

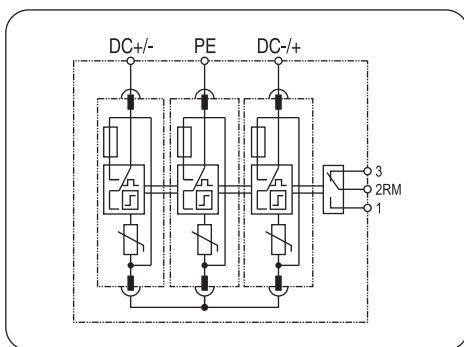
# BlitzTrap

# SPD

## BT Y PVM ... RM



Basic circuit diagram:



### • Technical data

Type		BT Y PVM 150 RM	BT Y PVM 600 RM	BT Y PVM 1000 RM	BT Y PVM 1200 RM	BT Y PVM 1500 RM
Art.-No.		800 505	800 506	800 507	800 509	800 508
Max. PV voltage	$U_{CPV}$	$\leq 150V$	$\leq 600V$	$\leq 1000V$	$\leq 1200V$	$\leq 1500V$
Short circuit current (EN 50539-11)	$I_{SCPV}$	1000A	1000A	1000A	1000A	1000A
Nominal discharge current (8/20)	$I_n$	20kA	20kA	20kA	20kA	15kA
Max. discharge current (8/20)	$I_{max}$	40kA	40kA	40kA	40kA	40kA
Voltage protection level for $I_n$	$U_p$	$\leq 1,0kV$	$\leq 2,5kV$	$\leq 4,0kV$	$\leq 4,0kV$	$\leq 6,0kV$
Voltage protection level at 5kA	$U_p$	$\leq 0,8kV$	$\leq 2,0kV$	$\leq 3,5kV$	$\leq 3,5kV$	$\leq 5,2kV$
Response time	$t_A$	$\leq 25ns$				
Operating temperature range	$T_u$	$-40^{\circ}C...+80^{\circ}C$				
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 grey (base) thermoplastic, UL94-V0				
Dimension		3 mods				
Test standards		IEC 61643-11; GB/T 18802.11; YD/T 1235.1				
Certification		CE				
Type of remote signalling contact		Switching contact				
Switching capacity		AC: 250V/0,5A; DC: 250V/0,1A, 125V/0,2A, 75V/0,5A				
Cross-sectional area for remote signalling contact		Max. 1.5mm <sup>2</sup> solid / flexible				

### • Product introduction

#### 1. Summary

BT Y PVM ... RM is applied in photovoltaic system. The max. PV voltage up to  $U_{CPV}=1500V$  dc, protecting photovoltaic inverter and so on.  
Designed according to IEC 61643-11; GB/T 18802.11; YD/T 1235.1

#### 3. Application

BT Y PVM ... RM is applied in PV system power supply system, Prevent surge and direct lightning, protecting photovoltaic inverter equipment.

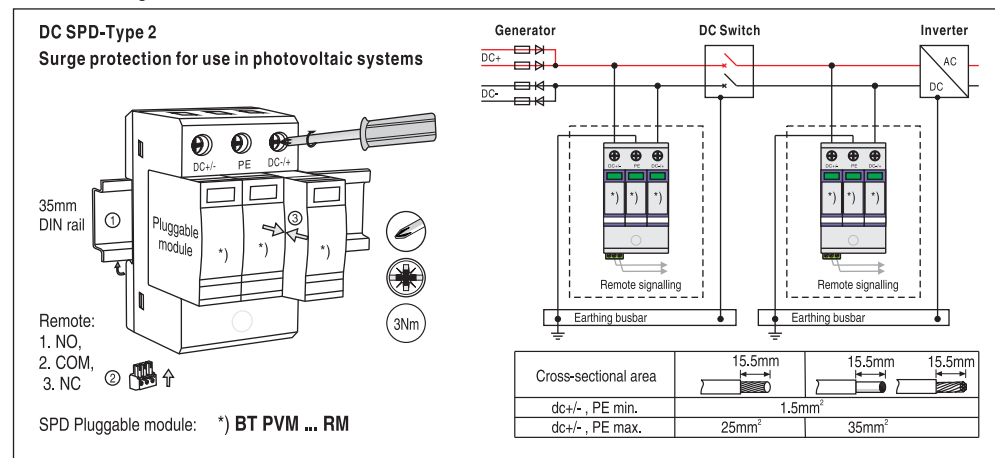
### • Installation instruction

This surge protective device is usually installed in distribution-box, protecting PV system devices in photovoltaic generator circuit.

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.
2. 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.

#### Installation diagram :



#### 2. Main character

- High discharge capacity, quick response, pluggable
- Approved fault-resistant circuit, consist of three varistors and thermal disconnection device
- Double thermal disconnection devices providing more reliable protection
- Window will display red when fault occurs, also provide remote alarm terminal at the same time

#### 4. Application environment

- Temperature:  $-40^{\circ}C \sim +80^{\circ}C$
- Relative humidity:  $\leq 95\%$  ( $25^{\circ}C$ )

### • Installation steps

1. Check the product for integrity of the package; make sure the product window indicate green.
2. Mount the SPD on 35 mm DIN rail.
3. Connect conductors, the cross-sectional area of cable must be larger than 6mm<sup>2</sup>. The withstand voltage value of cable is not smaller than AC1060V; ensure wiring reliable.
4. 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 appeared green window, indicates the unit is operating normally.

**Regularly inspect the operating status, especially after lightning. Once the fuse upstream break, or the SPD's window not indicate green, electrician should check/replace the SPD.**

**WARNING:**

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