

# PRF1 12.5r/PRF1 Master/ PRD1 25r/PRD1 Master Type 1 and 2 LV surge arresters

The Type 1 range of surge arresters meets the normative withstand capability of current wave type 10/350  $\mu$ s (8/20  $\mu$ s for Type 2 surge arresters). It is suitable for use with TT, TN-S, TN-C and 230 V IT earthing connection systems (neutral point connection).  
In addition, the PRF1 Master surge arrester covers the 400 V IT system.  
PRF1 12.5r and PRD1 surge arresters are fitted with a remote transfer contact to send «end-of-life indication» information.  
PRD1 surge arresters are fitted with easy-to-replace withdrawable cartridges.

## PRF1 12.5r/PRF1 Master/PRD1 25r/PRD1 Master

The Type 1 surge arrester is recommended for electrical installations in the service sector and industrial buildings protected by a lightning conductor or by a meshed cage.

It protects electrical installations against direct lightning strikes.

It is used to conduct the direct lightning current, propagating from the earth conductor to the network conductors.

It must be installed with an upstream disconnection device, such as a fuse or circuit-breaker, whose breaking capacity must be at least equal to the maximum prospective short-circuit current at the installation point.

PRF1 12.5r and PRD1 25r surge arresters also provide Type 2 protection and protect the electrical installation by finely clipping the lightning wave overvoltages.

PB104275-35



PRF1 12.5r

PB104260-35

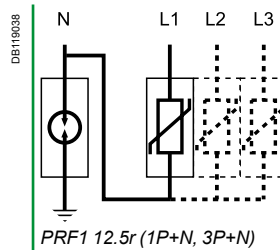


PRD1 25r

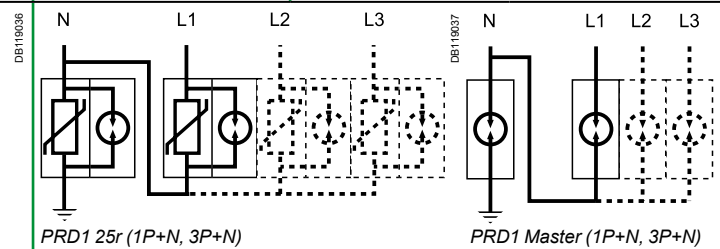
PB104284-35



PRD1 Master



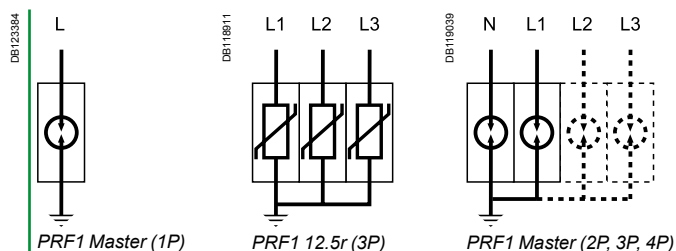
Type of surge arrester	Product solution	
Fixed surge arrester	1P+N	3P+N
PRF1 12.5r T1, T2	16632	16634
PRF1 Master T1		



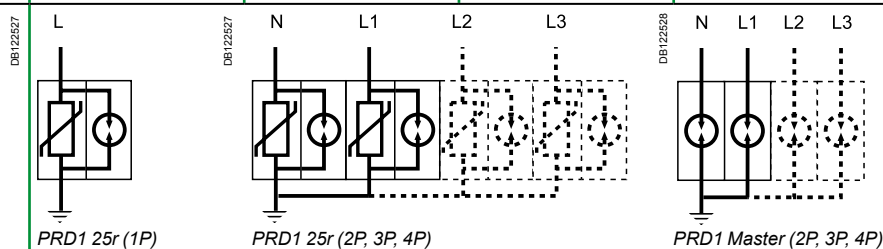
Cartridge surge arrester	1P+N	3P+N
PRD1 25r T1 + T2	16330	16332
PRD1 Master T1	16361	16363

# PRF1 12.5r/PRF1 Master/ PRD1 25r/PRD1 Master

Type 1 and 2 LV surge arresters (cont.)



				Neutral point connection	Recommended accessory
1P	2P	3P	4P		
		16633		TT, TN-S TN-C, IT 230 V	
	2 x 16630			IT <sup>(1)</sup> distributed neutral	16643
16630		3 x 16630		IT <sup>(1)</sup> non-distributed neutral	16644
			4 x 16630	IT <sup>(1)</sup> distributed neutral	16645



1P	2P	3P	4P		
				TT, TN-S	
	2 x 16329		4 x 16329	IT 230 V	
16329		16331		TN-C, IT 230 V	
				TT, TN-S	
	2 x 16360		4 x 16360	TN-C, IT, IT 230 V	
		16362		TN-C, IT 230 V	

(1) Version without indicator light.

# PRF1 12.5r/PRF1 Master/ PRD1 25r/PRD1 Master

Type 1 and 2 LV surge arresters (cont.)

Name of the surge arrester	Nb. of poles	Width	I imp (kA) (10/350)		I max (kA) (8/20)	In - kA	Up - kV	Un - V	Uc - V	Cat. no.
			Impulse current	Surge arrester + disconnector						
Fixed surge arrester		9 mm modules	Surge arrester	Surge arrester + disconnector						
<b>PRF1 12.5r</b>	Type 1 + 2									
	1P+N	4	12.5/50 N/PE		50	25	1.5	230	350	16632
	3P	8	12.5		50	25	1.5	230 / 400	350	16633
	3P+N	8	12.5/50 N/PE		50	25	1.5	230 / 400	350	16634
<b>PRF1 Master</b>	Type 1									
	1P	4	50	35	-	50	1.5	230	440	16630
<b>Withdrawable surge arrester</b>										
<b>PRD1 25r</b>	Type 1 + 2									
	1P	4	25		40	25	1.5	230	350	16329
	1P+N	8	25/100 N/PE		40	25	1.5	230/400	350	16330
	3P	12	25		40	25	1.5	230	350	16331
	3P+N	16	25/100 N/PE		40	25	1.5	230/400	350	16332
<b>PRD1 Master</b>	Type 1									
	1P	4	25		-	25	1.5	230	350	16360
	1P+N	8	25/100 N/PE		-	25	1.5	230/400	350	16361
	3P	12	25		-	25	1.5	230	350	16362
	3P+N	16	25/100 N/PE		-	25	1.5	230/400	350	16363
<b>Spare cartridge</b>										
C1 Master-350	-	4	-	-	-	25	1.5	-	350	16314
C1 25-350	-	23 mm	-	-	-	25	1.5	-	350	16315
C2 40-350	-	12 mm	-	-	-	20	1.4	-	350	16316
C1 Neutral-350	-	4	-	-	-	-	-	-	350	16317

Name of the surge arrester	Spare cartridge		
	Phase		Neutral
	Type 1	Type 2	
<b>PRD1 25r</b>			
PRD1 25r 1P	16315	16316	-
PRD1 25r 1P+N	16315	16316	16317
PRD1 25r 3P	3 x 16315	3 x 16316	-
PRD1 25r 3P+N	3 x 16315	3 x 16316	16317
<b>PRD1 Master</b>			
PRD1 Master 1P	16314	-	-
PRD1 Master 1P+N	16314	-	16317
PRD1 Master 3P	3 x 16314	-	-
PRD1 Master 3P+N	3 x 16314	-	16317

# PRF1 12.5r/PRF1 Master/ PRD1 25r/PRD1 Master

## Type 1 and 2 LV surge arresters (cont.)

Technical data		PRF1 12.5r	PRF1 Master	PRD1 25r	PRD1 Master
Operating frequency		50 Hz	50/60 Hz	50 Hz	50 Hz
Degree of protection	Front panel	IP40	IP40	IP40	IP40
	Terminals	IP20	IP20	IP20	IP20
	Impacts	IK05	IK05	IK05	IK05
Response time		≤ 25 ns	≤ 1 μs	≤ 25 ns	≤ 100 ns
End-of-life indication		Green: correct operation	-	White: correct operation	White: correct operation
		Red: at end of life	-	Red: at end of life	Red: at end of life
	Remote notification	1 A/250 V AC	-	1 A/250 V AC. 0.2 A/125 V DC	1 A/250 V AC. 0.2 A/125 V DC
By tunnel terminal	Rigid cable	10...35 mm <sup>2</sup>	10...50 mm <sup>2</sup>	2.5...35 mm <sup>2</sup>	10...35 mm <sup>2</sup>
	Flexible cable	10...25 mm <sup>2</sup>	10...35 mm <sup>2</sup>	2.5...25 mm <sup>2</sup>	10...25 mm <sup>2</sup>
Operating temperature		-25°C to +60°C	-40°C to +85°C	-25°C to +60°C	-25°C to +60°C
Standards	Type 1	IEC 61643-1 [T1]. EN 61643-11 Type 1	IEC 61643-1 [T1]. EN 61643-11 Type 1	IEC 61643-1 [T1]. EN 61643-11 Type 1	IEC 61643-1 [T1]. EN 61643-11 Type 1
	Type 2	IEC 61643-1 [T2]. EN 61643-11 Type 2	-	IEC 61643-1 [T2]. EN 61643-11 Type 2	-
Certification		CE	KEMAKEUR, CE	KEMAKEUR, CE	CE

Choice of disconnecter / surge arrester		Isc: prospective short-circuit current at the installation point				
Type	Iimp: impulse current	10 kA	15 kA	25 kA	36 kA	50 kA
PRF1 12.5r	12.5 kA	C120N 80 A curve C	C120H 80 A curve C or NG125N 80 A curve C	NG125N 80 A curve C	Contact us	
PRF1 Master	35 kA	Compact NSX160B 160 A TM			Compact NSX160F 160 A	Compact NSX160N 160 A
PRD1 25r	25 kA	NG125N 80 A curve C			-	
PRD1 Master	25 kA	NG125N 80 A curve C			NG125H 80 A curve C	NG125L 80 A curve C

DB123370



### Accessories

Type	Number of poles	Cat. no.
4P Wiring comb busbars	4	16643
6P Wiring comb busbars	6	16644
8P Wiring comb busbars	8	16645
200 mm flexible cable (PRF1 Master)		16646

# PRF1 12.5r/PRF1 Master/ PRD1 25r/PRD1 Master

Type 1 and 2 LV surge arresters (cont.)



Indice	Date	Modification	Name
2.0	24/05/2011	InDesign CS5	Sedoc
1.1	5/04/2011	Add: IT 230 for 16633, 16331, 16362 cat. no and TN-C, IT for 4 x 16360 cat. no	Sedoc
1.0	21/09/2010	Creation	Sedoc