



PRODUCT CATALOGUE

Surge Protective Devices

MDAY(ZHEJIANG) NEW ENERGY CO., LTD.

NO. 299, 10 latitude Road, Economic Development zone, Yueqing City, Zhejiang Province, China 325600

Cell/Whats App: +86-18267877666

Web: www.mday.com

Tel : +86-0577-5757 5557

Directory

FACTORY INTRODUCTION /01

- Workshop /02
- Laboratory /03

MDH12.5-275 /05

MDH7-275 /08

MDN40-275 /11

MDN20-275 /14

MDH9-DC /17

MDH6.25-DC /18

MDN40-DC /19

FACTORY INTRODUCTION

Mday is one of the most potential manufacturer of protective components for photovoltaic systems in the world. We can provide a full set of low-voltage power distribution equipment related to solar energy, mainly including SPD, MCB, FUSE, etc. Our factory has been under operation for more than 20 years, during which the factory and all products strictly comply with international standards. To strengthen the performance and safety of solar components, our professional engineer team participates in the whole process from R&D, production to testing.

Professionalism and innovation are what we have been pursuing boosting an investment spike on production management recently. It can be seen that the functions of workshops have been finely divided and more fully automatic production line technology has been introduced. Besides, each process will be screened by quality inspectors to strictly control product quality. As for staff, we conduct regular training and assessment improving their expertise. Mday owns a mature customer service structure support to respond questions raised by customers in time, which enhances customer experience in our trade.

Mday's mission is not limited to creating maximum value for customers and promoting employees' personal growth, but also includes actively undertaking social and environmental responsibilities, committed to contributing to the development of the international energy market and environmental protection.



WORKSHOP



Impulse Current Generator
T1 (10/350 μ s) and T2 (8/20 μ s) test



SPD CLASSIC D TYPE

Surge Protectors for AC Power Distribution

- | AC Type1+2 / AC Type2 / AC Type2+3
- | DC Type1+2 / DC Type2



Classification of protectors

Ection devices are classified into types according to discharge capacity:

Type 1:

- Tested with a 10/350 μ s waveform (Class I test), which simulates the current produced by a direct lightning strike.
- Ability to discharge very high currents to earth, providing a high Up - voltage protection level.
- Must be accompanied by downstream Type 2 protectors. Designed for use in incoming power supply panels where the risk of lightning strike is high, for example in buildings with an external protection system.

Type 2:

- Tested with a 8/20 μ s waveform (Class II test), which simulates the current produced in the event of a switching or lightning strike on the distribution line or its vicinity.
- Ability to discharge high currents to earth, providing a medium Up - voltage protection level. Designed for use in distribution panels located downstream of Type 1 protectors or in incoming power supply panels in areas with low exposure to lightning strikes.

Type 3:

- Tested with a combined 1.2/50 μ s - 8/20 μ s waveform (Class III test), which simulates the current and voltage that can reach the equipment to be protected.
- Ability to discharge medium currents to earth, providing a low Up - voltage protection level. Always installed downstream of a Type 2 protection designed to protect sensitive equipment or equipment located more than 20m downstream of the Type 2 device.

1. Meets both Class I (10/350us waveform) and Class II (8/20s waveform) SPD tests
2. Based on zinc oxide technology
3. Using 34S-H high-performance MOV, the maximum will be up to 10/350μs 8kA
4. No power frequency continuous flow
5. The operating environment temperature is -40°C~+70°C
6. Remote signaling function is optional.
7. When product fails, the green window turns to red and remote signaling provides remote alarm function

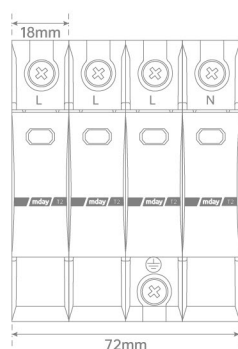
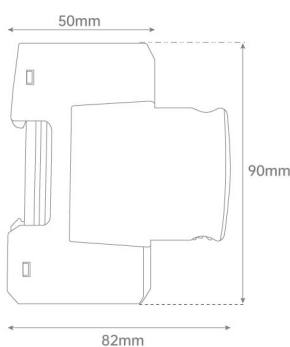
Technical Data

SPD Type	Type 1+2 / Class I+II				
Technology	MOV (Metal Oxide Varistors)				GDT
Protection mode(s)	L-PE/N-PE				NPE
Nominal voltage (a.c.) [Un]	220v	300V	380V	400V	255V
Max. continuous operating voltage (a.c.) [Uc]	275V	320V	385V	420V	255V
Nominal discharge current(8/20μs) [In]	30kA		30kA		30kA
Max.discharge current (8/20μs) [Imax]	60kA		60kA		60kA
Lightning impulse current (10/350μs) [Iimp]	12.5kA		9kA		12.5kA
Protection level [Up]	≤1.8kV	≤2.0kV	≤2.2kV	≤2.4kV	≤1.5kV
Response time [tA]	≤25ns				
Temporary overvoltage (TOV) Withstand - 5 sec [Ut]	335V	440V	440V	620V	335V
Admissible short-circuit current [Iscrr]	25kA				
Max. backup fuse	125A gL/gG				

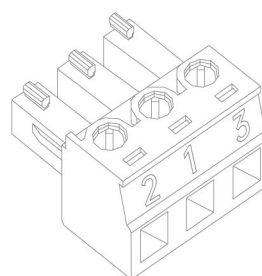
Mechanical Data

Current	AC System
SPD configuration	Single/Three phase
Plugable	Available
Mounting	35mm DIN rail
Material	Thermoplastic,UL94 V-0
Operating temperature	-40°C...+80°C
Protection rating	IP20
Operating state / fault indication	Green / Red
Remote Signaling	Optional
Wiring for remote signaling	Max. 1.5mm solid/flexible
Max.Voltage / Current for remote signaling	250V/0.1A; 125V/0.2A; 75V/0.5A
Standards compliance	IEC 61643-11 / EN 61643-11
Certificate	CE,TUV,RoHS,CB

Size



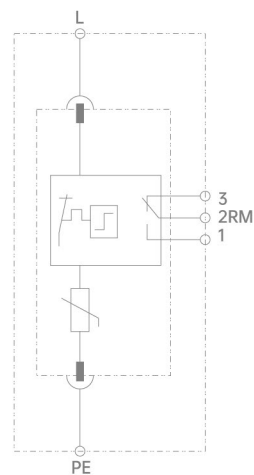
Remote Signaling



MD..+FS	0.5-1.5 mm ²	0.2Nm
	AWG 28-16Cu	1.7lbs-in
Working Voltage	30V DC	
Working Current	50mA	
Contact Resistance	≤100mΩ	
Innlation Resistance	≥100mΩ	
Press Force	30±15gf	
Life	≥1000000	



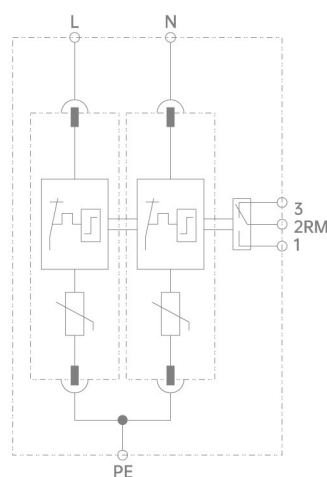
1+0



Weight(1 piece)	150g
Package Quantity	128 pcs/ctn
CTN Size	39.6X30.6X17 cm



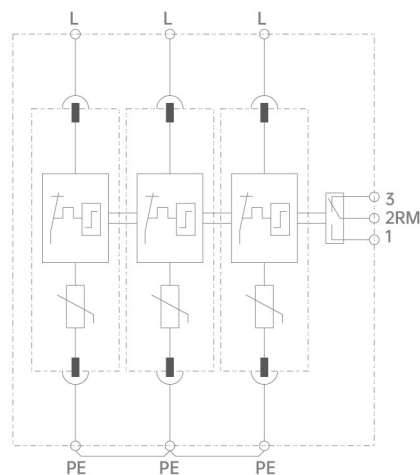
2+0



Weight(1 piece)	250g
Package Quantity	64 pcs/ctn
CTN Size	39.6X30.6X17 cm



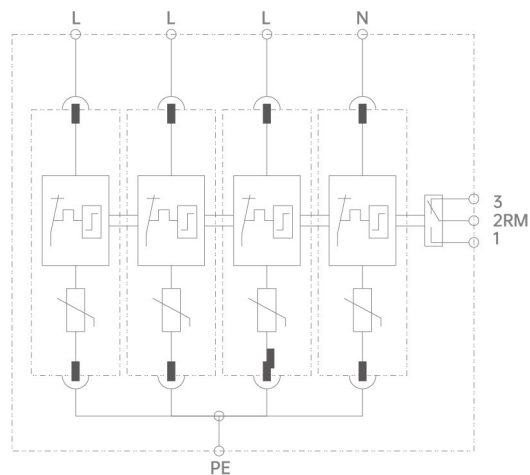
3+0



Weight(1 piece)	350g
Package Quantity	32 pcs/ctn
CTN Size	39.6X30.6X17 cm



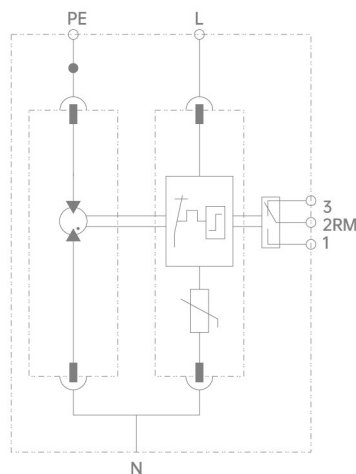
4+0



Weight(1 piece)	450g
Package Quantity	32 pcs/ctn
CTN Size	39.6X30.6X17 cm



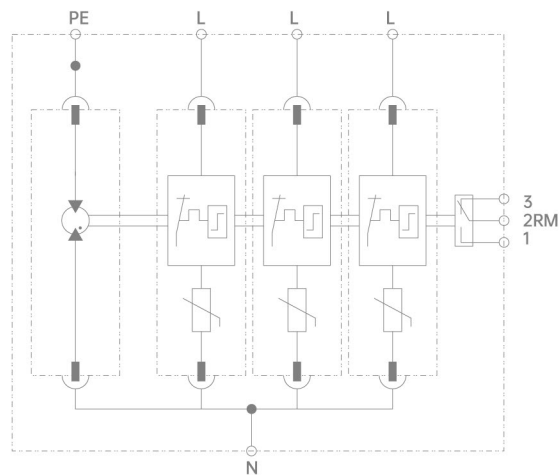
1+1



Weight(1 piece)	250g
Package Quantity	64 pcs/ctn
CTN Size	39.6X30.6X17 cm



3+1



Weight(1 piece)	450g
Package Quantity	62 pcs/ctn
CTN Size	39.6X30.6X17 cm

1. Meets both Class I (10/350us waveform) and Class II (8/20s waveform) SPD tests
2. Based on zinc oxide technology
3. Using 34S-H high-performance MOV, the maximum will be up to 10/350μs 8kA
4. No power frequency continuous flow
5. The operating environment temperature is -40°C~+70°C
6. Remote signaling function is optional.
7. When product fails, the green window turns to red and remote signaling provides remote alarm function

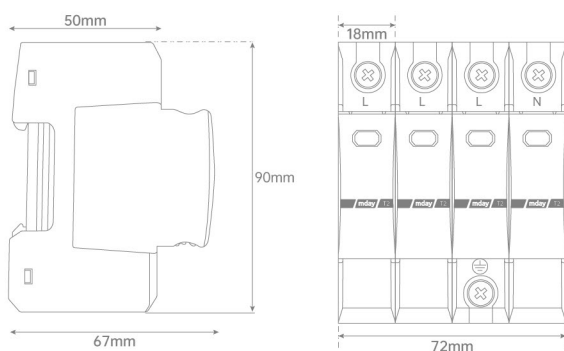
Technical Data

SPD Type	Type 1+2 / Class I+II				
Technology	MOV (Metal Oxide Varistors)				GDT
Protection mode(s)	L-PE/N-PE				NPE
Nominal voltage (a.c.) [Un]	220v	300V	380V	400V	255V
Max. continuous operating voltage (a.c.) [Uc]	275V	320V	385V	420V	255V
Nominal discharge current(8/20μs) [In]	20kA		20kA		20kA
Max.discharge current (8/20μs) [Imax]	50kA		50kA		50kA
Lightning impulse current (10/350μs) [Iimp]	7kA		6.25kA		7kA
Protection level [Up]	≤1.5kV	≤1.6kV	≤1.8kV	≤2.0kV	≤1.5kV
Response time [tA]	≤25ns				
Temporary overvoltage (TOV) Withstand - 5 sec [Ut]	335V	440V	440V	620V	335V
Admissible short-circuit current [Iscrr]	25kA				
Max. backup fuse	125A gL/gG				

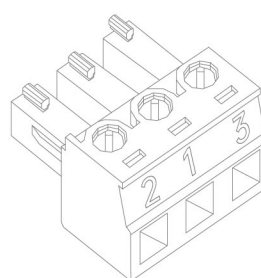
Mechanical Data

Current	AC System
SPD configuration	Single/Three phase
Plugable	Available
Mounting	35mm DIN rail
Material	Thermoplastic,UL94 V-0
Operating temperature	-40°C...+80°C
Protection rating	IP20
Operating state / fault indication	Green / Red
Remote Signaling	Optional
Wiring for remote signaling	Max. 1.5mm solid/flexible
Max.Voltage / Current for remote signaling	250V/0.1A; 125V/0.2A; 75V/0.5A
Standards compliance	IEC 61643-11 / EN 61643-11
Certificate	CE,TUV,RoHS,CB

Size



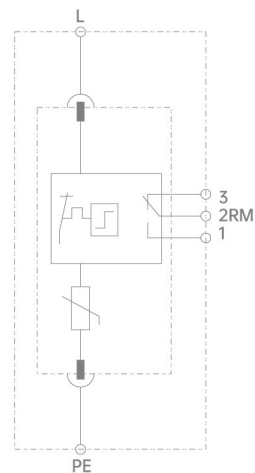
Remote Signaling



MD..+FS	0.5-1.5 mm ² AWG 28-16Cu	0.2Nm 1.7lbs-in
Working Voltage	30V DC	
Working Current	50mA	
Contact Resistance	≤100mΩ	
Insulation Resistance	≥100mΩ	
Press Force	30±15gf	
Life	≥1000000	



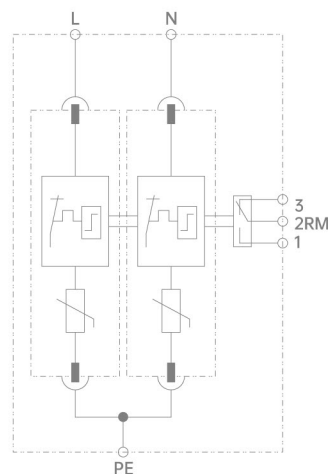
1+0



Weight(1 piece)	150g
Package Quantity	128 pcs/ctn
CTN Size	39.6X30.6X17 cm



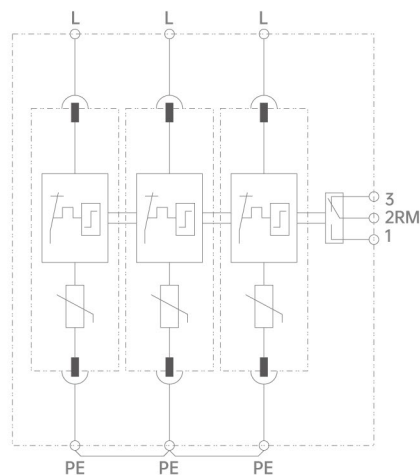
2+0



Weight(1 piece)	250g
Package Quantity	64 pcs/ctn
CTN Size	39.6X30.6X17 cm



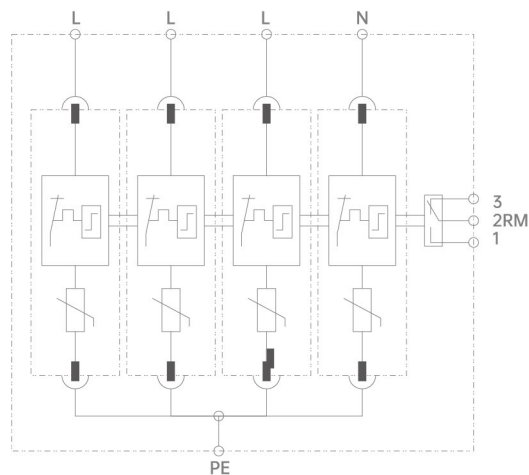
3+0



Weight(1 piece)	350g
Package Quantity	32 pcs/ctn
CTN Size	39.6X30.6X17 cm



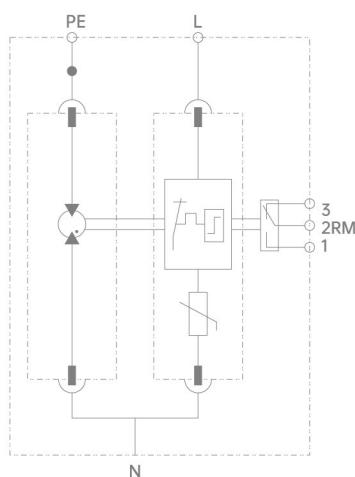
4+0



Weight(1 piece)	450g
Package Quantity	32 pcs/ctn
CTN Size	39.6X30.6X17 cm



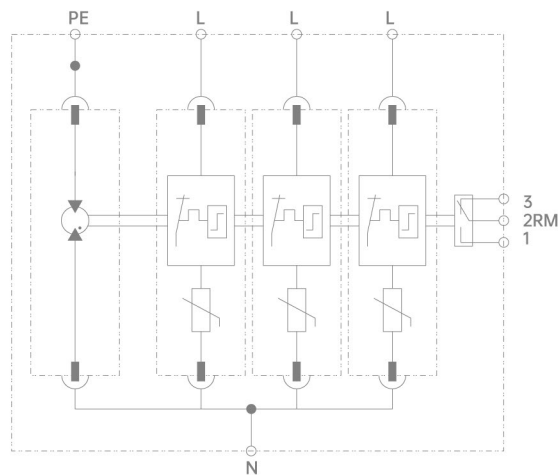
1+1



Weight(1 piece)	250g
Package Quantity	64 pcs/ctn
CTN Size	39.6X30.6X17 cm



3+1



Weight(1 piece)	450g
Package Quantity	62 pcs/ctn
CTN Size	39.6X30.6X17 cm

1. Meets Class II (8/20s waveform) SPD tests
2. Based on zinc oxide technology
3. Using 34S MOV, the maximum will be up to 8/20μs 40kA
4. No power frequency continuous flow
5. Compact,yet high surge rated pluggable design,using minimum DIN rail width
6. The operating environment temperature is -40°C~+70°C
7. Red/Green status indication and change-over contacts standard for remote monitoring.(RS485 is Option)

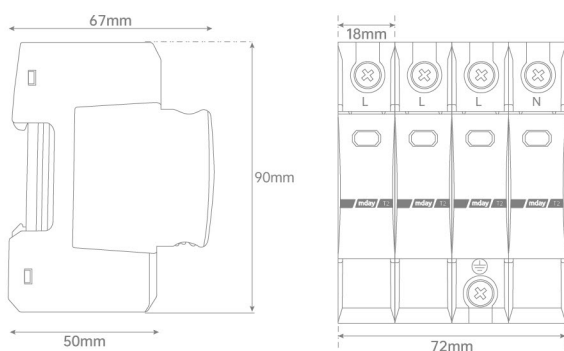
Technical Data

Pole	2P/2+0				
Technology	MOV (Metal Oxide Varistors)				GDT
Protection mode(s)	L-PE/N-PE				NPE
Nominal voltage (a.c.) [Un]	220v	300V	380V	400V	255V
Max. continuous operating voltage (a.c.) [Uc]	275V	320V	385V	420V	255V
Nominal discharge current(8/20μs) [In]	20kA				20kA
Max.discharge current (8/20μs) [Imax]	40kA				40kA
Protection level [Up]	≤1.5kV	≤1.6kV	≤1.8kV	≤2.0kV	≤1.5kV
Response time [tA]	≤25ns				
Temporary overvoltage (TOV) Withstand - 5 sec [Ut]	335V	440V	440V	620V	335V
Admissible short-circuit current [Iscrr]	25kA				
Max. backup fuse	63A gL/gG				

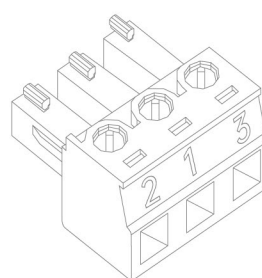
Mechanical Data

Current	AC System
SPD configuration	Single/Three phase
Plugable	Available
Mounting	35mm DIN rail
Material	Thermoplastic,UL94 V-0
Operating temperature	-40°C...+80°C
Protection rating	IP20
Operating state / fault indication	Green / Red
Remote Signaling	Optional
Wiring for remote signaling	Max. 1.5mm solid/flexible
Max.Voltage / Current for remote signaling	250V/0.1A; 125V/0.2A; 75V/0.5A
Standards compliance	IEC 61643-11 / EN 61643-11
Certificate	CE,TUV,RoHS,CB

Size



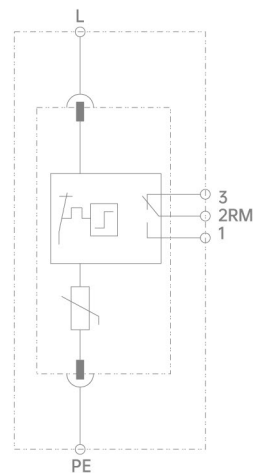
Remote Signaling



MD..+FS	0.5-1.5 mm ²	0.2Nm
	AWG 28-16Cu	1.7lbs-in
Working Voltage	30V DC	
Working Current	50mA	
Contact Resistance	≤100mΩ	
Innlation Resistance	≥100mΩ	
Press Force	30±15gf	
Life	≥1000000	



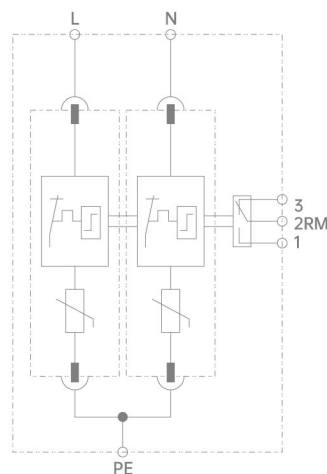
1+0



Weight(1 piece)	150g
Package Quantity	128 pcs/ctn
CTN Size	39.6X30.6X17 cm



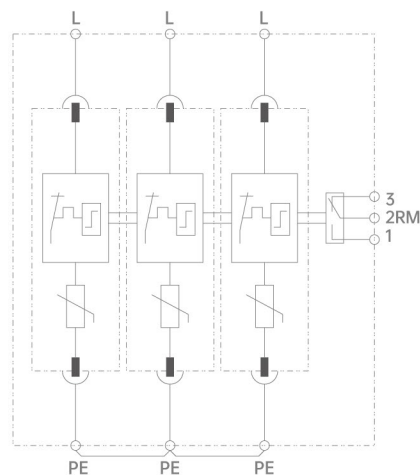
2+0



Weight(1 piece)	250g
Package Quantity	64 pcs/ctn
CTN Size	39.6X30.6X17 cm



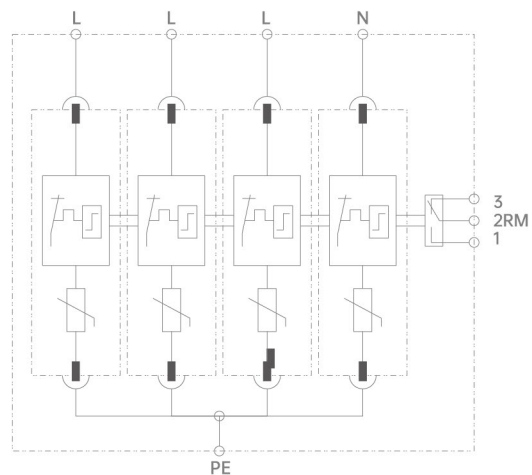
3+0



Weight(1 piece)	350g
Package Quantity	32 pcs/ctn
CTN Size	39.6X30.6X17 cm



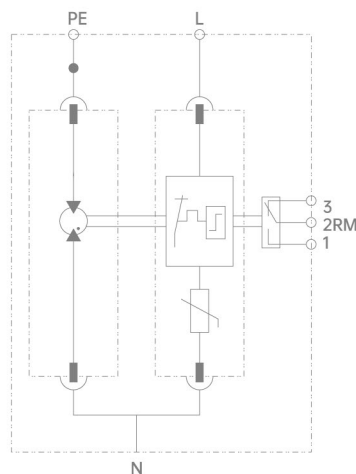
4+0



Weight(1 piece)	450g
Package Quantity	32 pcs/ctn
CTN Size	39.6X30.6X17 cm



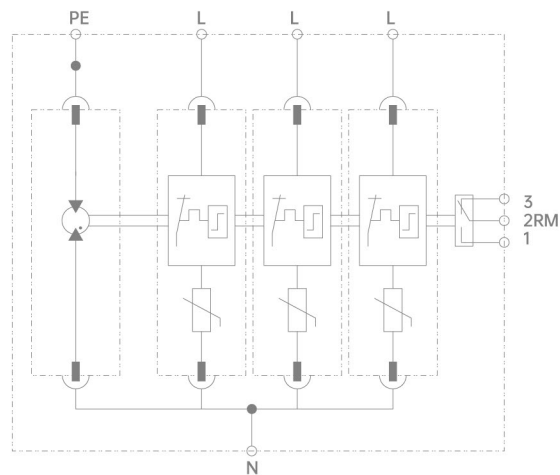
1+1



Weight(1 piece)	250g
Package Quantity	64 pcs/ctn
CTN Size	39.6X30.6X17 cm



3+1



Weight(1 piece)	450g
Package Quantity	62 pcs/ctn
CTN Size	39.6X30.6X17 cm

1. Meets Class II (8/20s waveform) SPD tests
2. Based on zinc oxide technology
3. Using 34S MOV, the maximum will be up to 8/20μs 40kA
4. No power frequency continuous flow
5. The operating environment temperature is -40°C~+70°C
6. Remote signaling function is optional.
7. When product fails, the green window turns to red and remote signaling provides remote alarm function

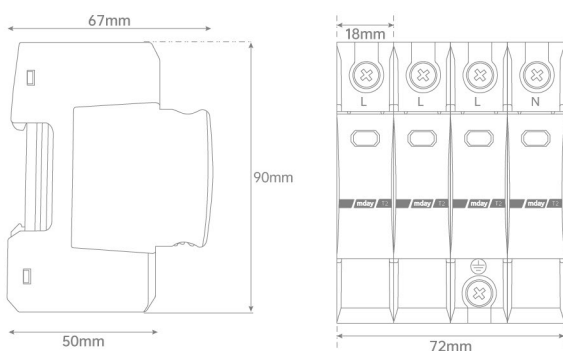
Technical Data

SPD Type	Type 2+3 / Class II+III				
Technology	MOV (Metal Oxide Varistors)				GDT
Protection mode(s)	L-PE/N-PE				NPE
Nominal voltage (a.c.) [Un]	220v	300V	380V	400V	255V
Max. continuous operating voltage (a.c.) [Uc]	275V	320V	385V	420V	255V
Nominal discharge current(8/20μs) [In]	10kA		10kA		10kA
Max.discharge current (8/20μs) [Imax]	20kA		20kA		20kA
Protection level [Up]	≤1.2kV	≤1.3kV	≤1.5kV	≤1.8kV	≤1.2kV
Response time [tA]	≤25ns				
Temporary overvoltage (TOV) Withstand - 5 sec [Ut]	335V	440V	440V	620V	335V
Admissible short-circuit current [Iscrr]	25kA				
Max. backup fuse	32A gL/gG				

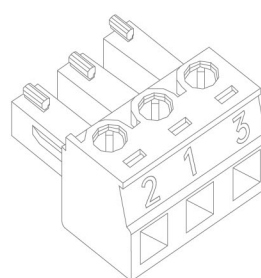
Mechanical Data

Current	AC System
SPD configuration	Single/Three phase
Plugable	Available
Mounting	35mm DIN rail
Material	Thermoplastic,UL94 V-0
Operating temperature	-40°C...+80°C
Protection rating	IP20
Operating state / fault indication	Green / Red
Remote Signaling	Optional
Wiring for remote signaling	Max. 1.5mm solid/flexible
Max.Voltage / Current for remote signaling	250V/0.1A; 125V/0.2A; 75V/0.5A
Standards compliance	IEC 61643-11 / EN 61643-11
Certificate	CE,TUV,RoHS,CB

Size



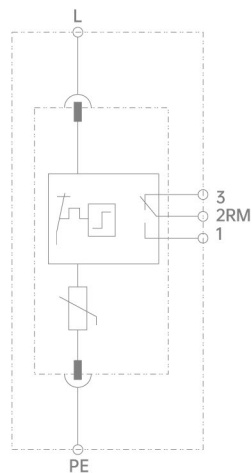
Remote Signaling



MD..+FS	0.5-1.5 mm ² AWG 28-16Cu	0.2Nm 1.7lbs-in
Working Voltage	30V DC	
Working Current	50mA	
Contact Resistance	≤100mΩ	
Innlation Resistance	≥100mΩ	
Press Force	30±15gf	
Life	≥1000000	



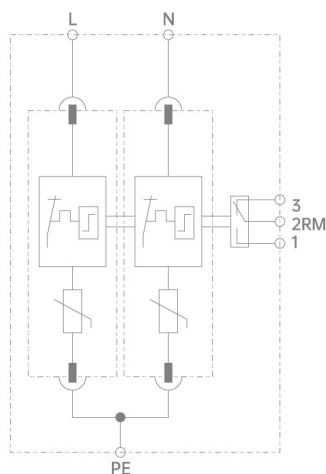
1+0



Weight(1 piece)	150g
Package Quantity	128 pcs/ctn
CTN Size	39.6X30.6X17 cm



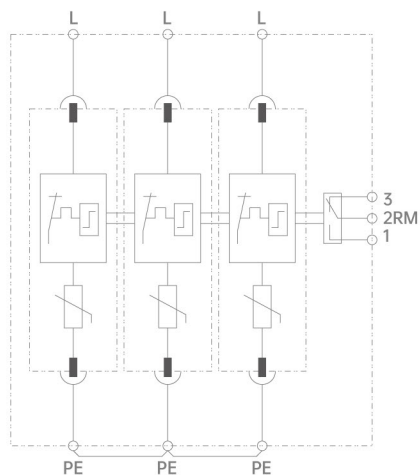
2+0



Weight(1 piece)	250g
Package Quantity	64 pcs/ctn
CTN Size	39.6X30.6X17 cm



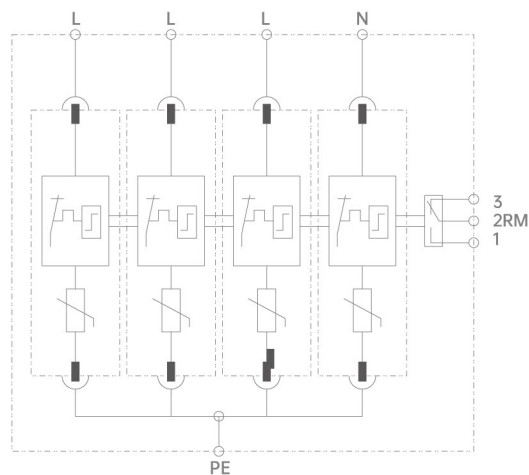
3+0



Weight(1 piece)	350g
Package Quantity	32 pcs/ctn
CTN Size	39.6X30.6X17 cm



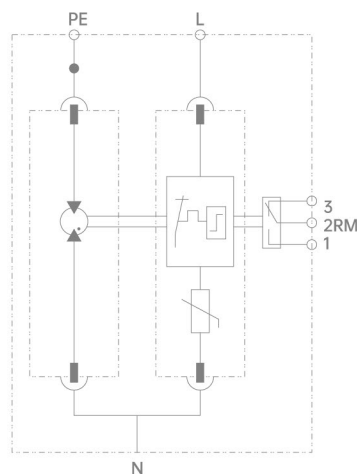
4+0



Weight(1 piece)	450g
Package Quantity	32 pcs/ctn
CTN Size	39.6X30.6X17 cm



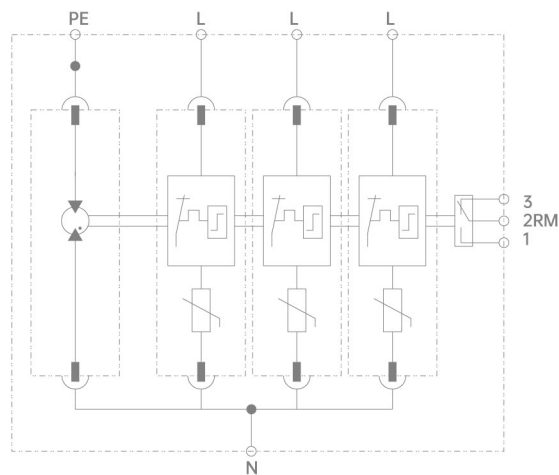
1+1



Weight(1 piece)	250g
Package Quantity	64 pcs/ctn
CTN Size	39.6X30.6X17 cm



3+1



Weight(1 piece)	450g
Package Quantity	62 pcs/ctn
CTN Size	39.6X30.6X17 cm

1. Meets both Class I (10/350us waveform) and Class II (8/20s waveform) SPD tests
2. Based on zinc oxide technology
3. Using 34S-H high-performance MOV, the maximum will be up to 10/350μs 9kA
4. No power frequency continuous flow
5. The operating environment temperature is -40°C~+80°C
6. Remote signaling function is optional.
7. When product fails, the green window turns to red and remote signaling provides remote alarm function

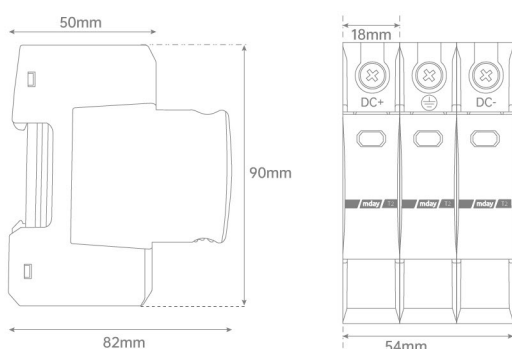
Technical Data

SPD Type	Type 1+2 / Class I+II				
Technology	MOV (Metal Oxide Varistors)				
Protection mode(s)	DC+ / PE.DC- / PE				
Nominal voltage(d.c)	[Ucpv]	600V	800V	1000V	1200V
Nominal discharge current(8/20μs)	[In]	20kA			
Max.discharge current (8/20μs)	[Imax]	50kA			
Lightning impulse current (10/350μs)	[Iimp]	9kA			
Total discharge current for multipole SPD	[Itotal]	18kA			
Protection level	[Up]	≤3.2kV	≤3.6kV	≤4.0kV	≤4.5kV
Response time	[tA]	≤25ns			
Admissible short-circuit current	[Iscrr]	25kA			
Max. backup fuse	125A gL/gG				

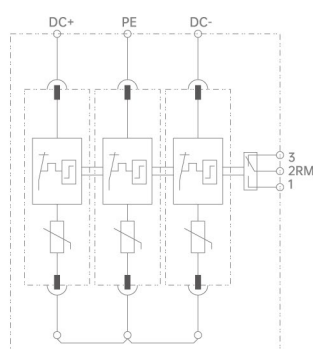
Mechanical Data

Technology	MOV (Metal Oxide Varistors),中间可加GDT
SPD configuration	DC system
Plugable	Available
Mounting	35mm DIN rail
Housing material	Thermoplastic,UL94 V-0
Operating temperature	-40°C...+80°C
Protection rating	IP20
Operating state / fault indication	Green / Red
Remote Signaling	Optional
Wiring for remote signaling	Max. 1.5mm solid/flexible
Max.Voltage / Current for remote signaling	250V/0.1A; 125V/0.2A; 75V/0.5A
Test Standards	IEC 61643-31 / EN 61643-31
Certification	CE,CB,RoHS,TUV

Size



Wiring



1. Meets both Class I (10/350us waveform) and Class II (8/20s waveform) SPD tests
2. Based on zinc oxide technology
3. Using 34S-H high-performance MOV, the maximum will be up to 10/350μs 9kA
4. No power frequency continuous flow
5. The operating environment temperature is -40°C~+80°C
6. Remote signaling function is optional.
7. When product fails, the green window turns to red and remote signaling provides remote alarm function

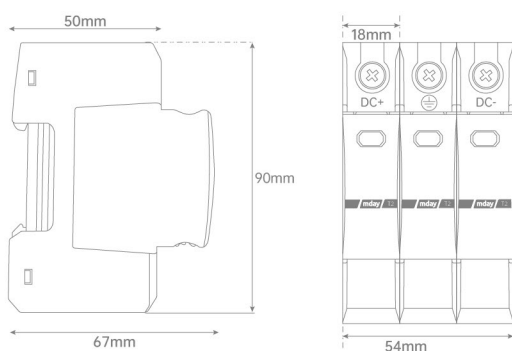
Technical Data

SPD Type	Type 1+2 / Class I+II				
Technology	MOV (Metal Oxide Varistors)				
Protection mode(s)	DC+ / PE.DC- / PE				
Nominal voltage(d.c)	[Ucpv]	600V	800V	1000V	1200V
Nominal discharge current(8/20μs)	[In]	20kA			
Max.discharge current (8/20μs)	[Imax]	50kA			
Lightning impulse current (10/350μs)	[Iimp]	6.25kA			
Total discharge current for multipole SPD	[Itotal]	12.5kA			
Protection level	[Up]	≤3.2kV	≤3.6kV	≤4.0kV	≤4.5kV
Response time	[tA]	≤25ns			
Admissible short-circuit current	[Iscrr]	25kA			
Max. backup fuse		125A gL/gG			

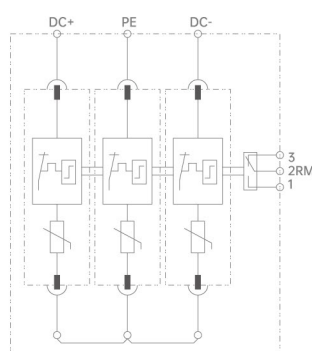
Mechanical Data

Technology	MOV (Metal Oxide Varistors),中间可加GDT
SPD configuration	DC system
Plugable	Available
Mounting	35mm DIN rail
Housing material	Thermoplastic,UL94 V-0
Operating temperature	-40°C...+80°C
Protection rating	IP20
Operating state / fault indication	Green / Red
Remote Signaling	Optional
Wiring for remote signaling	Max. 1.5mm solid/flexible
Max.Voltage / Current for remote signaling	250V/0.1A; 125V/0.2A; 75V/0.5A
Test Standards	IEC 61643-31 / EN 61643-31
Certification	CE,CB,RoHS,TUV

Size



Wiring



1. Meets Class II (8/20s waveform) SPD tests
2. Based on zinc oxide technology
3. Using 34S MOV, the maximum will be up to 8/20μs 40kA
4. No power frequency continuous flow
5. The operating environment temperature is -40°C~+70°C
6. Remote signaling function is optional.
7. When product fails, the green window turns to red and remote signaling provides remote alarm function

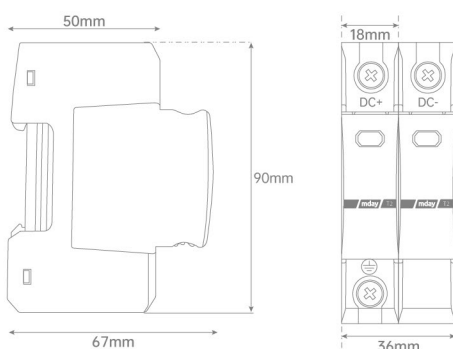
Technical Data

POLE		2P			
SPD Type		Type 2 / Class II			
Technology		MOV/MOV+GDT			
Protection mode(s)		DC+.PE.DC-			
Max. continuous operating voltage (D.c.)	[Ucpv]	600V	800V	1000V	1200V
Nominal discharge current(8/20μs)	[In]	20kA			
Max.discharge current (8/20μs)	[Imax]	40kA			
Protection level	[Up	≤3.2kV	≤3.6kV	≤4.0kV	≤4.5kV
Response time	[tA]	≤25ns			
Admissible short-circuit current	[Iscrr]	25kA			
Max. backup fuse		125A gL/Gg			

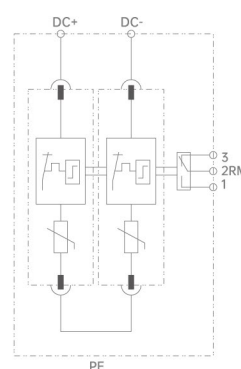
Mechanical Data

SPD configuration	DC system
Plugable	Available
Mounting	35mm DIN rail
Housing material	Thermoplastic,UL94 V-0
Operating temperature	-40°C...+80°C
Protection rating	IP20
Operating state / fault indication	Green / Red
Remote Signaling	Optional
Wiring for remote signaling	Max. 1.5mm solid/flexible
Max.Voltage / Current for remote signaling	250V/0.1A; 125V/0.2A; 75V/0.5A
Standards compliance	IEC 61643-31 / EN 61643-31
Certification	CE,CB,RoHS,TUV

Size



Wiring





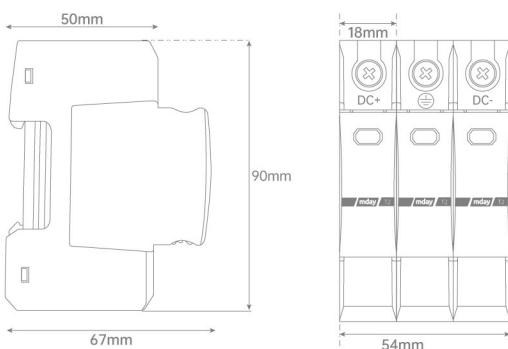
Technical Data

POLE		3P			
SPD Type		Type 2 / Class II			
Technology		MOV (Metal Oxide Varistors),中间可加GDT			
Protection mode(s)		MOV/MOV+GDT			
Max. continuous operating voltage (D.c.)	[Ucpv]	800V	1000V	1200V	1500V
Nominal discharge current(8/20μs)	[In]	20kA			
Max.discharge current (8/20μs)	[Imax]	40kA			
Protection level	[Up]	≤3.6kV	≤4.0kV	≤4.5kV	≤5.2kV
Response time	[tA]	≤25ns			
Admissible short-circuit current	[Iscrr]	25kA			
Max. backup fuse		125A gL/Gg			

Mechanical Data

SPD configuration	DC system
Plugable	Available
Mounting	35mm DIN rail
Housing material	Thermoplastic,UL94 V-0
Operating temperature	-40°C...+80°C
Protection rating	IP20
Operating state / fault indication	Green / Red
Remote Signaling	Optional
Wiring for remote signaling	Max. 1.5mm solid/flexible
Max.Voltage / Current for remote signaling	250V/0.1A; 125V/0.2A; 75V/0.5A
Standards compliance	IEC 61643-31 / EN 61643-31
Certification	CE,CB,RoHS,TUV

Size



Wiring

