

# ABB Surge Protective Device range

## Photovoltaic pluggable surge arresters



OVR PV 40 600 P



OVR PV 70 600 s P TS

The photovoltaic pluggable surge arresters provide protection for equipment on photovoltaic system (connected & standalone), against transient overvoltages that occur on the electrical network (mains).

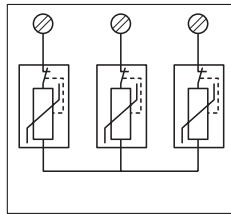
The maximum available discharge currents ( $I_{max}$ ) range from 30 to 70 kA (8/20  $\mu$ s waveform).

### Standards Info

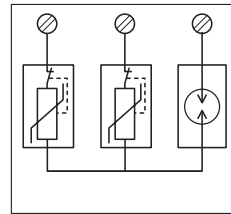
The pluggable photovoltaic surge arresters comply with IEC 61643-1 and EN 61643-11.

The relevant standard for the installation of this type of surge arrester is: IEC 61643-12.

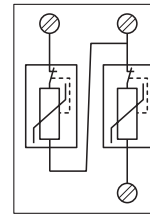
### Schematic diagrams



OVR PV 1000 V

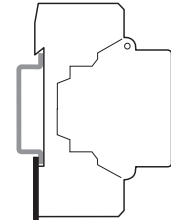


OVR PV 600 V



OVR PV 75 V

### Fixing

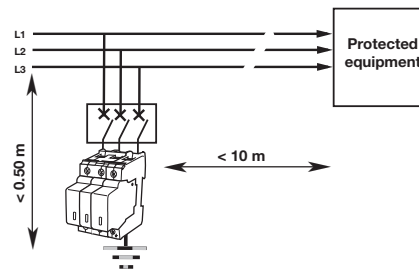


Simply clips onto DIN rail.

### Dimensions

Dimensions	W (mm)	H (mm)	D (mm)
OVR PV ... 600 (s) P (TS)	42.5	85	58
OVR PV ... 1000 (s) P (TS)	42.5	85	58
OVR PV ... 75 (s) P (TS)	35	85	63

### Connection



OVR PV ... 600 / 1000 V

### PRACTICAL INFO

Pluggable photovoltaic surge arresters are installed in sub-distribution boards using DIN rail. They are used for common mode protection.

Maintenance is made easier with pluggable surge arresters as replacement cartridges can be simply plugged-in without the need to isolate the circuit.

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## Photovoltaic surge arresters - Characteristics

	More info	Connected PV system			1000 V			Standalone PV system	
		600 V			1000 V			75 V	
		OVR PV 40 600 P (2CTB803953R6000)	OVR PV 40 600 P TS (2CTB803953R5100)	OVR PV 70 600 s P TS (2CTB803953R5200)	OVR PV 40 1000 P (2CTB803953R6100)	OVR PV 40 1000 P TS (2CTB803953R6200)	OVR PV 70 1000 s P TS (2CTB803953R6300)	OVR PV 30 75 P TS (2CTB803953R3100)	OVR PV 65 75 s P TS (2CTB803953R3200)
<b>Electrical characteristics</b>									
Types of network	p.10	Photovoltaic installations							
Number of poles		3							
Type of surge arrester		2							
Type of current		D.C.							
Nominal voltage: $U_n$	p. 7	600 V	600 V	600 V	1000 V	1000 V	1000 V	75 V	75 V
Max. cont operating voltage: $U_c$	p. 8	700 V	700 V	700 V	1120 V	1120 V	1120 V	100 V	100 V
Max. discharge current: $I_{max}$ (8/20)	p. 7	40 kA	40 kA	70 kA	40 kA	40 kA	70 kA	30 kA	65 kA
Nominal discharge current: $I_n$ (L-L / L-PE)	p. 7	20 kA	20 kA	30 kA	20 kA	20 kA	30 kA	10 kA	20 kA
Voltage protection level: $U_p$ (L-L / L-PE)	p. 7	2.8 / 1.4 kV			3.8 kV			0.3 / 0.6 kV	
TOV withstand: $U_T$ (5 s)	p. 8	N. / A.							
Continuous operating current: $I_c$		< 1 mA							
Short-circuit withstand capability: $I_{sc}$		N. / A.							
Response time: $t_A$		25 ns.							
Associated breaking device:									
- gG - gL fuse	p. 45	N. / A.							
- curve C circuit-breaker	p. 45	N. / A.							
<b>Mechanical and installation characteristics</b>									
L connection terminals:									
- solid wire		2.5 ... 25 mm <sup>2</sup>							
- stranded wire		2.5 ... 16 mm <sup>2</sup>							
L stripping length		12.5 mm							
L tightening torque		2.8 Nm							
PE connection terminal:									
- solid wire		2.5 ... 25 mm <sup>2</sup>							
- stranded wire		2.5 ... 16 mm <sup>2</sup>							
PE stripping length		12.5 mm							
PE tightening torque		2.8 Nm							
Integrated thermal disconnecter		Yes							
End of life indicator	p. 18	Yes							
Compatibility with OVR Sign	p. 18	No							
Safety reserve (s)	p. 18	No	No	Yes	No	No	Yes	No	Yes
Remote indicator (TS)	p. 18	No	Yes	Yes	No	Yes	Yes	Yes	Yes
<b>Miscellaneous characteristics</b>									
Degree of protection		IP 20							
Temperature range		-40 °C to +80 °C							
Maximum altitude		2000 m							
Case material		PC grey RAL 7035							
Insulating material		UL94 V2 classification							
Reference standards		IEC 61643-1 / EN 61643-11							
Weight		270 g						120 g	
<b>Maintenance</b>									
Replacement cartridges	p. 41	2 x OVR T2 40 275 C (2CTB803854R1000) + OVR T2 70 NC (2CTB803854R0000)	2 x OVR T2 40 275 C (2CTB803854R1000) + OVR T2 70 NC (2CTB803854R0000)	2 x OVR T2 70 275 s C (2CTB803854R0700) + OVR T2 70 NC (2CTB803854R0000)	3 x OVR T2 40 440 C (2CTB803854R0400)	3 x OVR T2 40 440 C (2CTB803854R0400)	3 x OVR T2 70 440 s C (2CTB803854R0100)	2x OVR T2 30 75 C (2CTB803854R1500)	2x OVR T2 65 75 s C (2CTB803854R1300)