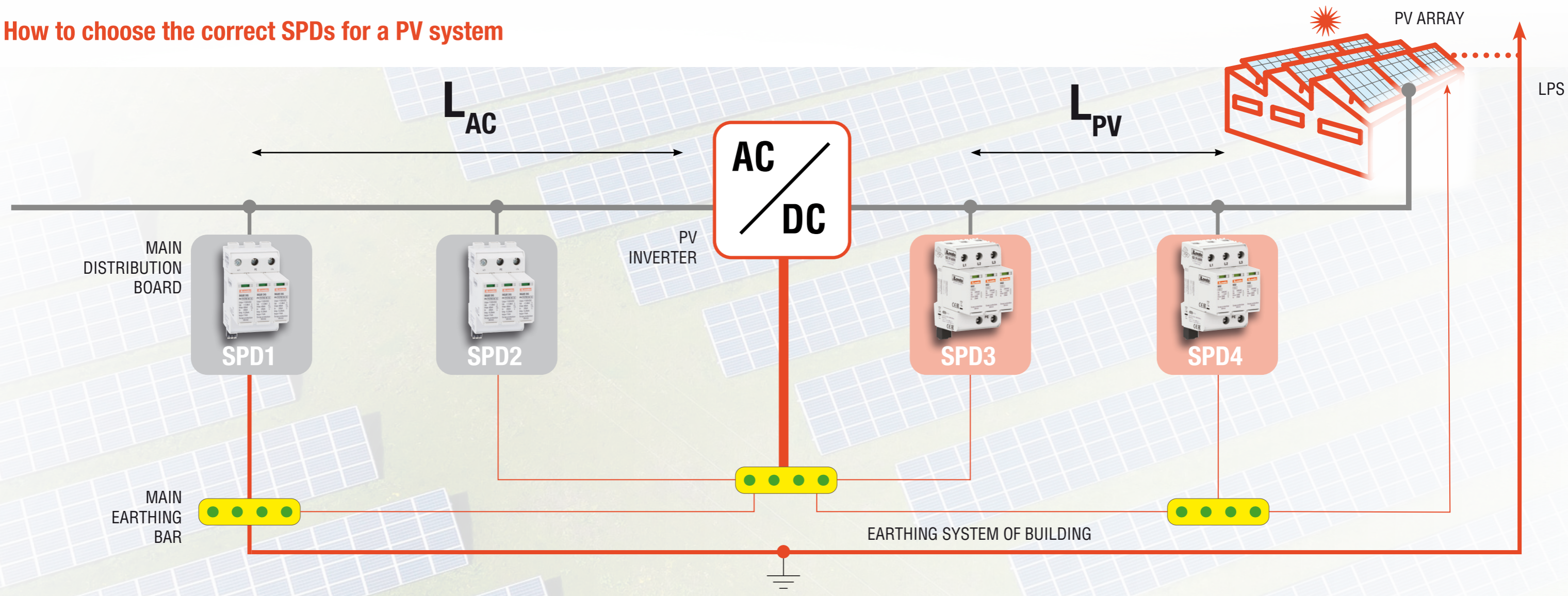


SELECTION GUIDE SURGE PROTECTION DEVICES

How to choose the correct
SPDs for a PV system



How to choose the correct SPDs for a PV system



According to IEC61643-32, the location where to install and the type of SPD needed on AC and DC side of a PV system connected to an AC grid depend on several criteria:

- location of the PV plant (building or field)
- presence of LPS (Lightning Protection System)
- type of LPS (isolated or not isolated)
- cable length.

The table below describes the main configurations.

PV on building equipped with LPS				
LPS	Not isolated		Isolated	
L_{AC}	>10m	<10m	>10m	<10m
SPD1	AC Type 1,2	AC Type 1,2	AC Type 1,2	AC Type 1,2
SPD2	AC Type 1,2	Without	AC Type 2	Without
L_{PV}	>10m	<10m	>10m	<10m
SPD3	PV Type 1,2	PV Type 1,2	PV Type 2	PV Type 2
SPD4	PV Type 1,2	Without	PV Type 2	Without

PV on building without LPS		
LPS	No	
L_{AC}	>10m	<10m
SPD1	AC Type 2	AC Type 2
SPD2	AC Type 2	Without
L_{PV}	>10m	<10m
SPD3	PV Type 2	PV Type 2
SPD4	PV Type 2	Without

PV field	
LPS	No
L_{AC}	>10m
SPD1	AC Type 1,2
SPD2	AC Type 1,2
L_{PV}	>10m
SPD3	PV Type 1,2
SPD4	PV Type 1,2

L_{AC} : distance between the SPD and the PV inverter on the AC side. L_{PV} : distance between the SPD and the PV inverter on the DC side.

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