

Photovoltaic DC Products

EXPD DC Surge Protector



Application Scope

The EXPD40 DC Surge Protective Device (SPD) is widely utilized in photovoltaic equipment such as combiner boxes, inverters, controllers, and DC distribution cabinets. Featuring a rated voltage of up to 1500 VDC and a maximum discharge current of 40 kA, it employs high-energy metal oxide varistors with a nanosecond-level response speed to effectively prevent damage to photovoltaic power generation systems caused by lightning-induced overvoltages. The product complies with standards GB18802.1, GB50057, and IEC61643-1.

It is designed for installation on standard 35mm DIN rails. The neutral line should be connected using a 2.5–35 mm² conductor, while the ground line requires a stranded copper conductor of 6 mm² or larger (preferably bi-colored), with a maximum length of 500 mm.

Typically, the device is installed within DC distribution cabinets, photovoltaic inverters, or combiner boxes.

Technical Parameters

Model/Specification	EXPD-500	EXPD-600	EXPD-800	EXPD-1000	EXPD-1200	EXPD-1500
Nominal Discharge Current In (kA)	20kA					
Maximum Discharge Current Imax (kA)	40kA					
Maximum Continuous Operating Voltage U _c (V)	500	600	800	1000	1200	1500
Voltage Protection Level Up (kV)	2.4					
Response Time (ns)	<25					
Protection Class	Ip20					
Enclosure Material	PBT/PA66					
Failure Indication	level1					
Ambient Temperature Range TU	-40°C~80°C					
Protection Mode	DC+ -PE DC- -PE					
Mounting Type	Designed for mounting on a standard 35mm DIN rail.					
Incoming Power Cable Cross-Section (mm ²)	Supports 16–35 mm ² multi-core flexible cables.					
Remarks	Remote signaling functionality is available as an optional add-on; other maximum continuous operating voltages (U _c) can be customized.					

Overall Dimensions

