

**DESCRIPTION**

The MLP-TC is a high-performance surge protective device (SPD) for thermocouple (millivolt) signal lines that protects electrical instruments by absorbing lightning-induced surge voltage.

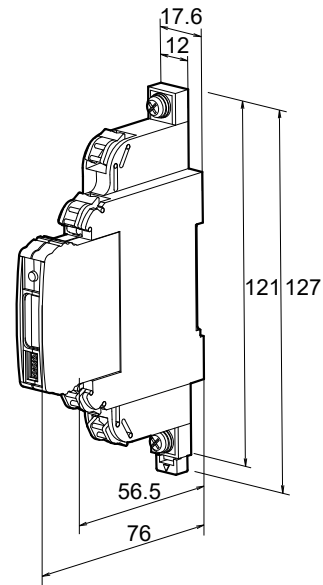
This SPD consists of a plug part and a socket part. The plug part features a deterioration indication function that allows users to check it for deterioration with a special tester. The product is designed such that the signal is not interrupted even if the plug is removed from the socket for replacement.

**ORDERING INFORMATION**

Ordering Code
MLP-TC

**SPECIFICATIONS**
**● PERFORMANCE**

Item	Measuring Conditions	Performance
Maximum Continuous Operating Voltage (Uc)	—	150V DC
Rated Current	—	3A DC
Operation Starting Voltage	100V/s	T1-T2: 250-560V T-E: 180-280V
Insulation Resistance	150V DC	10MΩ min.
Insertion Loss	DC to 1MHz	1.0dB max.
Voltage Protection Level (Up)	1.2/50μs, 4kV	T1-T2: 1500V max. T-E: 1000V max.
Impulse Durability	8/20μs (cat. C2)	10 times (2kA)
	10/350μs (cat. D1)	2 times (0.5kA)
Maximum Discharge Current (Imax)	8/20μs	L1-L2: 5kA L-E: 10kA (5kA×2)
	10/350μs	L1-L2: 0.5kA L-E: 1kA (0.5kA×2)
Impulse Reset	48V DC 260mA	30ms max.
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.

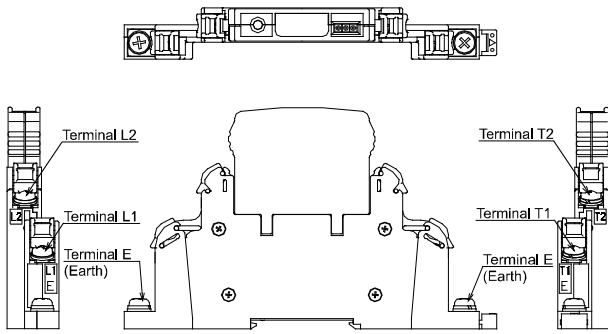
**● PHYSICAL**

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

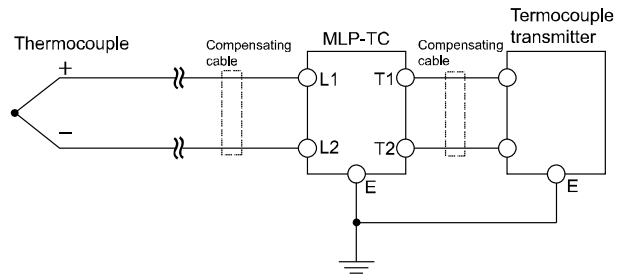
**● MATERIAL**

Plug / Socket	Polyamide
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### TERMINAL ASSIGNMENTS



### INSTALLATION EXAMPLE



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.

### BLOCK DIAGRAM

