

# High performance MCB S800PV-S for Photovoltaic string protection



## Application

The S800PV-S was developed especially for photovoltaic applications. The device is ideal for the following uses:

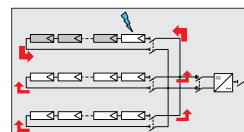
- **DC string protection**  
 Protects the PV module from dangerously high DC back current
- **AC string protection**  
 Protects the PV module from AC back-feed caused by a defective inverter
- **DC load disconnecting switch**  
 Safe switching under load. In case of faults or maintenance work, individual strings can be safely and selectively switched under load.
- **Remote tripping and signalling**  
 Remote tripping of the S800PV-S can be realised with an under-voltage or shunt operation release.  
 An optional auxiliary (on or off) or signal contact (over-current or short circuit) signals the actual switching state of the device in the individual strings.

## Protecting the PV modules against DC reverse currents

in a system free of defects, the currents of the individual strings are equalized. Excessive reverse currents cannot take place. Even a partial disconnection of individual PV modules hardly has an impact on the magnitude of the string currents.

Critical reverse currents can generally occur in systems with more than 3 strings connected in parallel. If one or more PV modules are damaged in a string, this string will show a reduced current compared to the intact strings.

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This means that the intact strings feed the defective string with a dangerously high reverse current. These reverse current flow through the bypass diodes and can destroy the PV module and the wiring. This reverse current generates heat and can destroy the PV modules of the respective string. Such damage can be prevented with string protection provided by the S800PV-S High Performance MCB. This device trips if there are dangerous reverse currents, thus protecting the PV module from being destroyed.



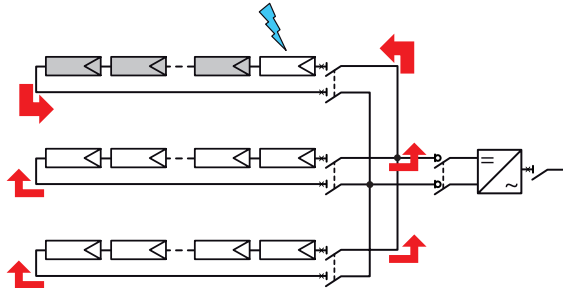


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# Application notes

## Protecting PV modules from AC reverse currents

If an inverter becomes defective, AC reverse currents can feed into the DC strings and destroy the PV modules. The S800PV-S protects the individual strings against overload and short circuits and trips before the PV module can be endangered.



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## Disconnect properties

The S800PV-S enables selective disconnection of the individual DC strings under load up to a rated current of 125 A and a maximum voltage of 1,200 VDC.

## Product description S800PV-S

- Rated operating current: 10, 13, 16, 20, 25, 32, 40, 50, 63, 80, 100 and 125A
- Rated operating voltage

Number of poles	Rated operating current	
	10...80A	100, 125A
2-pole	800 VDC	600 VDC
3-pole	1'200 VDC	1'000 VDC
4-pole	1'200 VDC	

For more information, please request our Technical Catalogue S800PV The High Performance MCB Photovoltaic.

## Remote tripping and signalling

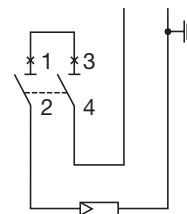
With the mountable under-voltage or shunt operation release, the S800PV-S can be tripped from a distance.

The optional auxiliary and signal contacts enable clear signalling of the switching state of the S800PV-S in the individual strings.

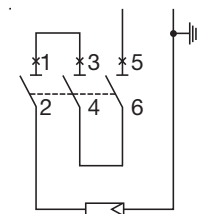
## Advantages and benefits

- Can be operated up to 125 A and 1,200VDC
- Protects the PV modules against dangerously high DC reverse currents
- Protects the PV modules against AC back-feed caused by a defective inverter
- Safe switching and disconnecting of individual strings under load
- Selective remote tripping of individual strings, even under load
- Signalling the switching state of the 800PV-S in the individual strings

## Earthed system

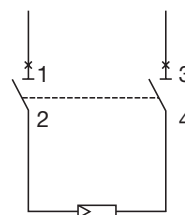


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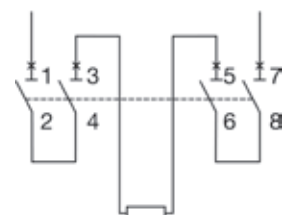


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## Unearthed system



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