



MERI China LLC

MERI SPD Solution





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This is the 60 KA Surge Generator test lab for SPD application test.



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Plug-in Type SPD, Very good insulation grade and hot-pluggable application.



Professional test equipment and procedure to sort the MOV chip for SPD application.



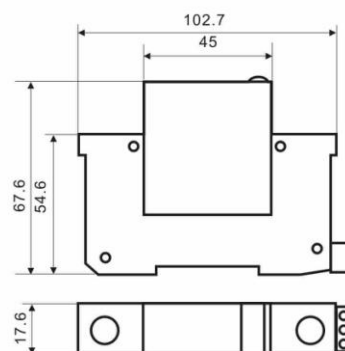
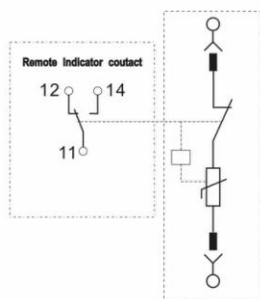
We have good quality system to assure high reliability final products.



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VD10 (Plug-in Type) MOV SPD

Rating discharge current	$I_n(8/20) \mu s$	10kA
Max. discharge current	$I_{max}(8/20) \mu s$	20kA
Preset Fuse		16A
Response time	t_a	< 50ns
Leakage current		< 15uA
Temperature range		-40°C to +80°C
Degree of protection in acc		IP20
Housing materials		PBT/PA-F
Inflammability class		UL 94-V0
Remote ind. contact	Max. operation current I_{max} AC	0.2A/125V
	Max. operation current I_{max} DC	0.5A/48V DC
Installation Screw		M5/M2
Installation Torque		6Nm/0.25Nm



Configurable Unit

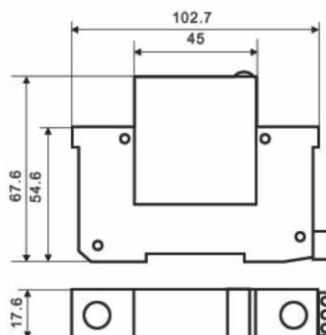
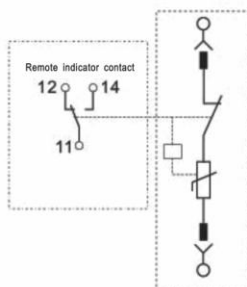
2P(1P+N):	L-PE N-PE
1P+1:	L-N N-PE
3P(2P+N):	L1-PE L2-PE L3-PE
2P+1:	L-N L-PE N-PE
4P(3P+N):	L1-PE L2-PE L3-PE N-PE



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VC20 (Plug-in Type) MOV SPD

Rating discharge current	$I_n(8/20) \mu s$	20kA
Max. discharge current	$I_{max}(8/20) \mu s$	40kA
Preset Fuse		16A
Response time	t_a	< 50ns
Leakage current		< 15uA
Temperature range		-40°C to +80°C
Degree of protection in acc		IP20
Housing materials		PBT/PA-F
Inflammability class		UL 94-V0
Remote ind. contact	Max. operation current I_{max} AC	0.2A/125V
	Max. operation current I_{max} DC	0.5A/48V DC
Installation Screw		M5/M2
Installation Torque		6Nm/0.25Nm



Configurable unit



1PN



2PN



3P



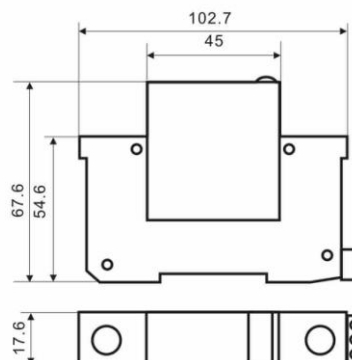
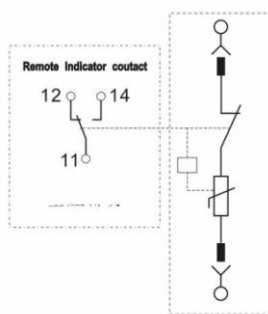
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VB40 (Standard Type) MOV SPD

Rating discharge current	$I_n(8/20) \mu s$	40kA
Max. discharge current	$I_{max}(8/20) \mu s$	80kA
Preset Fuse		25A
Response time t_a		< 50ns
Leakage current		< 25uA
Temperature range		-40°C to +80°C
Degree of protection		IP20
Housing materials		PBT/PA-F
Inflammability class		UL 94-V0
Remote ind. contact	Max. operation current I_{max} AC	0.2A/125V
	Max. operation current I_{max} DC	0.5A/48V
Installation Screw		M5/M2
Installation Torque		6Nm/0.25Nm



Configurable Unit

2P(1P+N):	L-PE N-PE
1P+1:	L-N N-PE
3P(2P+N):	L1-PE L2-PE L3-PE
2P+1:	L-N L-PE N-PE
4P(3P+N):	L1-PE L2-PE L3-PE N-PE

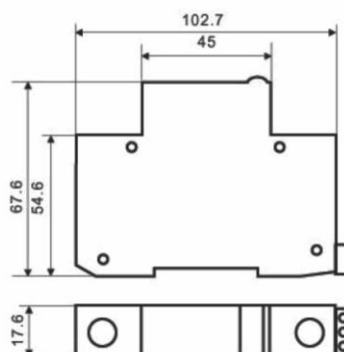
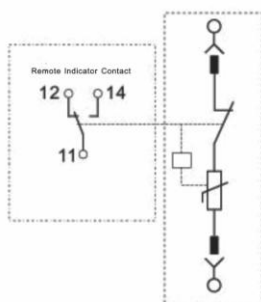




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VP20 (Standard Type) MOV SPD

Rating discharge current	$I_n(8/20) \mu s$	20kA
Max. discharge current	$I_{max}(8/20) \mu s$	40kA
Preset Fuse		16A
Response time t_a		< 50ns
Leakage current		< 15uA
Temperature range		-40°C to +80°C
Degree of protection		IP20
Housing materials		PBT/PA-F
Inflammability class		UL 94-V0
Remote ind. contact	Max. operation current I_{max} AC	0.2A/125V
	Max. operation current I_{max} DC	0.5A/48V
Installation Screw		M5/M2
Installation Torque		6Nm/0.25Nm



Configurable unit

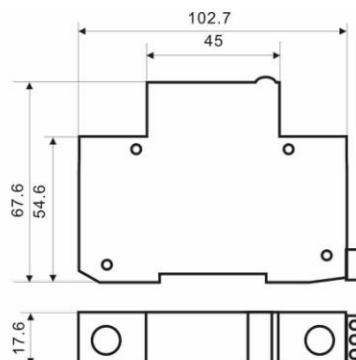
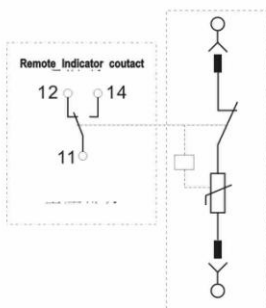
2P(1P+N):	L-PE N-PE
1P+1:	L-N N-PE
3P(2P+N):	L1-PE L2-PE L3-PE
2P+1:	L-N L-PE N-PE
4P(3P+N):	L1-PE L2-PE L3-PE N-PE



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VP40 (Standard Type) MOV SPD

Rating discharge current	$I_n(8/20) \mu s$	40kA
Max. discharge current	$I_{max}(8/20) \mu s$	80kA
Preset Fuse		25A
Response time t_a		< 50ns
Leakage current		< 25uA
Temperature range		-40°C to +80°C
Degree of protection		IP20
Housing materials		PBT/PA-F
Inflammability class		UL 94-V0
Remote ind. contact	Max. operation current I_{max} AC	0.2A/125V
	Max. operation current I_{max} DC	0.5A/48V
Installation Screw		M5/M2
Installation Torque		6Nm/0.25Nm



Configurable unit

2P(1P+N):	L-PE N-PE
1P+1:	L-N N-PE
3P(2P+N):	L1-PE L2-PE L3-PE
2P+1:	L-N L-PE N-PE
4P(3P+N):	L1-PE L2-PE L3-PE N-PE



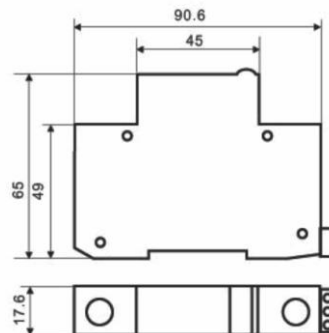
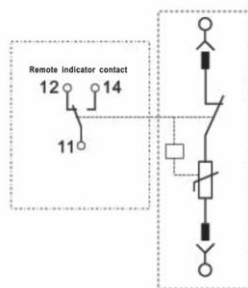
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VP60 (Standard Type)MOV SPD

Rating discharge current	$I_n(8/20) \mu s$	60kA
Max. discharge current	$I_{max}(8/20) \mu s$	120kA
Preset Fuse		25A
Response time t_a		< 50ns
Leakage current		< 35uA
Temperature range		-40°C to +80°C
Degree of protection		IP20
Housing materials		PBT/PA-F
Inflammability class		UL 94-V0
Remote ind. contact	Max. operation current I_{max} AC	0.2A/125V
	Max. operation current I_{max} DC	0.5A/48V
Installation Screw		M5/M2
Installation Torque		6Nm/0.25Nm



Configurable unit

2P(1P+N):	L-PE N-PE
1P+1:	L-N N-PE
3P(2P+N):	L1-PE L2-PE L3-PE
2P+1:	L-N L-PE N-PE
4P(3P+N):	L1-PE L2-PE L3-PE N-PE



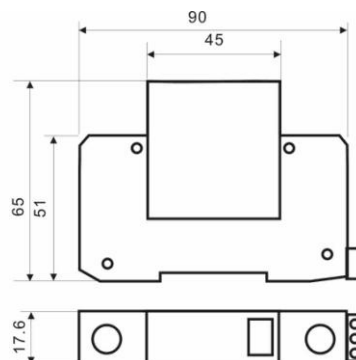
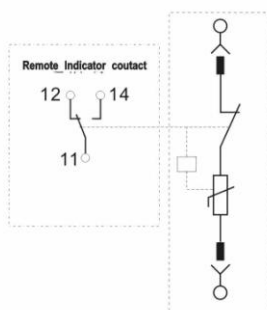
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VS20 (Plug-in Type) MOV SPD

Rating discharge current	$I_n(8/20) \mu s$	20kA
Max. discharge current	$I_{max}(8/20) \mu s$	40kA
Preset Fuse		25A
Response time t_a		< 50ns
Leakage current		< 35uA
Temperature range		-40°C to +80°C
Degree of protection		IP20
Housing materials		PBT/PA-F
Inflammability class		UL 94-V0
Remote ind. contact	Max. operation current I_{max} AC	0.2A/125V
	Max. operation current I_{max} DC	0.5A/48V
Installation Screw		M5/M2
Installation Torque		6Nm/0.25Nm



Configurable Unit

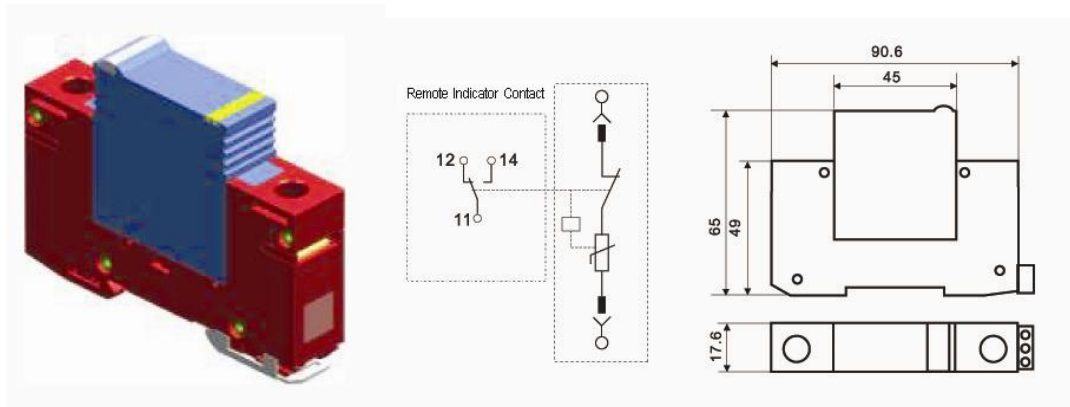
2P(1P+N):	L-PE N-PE
1P+1:	L-N N-PE
3P(2P+N):	L1-PE L2-PE L3-PE
2P+1:	L-N L-PE N-PE
4P(3P+N):	L1-PE L2-PE L3-PE N-PE



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VSP20 (Plug-in Type) MOV SPD

Rating discharge current	$I_n(8/20) \mu s$	20kA
Max. discharge current	$I_{max}(8/20) \mu s$	40kA
Preset Fuse		25A
Response time t_a		< 25ns
Leakage current		< 29uA
Temperature range		-40°C to +80°C
Degree of protection		IP20
Housing materials		PBT/PA-F
Inflammability class		UL 94-V0
Remote ind. contact	Max. operation current I_{max} AC	0.2A/125V
	Max. operation current I_{max} DC	0.5A/48V
Installation Screw		M5/M2
Installation Torque		6Nm/0.25Nm



Configurable Unit

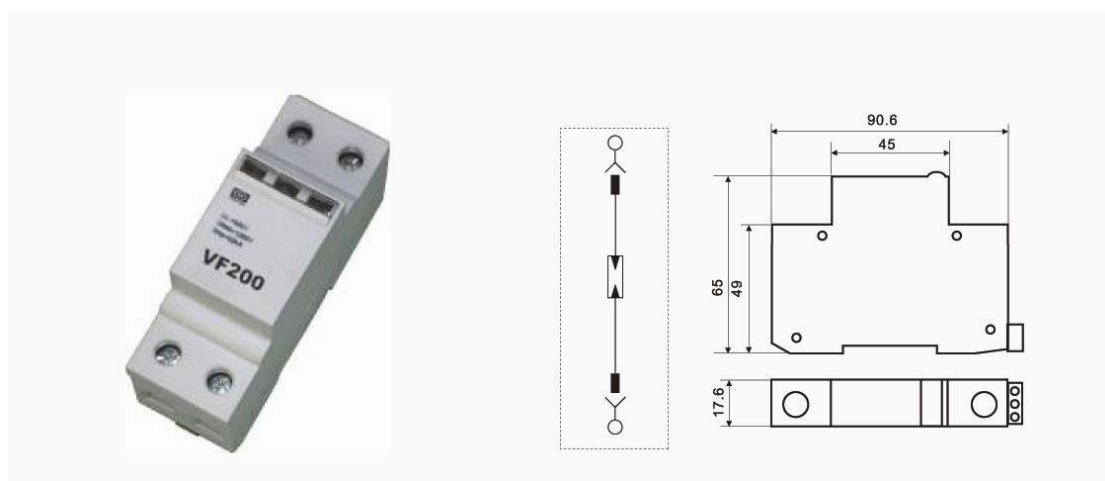
1PN	L-PE N-PE	
1P1	L-N N-PE	20kA
2PN	L1-PE L2-PE L3-PE	
2P1	L-N L-PE N-PE	40kA
3PN	L1-PE L2-PE L3-PE N-PE	
3P1	L1-N L2-N L3-N N-PE	60kA



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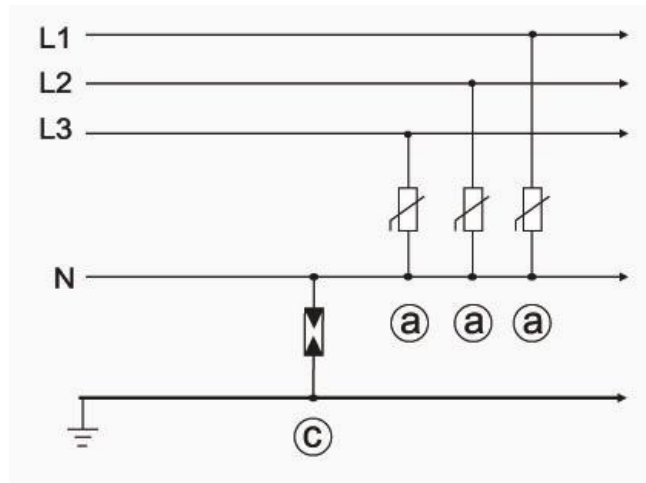
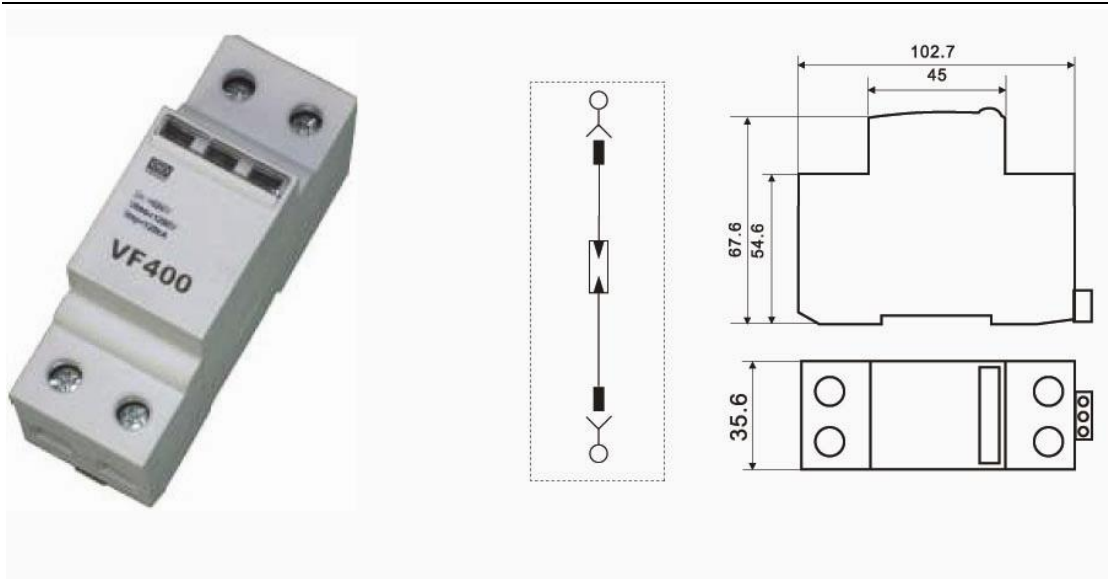
VF200 VF400 Lightning Arrestor

	VF200	VF400
Pulse Breakdown Voltage (1000V/ μ s)	1200V	1200V
DC Breakdown Voltage (100V/s)	230V	230V
Max. discharge current $I_{max}(10/350 \mu s)$	60kA	120kA
Capacitance	< 50pF	< 50pF
Response time t_a	< 50ns	< 50ns
Temperature range	-40°C to +80°C	-40°C to +80°C
Degree of protection	IP20	IP20
Housing materials	PBT/PA-F	PBT/PA-F
Inflammability class	UL 94-V0	UL 94-V0
Installation Screw	M5	M5
Installation Torque	6Nm	6Nm





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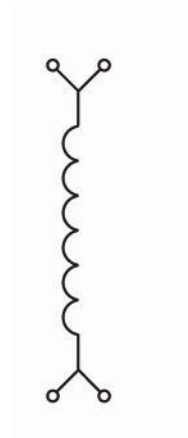




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Decouple Inductor

Type No.	PL32	PL65
Rating Current	32 A	65 A
Inductance	5uH	5uH
Temperature range	-25°C to +80°C	-25°C to +80°C
Degree of protection	IP20	IP20
Housing materials	PBT/PA-F	PBT/PA-F
Installation	Screw	Screw

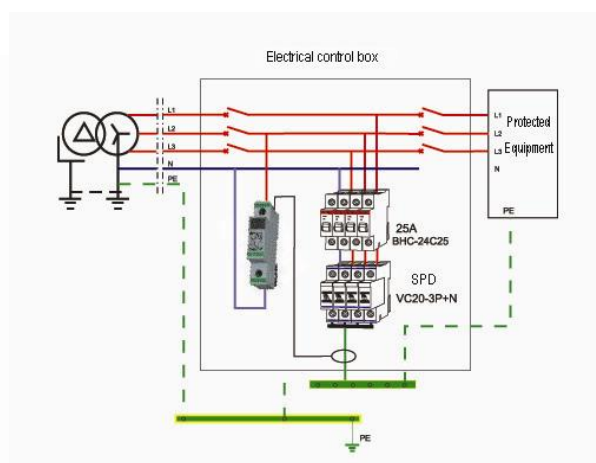




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Surge Counter TDA-01-99

Rating Voltage	220V AC
Max. surge count	99
Surge sensor	ZCT-24-01
Count response surge current	0.5 KA
Temperature range	-25°C to +80°C
Degree of protection	IP20
Housing materials	PBT/PA-F
Installation	Screw

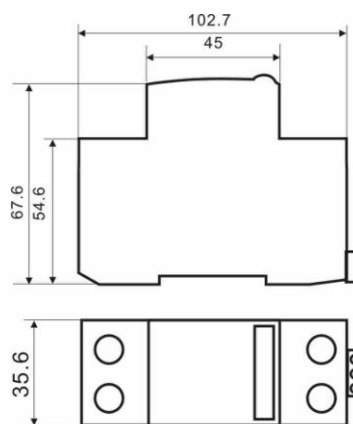
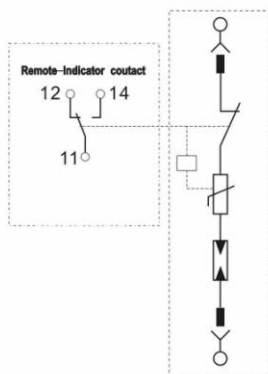




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VA80 Standard Type MOV SPD

Rating discharge current	$I_n(8/20) \mu s$	80kA
Max. discharge current	$I_{max}(8/20) \mu s$	160kA
Preset Fuse		25A
Response time t_a		< 50ns
Leakage current		< 25uA
Temperature range		-40°C to +80°C
Degree of protection		IP20
Housing materials		PBT/PA-F
Inflammability class		UL 94-V0
Remote ind. contact	Max. operation current I_{max} AC	0.2A/125V
	Max. operation current I_{max} DC	0.5A/48V
Installation Screw		M5/M2
Installation Torque		6Nm/0.25Nm



Configurable Unit

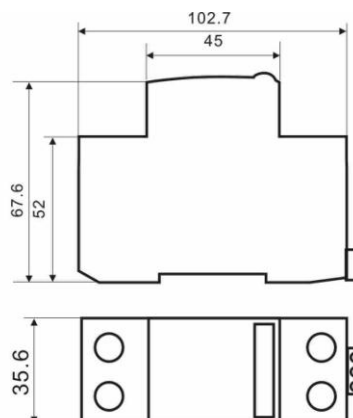
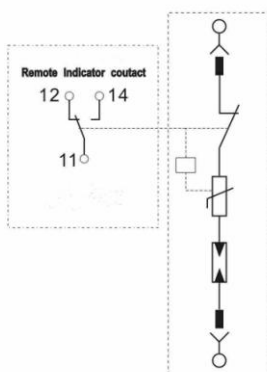
2P(1P+N):	L-PE N-PE
1P+1:	L-N N-PE
3P(2P+N):	L1-PE L2-PE L3-PE
2P+1:	L-N L-PE N-PE
4P(3P+N):	L1-PE L2-PE L3-PE N-PE



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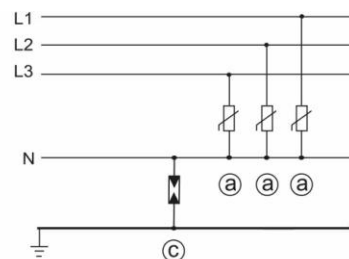
VA100 Standard Type MOV SPD

Rating discharge current $I_n(8/20) \mu s$		100kA
Max. discharge current $I_{max}(8/20) \mu s$		180kA
Preset Fuse		50A
Response time t_a		< 50ns
Leakage current		< 45uA
Temperature range		-40°C to +80°C
Degree of protection		IP20
Housing materials		PBT/PA-F
Inflammability class		UL 94-V0
Remote ind. contact	Max. operation current I_{max} AC	0.2A/125V
	Max. operation current I_{max} DC	0.5A/48V
Installation Screw		M5/M2
Installation Torque		6Nm/0.25Nm



Configurable Unit

2P(1P+N):	L-PE N-PE
1P+1:	L-N N-PE
3P(2P+N):	L1-PE L2-PE L3-PE
2P+1:	L-N L-PE N-PE
4P(3P+N):	L1-PE L2-PE L3-PE N-PE





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TD9-02/8 SPD for Ethernet

Rating discharge current $I_n(8/20) \mu s$	2 kA
Max. discharge current $I_{sn}(8/20) \mu s$	4 kA
Limit Voltage (1kV/s) 0.5KA Up	Line-Line < 25V, Line to Gnd < 500V
Limit Voltage (8/20 μs) 2 KA Up	Line to Gnd < 130V
Insert Loss	< 0.5dB
Frequency Range	1-100 mHz
Transmission Speed	0.72C
Response time t_a	< 2 ns
I/O connector	RJ-45
Grounding	6.3mm copper wire
Protect Circuit	1,2,3,4,5,6,7,8
Temperature range	-25°C to +80°C
Degree of protection	IP20
Housing materials	Aluminum Alloy





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TD9-06 SPD for Ethernet

Rating discharge current $I_n(8/20) \mu s$	5 kA
Max. discharge current $I_{sn}(8/20) \mu s$	10 kA
Limit Voltage (1kV/s) 0.5KA Up	Line to Gnd < 500V
Limit Voltage (8/20 μs) 2 KA Up	Line to Gnd < 130V
Insert Loss	< 0.5dB
Frequency Range	1-100 mHz
Transmission Speed	0.72C
Response time t_a	< 2 ns
I/O connector	BNC
Grounding	6.3mm copper wire
Protect Circuit	Signal to Gnd.
Temperature range	-25°C to +80°C
Degree of protection	IP20
Housing materials	Aluminum Alloy





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TD2-06 SPD for CCTV

Rating discharge current $I_n(8/20) \mu s$	5 kA
Max. discharge current $I_{sn}(8/20) \mu s$	10 kA
Limit Voltage (1kV/s) 0.7KA Up	Line to Shielding Chassis < 35V
Limit Voltage (1kV/s) 0.7 KA Up	Shielding Chassis to Gnd < 600V
Limit Voltage (8/20us) 5 KA Up	Line to Gnd < 180V
Limit Voltage (8/20us) 10 KA Up	Line to Gnd < 300V
Insert Loss	< 0.5dB
Frequency Range	1-50 mHz
Transmission Speed	0.72C
Response time t_a	< 2 ns
I/O connector	BNC
Grounding	6.3mm copper wire
Protect Circuit	Signal and ground
Temperature range	-25°C to +80°C
Degree of protection	IP20
Housing materials	Aluminum Alloy





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TD8-13-6V SPD for RS-232/485 Interface

Rating discharge current I_n (8/20) μ s	5 kA
Max. discharge current I_{sn} (8/20) μ s	10 kA
Limit Voltage (1kV/s) 0.7KA Up	Line to Gnd < 700V
Limit Voltage (1kV/s) 0.7 KA Up	Line to Line < 25V
Limit Voltage (8/20 μ s) 5 KA Up	Line to Gnd < 300V
Insert Resistance	< 2 Ohm
Frequency Range	1-100 MHz
Response time t_a	< 2 ns
I/O connector	Terminal block
Grounding	6.3mm copper wire
Protect Circuit	Signal-Signal, Signal -Gnd.,
Temperature range	-25°C to +80°C
Degree of protection	IP20
Housing materials	Aluminum Alloy





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TD01-13 SPD for 3-in-1 CCTV/Power Supply/Control Signal

	Power Supply	CCTV video Signal	Control Signal
Max. Operation Voltage Vs	320V	12V	24V
Load current	5A		
Protect Circuit	AC220/ DC24V		
Rating discharge current In (8/20) μ s	10kA	5kA	5 kA
Max. discharge current Isn (8/20) μ s	20 kA	10 kA	10 kA
Limit Voltage (8/20 μ s) 10KA Up	< 1.2 kV		
Limit Voltage(1kV/us) 0.072 KA Up		Line to Line < 37V	Line to Line < 55V
Limit Voltage (8/20 μ s) 5KA Up		Line to Gnd < 900V	Line to Gnd < 900V
Insert Loss		< 0.4dB	< 0.4dB
Frequency Range		10 mHz	
Transmission Speed			10M bit/s
Response time t _a	< 25 ns	< 2 ns	< 2 ns
Installation Method	In Series	In Series	In Series
I/O connector	Terminal block	BNC	Terminal block
Grounding	6.3mm copper wire	6.3mm copper wire	6.3mm copper wire
Temperature range	-25°C to +80°C	-25°C to +80°C	-25°C to +80°C
Degree of protection	IP20	IP20	IP20
Housing materials	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy

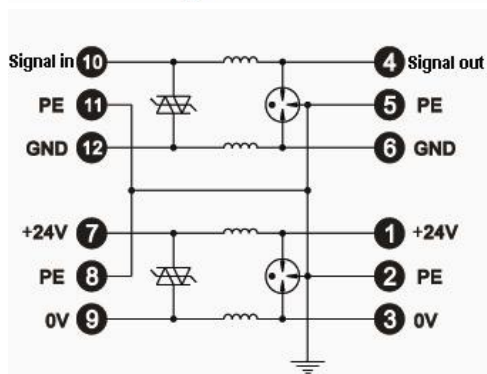
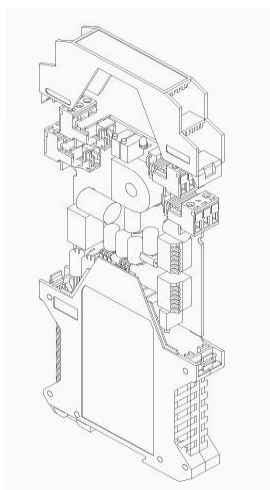




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TD1-13 SPD for DCS controller

	TD1-13A for Analog input	TD1-13D for Digital input
Rating discharge current In (8/20) μ s	5kA	5kA
Limit Voltage(1kV/us) 0.7KA Up	Line to Gnd < 700V	Line to Gnd < 700V
Limit Voltage (8/20 μ s) 5KA Up	Line to Line < 10V	Line to Line < 10V
Rating Operation Current	< 500 mA	< 500 mA
Insert Resistance	<0.08 Ohm	< 1.8 Ohm
Frequency Range	0-10 MHz	1-10 MHz
Transmission Speed	2 Mbit/s	2 Mbit/s
Response time t_a	< 2 ns	< 2 ns
I/O connector	Terminal block	Terminal block
Protect Circuit	Line to Line, Line to Gnd	Line to Line, Line to Gnd
Temperature range	-25°C to +80°C	-25°C to +80°C
Degree of protection	IP20	IP20
Housing materials	PA66	PA66





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TD3-05/N SPD for Mobile Base Station

	TD3-05/N	TD3-05/N1
Rating discharge current I_n (8/20) μs	5kA	5kA
Max. discharge current I_{max} (8/20) μs	10kA	10kA
Limit Voltage (8/20 μs) 5KA Up	< 90V	< 90V
Insert Loss	< 0.3dB	< 0.3dB
Frequency Range	0.5-2.9 GHz	0.5-2.9 GHz
Character Resistance	50 Ohm	50 Ohm
Response time t_a	< 50 ns	< 50ns
I/O connector	N Type(KK)	N Type(JK)
Grounding	6.3mm copper wire	6.3mm copper wire
Protect Circuit	Line to Gnd	Line to Gnd
Temperature range	-25°C to +80°C	-25°C to +80°C
Degree of protection	IP20	IP20
Housing materials	Brass	Brass





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TD3-06/N1 SPD for Satellite and Mobile base station

	TD3-06/N1
Rating discharge current I_n (8/20) μs	5kA
Max. discharge current I_{max} (8/20) μs	10kA
Limit Voltage (8/20 μs) 5KA U_p	< 90 V
DC Limit Voltage (100V/s) U_p	< 350 V
Insert Loss	< 0.5dB
Frequency Range	0.5-2.9 GHz
Character Resistance	50 Ohm
Response time t_a	< 50ns
I/O connector	BNC(JK)
Grounding	6.3mm copper wire
Protect Circuit	Line to Gnd
Temperature range	-25°C to +80°C
Degree of protection	IP20
Housing materials	Brass





MERI China LLC

TD9-02/8-20 SPD for Ethernet HUB

	TD9-02/8-20	TD9-02/8-24
Rating discharge current In (8/20) μ s	2 kA	2 kA
Max. discharge current I _{max} (8/20) μ s	4 kA	4kA
Limit Voltage (8/20 μ s) 0.5KA Up	Line-Line<25V, Line-to Gnd <500V	Line-Line<25V, Line-to Gnd <500V
Limit Voltage (8/20 μ s) 2 KA Up	Line-to Gnd <1300V	Line-to Gnd <1300V
Insert Loss	< 0.5dB	< 0.5dB
Frequency Range	1-100 MHz	1-100 MHz
Transmission Speed	0.72C	0.72C
Response time t _a	< 2 ns	< 2 ns
I/O connector	RJ-45 x 20 ports	RJ-45 x 24 ports
Surge counter	Built-in	No
Grounding	6.3mm copper wire	6.3mm copper wire
Protect Circuit	1,2,3,4,5,6,7,8	1,2,3,4,5,6,7,8
Temperature range	-25°C to +80°C	-25°C to +80°C
Degree of protection	IP20	IP20
Housing materials	Metal Chassis	Metal Chassis

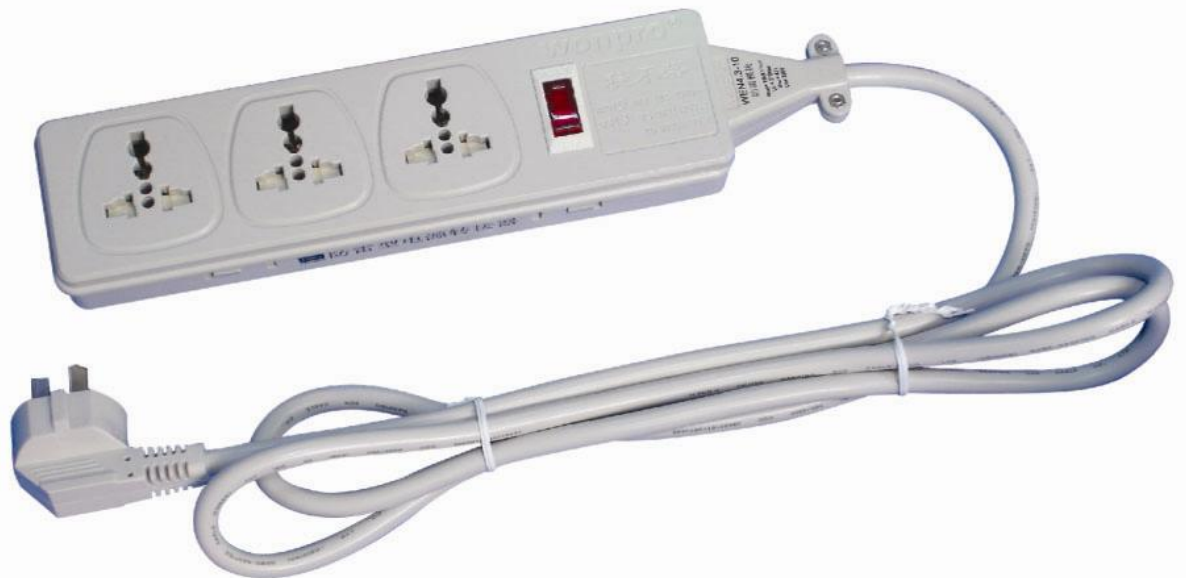




MERI China LLC

WEN4.3-10 AC Outlet Panel built-in SPD

	WEN4.3-10/3	WEN4.3-10/5
Rating Current	10A	10A
Rating Voltage	250V AC	250V AC
Receptacle type	Universal	Universal
Receptacle No.	3	5
Rating discharge current I_n (8/20) μ s	5 kA	5 kA
Max. discharge current I_{max} (8/20) μ s	15 kA	15 kA
Limit Voltage (8/20 μ s) 10 KA Up	<1200V	<1200V
Response time t_a	< 25 ns	< 25 ns
AC Ext. Line Length	1.8 m	1.8 m
Protect Circuit	L-N, L-PE, N-PE	L-N, L-PE, N-PE
Temperature range	-25°C to +80°C	-25°C to +80°C
Degree of protection	IP20	IP20
Housing materials	ABS	ABS





MERI China LLC

Lightning Rod

Model	TP01	TP02	TP03
Max. lightning current	300KA	300KA	300KA
Max. application site wind speed	40M/s	40M/s	40M/s
Weight	8kg	8kg	12kg
Rod No.	1	1	7
Size	15mm*1.5m	15mm*1.5m	200mm*1.5m
Temperature range	-40°C to +80°C	-40°C to +80°C	-40°C to +80°C
Materials	Stainless steel	Stainless steel	Stainless steel



TP01



TP02



MERI China LLC

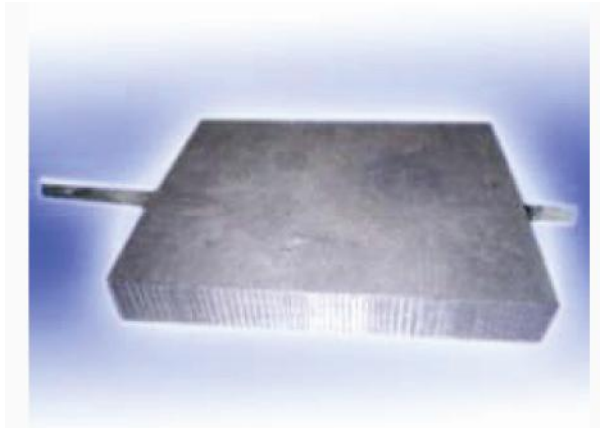


TP03



MERI China LLC

Grounding Module JDM-01



Model	JDM-01
Resistance rate	2 Ohm.m
Max. Mechanical force	6M Pa
Size	500mm*300mm*40mm