D-Link
Building Networks for People

Product Highlights

10 kA Impulse Discharge Current

Higher surge capability and lower clamping voltage for better and more reliable protection; compliant with the IEC 61643-21 standard

High Performance and PoE

Combines Gigabit transfer speed and Power over Ethernet (PoE) passthrough, ideal for transmitting power to high bandwidth devices without the need for additional power supplies and outlets

Waterproof

The water-resistant IP66-rated housing and additional port protection provide an ideal solution to safely power and better protect outdoor PoE devices

DPE-SP110

Outdoor PoE Lightning Protector

Features

High Standard of Protection

- 10 kA impulse discharge current
- IP66-rated water and dust-resistant casing

Easy to Use

- Suitable for PoE equipment and Ethernet devices
- Plug and Play, no software required
- 10/100/1000 Mbps connection up to 100 meters
- Compact and easy-to-install design

Protection Mode

- Common mode up to 10 kA
- Differential mode up to 1 kA

Surge Compliance

- IEC 61643-21
- IEC 61000-4-5
- ITU-T K-Series

PoE Passthrough

- Supports IEEE 802.3af/at
- Supports up to 35 W PoE passthrough
- Protects all four pairs of the Ethernet cable

Any type of sudden electrical surge can damage electronic equipment beyond practical repair. The DPE-SP110 Outdoor PoE Lightning Protector helps protect your network equipment from damage caused by lightning or other static buildup. In the event of an electricity surge, the DPE-SP110 will cut off or divert all the excess electricity while continuing to let through the amount of power necessary for your equipment to work as normal. This lightning protector is water-resistant, making it ideal for installation in outdoor environments.

High Surge Capability

The DPE-SP110 is built around a durable design featuring a higher surge capability and lower clamping voltage. The 10 kA impulse discharge current provides reliable surge protection, while the lower clamping voltage means the unit will activate faster by triggering at a lower voltage threshold. The DPE-SP110 is also IEC 61643-21-compliant, meaning it automatically covers all other existing international standards such as the ITU-T K-Series and IEC 61000-4-5.

High Speed PoE Connectivity

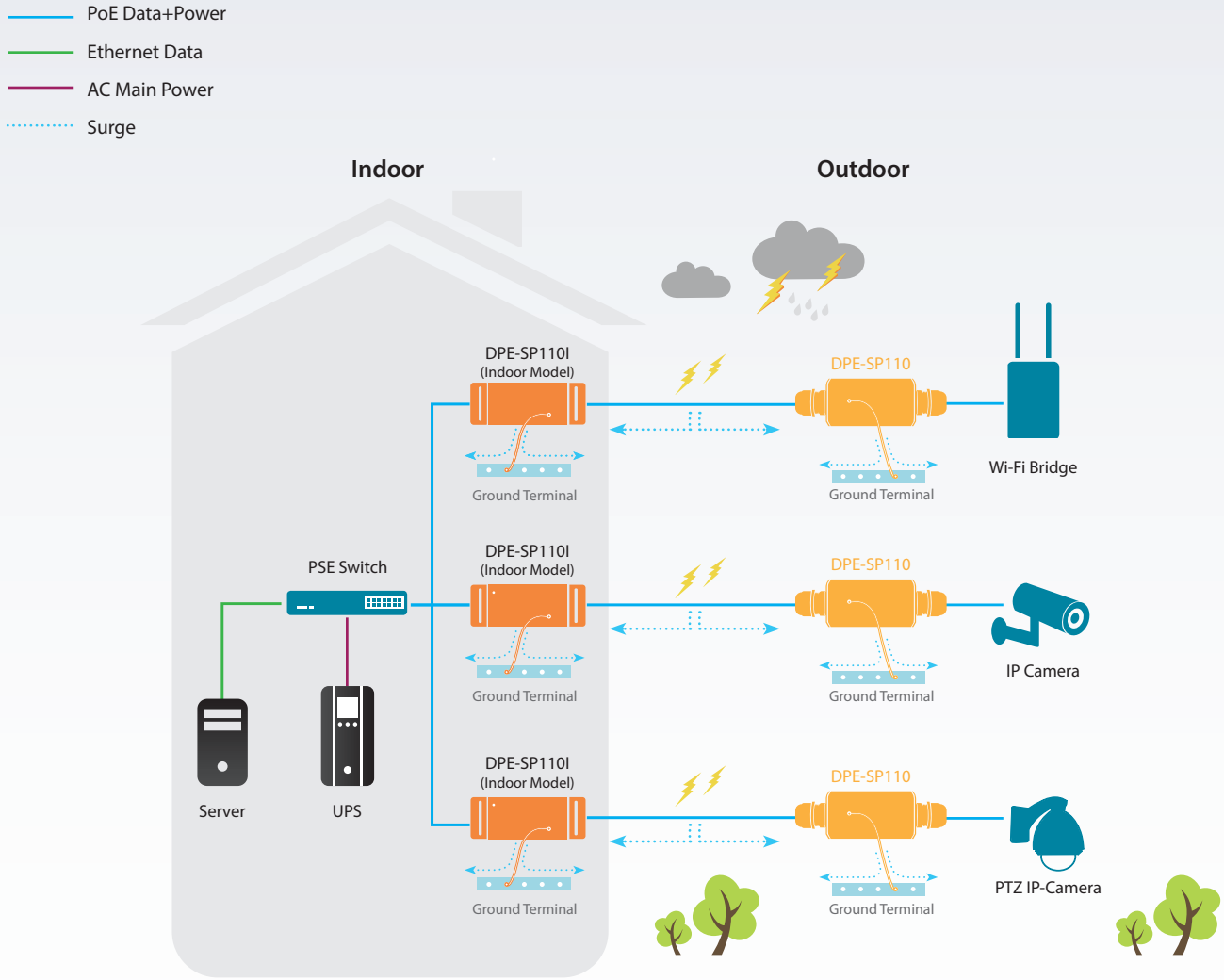
The DPE-SP110 can function as a transmitter for a PoE switch to deliver power and data through an Ethernet cable. This device helps protect all 8 pins and is compatible with all types of RJ45 cables. The DPE-SP110 can handle data rates of up to 1000 Mbps, and is backwards compatible with older 10/100 Mbps ports, while also providing support for both PoE and PoE+ standards.

Optimal Efficiency

Most traditional lightning protectors use either Gas Discharge Tube (GDT) and Silicone Avalanche Diodes (SAD) technology or a combination of both, resulting in unstable current and limited surge capabilities. When used in the field these lightning protectors have shown to be unreliable and still damage the connected equipment. The D-Link DPE-SP110 and DPE-110I feature an innovative patented design that balances surge current on each line to maximize surge capability, significantly enhancing reliability.

DPE-SP110 Outdoor PoE Lightning Protector

Typical Installation Diagram



Technical Specifications

Interface		
Line In Port (Line IN)	• 1 x RJ-45 port (power + data in) • Compatible with 10/100/1000BASE-T	• PoE passthrough
Line Out Port (Device)	• 1 x RJ-45 port (power + data out) • Compatible with 10/100/1000BASE-T	• PoE passthrough
Performance		
Maximum Discharge Current	• 10 kA	
Common Mode (Line-to-Ground) Protection	• 20 kV (10/700 us)	• 10 kA (8/20 us)
Differential Mode (Line-to-Line) Protection	• 6 kV (10/700 us)	• 1 kA (8/20 us)
Clamping Voltage (Line-to-Ground)	• 600 V at 10 kA	
Clamping Voltage (Line-to-Line)	• 20 V at 1 kA	

DPE-SP110 Outdoor PoE Lightning Protector

Surge Protection Response Time	• 5 ns	
Ethernet PoE/Data Line	• Added protection for 10/100/1000 Mbps Ethernet ports • Added protection for all RJ-45 8-pin assignments	• Added protection for all four pairs of all types of Ethernet cables including Cat 5, Cat 5E, and Cat 6
PoE Passthrough	• Supports IEEE 802.3af/at	• Supports up to 35 W PoE passthrough
Physical		
Dimensions (L x W x H)	• 163 x 55 x 41.8 mm (6.41 x 2.17 x 1.65 in)	
Weight	• 220 g ± 10 g (0.49 lbs ± 0.02 lbs)	
Maximum PoE Operation DC Voltage	• 57 V DC	
Maximum PoE Operation DC Current	• 0.6 A	
Operation Temperature	• -40 to 75 °C (-40 to 167 °F)	
Storage Temperature	• -40 to 75 °C (-40 to 167 °F)	
Humidity	• 0 to 95%, non-condensing	
Material	• Aluminium	• IP66 water-resistant enclosure
Ground Cable	• AWG 12-type cable	• 10-32 stud with wire clamp
Mean Time Between Failure (MTBF)	• 528,513 hours	
Certifications	• CE • IEC 61643-21 (10 kA) • IEC 61000-4-5	• ITU-T K-Series • RoHS 6
Order Information		
Product Number	*Description*	
DPE-SP110	Outdoor PoE Lightning Protector	

Safety Information:
Please read this safety information carefully. By installing or making use of the lightning protector, you acknowledge and agree to the statement herein.
- This product is sold pursuant to the terms and conditions set forth in the Warranty document. You acknowledge your review and acceptance of all terms and conditions of such Warranty.
- Proper installation is required for the ground cable to achieve its highest surge capability.
- Lightning protectors and lightning: It is a common misunderstanding that lightning protectors will protect equipment from lightning. Even the most effective lightning protectors cannot always fully protect equipment from the sudden increase in electrical pressure of several millions of volts transmitted by a lightning strike.
- A lightning/surge protector is a passive device with a variable life span, depending on the number of surges it receives. Its service life also varies depending on the amount of energy absorbed during each electrical surge. It is difficult to assess the current status of the lightning/surge protector based on its outer appearance or physical shape. For optimal performance, we strongly recommend that you replace your lightning/surge protector every two (2) years.

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