

# Installation Instructions for **VARIO** surge protective devices (SPD) Public Street Lighting



VAR15EP2SMR: Surge protection for public lighting with terminal strip serial connections.

These instructions apply to compact modular surge protectors for public lighting according to the table below:

Reference	Code	Connection type	Application
VAR15EP2SMR	60102	Series / Terminal strip	Low profile modular surge protective devices (SPD) for public lighting applications, I <sub>max</sub> 15kA, U <sub>c</sub> 305V, U <sub>p</sub> 1.5kV with fault indicator light.

These **VARIO** surge protective devices are of type 2 / 3 according to standard NFEN61643-11. They are used to protect public or outdoor lighting (lighting poles, sconces, and in-ground recessed lighting) against atmospheric overvoltage surges in common and differential modes. These surge protectors use varistor + spark-gap technology.

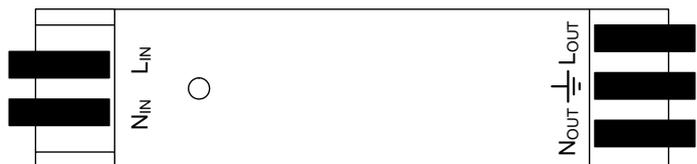
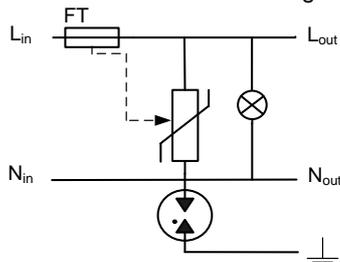
Serial connection versions allow turning off the power to equipment connected downstream if the SPD is no longer functional in order to protect the equipment, even if the SPD is internally disconnected, and also to indicate that the SPD no longer works by turning off the power supply.

## 1 CONNECTION

Serial Connection:	Connections :
<p>Terminal strip Of the lighting pole</p> <p>Earthing connection</p> <p>To light points</p>	<p>10mm</p> <p>To connect, insert the wire into the terminal and lower the lever to complete the connection</p>

## 2 SCHEMATIC DIAGRAM AND DIMENSIONS

Internal serial connection diagram



**3 OPERATION**

If the SPD is connected and its indicator is lit, protection is activated. Overvoltage surges that occur between phase and neutral as well as between live and earthed conductors will be capped. By an accumulation of small surges less than the nominal current discharge, or by a high amplitude overvoltage surge, overheating by end of life varistors is eliminated by the internal magneto-thermal circuit breaker. The protection has an end of life in an open circuit by interrupting the power supply. Hence, in the case of an SPD's end of life, the fault indicator light will turn off and thermal disconnectors will cut off power to the equipment connected downstream. The SPD must then be replaced to restore the installation's normal operation.

**4 TECHNICAL FEATURES (according to standard NF EN 61643-11)**

Product Code	Reference	I <sub>max</sub> (8/20)	I <sub>n</sub> (8/20)	U <sub>c</sub> / U <sub>n</sub> / Vac	U <sub>p</sub> kV	Rated current I <sub>L</sub> A	Input connection	Output connection	Associated disconnecter
60102	VAR15EP2SMR	15 kA	5 kA	305/275	1.5	5A	Terminal strip	Terminal strip	6A circuit breaker curve C or b or Fuse 10AgG

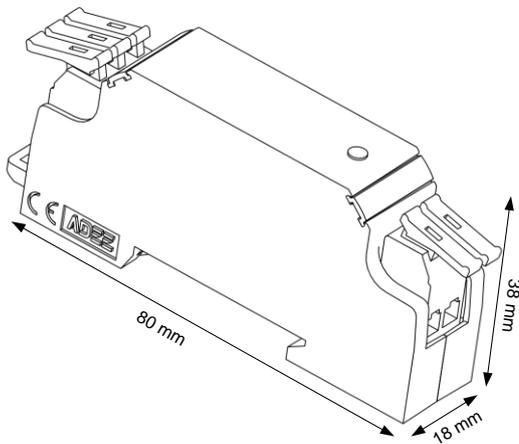
Operating temperature range: -40°/+70°C.

Stripping length of the wires connected to the terminal strip:  
10mm. Max section for terminal strip connections: Rigid 2.5mm<sup>2</sup>.

Residual current I<sub>PE</sub> = 0mA  
IP2X following 60529

No isolation distance in relation to all grounded metal surfaces is recommended.

Dimensions :



**5 SAFTY INSTRUCTIONS**

Electrical connections must be made by a qualified electrician in accordance with applicable regulations and standards. The external appearance of the product must be verified before being put into service. Do not connect any devices to the power supply that show signs of external damage or deterioration. The SPD must be selected based on the type of network and the voltage to which it will be connected. Loads connected downstream must fall within the ranges listed in these instructions. Any SPD having an unlit indicator must be changed as soon as possible in order to ensure the protection of the equipment connected downstream.