Surge Protective Device

避雷器（SPD）MLP Series

MTTI's lightning arrester (SPD: surge protection device)
is used for power supplies and signals. There are various lineups,
and protect important devices and data from lightning and surge current.

JIS Compatible

For Signal：Thin Design of width 12mm 、DIN Rail Mounting、
Degradation diagnosis LED device

JIS C 5381-21 (2014)※1 Category C2、D1 Correspond

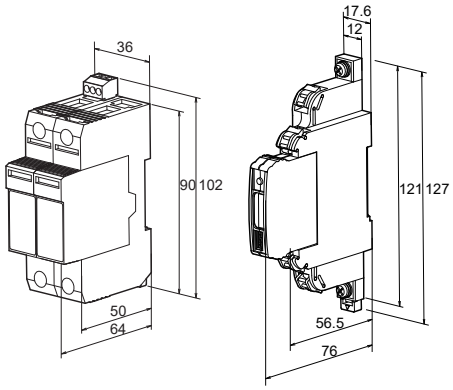
※1 Regulation of specifications for the required performance and test methods of surge protection devices connected to communication and signal lines.

For Power Supply：DIN Rail Mounting、Deterioration display function、
With deterioration alarm output

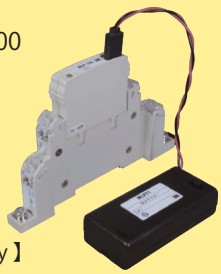
JIS C 5381-11 (2014)※2 Category Class 2 Correspond

※2 Regulation for performance requirements, test methods and ratings of surge protection devices connected to low voltage distribution systems

Dimension



MLP For signal Special Tester
【Type：MLTP1】List Price：￥2,000



【How to check the degradation display】
Connect the plug, turn on the tester,
and the green LED lights up.
If the light is off, it is necessary to replace the main unit.

Our Team Are Here To Help:

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MTT Instruments, Inc.

MLP Series for Signal Specification

Type		MLP-TC	MLP-TR	MLP-C24	MLP-C48	MLP-100
Purpose		Thermocouple、mV Signal	RTD、Potentiometer DC150V	DC1～5V、DC4～20mA、 2-Wire Transmitter DC24V Pulse Signal	DC1～5V、DC10～50mA、 2-Wire Transmitter DC48V Pulse Signal	AC / DC100V Contact Synchro Device
Rated Voltage		DC150V	—	DC27V	DC52V	AC140V / DC180V
Rated Current		DC3A	—	DC100mA	DC100mA	3A
Leakage Current		—	Less than 1.0 dB	Less than 5μA	Less than 5μA	Less than 20μA
Insertion Loss	DC～1MHz	Less than 1.0 dB	180～280V (Ground)	Less than 1.0 dB	Less than 1.0 dB	Less than 1.0 dB
Reference voltage		180～280V (Ground)	Less than 1000V (Ground)	34～38V (Ground)	62～70V (Ground)	280～500V (Ground)
Voltage Protection Level Up		Less than 1000V (Ground)	—	Less than 120V (Ground)	Less than 140V (Ground)	Less than 800V (Ground)
Output Impedance(Inline)		—	10kA (Ground)	5Ω±10%	5Ω±10%	—
Max. discharge current Imax	8 / 20μs	10kA (Ground)	1kA (Ground)	10kA (Ground)	10kA (Ground)	10kA (Ground)
	10 / 350μs	1kA (Ground)	2	2kA (Ground)	2kA (Ground)	1kA (Ground)
Use Quantity		1		1	1	1 / 2 (※3)
Connect Terminal		Middle (×) Hanging (○)		M4 Screw		
Wiring Method		Middle (○) Hanging (×)		Middle (○) Hanging (×)	Middle (○) Hanging (×)	Middle (○) Hanging (○)
Operation Ermironment		Temperature -40～70℃ Humidity under 96%(Non-Condensing)				
Degradation Diagnosis		By Special Tester (MLPT1) Normal：LED light on Abnormal：LED light off				

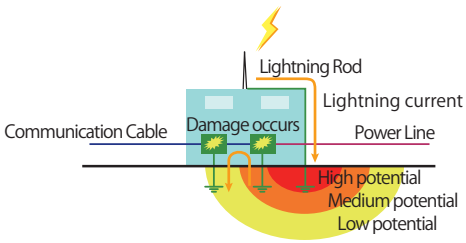
※3：Using 2 by the Selsyn signal

MLP Series for Power Supply Specification

Type		MLP-D24	MLP-D48	MLP-P100	MLP-P200	MLP-P200AR
Purpose		DC24V Power	DC48V Power	AC100V Power	AC200V Power	AC200V Power
Rated Voltage		DC27V	DC52V	AC150V	AC255V	AC255V
Rated Current		DC3A	DC3A	—	—	—
Leakage Current		Less than 10μA	Less than 10μA	Less than 20μA	Less than 20μA	Less than 20μA
Insertion Loss	DC～1MHz	Less than 1.0 dB	Less than 1.0 dB	—	—	—
Reference voltage		74～90V (Ground)	74～90V (Ground)	256～310V (L/N-PE)	387～473V (L/N-PE)	387～473V (L-N) 600～800V (N-PE)
Voltage Protection Level Up		Less than 500V (Ground)	Less than 500V (Ground)	Less than 700V (L/N-PE)	Less than 1.4kV (L/N-PE)	Less than 1.4kV (L-N) Less than 1kV (N-PE)
Nominal Discharge Current		2kA (Ground)	2kA (Ground)	5kA (L/N-PE)	20kA (L/N-PE)	20kA (L-PE) 60kA (N-PE)
Max. discharge current Imax	8 / 20μs	10kA (Ground)	10kA (Ground)	40kA (L/N-PE)	40kA (L/N-PE)	40kA (L-N) 75kA (N-PE)
	10 / 350μs	1kA (Ground)	1kA (Ground)	—	—	—
Response Time		—	—	Less than 3ns	Less than 3ns	Less than 3ns
Connect Terminal		M4 Screw				
Wiring Method		Middle (○) Hanging (○)	Middle (○) Hanging (○)	Middle (×) Hanging (○)	Middle (×) Hanging (○)	Middle (×) Hanging (○)
Operation Ermironment		Temperature -40～70℃ Humidity under 96%(Non-Condensing)		Temperature -40～70℃ Humidity under 90%(Non-Condensing)		
Degradation Diagnosis		By Special Tester (MLPT1) Normal：LED light on Abnormal：LED light off		Deterioration display on the Product (With external alarm output terminal)		

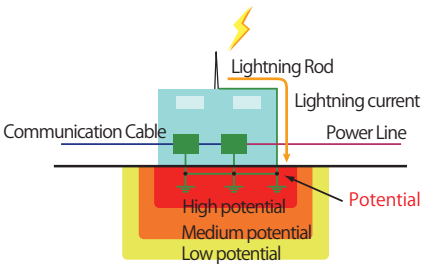
Reasons why equipotential bonding is effective for lightning

【Not Bonding (Equipotentialization)】



A potential difference occurs between the ground and lightning damage occurs.

【Bonding (Equipotentialization)】



Since no potential difference occurs between the grounds, no current flows.

Mounting adapter applicable to wall mounting of power supply MLP (Model: MLP-AD1)

For fixing MLP for signal, please use a clasp on both sides. ※6

It is convenient to use a 12 mm pitch short bar for grounding the signal MLP.※6

※6：Contact us for the specification.

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