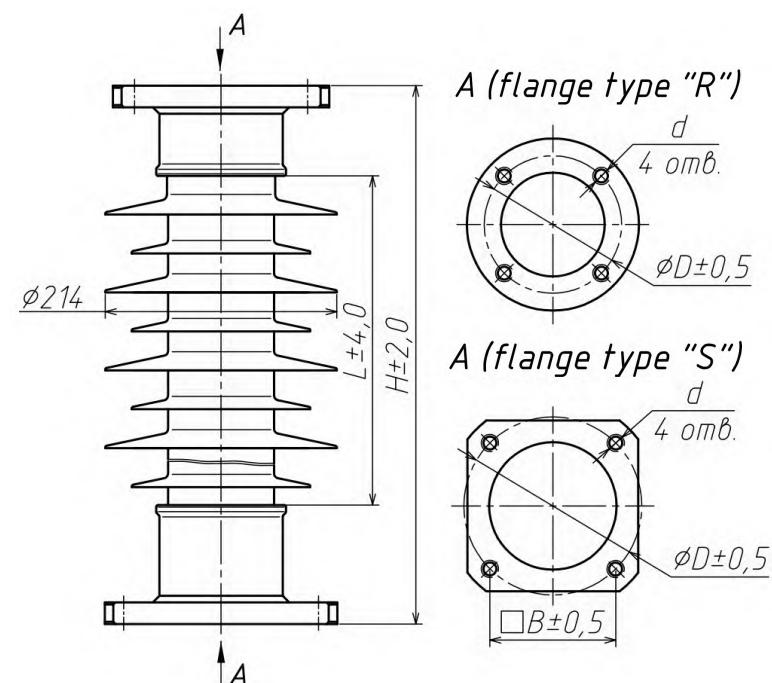


Insulator IOSK 12,5-150-1600-3A

Parameter name		Значение параметра
Rated voltage, кV		150
Breaking mechanical force at bending, kN, not less, then		12,5
Creepage distance, not less, then		4750
Section length H, mm		1600
Insulation length L, mm		1420
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		300/300
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		650
50% discharge voltage of industrial frequency in humidified and contaminated state, not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) μSm	150
Weight, kg		38,4

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.12,5.150.1600.3A/S.D140.4M12/0/S.D140.4x18	4xONSH 35-2000	Ø140	M16	Ø140	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

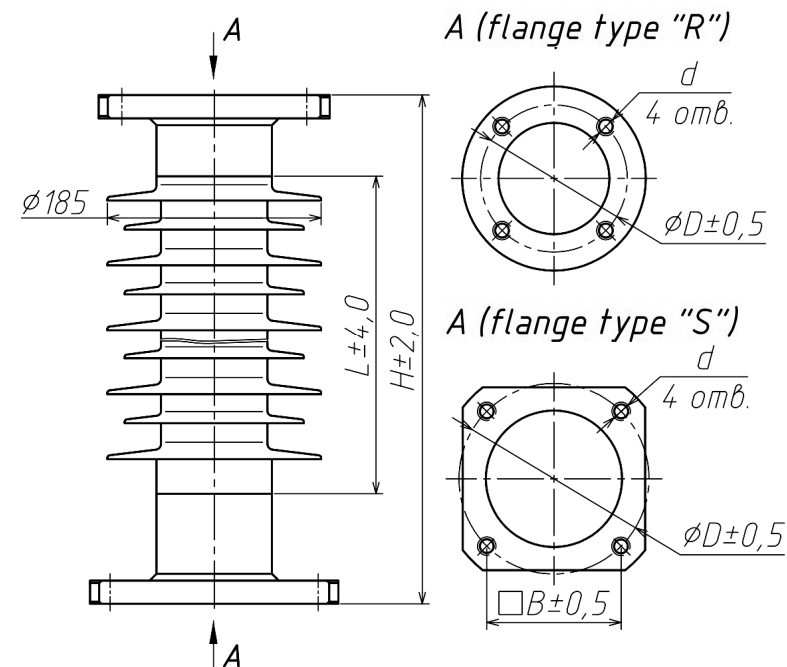


Insulator IOSK 10-150-1700-4

Parameter name		Значение параметра
Rated voltage, кV		150
Breaking mechanical force at bending, kN, not less, then		10,0
Creepage distance, not less, then		5350
Section length H, mm		1700
Insulation length L, mm		1510
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		300/300
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		650
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (30±3,0) μSm	150
Weight, kg		38,8

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.10.150.1700.4/R.D127.4M16/0/S.D200.4x18	C 4-750	$\phi 127$	M16	$\phi 200$	$\phi 18$
P.10.150.1700.4/R.D127.4M16/0/S.D225.4x18	C 6-750 C 8-750	$\phi 127$	M16	$\phi 225$	$\phi 18$

Execution of flanges with other connecting dimensions - as agreed with the customer.

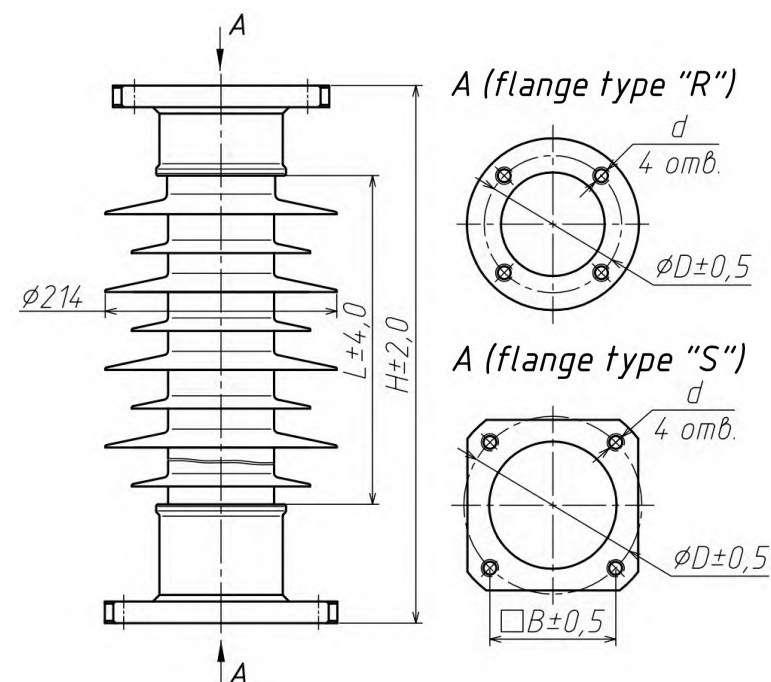


Insulator IOSK 12,5-150-1700-3A

Parameter name		Значение параметра
Rated voltage, кV		150
Breaking mechanical force at bending, кN, not less, then		12,5
Creepage distance, not less, then		5100
Section length H, mm		1700
Insulation length L, mm		1520
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		300/300
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		650
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (20±2,0) μSm	150
Weight, kg		42,7

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.12,5.150.1700.3A/R.D127.4M16/0/S.D200.4x18	C 4-750	Ø127	M16	Ø200	Ø18
P.12,5.150.1700.3A/R.D127.4M16/0/S.D225.4x18	C 6-750 C 8-750	Ø127	M16	Ø225	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

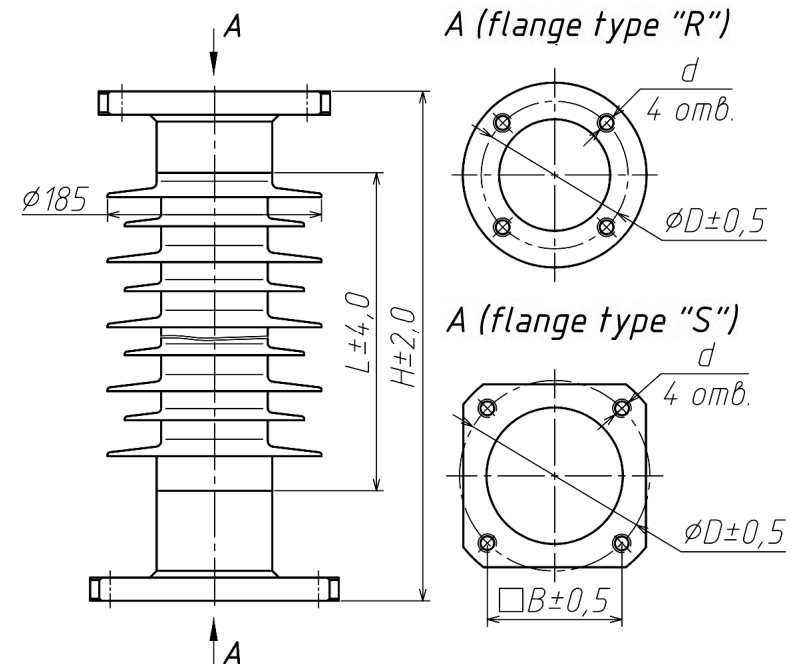


Insulator IOSK 8-220-2000-3

Parameter name		Значение параметра
Rated voltage, kV		220
Breaking mechanical force at bending, kN, not less, then		8,0
Creepage distance, not less, then		6300
Section length H, mm		2000
Insulation length L, mm		1790
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		440/440
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		950
50% discharge voltage of industrial frequency in humidified and contaminated state, not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) µSm	220
Weight, kg		41,5

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.8.220.2000.3/S.D140.4M12/0/S.D140.4x18	5xONSH 35-2000	$\phi 140$	M16	$\phi 140$	$\phi 18$

Execution of flanges with other connecting dimensions - as agreed with the customer.

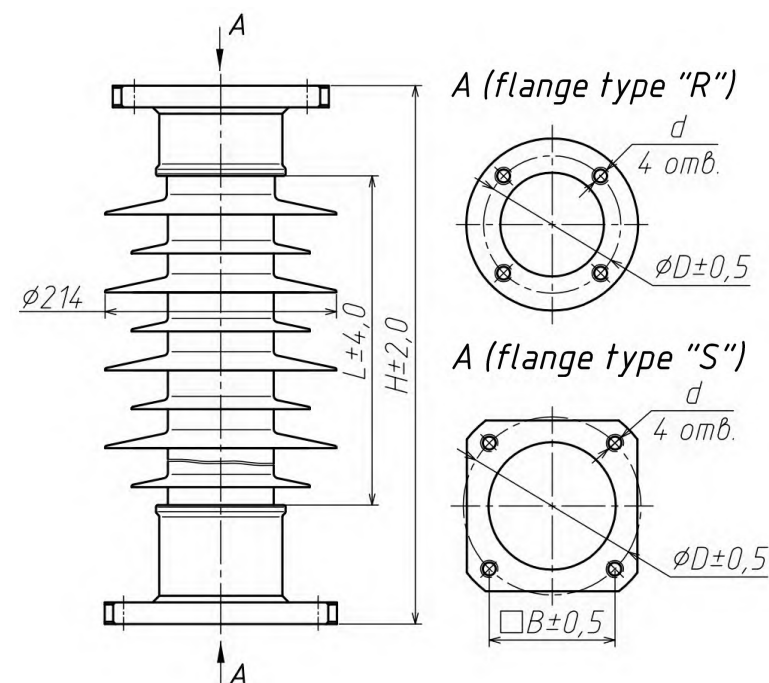


Insulator IOSK 10-220-2000-2A

Parameter name		Значение параметра
Rated voltage, кV		220
Breaking mechanical force at bending, кN, not less, then		10,0
Creepage distance, not less, then		5980
Section length H, mm		2000
Insulation length L, mm		1800
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		440/440
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		950
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (10±1,0) μSm	220
Weight, kg		46,7

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.10.220.2000.2A/S.D140.4M12/0/S.D140.4x18	5xONSH 35-2000	Ø140	M16	Ø140	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

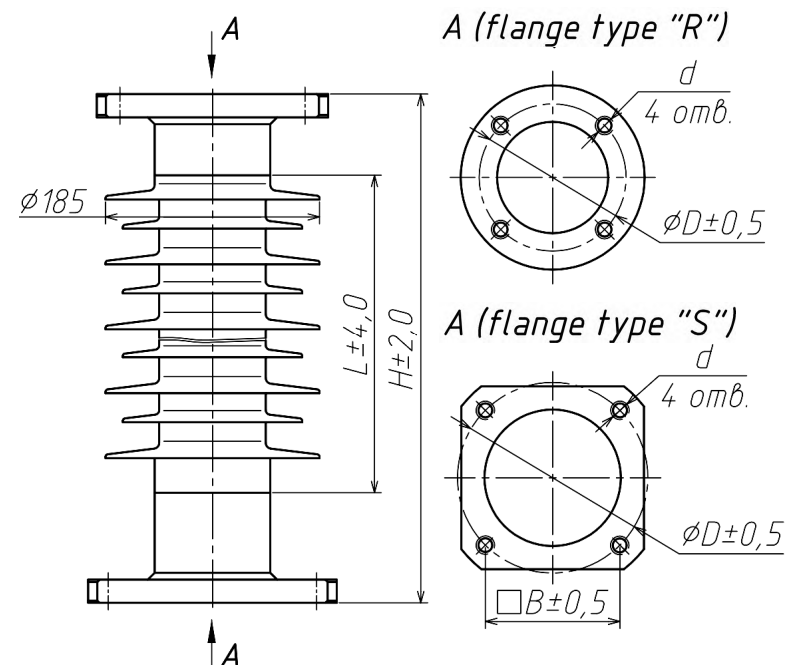


Insulator IOSK 8-220-2100-3

Parameter name		Значение параметра
Rated voltage, кV		220
Breaking mechanical force at bending, кN, not less, then		8,0
Creepage distance, not less, then		6700
Section length H, mm		2100
Insulation length L, mm		1890
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		440/440
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		950
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (20±2,0) μSm	220
Weight, kg		46,0

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.8.220.2100.A3/R.D127.4M16/0/S.D200.4x18	C 4-950	Ø127	M16	Ø200	Ø18
P.8.220.2100.A3/R.D127.4M16/0/S.D225.4x18	C 6-950	Ø127	M16	Ø225	Ø18
P.8.220.2100.A3/R.D127.4M16/0/R.D254.8x18	C 8-950	Ø127	M16	Ø254	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

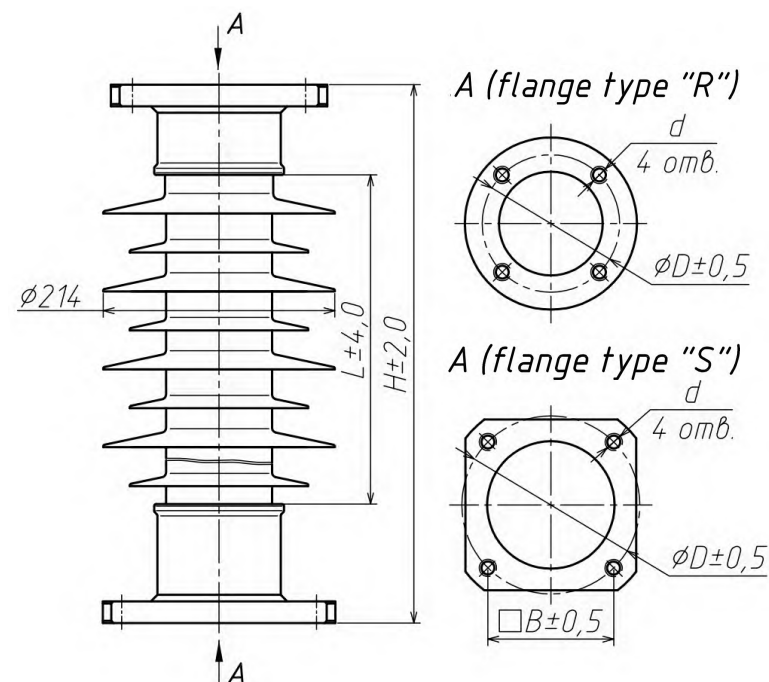


Insulator IOSK 10-220-2100-3A

Parameter name		Значение параметра
Rated voltage, кV		220
Breaking mechanical force at bending, kN, not less, then		10,0
Creepage distance, not less, then		6300
Section length H, mm		2100
Insulation length L, mm		1900
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		440/440
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		950
50% discharge voltage of industrial frequency in humidified and contaminated state, not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) μSm	220
Weight, kg		51,0

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.10.220.2100.3A/R.D127.4M16/0/S.D200.4x18	C 4-950	Ø127	M16	Ø200	Ø18
P.10.220.2100.3A/R.D127.4M16/0/S.D225.4x18	C 6-950	Ø127	M16	Ø225	Ø18
P.10.220.2100.3A/R.D127.4M16/0/R.D254.8x18	C 8-950	Ø127	M16	Ø254	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

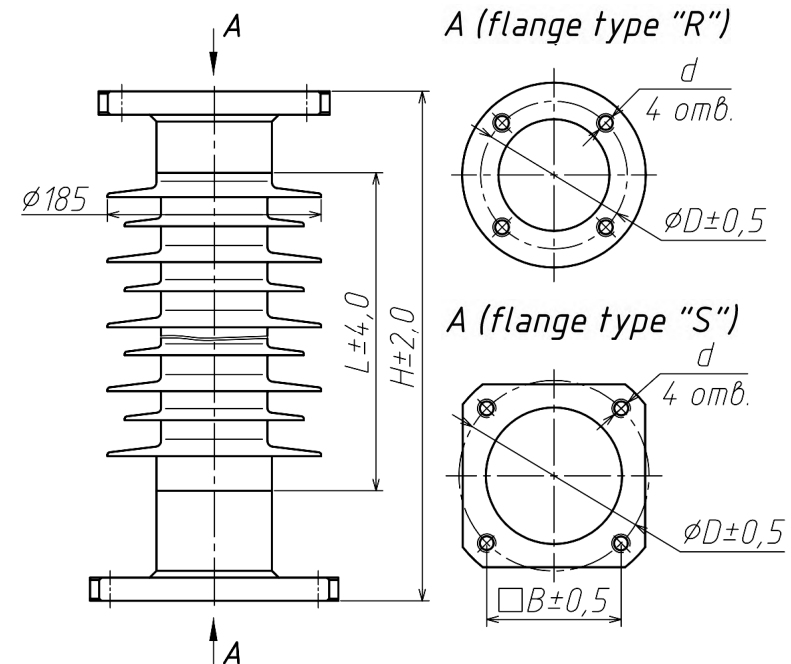


Insulator IOSK 8-220-2200-3

Parameter name		Значение параметра
Rated voltage, кV		220
Breaking mechanical force at bending, кN, not less, then		8,0
Creepage distance, not less, then		7000
Section length H, mm		2200
Insulation length L, mm		1990
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		440/440
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		950
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (20±2,0) μSm	220
Weight, kg		51,9

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.8.220.2200.3/S.B160.4x18/0/S.B160.4x18	By agreement	$\square 160$	$\phi 18$	$\square 160$	$\phi 18$

Execution of flanges with other connecting dimensions - as agreed with the customer.

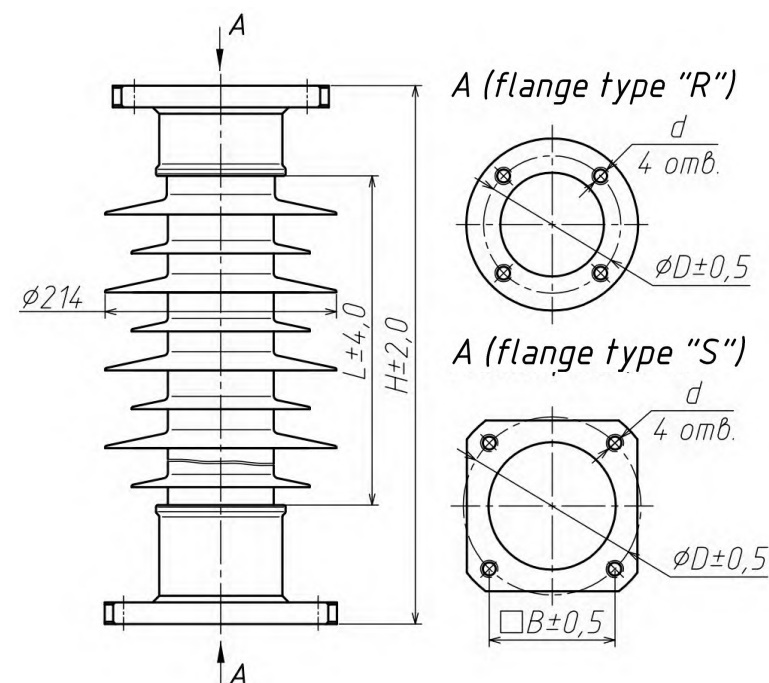


Insulator IOSK 10-220-2200-3A

Parameter name		Значение параметра
Rated voltage, кV		220
Breaking mechanical force at bending, кN, not less, then		10,0
Creepage distance, not less, then		6700
Section length H, mm		2200
Insulation length L, mm		2000
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		440/440
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		950
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (20±2,0) μSm	220
Weight, kg		53,0

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.10.220.2200.3A/S.B160.4x18/0/S.B160.4x18	By agreement	□160	Ø18	□160	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

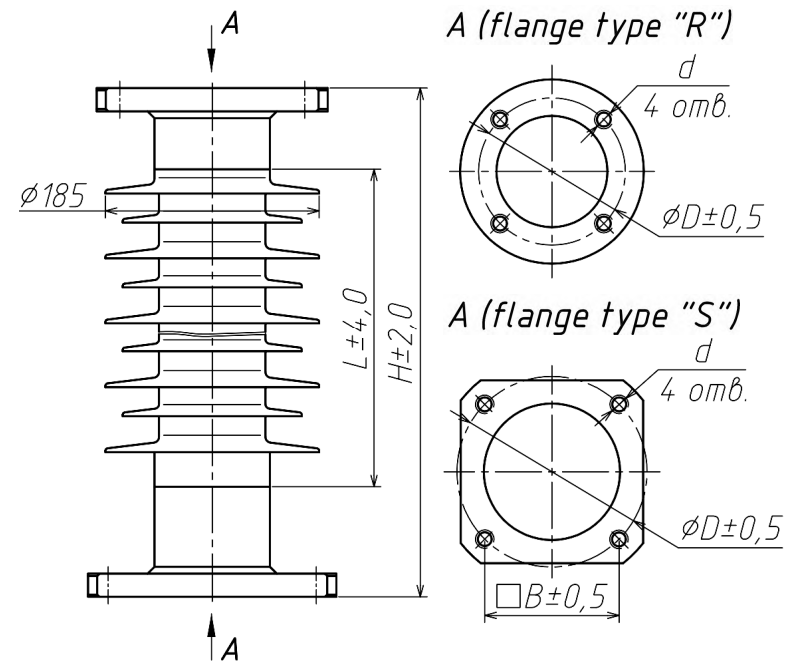


Insulator IOSK 6-220-2300-3

Parameter name		Значение параметра
Rated voltage, кV		220
Breaking mechanical force at bending, кN, not less, then		6,0
Creepage distance, not less, then		7400
Section length H, mm		2300
Insulation length L, mm		2090
Dry/Wet power frequency withstand voltage during 1 minute, not less than, кV		440/440
Dry lightning impulse withstand voltage, «1,2/50», not less than, кV		950
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, кV	at specific surface conductivity of the pollution layer (20±2,0) μSm	220
Weight, kg		49,5

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.6.220.2300.3/R.D127.4M16/0/S.D200.4x18	C4-1050	Ø127	M16	Ø200	Ø18
P.6.220.2300.3/R.D127.4M16/0/S.D225.4x18	C6-1050	Ø127	M16	Ø225	Ø18

Execution of flanges with other connecting dimensions - as agreed with the customer.

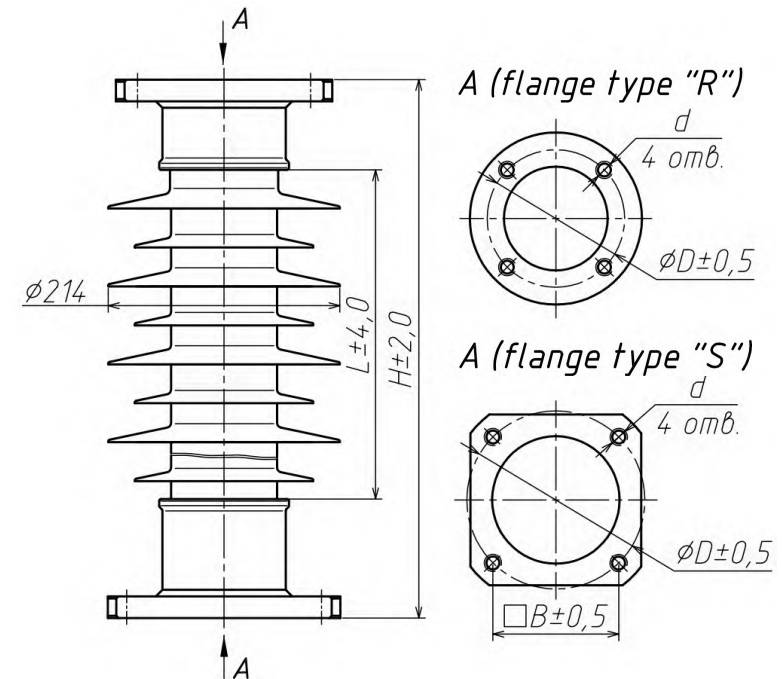


Insulator IOSK 8-220-2300-3A

Parameter name		Значение параметра
Rated voltage, kV		220
Breaking mechanical force at bending, kN, not less, then		8,0
Creepage distance, not less, then		7000
Section length H, mm		2300
Insulation length L, mm		2100
Dry/Wet power frequency withstand voltage during 1 minute, not less than, kV		440/440
Dry lightning impulse withstand voltage, «1,2/50», not less than, kV		950
50% discharge voltage of industrial frequency in humidified and contaminated state. not less than, kV	at specific surface conductivity of the pollution layer (20±2,0) µSm	220
Weight, kg		54,9

The Weight of Insulators may vary depending on the types of end fittings used.

The table shows the minimum parameters that meet the requirements of national standards - TU U 31.6-31279430-007: 2005, SOU MPE 40.1.51.302. The actual parameters are specified in the respective protocols.



Catalog number	Porcelain analog	Upper flange		Lower flange	
		D (B)	d	D (B)	d
P.8.220.2300.3A/R.D127.4M16/0/S.D200.4x18	C4-1050	$\phi 127$	M16	$\phi 200$	$\phi 18$
P.8.220.2300.3A/R.D127.4M16/0/S.D225.4x18	C6-1050	$\phi 127$	M16	$\phi 225$	$\phi 18$

Execution of flanges with other connecting dimensions - as agreed with the customer.



For notes

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In 2001, a Limited liability company research-and-production enterprise «ES Polymer» was established in the city of Artyomovsk (Bakhmut), Donetsk Region for polymer insulators production, polymer surge arresters and other types of high-voltage polymer structures.

Products are manufactured on highly productive high-performance equipment using high-quality raw materials from leading European manufacturers.



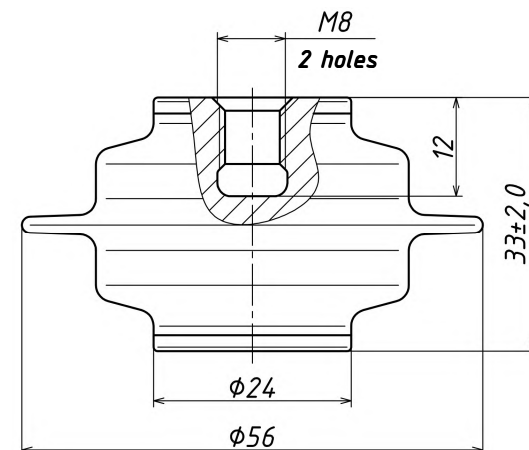
Surge arrester SA-0,22 - 0,66 kV (150A, 350A)

Parameter name	Parameter value for Line Discharge Class	
	1 (150A)	1 (350A)
Nominal system voltage, kV	0,22...0,66	
* Continuous operating voltage U_c , kV	0,26...0,80	
** Rated voltage U_r , kV	0,33...1,0	
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ s), A	150	350
Nominal discharge current (8/20 μ s), kA	10	
10 sec overvoltage, U_i / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	2,1	4,1
** Max. U_{res} with switching surge (30/60 μ s)		
- 125 A	0,98...1,5	0,7...1,9
- 250A	1,2...1,6	0,85...2,1
- 500 A	1,4...1,7	1,0...2,5
** Max. U_{res} with lightning current (8/20 μ s)		
- 5 kA	1,3...1,7	1,0...2,3
- 10 kA	1,5...1,8	1,1...2,5
** Max. U_{res} with steep current 10 kA (1/10 μ s)	1,8...2,1	1,5...2,6
Partial discharge level, no more, pC	10	10
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	340	340
Vibration resistance	M6	M6
Creepage distance, mm, not less than	46	51
** Weight , kg	0,12	0,21

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

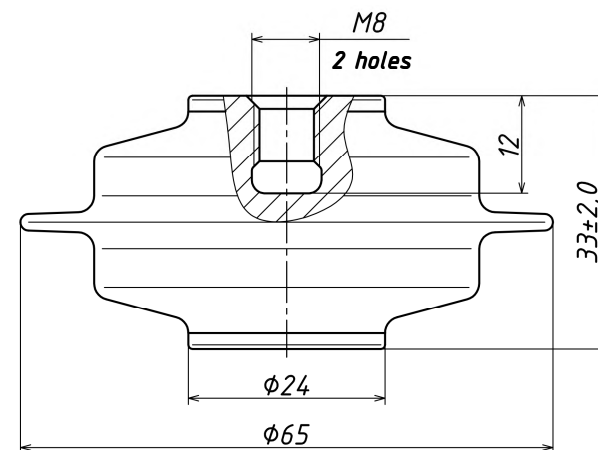
Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-0,22 – 0,66 kV (150A)

Designation (example): SA-0,22/0,26/10/150

Cat. number(example): SA-0,22/0,26/10/150-M8/M8



Surge arrester SA-0,22 – 0,66 kV (350A)

Designation (example): SA-0,22/0,26/10/350

Cat. number(example): SA-0,22/0,26/10/350-M8/M8

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



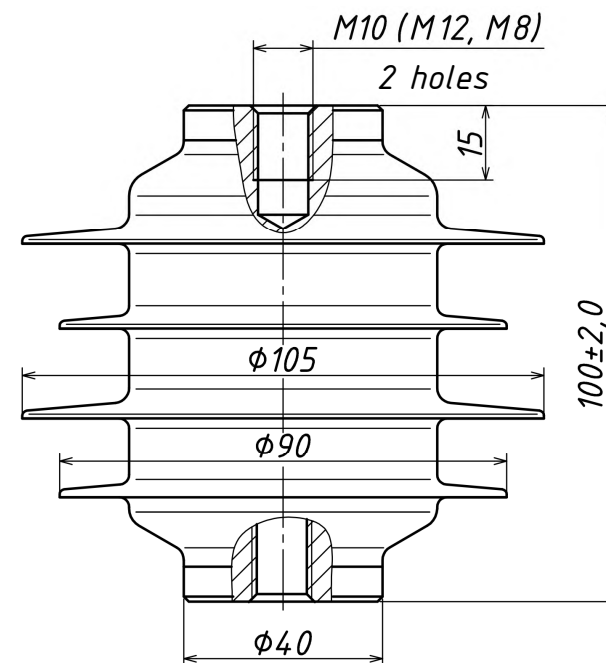
Surge arrester SA-3 kV (400A, 600A)

Parameter name	Parameter value for Line Discharge Class	
	1 (400A)	2 (600A)
Nominal system voltage, kV	3,0	
* Continuous operating voltage U_c , kV	2,4...4,8	
** Rated voltage U_r , kV	3,0...6,0	
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ s), A	400	600
Nominal discharge current (8/20 μ s), kA	10	
10 sec overvoltage, U_t / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	4,1	6,2
** Max. U_{res} with switching surge (30/60 μ s)	5,8...11,8	
	- 125 A	5,7...11,4
	- 250 A	5,9...11,8
	- 500 A	6,1...12,2
** Max. U_{res} with lightning current (8/20 μ s)	7,3...14,8	
	- 5 kA	7,2...14,4
	- 10 kA	7,75...15,5
** Max. U_{res} with steep current 10 kA (1/10 μ s)	8,1...16,3	8,1...16,2
Partial discharge level, no more, pC	10	
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	340	
Vibration resistance	M6	
Creepage distance, mm, not less than	220	
** Weight, kg	0,9	

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-3 kV (400A, 600A)

Designation (example): SA-3/4,0/10/600

Cat. number(example): SA-3/4,0/10/600-M10/M10

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



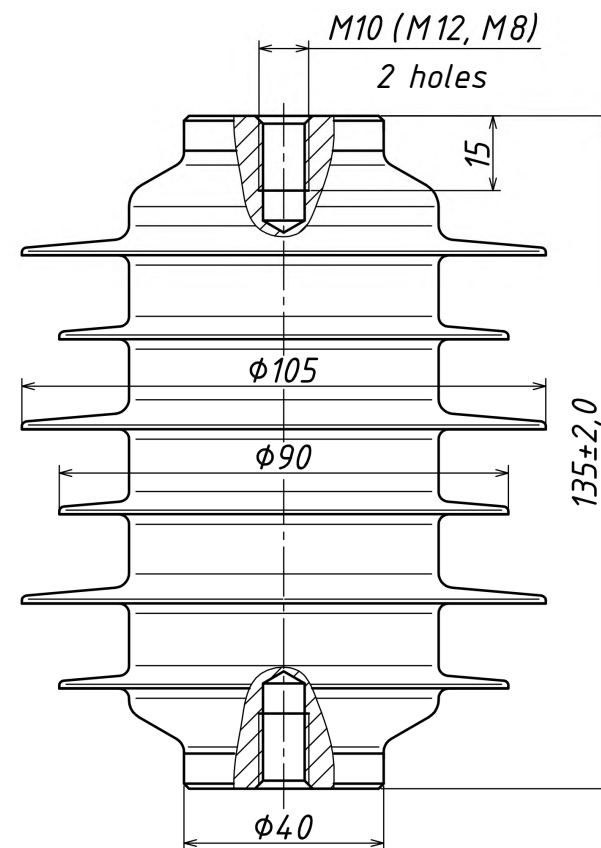
Surge arrester SA-6 kV (400A, 600A)

Parameter name	Parameter value for Line Discharge Class	
	1 (400A)	2 (600A)
Nominal system voltage, kV	6,0	
* Continuous operating voltage U_c , kV	5,0...8,0	
** Rated voltage U_r , kV	6,3...10,0	
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ s), A	400	600
Nominal discharge current (8/20 μ s), kA	10	
10 sec overvoltage, U_t / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	4,1	6,2
** Max. U_{res} with switching surge (30/60 μ s)		
- 125 A	12,29...19,6	11,87...19,0
- 250A	12,71...20,3	20,3...19,66
- 500 A	13,13...21,0	21,0...20,33
** Max. U_{res} with lightning current (8/20 μ s)		
- 5 kA	15,42...24,7	15,0...24,0
- 10 kA	16,46...26,3	16,1...25,76
** Max. U_{res} with steep current 10 kA (1/10 μ s)	16,98...27,2	16,87...26,9
Partial discharge level, no more, pC	10	
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	340	
Vibration resistance	M6	
Creepage distance, mm, not less than	320	
** Weight, kg	1,3	

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-6 kV (400A, 600A)

Designation (example): SA-6/7,2/10/600

Cat. number(example): SA-6/7,2/10/600-M10/M10

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



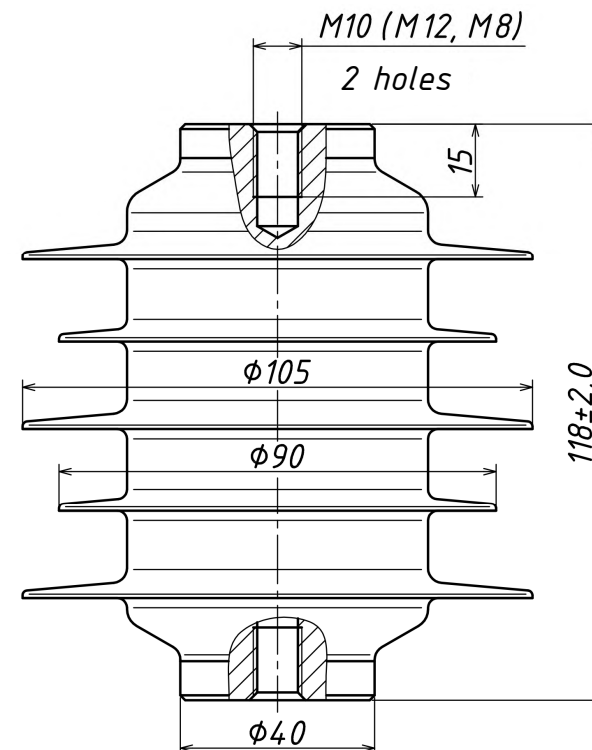
Surge arrester SA-6 kV, modification A (400A, 600A)

Parameter name	Parameter value for Line Discharge Class	
	1 (400A)	2 (600A)
Nominal system voltage, kV	6,0	
* Continuous operating voltage U_c , kV	5,0...8,0	
** Rated voltage U_r , kV	6,3...10,0	
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ s), A	400	600
Nominal discharge current (8/20 μ s), kA	10	
10 sec overvoltage, U_t / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	4,1	6,2
** Max. U_{res} with switching surge (30/60 μ s)		
- 125 A	12,29...19,6	11,87...19,0
- 250A	12,71...20,3	20,3...19,66
- 500 A	13,13...21,0	21,0...20,33
** Max. U_{res} with lightning current (8/20 μ s)		
- 5 kA	15,42...24,7	15,0...24,0
- 10 kA	16,46...26,3	16,1...25,76
** Max. U_{res} with steep current 10 kA (1/10 μ s)	16,98...27,2	16,87...26,9
Partial discharge level, no more, pC	10	
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	340	
Vibration resistance	M6	
Creepage distance, mm, not less than	280	
** Weight , kg	1,2	

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-6 kV mod. A (400A, 600A)

Designation (example): SA-6/7,2/10/400-A

Cat. number(example): SA-6/7,2/10/400-A-M10/M10

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



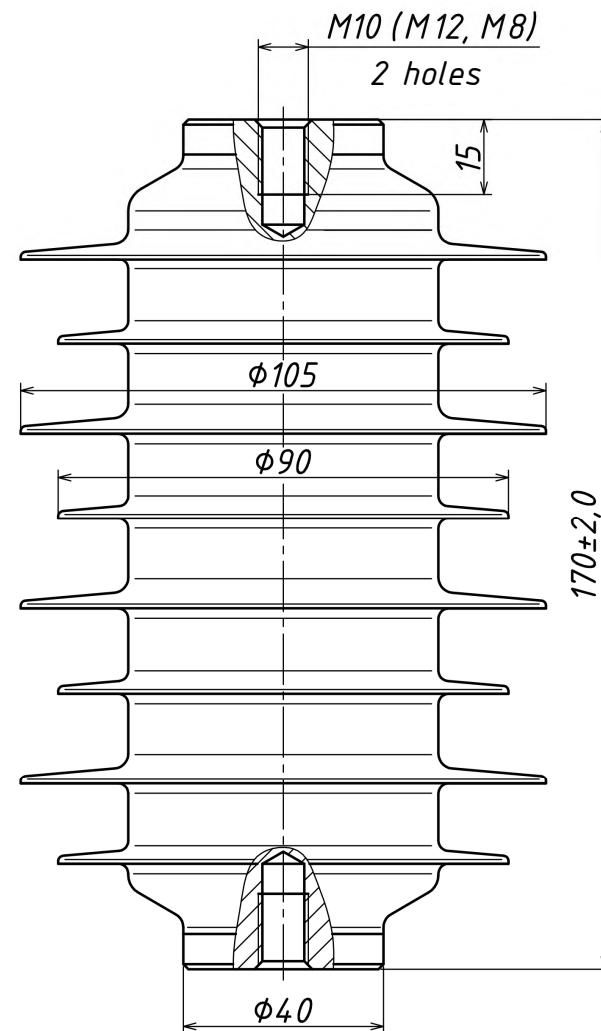
Surge arrester SA-10 kV (400A, 600A)

Parameter name	Parameter value for Line Discharge Class	
	1 (400A)	2 (600A)
Nominal system voltage, kV	10,0	
* Continuous operating voltage U_c , kV	8,2...12,7	
** Rated voltage U_r , kV	10,2...15,8	
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ s), A	400	600
Nominal discharge current (8/20 μ s), kA	10	
10 sec overvoltage, U_t / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	4,1	6,2
** Max. U_{res} with switching surge (30/60 μ s)		
- 125 A	20,1...31,1	19,47...30,16
- 250A	20,8...32,2	20,15...31,2
- 500 A	21,53...33,1	20,83...32,26
** Max. U_{res} with lightning current (8/20 μ s)		
- 5 kA	25,32...39,26	24,6...38,1
- 10 kA	26,96...41,8	26,4...40,85
** Max. U_{res} with steep current 10 kA (1/10 μ s)	27,88...43,1	27,57...42,7
Partial discharge level, no more, pC	10	
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	340	
Vibration resistance	M6	
Creepage distance, mm, not less than	420	
** Weight, kg	1,8	

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-10 kV (400A, 600A)

Designation (example): SA-10/12/10/600

Cat. number(example): SA-10/12/10/600-M10/M12

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



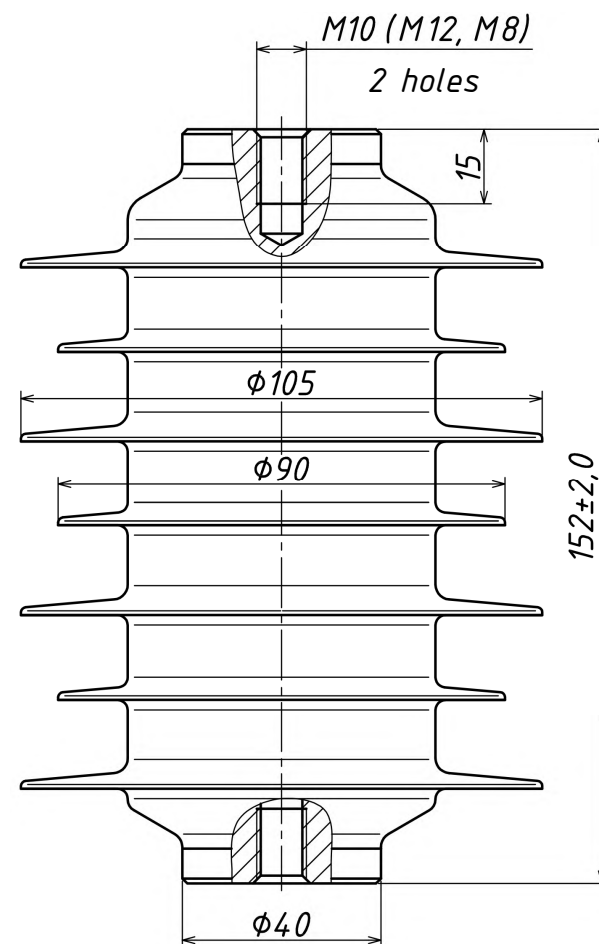
Surge arrester SA-10 kV, modification A (400A, 600A)

Parameter name	Parameter value for Line Discharge Class	
	1 (400A)	2 (600A)
Nominal system voltage, kV	10,0	
* Continuous operating voltage U_c , kV	8,2...12,7	
** Rated voltage U_r , kV	10,2...15,8	
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ s), A	400	600
Nominal discharge current (8/20 μ s), kA	10	
10 sec overvoltage, U_t / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	4,1	6,2
** Max. U_{res} with switching surge (30/60 μ s)	- 125 A	20,1...31,1
	- 250A	20,8...32,2
	- 500 A	21,53...33,1
** Max. U_{res} with lightning current (8/20 μ s)	- 5 kA	25,32...39,26
	- 10 kA	26,96...41,8
	- 10 kA	24,6...38,1
** Max. U_{res} with steep current 10 kA (1/10 μ s)	27,88...43,1	27,57...42,7
Partial discharge level, no more, pC	10	
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	340	
Vibration resistance	M6	
Creepage distance, mm, not less than	380	
** Weight, kg	1,5	

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-10 kV mod. A (400A, 600A)

Designation (example): SA-10/12/10/600-A

Cat. number(example): SA-10/12/10/600-A-M10/M10

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



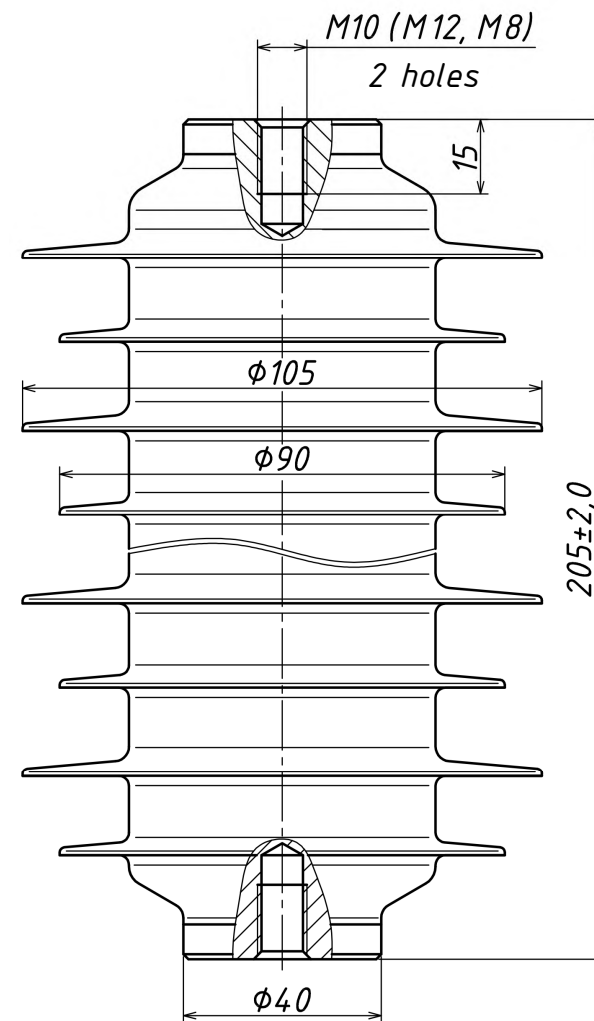
Surge arrester SA-15 kV (400A, 600A)

Parameter name	Parameter value for Line Discharge Class	
	1 (400A)	2 (600A)
Nominal system voltage, kV	15,0	
* Continuous operating voltage U_c , kV	13,2...18,0	
** Rated voltage U_r , kV	16,5...22,5	
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ s), A	400	600
Nominal discharge current (8/20 μ s), kA	10	
10 sec overvoltage, U_t / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	4,1	6,2
** Max. U_{res} with switching surge (30/60 μ s)		
- 125 A	32,33...44,1	31,33...42,75
- 250 A	33,47...45,6	32,43...44,24
- 500 A	34,4...47,0	33,53...45,73
** Max. U_{res} with lightning current (8/20 μ s)		
- 5 kA	40,8...55,7	39,6...54,0
- 10 kA	43,45...59,3	42,45...57,9
** Max. U_{res} with steep current 10 kA (1/10 μ s)	44,8...61,2	44,38...60,52
Partial discharge level, no more, pC	10	
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	340	
Vibration resistance	M6	
Creepage distance, mm, not less than	490	
** Weight, kg	2,4	

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-15 kV (400A, 600A)

Designation (example): SA-15/17/10/600

Cat. number(example): SA-15/17/10/600-M12/M12

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



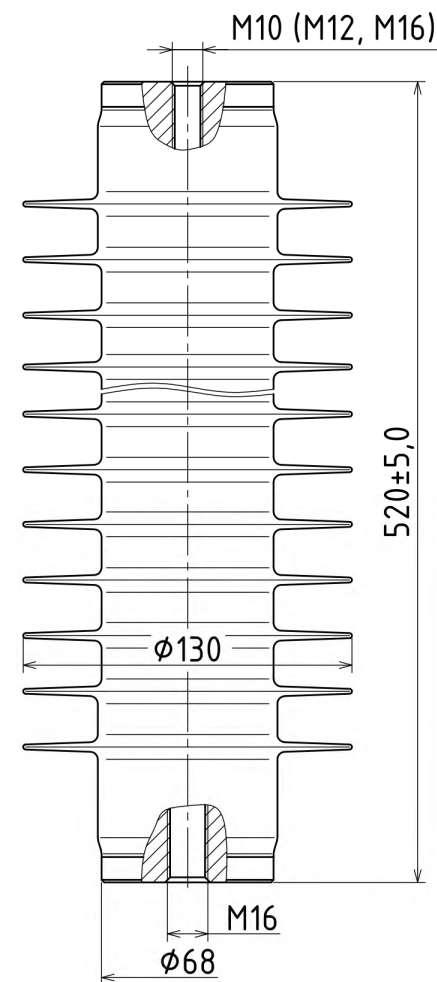
Surge arrester SA-35 kV (400A, 600A)

Parameter name	Parameter value for Line Discharge Class	
	1 (400A)	2 (600A)
Nominal system voltage, kV	35,0	
* Continuous operating voltage U_c , kV	31,0...50,0	
** Rated voltage U_r , kV	38,7...62,5	
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ s), A	400	600
Nominal discharge current (8/20 μ s), kA	10	
10 sec overvoltage, U_t / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	4,1	6,2
** Max. U_{res} with switching surge (30/60 μ s)		
	- 125 A	75,9...122,4
	- 250A	78,5...126,6
	- 500 A	80,6...130,4
** Max. U_{res} with lightning current (8/20 μ s)		
	- 5 kA	95,86...154,6
	- 10 kA	102,1...164,7
** Max. U_{res} with steep current 10 kA (1/10 μ s)	105,4...169,3	104,1...168,0
Partial discharge level, no more, pC	10	
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	365	
Vibration resistance	M6	
Creepage distance, mm, not less than	1580	
** Weight, kg	7,4	

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-35 kV (400A, 600A)

Designation (example): SA-35/40,5/10/400

Cat. number(example): SA-35/40,5/10/400-M12/M16

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



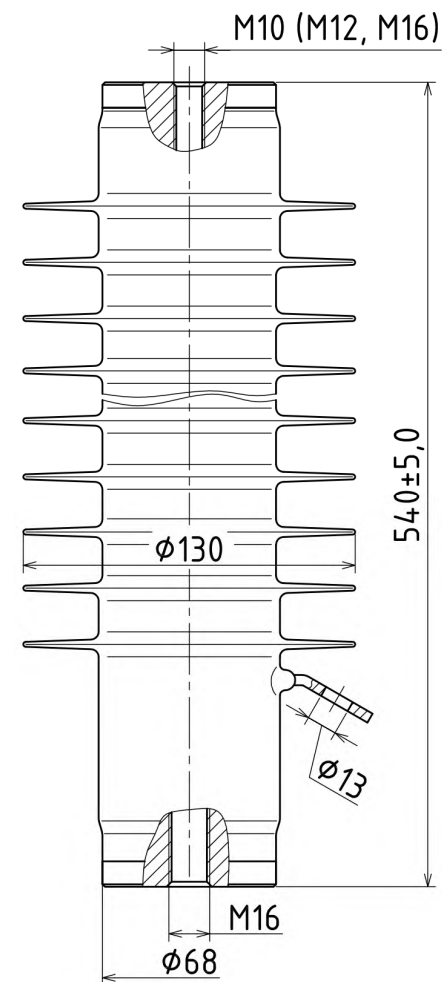
Surge arrester SA-35 kV, modification A (400A, 600A)

Parameter name	Parameter value for Line Discharge Class	
	1 (400A)	2 (600A)
Nominal system voltage, kV	35,0	
* Continuous operating voltage U_c , kV	31,0...50,0	
** Rated voltage U_r , kV	38,7...62,5	
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ s), A	400	600
Nominal discharge current (8/20 μ s), kA	10	
10 sec overvoltage, U_t / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	4,1	6,2
** Max. U_{res} with switching surge (30/60 μ s)		
	- 125 A	75,9...122,4
	- 250A	78,5...126,6
	- 500 A	80,6...130,4
** Max. U_{res} with lightning current (8/20 μ s)		
	- 5 kA	95,86...154,6
	- 10 kA	102,1...164,7
** Max. U_{res} with steep current 10 kA (1/10 μ s)	105,4...169,3	104,1...168,0
Partial discharge level, no more, pC	10	
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	365	
Vibration resistance	M6	
Creepage distance, mm, not less than	1580	
** Weight, kg	7,7	

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-35 kV (400A, 600A)

Designation (example): SA-35/40,5/10/400-A

Cat. number(example): SA-35/40,5/10/400-A-M12/M16

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



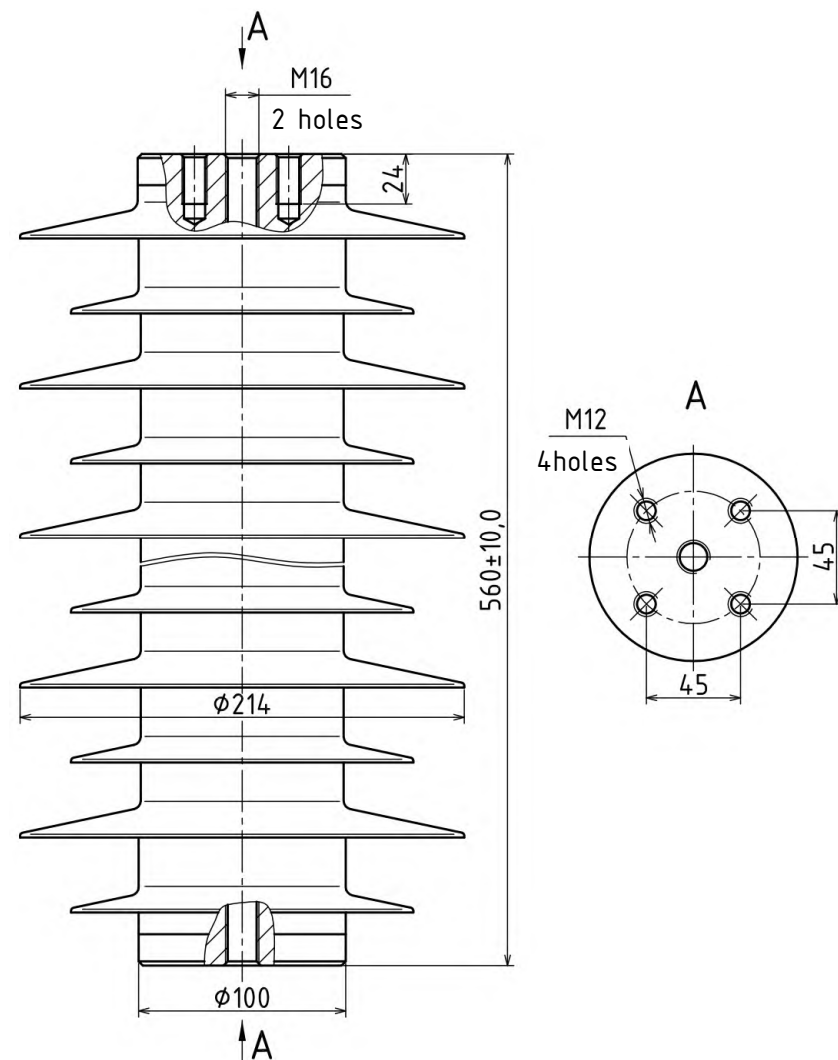
Surge arrester SA-35 kV (800, 850A, 1200A)

Parameter name	Parameter value for Line Discharge Class	
	3 (800, 850A)	4 (1200A)
Nominal system voltage, kV	35,0	
* Continuous operating voltage U_c , kV	31,0...50,0	
** Rated voltage U_r , kV	38,7...62,5	
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ s), A	800	1200
Nominal discharge current (8/20 μ s), kA	10	
10 sec overvoltage, U_t / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	8,3	11,0
** Max. U_{res} with switching surge (30/60 μ s)		
	- 125 A	71,5...115,2
	- 250 A	73,9...119,2
	- 500 A	76,4...123,3
** Max. U_{res} with lightning current (8/20 μ s)		
	- 5 kA	90,3...145,6
	- 10 kA	96,8...156,2
** Max. U_{res} with steep current 10 kA (1/10 μ s)	101,2...163,1	99,2...160,0
Partial discharge level, no more, pC	10	
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	365	
Vibration resistance	M6	
Creepage distance, mm, not less than	1650	
** Weight, kg	14,8	

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-35 kV (800, 850A, 1200A)

Designation (example): SA-35/40,5/10/800

Cat. number(example): SA-35/40,5/10/800

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



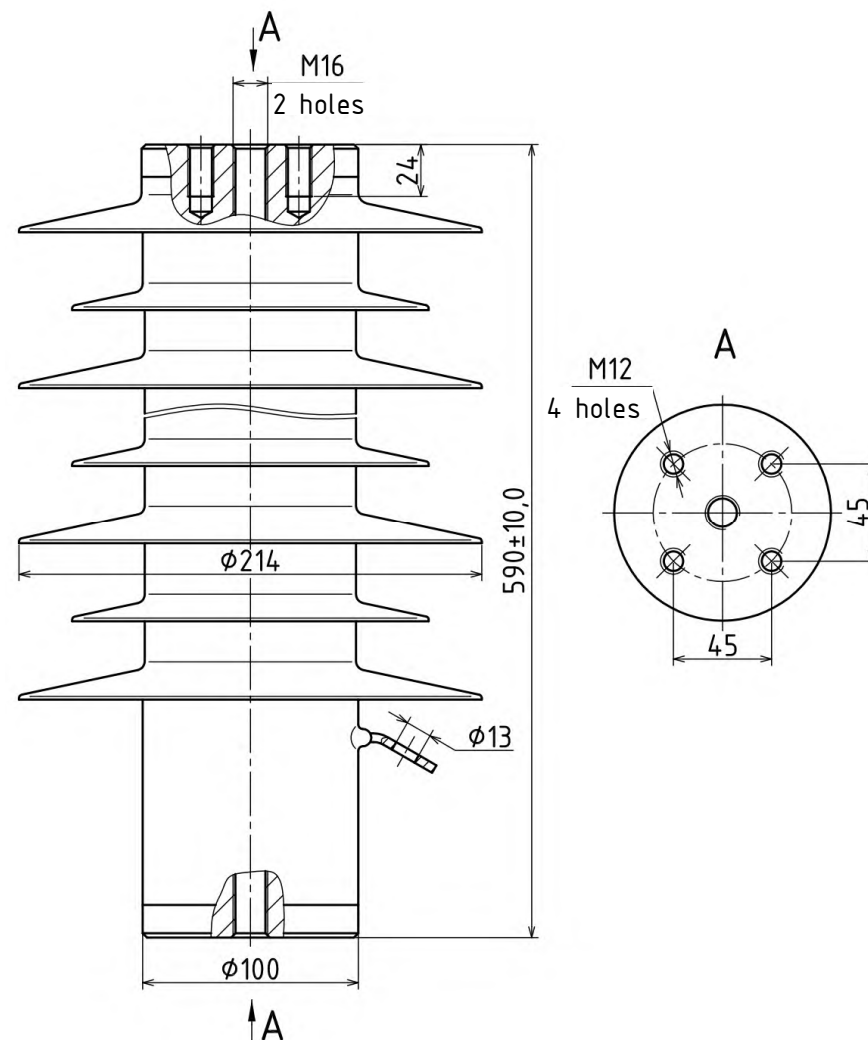
Surge arrester SA-35 kV, modification A (800, 850A, 1200A)

Parameter name	Parameter value for Line Discharge Class	
	3 (800, 850A)	4 (1200A)
Nominal system voltage, kV	35,0	
* Continuous operating voltage U_c , kV	31,0...50,0	
** Rated voltage U_r , kV	38,7...62,5	
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ s), A	800	1200
Nominal discharge current (8/20 μ s), kA	10	
10 sec overvoltage, U_t / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	8,3	11,0
** Max. U_{res} with switching surge (30/60 μ s)		
	- 125 A	71,5...115,2
	- 250 A	73,9...119,2
	- 500 A	76,4...123,3
** Max. U_{res} with lightning current (8/20 μ s)		
	- 5 kA	90,3...145,6
	- 10 kA	96,8...156,2
** Max. U_{res} with steep current 10 kA (1/10 μ s)	101,2...163,1	99,2...160,0
Partial discharge level, no more, pC	10	
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	365	
Vibration resistance	M6	
Creepage distance, mm, not less than	1650	
** Weight, kg	15,3	

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-35 kV (800, 850A, 1200A)

Designation (example): SA-35/40,5/10/800-A

Cat. number(example): SA-35/40,5/10/800-A

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



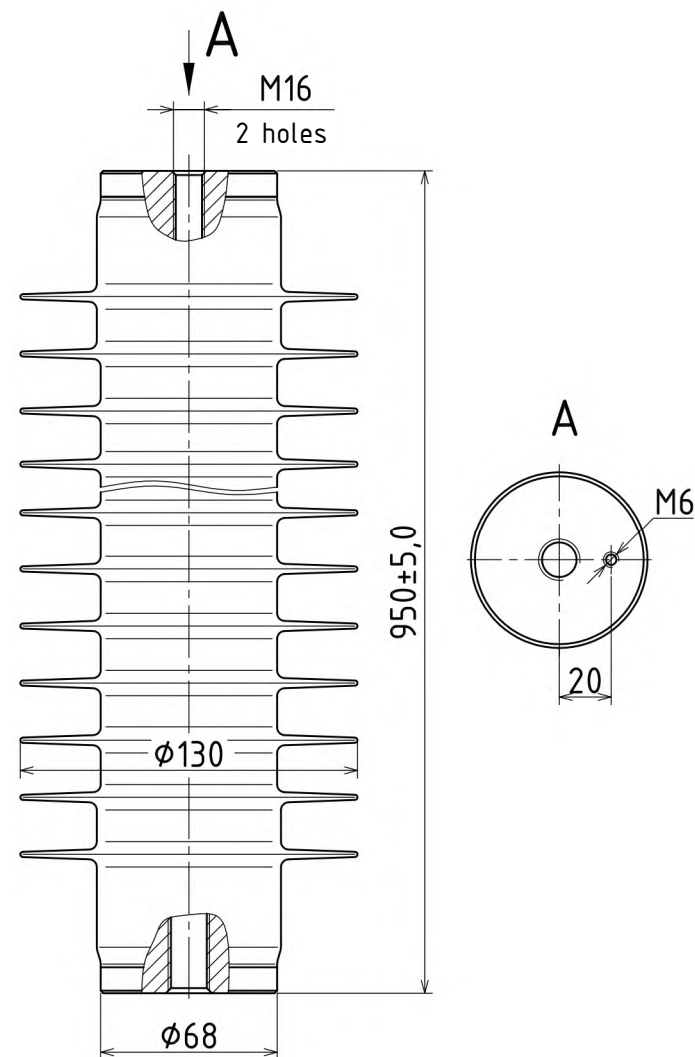
Surge arrester SA-110 kV (400A, 600A)

Parameter name	Parameter value for Line Discharge Class	
	1 (400A)	2 (600A)
Nominal system voltage, kV	110,0	
* Continuous operating voltage U_c , kV	51,0...90,0	
** Rated voltage U_r , kV	63,7...112,5	
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ S), A	400	600
Nominal discharge current (8/20 μ S), kA	10	
10 sec overvoltage, U_t / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ S), kJ/kV	4,1	6,2
** Max. U_{res} with switching surge (30/60 μ S)		
	- 125 A	124,8...220,2
	- 250A	129,1...125,3
	- 500 A	133,0...129,5
** Max. U_{res} with lightning current (8/20 μ S)		
	- 5 kA	157,6...278,1
	- 10 kA	168,0...296,5
** Max. U_{res} with steep current 10 kA (1/10 μ S)		
		171,4...302,4
Partial discharge level, no more, pC	10	
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	680	
Vibration resistance	M1	
Creepage distance, mm, not less than	3150	
** Weight, kg	14,3	

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-110 kV (400A, 600A)

Designation (example): SA-110/73/10/600

Cat. number(example): SA-110/73/10/600-M16/M16

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



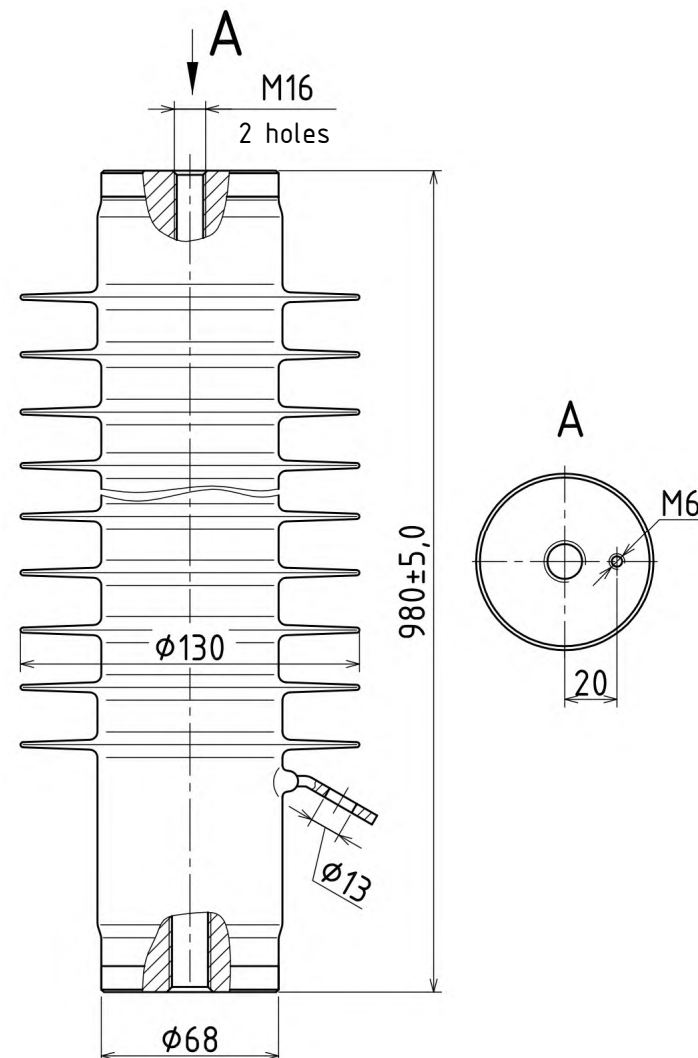
Surge arrester SA-110 kV, modification A (400A, 600A)

Parameter name	Parameter value for Line Discharge Class	
	1 (400A)	2 (600A)
Nominal system voltage, kV	110,0	
* Continuous operating voltage U_c , kV	51,0...90,0	
** Rated voltage U_r , kV	63,7...112,5	
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ S), A	400	600
Nominal discharge current (8/20 μ S), kA	10	
10 sec overvoltage, U_t / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ S), kJ/kV	4,1	6,2
** Max. U_{res} with switching surge (30/60 μ S)		
	- 125 A	124,8...220,2
	- 250A	129,1...125,3
	- 500 A	133,0...129,5
** Max. U_{res} with lightning current (8/20 μ S)		
	- 5 kA	157,6...278,1
	- 10 kA	168,0...296,5
** Max. U_{res} with steep current 10 kA (1/10 μ S)	172,7...304,7	171,4...302,4
Partial discharge level, no more, pC	10	
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	680	
Vibration resistance	M1	
Creepage distance, mm, not less than	3150	
** Weight, kg	14,5	

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-110 kV (400A, 600A)

Designation (example): SA-110/73/10/600-A

Cat. number(example): SA-110/73/10/600-A-M16/M16

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



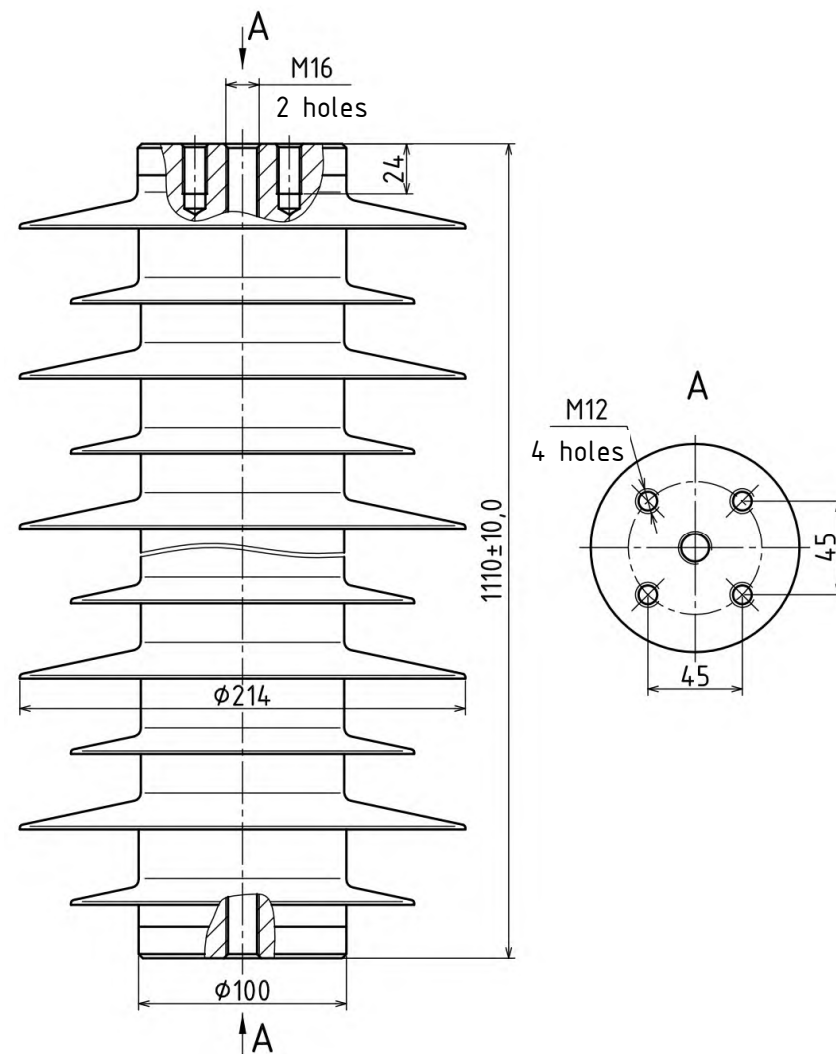
Surge arrester SA-110 kV (800, 850A, 1200A)

Parameter name	Parameter value for Line Discharge Class	
	3 (800, 850A)	4 (1200A)
Nominal system voltage, kV	110,0	
* Continuous operating voltage U_c , kV	51,0...90,0	
** Rated voltage U_r , kV	63,7...112,5	
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ s), A	800	1200
Nominal discharge current (8/20 μ s), kA	10	
10 sec overvoltage, U_t / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	8,3	11,0
** Max. U_{res} with switching surge (30/60 μ s)		
	- 125 A	117,5...207,4
	- 250A	121,6...214,6
	- 500 A	125,7...221,9
** Max. U_{res} with lightning current (8/20 μ s)		
	- 5 kA	148,5...262,1
	- 10 kA	159,2...281,0
** Max. U_{res} with steep current 10 kA (1/10 μ s)	166,4...293,6	163,4...287,8
Partial discharge level, no more, pC	10	
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	680	
Vibration resistance	M1	
Creepage distance, mm, not less than	3600	
** Weight, kg	29,5	

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-110 kV (800, 850A, 1200A)

Designation (example): SA-110/73/10/800

Cat. number(example): SA-110/73/10/800

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



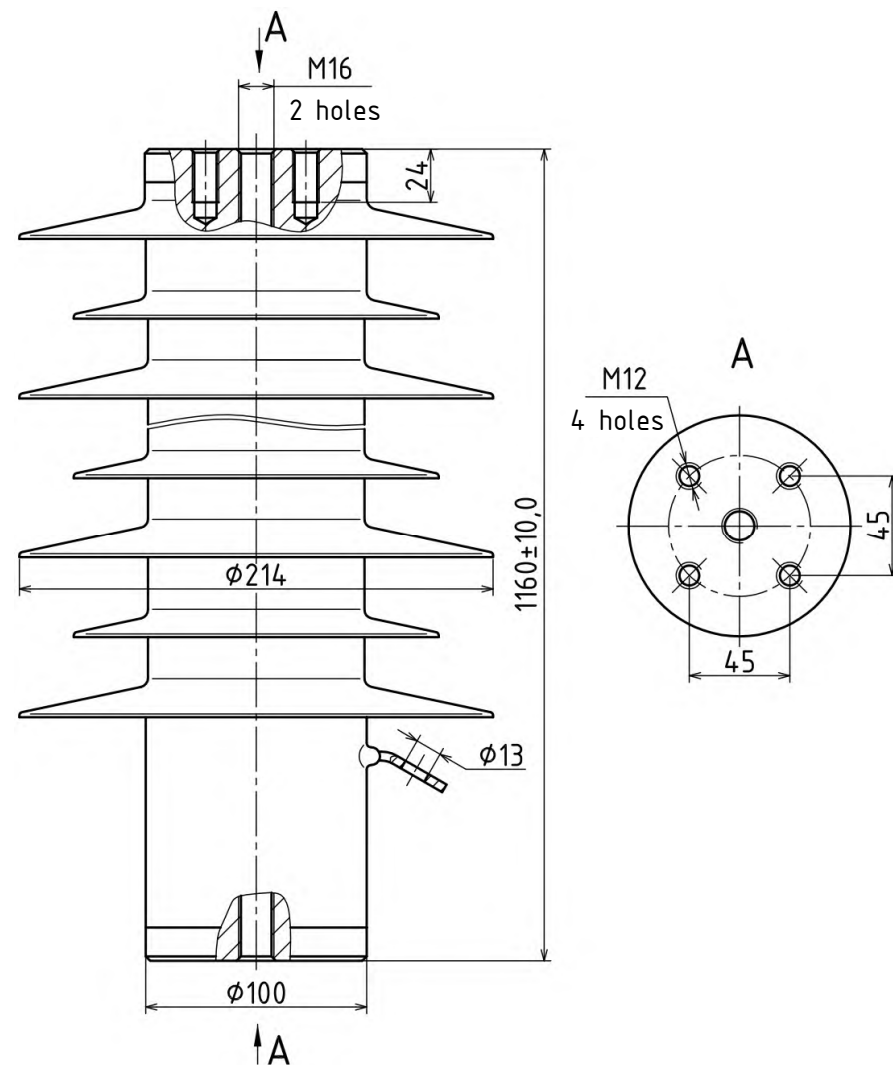
Surge arrester SA-110 kV, modification A (800, 850A, 1200A)

Parameter name	Parameter value for Line Discharge Class	
	3 (800, 850A)	4 (1200A)
Nominal system voltage, kV	110,0	
* Continuous operating voltage U_c , kV	51,0...90,0	
** Rated voltage U_r , kV	63,7...112,5	
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ s), A	800	1200
Nominal discharge current (8/20 μ s), kA	10	
10 sec overvoltage, U_t / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	8,3	11,0
** Max. U_{res} with switching surge (30/60 μ s)		
	- 125 A	117,5...207,4
	- 250A	121,6...214,6
	- 500 A	125,7...221,9
** Max. U_{res} with lightning current (8/20 μ s)		
	- 5 kA	148,5...262,1
	- 10 kA	159,2...281,0
** Max. U_{res} with steep current 10 kA (1/10 μ s)		
	166,4...293,6	163,4...287,8
Partial discharge level, no more, pC	10	
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	680	
Vibration resistance	M1	
Creepage distance, mm, not less than	3600	
** Weight, kg	30,0	

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-110 kV (800, 850A, 1200A)

Designation (example): SA-110/73/10/800-A

Cat. number(example): SA-110/73/10/800-A

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



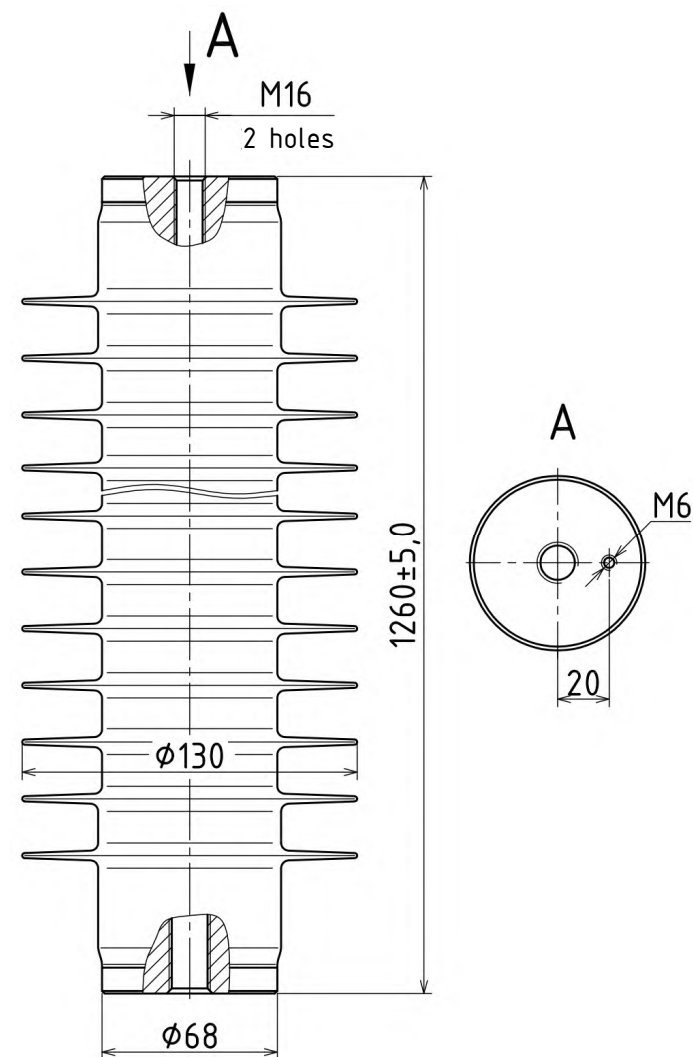
Surge arrester SA-150 kV (600A)

Parameter name	Parameter value for Line Discharge Class
	2 (600A)
Nominal system voltage, kV	150,0
* Continuous operating voltage U_c , kV	91,0...124,0
** Rated voltage U_r , kV	113,7...155,0
High current withstand (4/10 μ s), kA	100
Long duration current (2000 μ s), A	600
Nominal discharge current (8/20 μ s), kA	10
10 sec overvoltage, U_t / U_c	1,41
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	6,2
** Max. U_{res} with switching surge (30/60 μ s)	
	- 125 A
	- 250A
	- 500 A
** Max. U_{res} with lightning current (8/20 μ s)	
	- 5 kA
	- 10 kA
** Max. U_{res} with steep current 10 kA (1/10 μ s)	305,8...416,7
Partial discharge level, no more, pC	10
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	705
Vibration resistance	M1
Creepage distance, mm, not less than	4250
** Weight , kg	19,2

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-150 kV (600A)

Designation (example): SA-150/110/10/600

Cat. number(example): SA-150/110/10/600-M16/M16

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



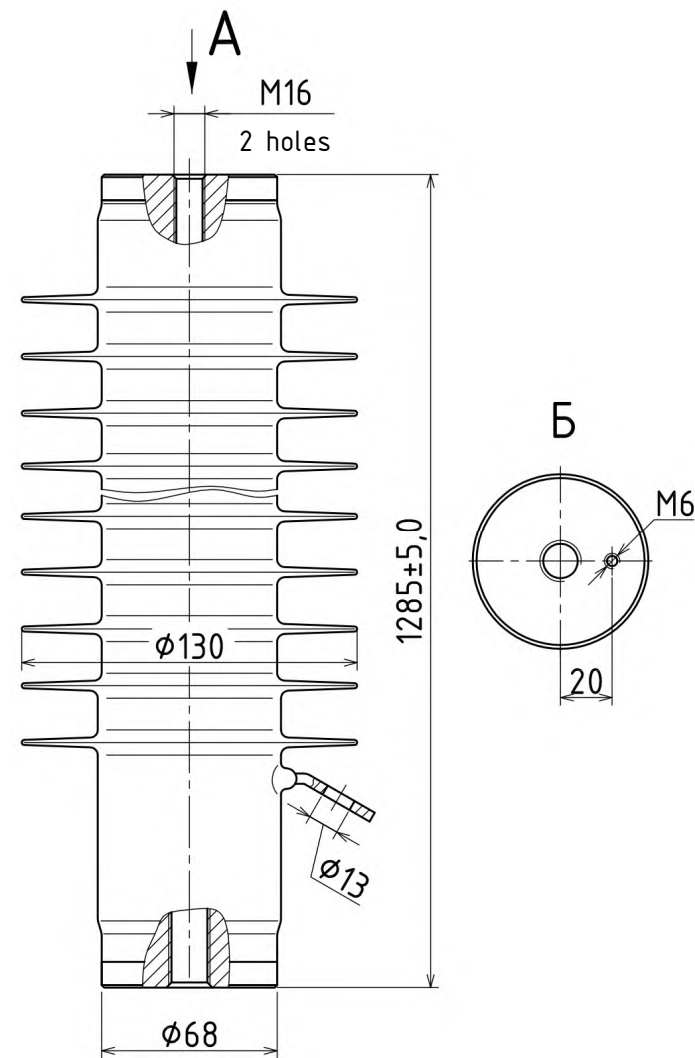
Surge arrester SA-150 kV, modification A (600A)

Parameter name	Parameter value for Line Discharge Class
	2 (600A)
Nominal system voltage, kV	150,0
* Continuous operating voltage U_c , kV	91,0...124,0
** Rated voltage U_r , kV	113,7...155,0
High current withstand (4/10 μ s), kA	100
Long duration current (2000 μ s), A	600
Nominal discharge current (8/20 μ s), kA	10
10 sec overvoltage, U_t / U_c	1,41
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	6,2
** Max. U_{res} with switching surge (30/60 μ s)	
	- 125 A
	- 250A
	- 500 A
** Max. U_{res} with lightning current (8/20 μ s)	
	- 5 kA
	- 10 kA
** Max. U_{res} with steep current 10 kA (1/10 μ s)	305,8...416,7
Partial discharge level, no more, pC	10
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	705
Vibration resistance	M1
Creepage distance, mm, not less than	4250
** Weight, kg	19,6

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-150 kV (600A)

Designation (example): SA-150/110/10/600-A

Cat. number(example): SA-150/110/10/600-A-M16/M16

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



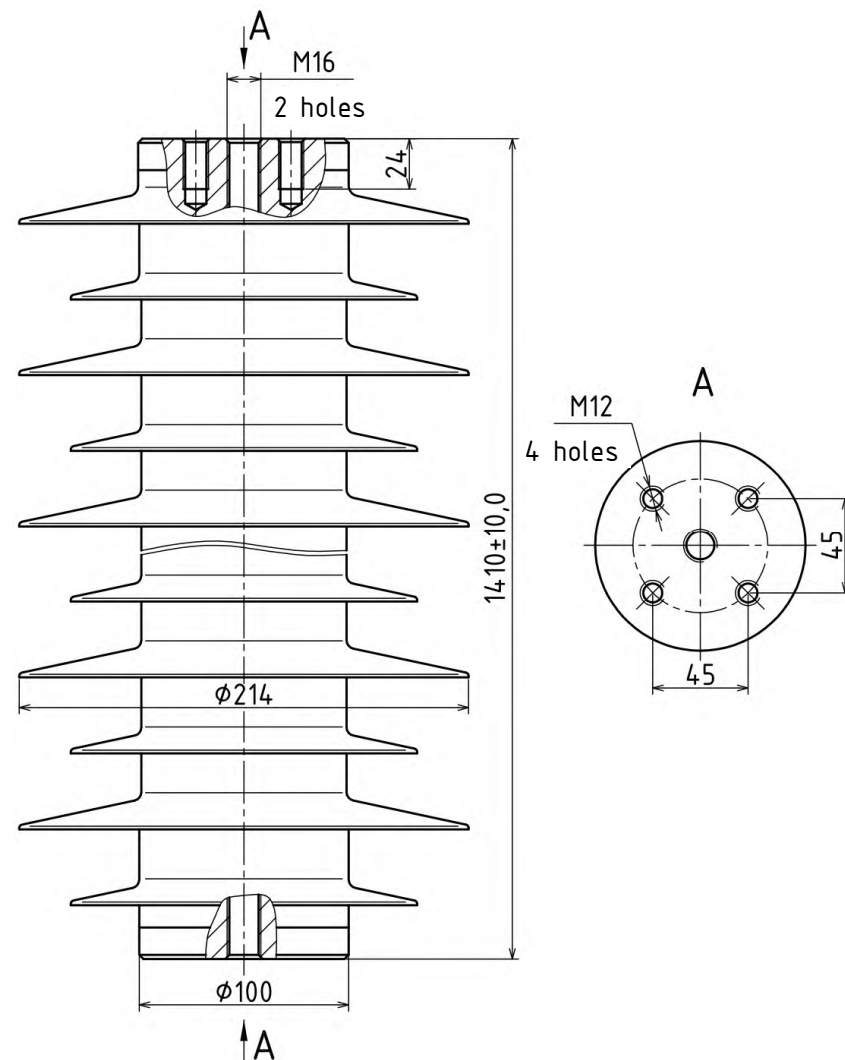
Surge arrester SA-150 kV (800, 850A, 1200A)

Parameter name	Parameter value for Line Discharge Class	
	3 (800, 850A)	4 (1200A)
Nominal system voltage, kV	150,0	
* Continuous operating voltage U_c , kV	91,0...124,0	
** Rated voltage U_r , kV	113,7...155,0	
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ s), A	800	1200
Nominal discharge current (8/20 μ s), kA	10	
10 sec overvoltage, U_t / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	8,3	11,0
** Max. U_{res} with switching surge (30/60 μ s)	- 125 A	209,7...285,7
	- 250 A	216,9...295,6
	- 500 A	224,4...305,7
		205,6...280,1
** Max. U_{res} with lightning current (8/20 μ s)	- 5 kA	265,0...361,2
	- 10 kA	284,1...387,0
		259,8...354,1
** Max. U_{res} with steep current 10 kA (1/10 μ s)	296,9...404,6	291,1...396,7
Partial discharge level, no more, pC	10	
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	705	
Vibration resistance	M1	
Creepage distance, mm, not less than	4500	
** Weight, kg	37,5	

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-150 kV (800, 850A)

Designation (example): SA-150/110/10/800

Cat. number(example): SA-150/110/10/800

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



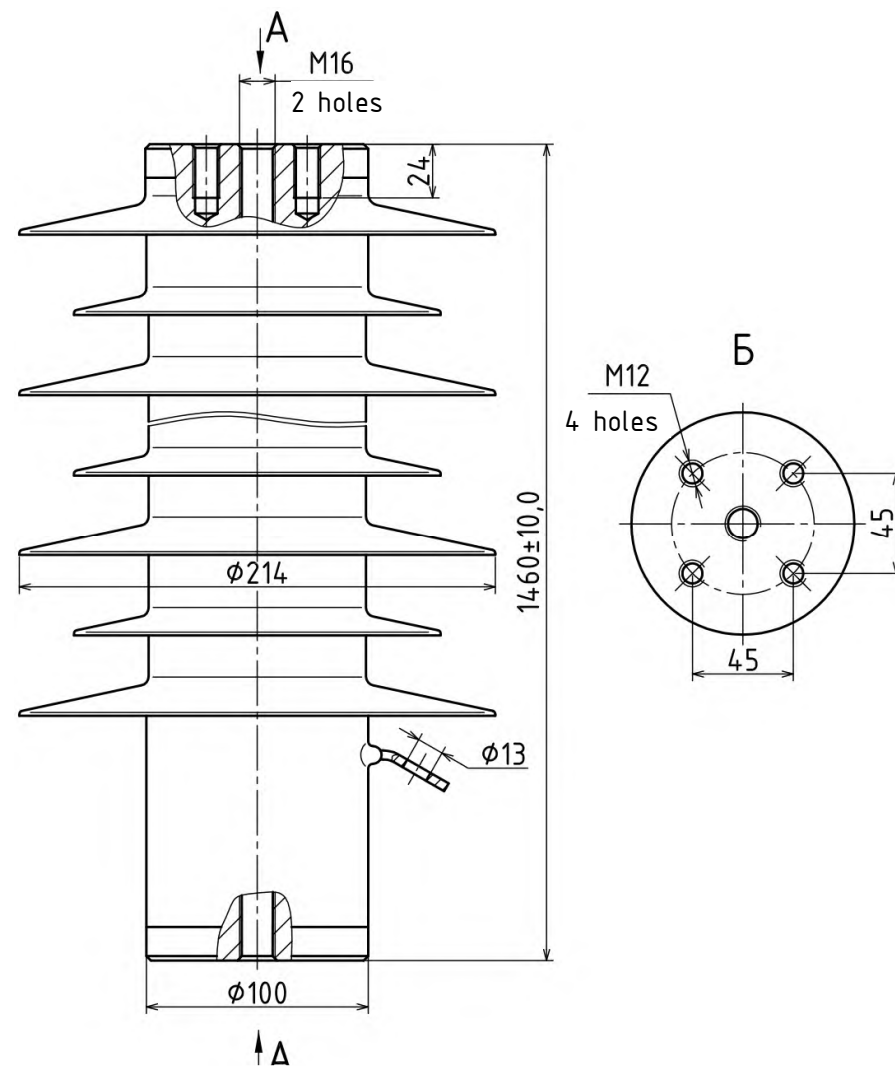
Surge arrester SA-150 kV, modification A (800, 850A, 1200A)

Parameter name	Parameter value for Line Discharge Class	
	3 (800, 850A)	4 (1200A)
Nominal system voltage, kV	150,0	
* Continuous operating voltage U_c , kV	91,0...124,0	
** Rated voltage U_r , kV	113,7...155,0	
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ s), A	800	1200
Nominal discharge current (8/20 μ s), kA	10	
10 sec overvoltage, U_t / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	8,3	11,0
** Max. U_{res} with switching surge (30/60 μ s)		
	- 125 A	209,7...285,7
	- 250A	216,9...295,6
	- 500 A	224,4...305,7
** Max. U_{res} with lightning current (8/20 μ s)		
	- 5 kA	265,0...361,2
	- 10 kA	284,1...387,0
** Max. U_{res} with steep current 10 kA (1/10 μ s)	296,9...404,6	291,1...396,7
Partial discharge level, no more, pC	10	
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	705	
Vibration resistance	M1	
Creepage distance, mm, not less than	4500	
** Weight, kg	38,0	

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-150 kV (800, 850A)

Designation (example): SA-150/110/10/800-A

Cat. number(example): SA-150/110/10/800-A

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



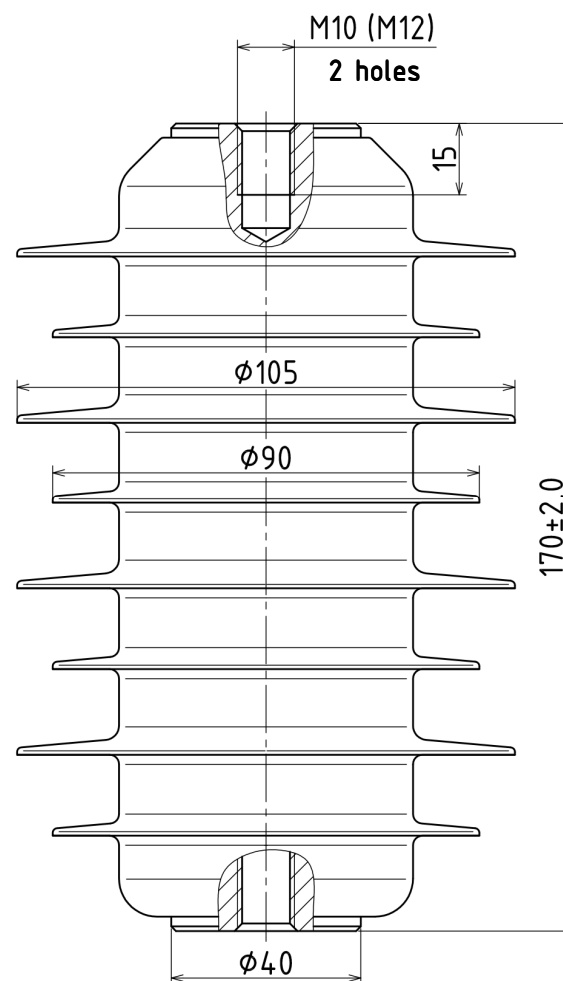
Surge arrester for railway SA-3,3 kV (600A)

Parameter name	Parameter value	
	SA-3,3/4,1/ 10/600KC	SA-3,3/4,5/ 10/600KC
Nominal system voltage, kV	3,3	
* Continuous operating voltage U_c , kV	4,1	4,5
** Rated voltage U_r , kV	5,1	5,6
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ s), A	400	600
Nominal discharge current (8/20 μ s), kA	10	
10 sec overvoltage, U_t / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	6,2	
** Max. U_{res} with switching surge (30/60 μ s)		
	- 125 A	10,6
	- 250A	10,9
	- 500 A	11,0
** Max. U_{res} with lightning current (8/20 μ s)		
	- 5 kA	12,5
	- 10 kA	13,5
** Max. U_{res} with steep current 10 kA (1/10 μ s)	15,6	16,1
Partial discharge level, no more, pC	340	
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	M6	
Vibration resistance	440	
Creepage distance, mm, not less than	1,3	1,4

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-3,3 kV (600A)

Designation (example): SA-3,3/4,1/10/600KC

Cat. number(example): SA-3,3/4,1/10/600KC-M10/M10

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



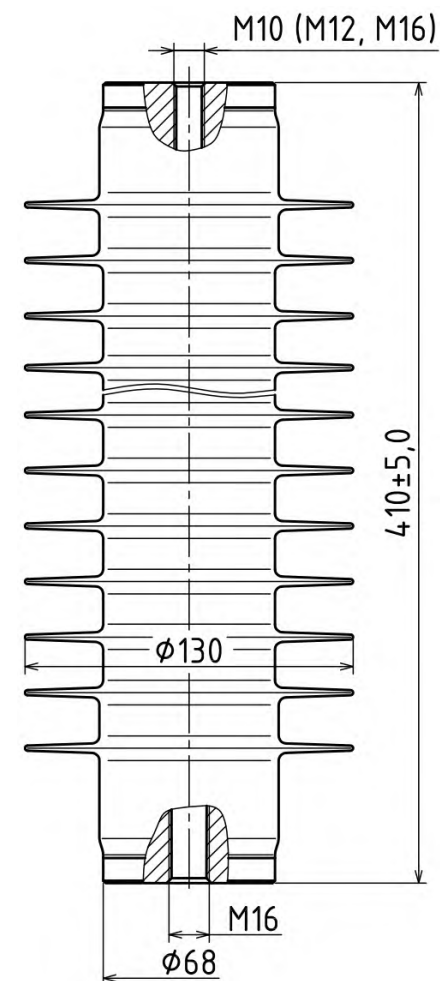
Surge arrester for railway SA-27,5 kV (400A, 600A)

Parameter name	Parameter value for Line Discharge Class	
	1 (400A)	2 (600A)
Nominal system voltage, kV	27,5	
* Continuous operating voltage U_c , kV	18,5...30,0	
** Rated voltage U_r , kV	23,1...37,5	
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ s), A	400	600
Nominal discharge current (8/20 μ s), kA	10	
10 sec overvoltage, U_t / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	4,1	6,2
** Max. U_{res} with switching surge (30/60 μ s)		
	- 125 A	45,33...73,5
	- 250A	46,87...76,0
	- 500 A	48,3...78,0
** Max. U_{res} with lightning current (8/20 μ s)		
	- 5 kA	57,25...92,8
	- 10 kA	60,95...98,8
** Max. U_{res} with steep current 10 kA (1/10 μ s)	62,9...102,0	62,2...100,86
Partial discharge level, no more, pC	10	
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	365	
Vibration resistance	M6	
Creepage distance, mm, not less than	1220	
** Weight, kg	5,7	

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-27,5 kV (400A, 600A)

Designation (example): SA-27,5/30/10/400

Cat. number(example): SA-27,5/30/10/400-M10/M16

Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.



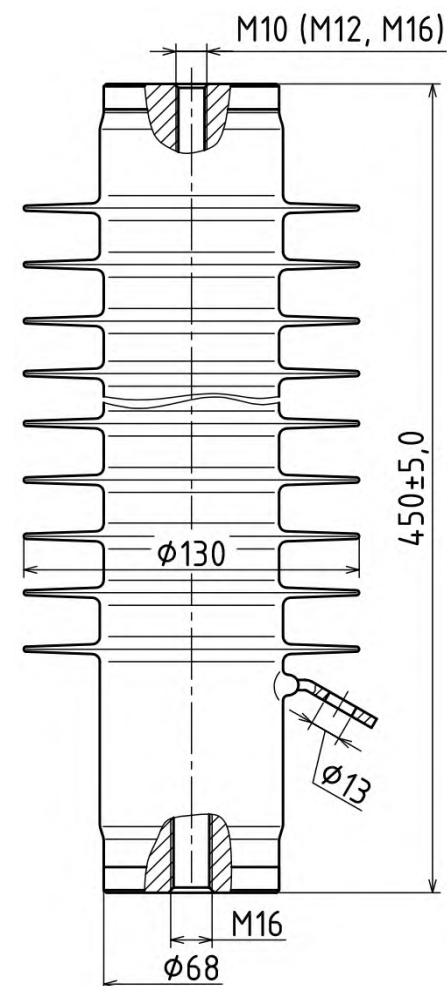
Surge arrester for railway SA-27,5 kV, modification A (400A, 600A)

Parameter name	Parameter value for Line Discharge Class	
	1 (400A)	2 (600A)
Nominal system voltage, kV	27,5	
* Continuous operating voltage U_c , kV	18,5...30,0	
** Rated voltage U_r , kV	23,1...37,5	
High current withstand (4/10 μ s), kA	100	
Long duration current (2000 μ s), A	400	600
Nominal discharge current (8/20 μ s), kA	10	
10 sec overvoltage, U_t / U_c	1,41	
Energy capability at U_c (2 imp. 2000 μ s), kJ/kV	4,1	6,2
** Max. U_{res} with switching surge (30/60 μ s)		
	- 125 A	45,33...73,5
	- 250 A	46,87...76,0
	- 500 A	48,3...78,0
** Max. U_{res} with lightning current (8/20 μ s)		
	- 5 kA	57,25...92,8
	- 10 kA	60,95...98,8
** Max. U_{res} with steep current 10 kA (1/10 μ s)	62,9...102,0	62,2...100,86
Partial discharge level, no more, pC	10	
Mechanical stress from wire pulling, wind and ice-wind loads, not less, N	365	
Vibration resistance	M6	
Creepage distance, mm, not less than	1220	
** Weight, kg	6,1	

* Continuous operating voltage U_c – according to customer requirement.

** Specifications may vary depending on Continuous operating voltage U_c .

Surge arrestors comply with the requirements of IEC 60099-4, GKD 34.35.512-2002, TUU 31.2-31279430-008:2006.



Surge arrester SA-27,5 kV (400A, 600A)

Designation (example): SA-27,5/30/10/400-A

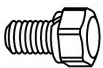
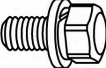
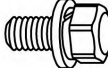
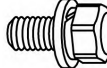
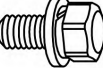
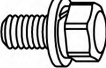
Cat. number(example): SA-27,5/30/10/400-A-M10/M16

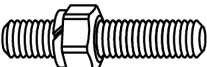
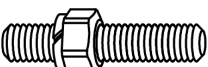
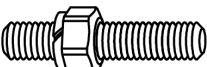
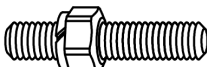
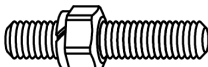
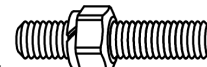
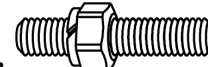
Additional components for surge suppressors - as agreed with the customer.
The main components are presented in Appendix A.

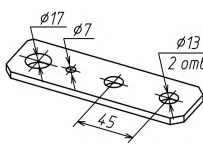
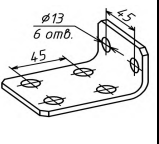
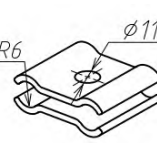
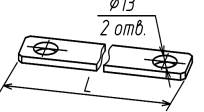
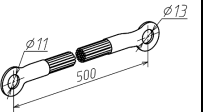


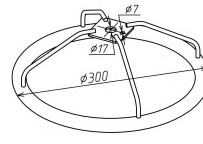
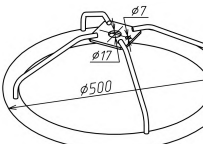
Appendix A

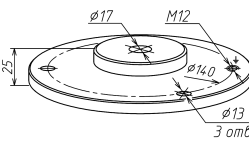
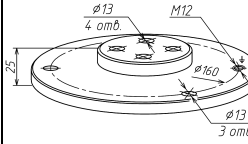
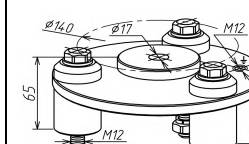
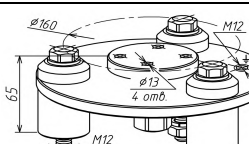
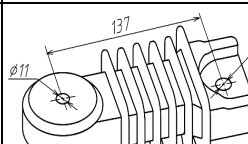
Additional components for surge arresters

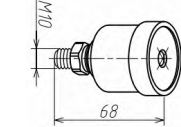
The screws and Bolts (B)				
				
B1 Screw M6x12-1 pc. Washer 6-1 pc. Spring washer 6-1 pc.	B2 Bolt M6x20-1 pc. Spring washer 6-1 pc.	B3 Bolt M10x20-1 pc. Washer 10-1 pc. Spring washer 10-1 pc.	B4 Bolt M10x30-1 pc. Washer 10-1 pc. Spring washer 10-1 pc.	B5 Bolt M12x20-1 pc. Washer 12-1 pc. Spring washer 12-1 pc.
				
B5E Bolt M12x20-1 pc. Washer 12-1 pc. Spring washer 12-1 pc.	B6 Bolt M12x30-1 pc. Washer 12-1 pc. Spring washer 12-1 pc.	B7 Bolt M12x30-1 pc. Washer 12-1 pc. Spring washer 12-1 pc.	B8 Bolt M16x35-1 pc. Spring washer 16-1 pc.	

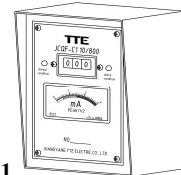
Studs (S)			
			
S1 Nut M6-1 pc. Spring washer 6-1 pc. Stud M6x30-1 pc.	S2 Nut M6-2 pcs. Washer 6-2 pcs. Spring washer 6-2 pcs. Stud M6x30-1 pc.	S3 Nut M10-1 pc. Spring washer 10-1 pc. Stud M10x50-1 pc.	S4 Nut M10-2 pcs. Washer 10-2 pcs. Spring washer 10-2 pcs. Stud M10x50-1 pc.
			
S5 Nut M10-1 pc. Spring washer 10-1 pc. Stud M10x55-1 pc.	S5D Stud M10x55-1 pc.	S6 Nut M10-2 pcs. Washer 10-2 pcs. Spring washer 10-2 pcs. Stud M10x55-1 pc.	S7 Nut M12-1 pc. Spring washer 12-1 pc. Stud M12x60-1 pc.
			
S8 Nut M12-2 pcs. Washer 12-2 pcs. Spring washer 12-2 pcs. Stud M12x60-1 pc.	S9 Nut M10-1 pc. Spring washer 10-1 pc. Stud M10x70-1 pc.	S10 Nut M10-2 pcs. Washer 10-2 pcs. Spring washer 10-2 pcs. Stud M10x70-1 pc.	S11 Nut M12-1 pc. Spring washer 12-1 pc. Stud M12x70-1 pc.
			
S12 Nut M12-2 pcs. Washer 12-2 pcs. Spring washer 12-2 pcs. Stud M12x70-1 pc.	S13 Nut M16-1 pc. Spring washer 16-1 pc. Stud M16x80-1 pc.	S14 Nut M16-2 pcs. Washer 16-2 pcs. Spring washer 16-2 pcs. Stud M16x80-1 pc.	

Line terminal (L)			Earth Clamps (E)	
				
L1 Line bus	L2 Line bus	L3 Line clamp	E1 Ground bus L=500	E2 Ground bus (flexible) L=500

Grading ring (G)		
		
G1 Grading ring EO-300/2	G2 Grading ring EO-500/2	G3 Grading ring EO-500/3

Pedestal base, Insulating pedestal base, Insulating bracket (P)		
		
P1 Pedestal base	P2 Pedestal base	P3 Insulating pedestal base
		
P4 Insulating pedestal base	P5 Insulating bracket	

Disconnector (D)

D1 Disconnector TLB-2

Surge Counters (SC)

SC1 Surge Counter JCQF-C1 10/800



[illegible]