

DESCRIPTION

The MLP-D48 is a high-performance surge protective device (SPD) for 48VDC power circuits that protects electrical instruments by absorbing lightning-induced surge voltage.

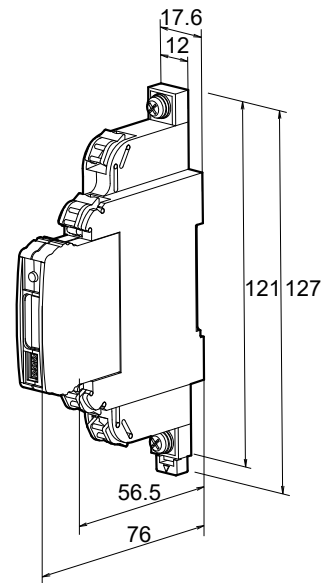
This SPD consists of a plug part and a socket part. The plug part features a deterioration indication function that allows users to check it for deterioration with a special tester. The product is designed such that the signal is not interrupted even if the plug is removed from the socket for replacement.

ORDERING INFORMATION

Ordering Code
MLP-D48

SPECIFICATIONS
● PERFORMANCE

Item	Measuring Conditions	Performance
Maximum Continuous Operating Voltage (Uc)	—	52V DC
Rated Current	—	3A DC
Operation Starting Voltage	V1mA	T1-T2: 148-180V T-E: 74-90V
Leakage Current	52V DC	10 μ A max.
Insertion Loss	DC to 1MHz	1.0dB max.
Voltage Protection Level (Up)	1.2/50 μ s, 4kV	T1-T2: 600V max. T-E: 500V max.
Nominal Discharge Current (In)	8/20 μ s	2kA
Impulse Durability	8/20 μ s (cat. C2)	10 times (2kA)
	10/350 μ s (cat. D1)	2 times (0.5kA)
Maximum Discharge Current (Imax)	8/20 μ s	L1-L2: 5kA L-E: 10kA (5kA \times 2)
	10/350 μ s	L1-L2: 0.5kA L-E: 1kA (0.5kA \times 2)
AC Durability	50Hz 0.5A 1s	5 times
Overstressed Fault Mode	—	mode 1
Response Time	—	3ns max.
Plug Replacement Timing Indicator	Checked with special tester	Normal: LED ON
		Faulty: LED OFF
JIS Compliance	JIS C 5381-21 (category: C2/D1)	


● ENVIRONMENTAL

Location of Use	Machine room or equipment enclosure
Rated Operating Temperature	-40 to 70°C
Rated Operating Humidity	96% RH max. (non-condensing)
Storage Temperature	-40 to 70°C
Storage Humidity	96% RH max. (non-condensing)
Altitude	2000m max.

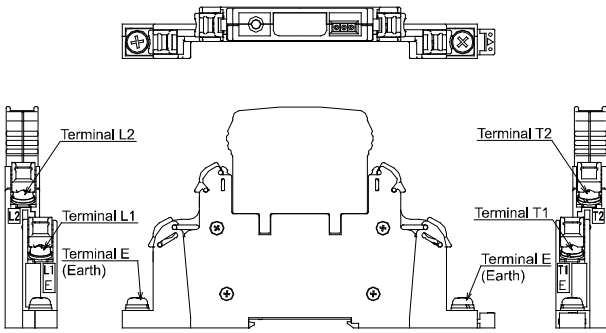
● PHYSICAL

Construction	Plug-and-socket, two-piece construction
Grounding	Class D [100 Ω max.]
Installation	DIN rail mounting (wall-mountable)
Wiring	M4 screw terminal connection Terminals L1, L2, T1, T2 Stranded wire: 0.2mm ² (AWG24) to 2mm ² (AWG14) Insulated solderless terminal for M4, e.g., 0.3-4.1, 1.25-4, 2-4
	Terminal E Stranded wire: 2mm ² (AWG14) min. Insulated solderless terminal for M4, e.g., 2-4
Screwing Torque	0.75 Nm
Dimensions	W17.6 \times D127 \times H76 mm
Weight	Approx. 90g

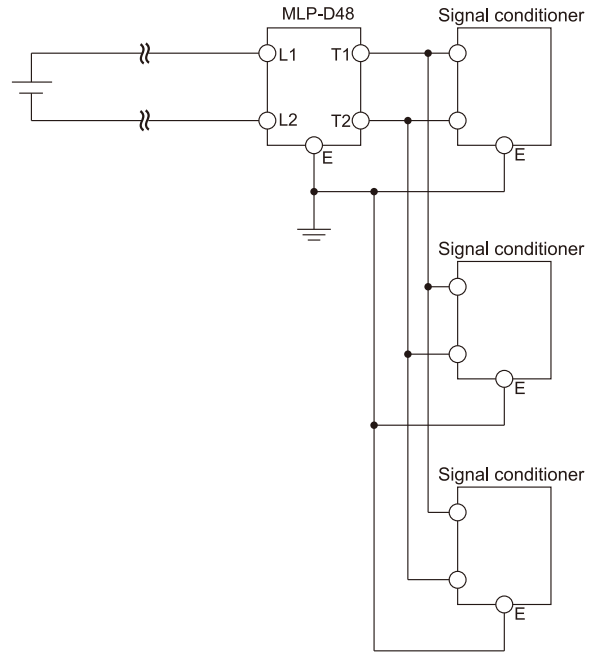
● MATERIAL

Plug / Socket	Polyamide
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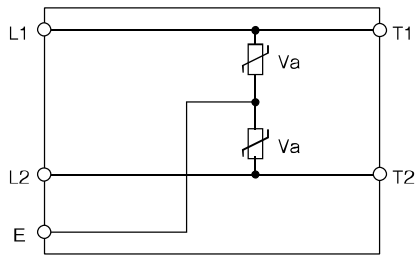
TERMINAL ASSIGNMENTS



INSTALLATION EXAMPLE



BLOCK DIAGRAM



NOTE: If the distance from the MLP device to the equipment to be protected is over 10 meters, it is recommended that an additional MLP device adjacent to the equipment to be protected should be installed.