

Electrics changes Life,
efficiency leads the Future!



NLDS1

Surge Protective Device Series (SPD)

NLD 北陆电气®



>> NLDS1 Series Surge Protective Device (SPD)

D

Safe

Intelligent

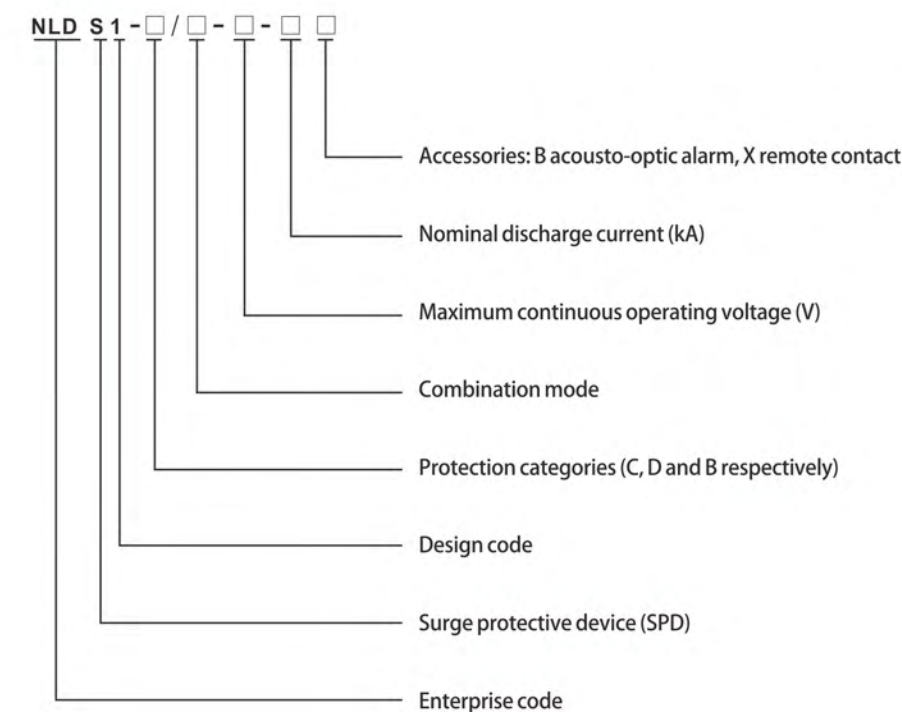
Reliable

■ Introduction

- NLDS1 series products have a large flow capacity and are suitable for C-level (II-level) and D-level (III-level) protection in low-voltage distribution systems.
- Different combination wiring methods are chosen based on different power supply systems.
- High energy varistor, nanosecond response speed;
- Equipped with overheating and overcurrent protection; Local indication1) and remote alarm contact2);
 - 1) It visually displays the working status of the protector on the protector
 - 2) It provides contacts for remote monitoring of protector status, which requires external wiring.
- Pluggable in charged condition, module replaceable in case of failure.



■ Naming rules

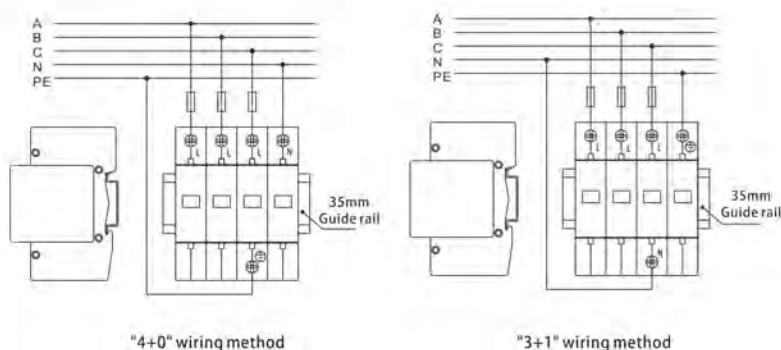


■ Performance parameters

Model	NLDS1-C voltage limited type	NLDS1-D voltage limited type
Maximum continuous operating voltage ¹⁾ U _c (V)	420	320
Nominal discharge current I _n 8/20 μs(kA)	20	10
Maximum discharge current 8/20 μs(kA)	40	20
Voltage protection level U _p (kV)	1.8	1.5
Back-up protective device (fuse)	32	20
Local failure indication	Window in green: normal, window in red: failure	
Remote alarm contact	A pair of normally open and normally closed contact	
Acousto-optic alarm	matching	
Wiring capacity	1.5~35mm ²	
Overall dimension	See outline size drawing	
Shell material	It complies with UL 94V-0	
Shell protection class	IP20	
Installation mode	It is installed with TH35-7.5 (DIN35mm) standard guide rail	

Note 1): The maximum continuous operating voltage is optional, with 275V, 385V, 420V, etc.

■ Installation schematic diagram

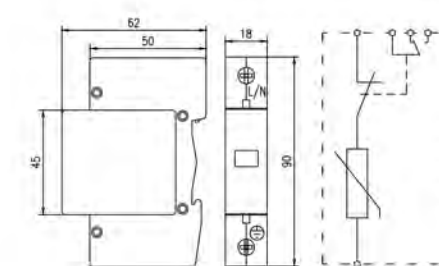


■ Model and specification

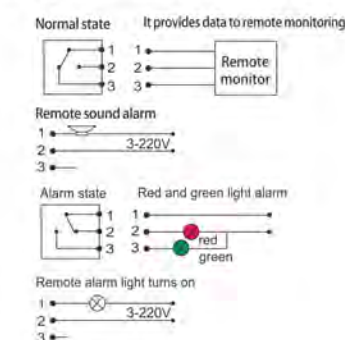
No.	Model	Number of poles	U _c (V)	I _n (kA)	I _{max} (kA)	U _p (kV)	Usage
1	NLDS1-D/1-140-5	1	140	5	10	<0.8	Single-phase and DC system of AC110V and below
2	NLDS1-D/1-275-5	1	275	5	10	<1.2	For single-phase system of TN-C, IT, TN-S system
3	NLDS1-D/1-320-5	1	320	5	10	<1.5	
4	NLDS1-D/1-385-5	1	385	5	10	<1.8	For single-phase system of TT system
5	NLDS1-D/1-420-5	1	420	5	10	<2.0	
6	NLDS1-D/2-140-5	2	140	5	10	<0.8	Single-phase and DC system of AC110V and below
7	NLDS1-D/2-275-5	2	275	5	10	<1.2	For single-phase system of TN-C, IT, TN-S system
8	NLDS1-D/2-320-5	2	320	5	10	<1.5	
9	NLDS1-D/2-385-5	2	385	5	10	<1.8	For single-phase system of TT system
10	NLDS1-D/2-420-5	2	420	5	10	<2.0	
11	NLDS1-D/2Q-385-5	3	385	5	10	<2.0	For full-module protection of single-phase system
12	NLDS1-D/3N-275-5	3	275	5	10	<1.2	For "3+1" combination and full-module combination
13	NLDS1-D/3N-320-5	3	320	5	10	<1.5	
14	NLDS1-D/4-275-5	4	275	5	10	<1.2	For TN-C, IT and TN-S system
15	NLDS1-D/4-320-5	4	320	5	10	<1.5	
16	NLDS1-D/4-385-5	4	385	5	10	<1.8	For TT system
17	NLDS1-D/4-420-5	4	420	5	10	<2.0	
18	NLDS1-C/1-140-15	1	140	15	40	<0.8	Single-phase and DC system of AC110V and below
19	NLDS1-C/1-275-20	1	275	20	40	<1.2	For single-phase system of TN-C, IT, TN-S system
20	NLDS1-C/1-320-20	1	320	20	40	<1.5	
21	NLDS1-C/1-385-20	1	385	20	40	<1.8	For single-phase system of TT system
22	NLDS1-C/1-420-20	1	420	20	40	<2.0	
23	NLDS1-C/1-550-20	1	550	20	40	<2.8	Used between AC380V lines
24	NLDS1-C/2-140-15	2	140	15	40	<0.8	Single-phase and DC system of AC110V and below
25	NLDS1-C/2-275-20	2	275	20	40	<1.2	For single-phase system of TN-C, IT, TN-S system
26	NLDS1-C/2-320-20	2	320	20	40	<1.5	
27	NLDS1-C/2-385-20	2	385	20	40	<1.8	For TT system
28	NLDS1-C/2-420-20	2	420	20	40	<2.0	
29	NLDS1-C/2Q-320-20	3	320	20	40	<1.5	For single-phase system of TN-C, IT and TN-S systems, full-module protection
30	NLDS1-C/2Q-385-20	3	385	20	40	<2.0	
31	NLDS1-C/3N-320-20	3	320	20	40	<1.5	For full-module protection of "3+1" combination surge protector or AC three-phase system composed of 4 poles
32	NLDS1-C/3N-385-20	3	385	20	40	<1.8	
33	NLDS1-C/3N-420-20	3	420	20	40	<2.0	
34	NLDS1-C/3-320-20	3	320	20	40	<1.5	Can be used for the main distribution box of TN-C, TN-C-S and TN-S system
35	NLDS1-C/3-385-20	3	385	20	40	<1.8	
36	NLDS1-C/3-420-20	3	420	20	40	<2.0	
37	NLDS1-C/4-275-20	4	275	20	40	<1.2	Can be used for the main distribution box of TN-C, TN-C-S and TN-S system
38	NLDS1-C/4-320-20	4	320	20	40	<1.5	
39	NLDS1-C/4-385-20	4	385	20	40	<1.8	For TT system
40	NLDS1-C/4-420-20	4	420	20	40	<2.0	
41	NLDS1-B/3-320-30	3	320	30	60	<2.0	For TN-C, TN-C-S and TN-S system
42	NLDS1-B/4-320-30	4	320	30	60	<2.0	
43	NLDS1-B/3-385-30	3	385	30	60	<2.5	For TT system
44	NLDS1-B/4-385-30	4	385	30	60	<2.5	

Note: Numbers 1-44 can be derived from varieties with alarms (add B at the end of the model), while 6-17 and 24-44 can be derived from varieties with remote communication contacts (add X at the end of the model).

■ Overall dimension and circuit diagram



■ Wiring diagram for remote communication terminal



■ Introduction

- NLDS1 series products have a large flow capacity, with maximum discharge current of 60-100kA for single pole module, and are suitable for B-level protection in low-voltage distribution systems. Different combination wiring methods are chosen based on different power supply systems.
- High energy varistor, nanosecond response speed;
- Equipped with overheating and overcurrent protection;
- Local indication¹⁾ and remote alarm contact²⁾;
 - 1) It visually displays the working status of the protector on the protector
 - 2) It provides contacts for remote monitoring of protector status, which requires external wiring.
- Pluggable in charged condition, module replaceable in case of failure.



■ Performance parameter

Model	NLDS1-60 voltage limited type	NLDS1-80 voltage limited type	NLDS1-100 voltage limited type
Maximum continuous operating voltage ¹⁾ Uc(V)	385	385	385
Nominal discharge current In 8/20μs(kA)	30	40	50
Maximum discharge current 8/20μs(kA)	60	80	100
Voltage protection level Up(kV)	2.0	2.5	3.0
Back-up protective device (fuse)	63	100	125
Local failure indication	Window in green: normal, window in red: failure		
Remote alarm contact	A normally open contact		
Wiring capacity	1.5~35mm ²		
Overall dimension	90×27×62		
Shell material	It complies with UL 94V-0		
Shell protection class	IP20		
Installation mode	It is installed with TH35-7.5 (DIN35mm) standard guide rail		

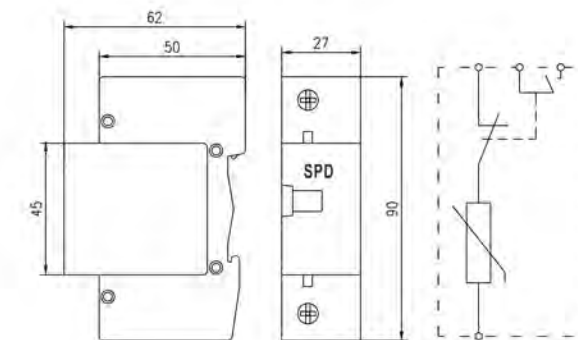
Note 1): The maximum continuous operating voltage is optional, with 275V, 385V, 420V, etc.



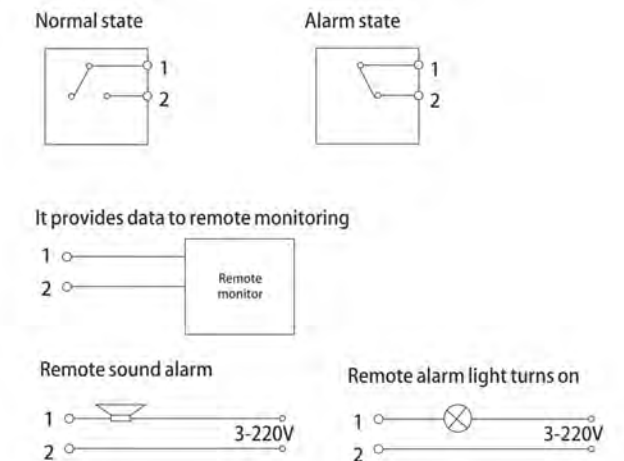
■ Model and specification

No.	Model	Number of poles	Uc (V)	In (kA)	I _{max} (kA)	Up (kV)	Usage
1	NLDS1-60/3-320	3	320	30	60	2.0	For TN-C, IT and TN-S system
2	NLDS1-80/3-320	3	320	40	80	2.0	
3	NLDS1-100/3-320	3	320	60	100	2.5	
4	NLDS1-60/3N-320	3	320	30	60	2.0	For "3+1" combination and full-module combination
5	NLDS1-80/3N-320	3	320	40	80	2.0	
6	NLDS1-100/3N-320	3	320	60	100	2.5	
7	NLDS1-60/4-320	4	320	30	60	2.0	For three-phase system of TN-S system
8	NLDS1-80/4-320	4	320	40	80	2.0	
9	NLDS1-100/4-320	4	320	60	100	2.5	
10	NLDS1-60/3N-385	3	385	30	60	2.0	For "3+1" combination
11	NLDS1-80/3N-385	3	385	40	80	2.5	
12	NLDS1-100/3N-385	3	385	60	100	3.0	
13	NLDS1-60/4-385	4	385	30	60	2.0	For TT system
14	NLDS1-80/4-385	4	385	40	80	2.5	
15	NLDS1-100/4-385	4	385	50	100	3.0	

■ Overall dimension and schematic diagram



■ Wiring diagram for remote communication terminal



■ Installation schematic diagram

