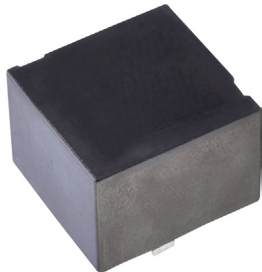


# Surge Protective Device Module **multicomp**<sup>PRO</sup>

**RoHS  
Compliant**



## Description

Surge protective device module (SPD-M) is an onboard lightning protection module that integrates functions, such as thermal protection, overvoltage protection, and remote signaling, and others. A single module can meet common-mode, differential-mode or full-mode protection requirements.

SPD-M, an integrated solution, can simplify the design and selection of surge protection modules for users, and is suitable for surge protection of low-voltage AC or DC power supply equipment. Surge protective device module (SPD-M) has the characteristics of small board space, high level of integration, and complete protection functions and solutions.

## Approvals

UL1449  
TUV EN 61643-11

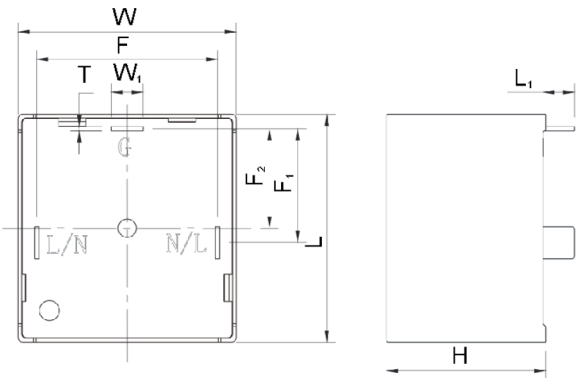
## Applications

- Telecom Equipment
- AC / DC Power Supply
- Uninterruptable Power Supply (UPS)
- Surge Protective Device (SPD)

## Features

- High Reliability
- Small Size
- Combination Technology of ATCO, MOV and GDT
- Comply with UL 1449 / IEC 61643-11
- Differential-mode / Common-mode Protection

## Diagram



L	L <sub>1</sub>	W	W <sub>1</sub>	H	T	F	F <sub>1</sub>	F <sub>2</sub>
25 ±1	3.5 ±1	24 ±1	3.5 ±0.5	17.6 ±1	0.5 ±0.05	20 ±1	12.5 ±1	11 ±1

Dimensions : Millimetres

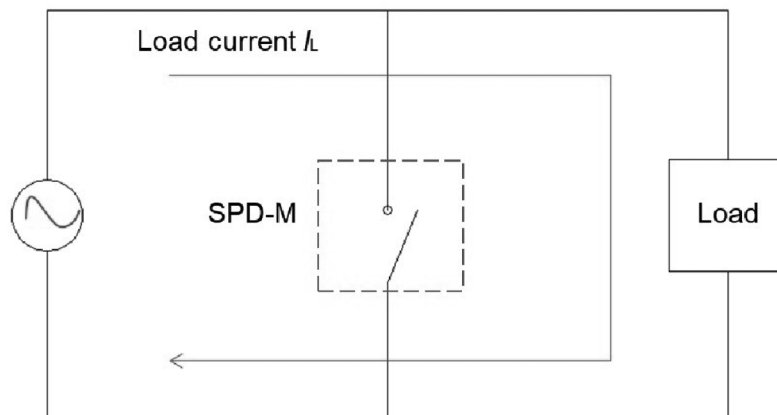
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Farnell.com/multicomp-pro  
sg.element14.com/b/multicomp-pro

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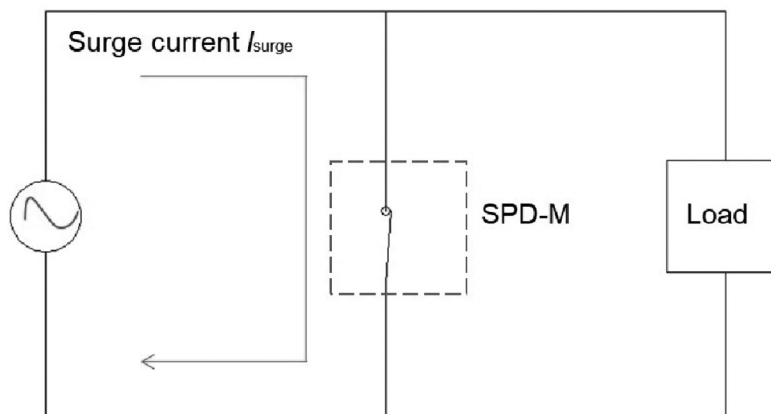
# Surge Protective Device Module **multicomp**<sup>PRO</sup>

## Operation Principle

SPD-M is equivalent to open circuit when the circuit without surge (Impedance > 100 MΩ)



When a surge invades the circuit, the SPD-M circuit mutates to a low impedance, releasing the surge current into the ground



# Surge Protective Device Module **multicomp**<sup>PRO</sup>

## Glossary

Item	Description
<b>U<sub>p</sub></b>	<b>Voltage Protection Level</b> Maximum voltage to be expected at the SPD terminals due to an impulse stress with defined voltage steepness and an impulse stress with a discharge current with given amplitude and wave shape.
<b>8/20 μs</b>	<b>8/20 Current Impulse</b> Current impulse with a nominal virtual front time of 8μs and a nominal time to half-value of 20μs.
<b>1.2/50 μs</b>	<b>1.2/50 Voltage Impulse</b> Voltage impulse with a nominal virtual front time of 1.2μs and a nominal time to half-value of 50μs.
<b>U<sub>c</sub></b>	<b>Maximum Continuous Operating Voltage</b> Maximum r.m.s. voltage, which may be continuously applied to the SPD's mode of protection.
<b>I<sub>n</sub></b>	<b>Nominal Discharge Current</b> Crest value of the current through the SPD having a current waveshape of 8/20.
<b>I<sub>imp</sub></b>	<b>Impulse Discharge Current for Class I Test</b> Crest value of a discharge current through the SPD with specified charge transfer Q and specified energy W/R in the specified time.
<b>I<sub>max</sub></b>	<b>Maximum Discharge Current</b> Crest value of a current through the SPD having an 8/20 waveshape and magnitude according to the manufacturers specification. I <sub>max</sub> is equal to or greater than I <sub>n</sub> .
<b>Modes of protection</b>	<b>Modes of protection</b> An intended current path, between terminals that contains protective components, e.g. line-to-line, line-to-earth, line-to-neutral, neutral-to-earth.
<b>I<sub>p</sub></b>	<b>Degree of protection of enclosure</b> Classification preceded by the symbol IP indicating the extent of protection provided by an enclosure against access to hazardous parts, against ingress of solid foreign objects and possibly harmful ingress of water
<b>TCO</b>	<b>Thermal-Link</b> A non-resettable device incorporating a THERMAL ELEMENT which will open a circuit once only when exposed for a sufficient length of time to a temperature in excess of that for which it has been designed.
<b>ATCO</b>	<b>Alloy Thermal-Link</b> Alloy Type Thermal-Link, Alloy is the thermal element.

# Surge Protective Device Module **multicomp**PRO

**Specification Table**

Part Number	Max. Continuous Operating Voltage		Nominal Discharge Current (8/20 μs)	Max. Discharge Current (8/20 μs)	Voltage Protection Level	Response Time	External Overcurrent Protection
	U <sub>s</sub>		I <sub>n</sub>	I <sub>max</sub>	U <sub>p</sub>		
	(VAC)	(VDC)	(kA)	(kA)	(V)	(ns)	(A)
MPSM15S241P3NBB	150	--	5	10	800	<25	10
MPSM15S271P3NBB	175						
MPSM15S471P3NBB	300				1200		
MPSM15S511P3NBB	320				1500		
MPSM15S241P3GBB	150				800	<100	
MPSM15S271P3GBB	175						
MPSM15S471P3GBB	300				1200		
MPSM15S511P3GBB	320				1500		
MPSM15S561P3GBB	350						

Note:

a: Recommended External Circuit Breaker Model C 10 A, Curve C.

**Part Number Table**

Description	Part Number
SPD Module, 5kA, 150V AC	MPSM15S241P3NBB
SPD Module, 5kA, 175V AC	MPSM15S271P3NBB
SPD Module, 5kA, 300V AC	MPSM15S471P3NBB
SPD Module, 5kA, 320V AC	MPSM15S511P3NBB
SPD Module, 5kA, 150V AC	MPSM15S241P3GBB
SPD Module, 5kA, 175V AC	MPSM15S271P3GBB
SPD Module, 5kA, 300V AC	MPSM15S471P3GBB
SPD Module, 5kA, 320V AC	MPSM15S511P3GBB
SPD Module, 5kA, 350V AC	MPSM15S561P3GBB

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