



SPD-PV-21

Surge protection box for PV



Characteristics

- Complete DC surge protection wall distribution box SPD-PV-21 will provide the necessary protection before a lightning strike for your photovoltaic power plant.
- This plug-and-play solution provides surge protection for both buildings without external lightning protection, as well as with external protection.
- Universal solution for a 2-string installation (2x MPPT).
- Supplied as a wired kit, which makes installation quick and easy.
- The switchboard is designed for a maximum voltage of 1000 V.
- It is equipped with 2 surge protection devices T2-1100PV-3+0, which are specially designed for PV protection and 4 fuse disconnectors EPF-32-1P with 4 fuses 10 x 38 gPV 15A / 1000V.
- The protection of the box is IP65.
- The unit is build in a plastic 12-module distribution board with dimensions 330 x 260 x 138 mm.
- Available with 15A or 12A fuses.

Technical parameters

SPD Green Power T2-1100PV-3+0

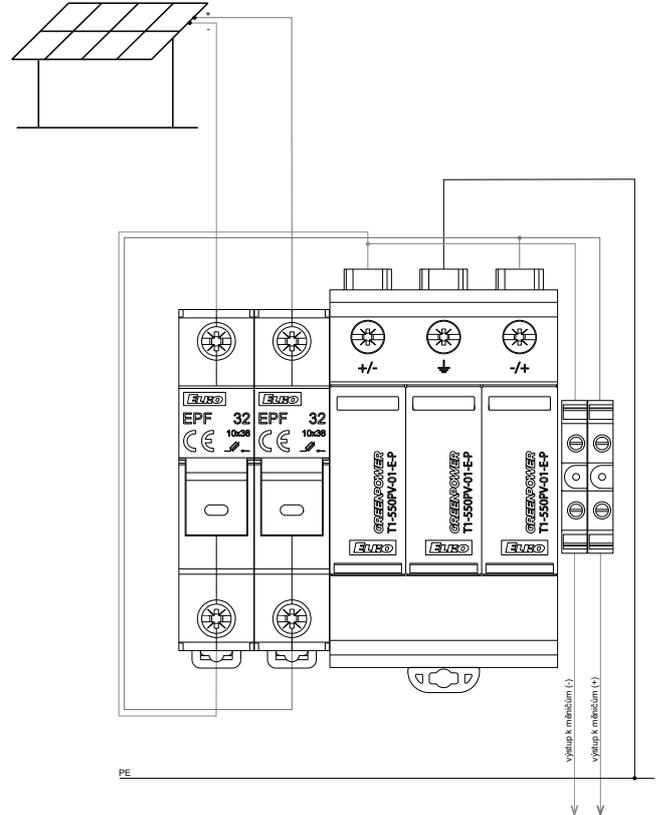
UCPV (+)-PE, (-)-PE, (+)-(-):	1100 V
In (8/20) / Iimp (10/350):	20 kA
ITotal (8/20) / (10/350):	50 kA
I _{max} (8/20):	40 kA
Up (+)-PE, (-)-PE, (+)-(-):	3800 V
ISCPV:	11 kA
SPD Failure Mode:	Open Circuit Failure Mode (OCFM)
Type of PV systems:	Not earthed / earthed
Operating temperature:	-40 °C to +50 °C

Technical parameters

Fuse disconnector EPF-32-1P and fuses

UCPV:	1000 V DC
Rated current fo fuse:	15 A
Diametr of fuses:	10x38
Other parameters of box	
Rated insulation voltage:	1000 V DC
Rated impulse withstand tension:	8,0 kV
Types of system grounding:	TN-S (DC)
Installation type:	inside
Intended for use by persons:	knowledgeable person
External box:	on-wall
Protection against mechanical impacts:	IK 07
Construction type:	solid parts
Type of device securing the front in short:	fuse
Measures to protect against electric shock by current:	automatic disconnection from the source, double insulation
Operating temperature:	-20 .. +50 °C
Storage temperature:	-25 .. +55 °C
Working position:	any, (door open IP20)
Protection of box:	IP 65
Degree of pollution:	2
Dimensions:	330 x 260 x 138 mm
Weight:	3010 g
Related standards:	IEC 61439-1, IEC 61439-2, attach. DD

Connection



Network connections and parameters

- The switchboards can be used for a nominal voltage of $U_n = 1000$ V DC. The fuses used must have a maximum value of $I_n = 15$ A
- The maximum cross-section of the connected conductor is 10 mm²

Service

Warning: During the operation of the switchboard, some of its parts are under voltage. Failure to heed the warning may result in personal injury or property damage. Only qualified personnel may work on and near the switchboard. The ambient temperature for switchboard operation is -40°C to +50°C. Nominal current values are given for operation at a temperature of 20°C. In the case of a significantly higher temperature, a current reduction factor must be taken into account.

The fuse disconnectors in the EPF 32 switchboard must not be disconnected under load (DC-20B).

After each handling of the switchboard, which is installed outdoors, it is necessary to ensure that the door is completely closed and locked to prevent moisture from entering the switchboard.

During installation, the assembly technician is required to tighten all screw connections of the contacts. In addition, the operator is obliged to regularly check and tighten the screws every 6 months.

Warning

Switchboards can only be assembled and operated by a qualified person with all valid documents and completed training!

The company ELKO EP s.r.o. is not responsible for any changes and possible interventions in the finished cabinet that are not the subject of this manual.

The switchboard can be installed both indoors and outdoors in accordance with the instructions in the manual enclosed with the switchboard. The switchboard must be fixed on a solid and non-flammable surface.

The correct method of transport, storage and assembly is essential for the trouble-free and safe operation of the equipment. Storage is required in dry areas with a temperature of -25°C to +55°C. During transport, it is necessary to secure the switchboard to prevent mechanical damage. The company ELKO EP s.r.o. is not responsible for damage to the switchboard caused by improper storage, assembly or transportation.

This manual should be located at the installation site of the switchboard and should be accessible to all personnel operating the equipment. Workers must always be familiar with the installation and operating instructions before any work on the equipment is started.