

Protection

Load protection

iPF surge arresters

Type 2 or 3 LV surge arresters

The iPF multi-pole single-piece surge arrester range is adapted for earthing systems: TT, TN-S, TN-C.

Type 2 surge arresters are tested with a 8/20 μs current wave.

Type 3 surge arresters are tested with a 12/50 μs and 8/20 μs combined wave.

Each surge arrester in the range has a specific application:

- **incoming protection (type 2):**
 - the iPF65(r) is recommended for a very high risk level (strongly exposed site)
 - the iPF40(r) is recommended for a high risk level
 - the iPF20 is recommended for a medium risk level
- **secondary protection (type 2 or 3):**
 - the iPF8 ensures secondary protection of loads to be protected and is placed in cascade with the incoming surge arresters. This surge arrester is required when the loads to be protected are at a distance of more than 10 m from the incoming surge arrester.

The iPF surge arresters with “r” indication have remote transfer of the information: “surge arrester to be replaced”.



1P+N.



3P+N.

Rated discharge current (I _{max}) / Nominal discharge current (I _n)	Type of protection		Network							
	Incoming	Secondary (type 2 or 3)	1P+N	3P+N	1P	2P	3P	4P		
65 kA / 20 kA										
Very high risk level	iPF65		A9L15684		A9L15683					
						A9L15584				
								A9L15581		
					A9L15685					
					A9L15586					
									A9L15585	
40 kA / 15 kA										
High risk level	iPF40		A9L15687		A9L15686					
							A9L15587			
								A9L15582		
					A9L15690					
					A9L15688					
									A9L15590	
							A9L15588			
20 kA / 5 kA										
Medium risk level	iPF20				A9L15691					
			A9L15692			A9L15592				
							A9L15597			
			A9L15693							
							A9L15593			
8 kA / 2.5 kA										
Secondary protection: placed near the loads to be protected when they are at a distance of more than 10 m from the incoming surge arrester		iPF8	A9L15695		A9L15694					
						A9L15595				
							A9L15598			
			A9L15696							
							A9L15596			

Surge arrester/circuit breaker association	
Type of surge arrester	Associated circuit breaker
iPF65	Curve C 50 A
iPF40	Curve C 40 A
iPF20	Curve C 25 A
iPF8	Curve C 20 A

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	Earthing system	Transfer	Surge arrester name	Width in mod. of 9 mm	Up - (kV) Voltage protection level			Un - (V) Rated voltage network	Uc - (V) Maximum continuous operating voltage		
					CM*		DM*		CM*		DM*
					L/±	N/±	L/N		L/±	N/±	L/N
iPF65											
	TT & TN		iPF65 1P	2	≤ 1.5	-	-	230	340	-	-
	TT & TN-S		iPF65 1P+N	4	-	≤ 1.5	≤ 1.5		-	260	340
	TN-C		iPF65 2P		≤ 1.5	≤ 1.5	-		340	340	-
	TN-C		iPF65 3P	8	≤ 1.5	-	-	230/400	340	-	-
	TT & TN-S	■	iPF65r 3P+N		-	≤ 1.5	≤ 1.5		-	260	340
	TT & TN-S		iPF65 3P+N		-	≤ 1.5	≤ 1.5		-	260	340
	TN-C	■	iPF65r 4P		≤ 1.5	≤ 1.5	-		340	340	-
iPF40											
	TT & TN		iPF40 1P	2	≤ 1.5	-	-	230	340	-	-
	TT & TN-S		iPF40 1P+N	4	-	≤ 1.5	≤ 1.5		-	260	340
	TN-C		iPF40 2P		≤ 1.5	≤ 1.5	-		340	340	-
	TN-C		iPF40 3P	8	≤ 1.5	-	-	230/400	340	-	-
	TT & TN-S	■	iPF40r 3P+N		-	≤ 1.5	≤ 1.5		-	260	340
	TT & TN-S		iPF40 3P+N		-	≤ 1.5	≤ 1.5		-	260	340
	TN-C	■	iPF40r 4P		≤ 1.5	≤ 1.5	-		340	340	-
	TN-C		iPF40 4P		≤ 1.5	≤ 1.5	-		340	340	-
iPF20											
	TT & TN		iPF20 1P	2	≤ 1.1	-	-	230	340	-	-
	TT & TN-S		iPF20 1P+N	4	-	≤ 1.5	≤ 1.1		-	260	340
	TN-C		iPF20 2P		≤ 1.1	≤ 1.1	-		340	340	-
	TN-C		iPF20 3P	8	≤ 1.1	-	-	230/400	340	-	-
	TT & TN-S		iPF20 3P+N		-	≤ 1.5	≤ 1.1		-	260	340
	TN-C		iPF20 4P		≤ 1.1	≤ 1.1	-		340	340	-
iPF8 (1) Type 2 / Type 3											
	TT & TN		iPF8 1P	2	≤ 1 / ≤ 1.1	-	-	230	340	-	-
	TT & TN-S		iPF8 1P+N	4	-	≤ 1.5 / ≤ 1.2	≤ 1 / ≤ 1.1		-	260	340
	TN-C		iPF8 2P		≤ 1 / ≤ 1.1	≤ 1 / ≤ 1.1	-		340	340	-
	TN-C		iPF8 3P	8	≤ 1 / ≤ 1.1	-	-	230/400	340	-	-
	TT & TN-S		iPF8 3P+N		-	≤ 1.5 / ≤ 1.2	≤ 1 / ≤ 1.1		-	260	340
	TN-C		iPF8 4P		≤ 1 / ≤ 1.1	≤ 1 / ≤ 1.1	-		340	340	-

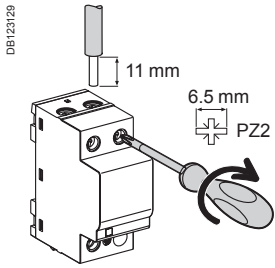
* **CM**: common mode (phase to earth and neutral to earth). * **DM**: differential mode (phase to neutral). (1) **Uoc**: combined waveform voltage: 10 kV.



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Connection



Type	Tightening torque	Copper cables	
		Rigid	Flexible or with ferrule
iPF	3.5 N.m	 25 mm ² max.	 16 mm ² max.

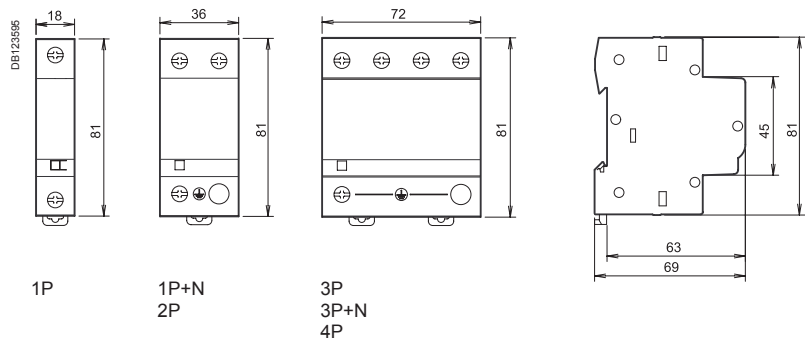
Technical data

Main characteristics		
Operating frequency	50/60 Hz	
Operating voltage (Ue)	230/400 V AC	
Permanent operating current (Ic)	< 1 mA	
Response time	< 25 ns	
End of life indication: by green/red indicator light	Green	In operation
	Red	At end of life
End of life remote indication	By contact NO, NC 250 V / 0.25 A	
Additional characteristics		
Operating temperature	-25°C to +60°C	
Type of connection terminals	Tunnel terminals, 2.5 to 35 mm ²	
Standards	IEC 61643-1 <u>T2</u> and EN 61643-11 Type 2	

Weight (g)

Surge arrester	
Type	iPF
1P	125
2P	210
3P	335
4P	420

Dimensions (mm)



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4.0	27/03/2017	New charte	Sonovision
3.4	9/09/2016	Changed 30 m by 10 m page 2	Sonovision
3.3	18/07/2016	Changed mechanical indicator by indicator light	JPM
3.2	3/03/2015	Changed Connection table page 4	Sonovision
3.1	2/04/2012	Changed iPF8 Up, L/N for cat no. A9L15695 and A9L15696: 1.4 to 1	Sedoc
3.0	19/05/2011	InDesign CS5	Sedoc
1.0	22/11/2010	Creation	Sedoc
Indice	Date	Modification	Name