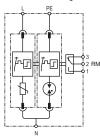
## Type 2 - Single Phase Modular SPD



# Basic circuit diagram:



#### Technical data

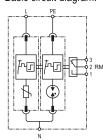
Туре			Single Phase 275V	Single Phase 320V
Rated voltage (max. continuous voltage)	L-N N-PE	U <sub>c</sub>	275V~ 255V~	320V~ 255V~
Nominal discharge current (8/20)	L-N N-PE	I,	20kA 40kA	20kA 40kA
Max. discharge current (8/20)	L-N N-PE	I <sub>max</sub>	40kA 65kA	40kA 65kA
Voltage protection level at I,	L-N N-PE	Up	≤ 1.3kV ≤ 1.8kV	≤ 1.5kV ≤ 1.8kV
Voltage protection level at 5kA	L-N	U <sub>p</sub>	≤ 1.0kV	≤ 1.2kV
Response time	L-N N-PE	t,	≤ 25ns ≤ 100ns	
Follow current extinguishing capability at U <sub>c</sub>	N-PE	l,	100A <sub>rms</sub>	
Max. circuit protection value	L-N		125A gG/gL Fuse / 125A MCCB	
Operating temperature range		T <sub>u</sub>	-40°C+80°C	
Cross-sectional area			1.5mm² ~ 25mm² solid / 35mm² flexible	
Mounting on			35mm DIN rail	
Enclosure material			Purple (module) & light gray (base) thermoplastic, UL94-V0	
Dimension			2 mods	
Test standards			IEC 61643-11; (	GB 18802.1; YD/T 1235.1
Certification			CE	
Type of remote signalling contact			Switching contact	
Switching capacity		U <sub>n</sub> /I <sub>n</sub>	AC:250V/0.5A DC:250V/0.1A,125V/0.2A,75V/0.5A	
Cross-sectional area for remote signalling contact			Max. 1.5mm² solid / flexible	

Dorman Smith Switchgear Ltd, 8 Swinbourne Drive, Braintree, Essex. CM7 2YG UK

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Nominal discharge current (8/20)	L-N N-PE	I,	20kA 40kA	20kA 40kA
Max. discharge current (8/20)	L-N N-PE	I <sub>max</sub>	40kA 65kA	40kA 65kA
Voltage protection level at I,	L-N N-PE	U <sub>p</sub>	≤ 1.3kV ≤ 1.8kV	≤ 1.5kV ≤ 1.8kV
Voltage protection level at 5kA	L-N	U <sub>p</sub>	≤ 1.0kV	≤ 1.2kV
Response time	L-N N-PE	t,	≤ 25ns ≤ 100ns	
Follow current extinguishing capability at U <sub>c</sub>	N-PE	l,	100A <sub>mms</sub>	
Max. circuit protection value	L-N		125A gG/gL Fuse / 125A MCCB	
Operating temperature range		T <sub>u</sub>	-40°C+80°C	
Cross-sectional area			1.5mm <sup>2</sup> ~ 25mm <sup>2</sup> solid / 35mm <sup>2</sup> flexible	
Mounting on			35mm DIN rail	
Enclosure material			Purple (module) & light gray (base) thermoplastic, UL94-V0	
Dimension			2 mods	
Test standards			IEC 61643-11; GB 18802.1; YD/T 1235.1	
Certification			CE	
Type of remote signalling contact			Switching contact	
Switching capacity		U <sub>n</sub> /I <sub>n</sub>	AC:250V/0.5A DC:250V/0.1A,125V/0.2A,75V/0.5A	
Cross-sectional area for remote signalling contact			Max. 1.5mm² solid / flexible	

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#### · Product introduction

#### 1. Summary

For installation at LPZ 0<sub>n</sub>-1 or higher, protecting low voltage equipment from surge Applied in modular SPD Class II (Class C) for TT and TN power supply system.

Designed according to IEC 61643-11; GB 18802.1; YD/T 1235.1.

#### 3. Application

The SPD is applied in three-phase TT and TN systems (1+1 circuit)

#### · Installation instruction

According to lightning protection zones concept, for installation at LPZ  $0_{\rm g}$ -1 or higher. This surge protective device is usually installed in distribution-box or feeder bus of UPS, protecting devices or equipment downstream.

Fuse must be installed at the upstream of the SPD or the lightning arrester to make sure that the protected system has double protection. The value of the fuse used in a SPD system should be conformed to

- 1. The value of FUSE should not be larger than the max. withstand capacity of the SPD's backup fuse value.
- Under the status of the max. current in the power supply & close loop circuit available current, the fuse should be able to disconnect when overloaded or short-circuited.
- 3. Take 1 & 2 into consideration, the fuse should be as large as possible to allow the maximum surge discharge of SPD.

## 2. Main character

- Small volume, pluggable Quick response
- Double thermal disconnector devices, providing more reliable protection
- Green window will change to red when fault and also provide remote alarm control at the same time

#### 4. Application environment

- Temperature: -40°C...+80°C
- Relative humidity: ≤ 95% (25°C)

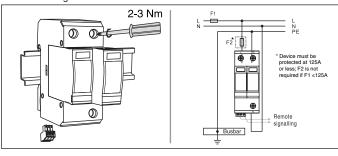
#### Installation steps

- Check the product for integrity of the package; make sure the product window indicate green.
   Mount the SPD on the 35mm DIN rail.
- Connect conductors, the cross-sectional area of cable must be larger than 6mm². The withstand voltage value of cable is not smaller than AC500V; ensure wiring reliable.
   If need remote alarm, it should be connected signal lines to
- remote signal terminal 1 and 2, or 2 and 3 (When normal, 1 and 2 open, 2 and 3 close; when fault, the state is reversed).

  5. After above, switch on the power supply and turn on the
- circuit breaker, if the SPD's window indicates green, this indicates the unit is operating normally.

Regularly inspect the operating status, especially after lightning. Once the fuse upstream breaks, or the SPD's window indicates red, electrician should check/replace

#### Installation Diagram





#### WARNING:

- The device must be installed by electrically skilled person, conforming to national standards and safety regulations.
   It is recommended that installation should be done under power off condition.

419-1-0057 v3 - T2INM12040-1CPN - 090719

### · Product introduction

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#### 3. Application

The SPD is applied in three-phase TT and TN systems (1+1 circuit)

## Installation instruction

According to lightning protection zones concept, for installation at LPZ  $0_8$ -1 or higher. This surge protective device is usually installed in distribution-box or feeder bus of UPS, protecting devices or equipment downstream.

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- 1. The value of FUSE should not be larger than the max. withstand capacity of the SPD's backup fuse value.
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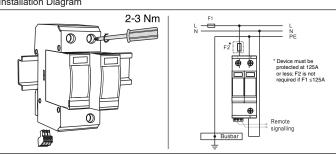
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#### Installation Diagram





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