

## New smartARS pro-PV AC 800 V

A safe step into the future with Apator



smartARS 00  
pro-PV



smartARS 2  
pro-PV



smartARS 3  
pro-PV

The new switch fuse disconnecter smartARS in the AC800V product line is a device which has been developed to meet the needs and requirements of the future.

Solar power systems and a new generation of inverters are assembled on AC800V correctly and safely under load. In the future AC800V will be extended by the smartARS family; moreover, it can be modified to facilitate the digitization of the energy transition.

High-quality materials and years of experience of APATOR Group in the NH disconnectors sector ensure excellent cost-benefit ratio.





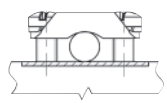
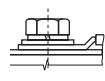
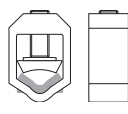
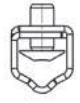
Table 18. Technical data

Parameter			smartARS 00 pro-PV	smartARS 2 pro-PV	smartARS 3 pro-PV
For NH fuse-links acc. to DIN VDE 0636-2	Size		00	1, 2	3
Rated operational voltage	$U_e$	V	AC800	AC800	AC800
Rated operational current	$I_e$	A	80	200	400
Conv. free air thermal current with fuse-links	$I_{th}$	A	80	200	400
Rated frequency	f	Hz	50 - 60	50 - 60	50 - 60
Rated insulation voltage	$U_i$	V	AC1000	AC1000	AC1000
Rated impulse withstand voltage	$U_{imp}$	kA	8	12	12
Utilization category			AC21B 80 A/ 800 V	AC21B 200 A/800 V	AC21B 400 A/ 800 V
Fuse protected short circuit withstand		kA	100 <sup>1)</sup>	120 <sup>1)</sup>	120 <sup>1)</sup>
Fuse protected short circuit making		kA	100 <sup>1)</sup>	120 <sup>1)</sup>	120 <sup>1)</sup>
Max. permis. power loss per fuse-link	$P_a$	W	11	21	41
Pollution degree			3	3	3
IP degree of protection		IP		30	
Ambient temperature		°C		-25 °C to + 55 °C	
Attitude		m		up to 2000 meters above sea level	
Busbar system		mm		for installation on 185 mm busbar system	
Actuation		-		manual	
Rated operating mode		-		continuous operation	

Table 19. Versions

Version		Weight	Article No.
<b>for installation on to 185 mm busbar system, three pole switching - all phases simultaneously</b>			
smartARS 00-3 pro-PV	cable terminals: bridge terminals with bridge clamps (5) 4-70mm <sup>2</sup> , screw terminals with M8 screws	2,5 kg	63-073821-001
smartARS 00-3-V pro-PV	cable terminals: V-terminals with V-clamps 25-150 SW	2,6 kg	63-073821-002
smartARS 2-6-V pro-PV	cable terminals: V-terminals with V-clamps 240 mm <sup>2</sup>	5,8 kg	63-073822-001
smartARS 3-6-V pro-PV	cable terminals: V-terminals with V-clamps 240 mm <sup>2</sup>	6,6 kg	63-073822-002
smartARS 2-6-M pro-PV	cable terminals: screw terminals with pressed nuts M12	5,7 kg	63-073822-003
smartARS 3-6-M pro-PV	cable terminals: screw terminals with pressed nuts M12	6,5 kg	63-073822-004
smartARS 2-6-2V pro-PV	cable terminals: 2V-terminals with double V-clamps 240 mm <sup>2</sup>	6,4 kg	63-073822-005
smartARS 3-6-2V pro-PV	cable terminals: 2V-terminals with double V-clamps 240 mm <sup>2</sup>	7,2 kg	63-073822-006

**Table 20. smartARS 00 pro-PV terminal clamps**

Description	smartARS 00 pro-PV			
Clamp	S-bridge clamp 2 x M5 x 25	M8 screw*	V-clamp 25-150 SW	HM 10-120
Picture of clamp				
Drawing of clamp				
Cross –section of conductors	4 - 70 mm <sup>2</sup>	Lug terminal max 185 mm <sup>2</sup>	re ● 16 mm <sup>2</sup> - 95 mm <sup>2</sup>	re ● 10 mm <sup>2</sup> - 70 mm <sup>2</sup>
			se ◆ 25 mm <sup>2</sup> - 150 mm <sup>2</sup>	se ◆ 25 mm <sup>2</sup> - 120 mm <sup>2</sup>
			rm ⊗ 16 mm <sup>2</sup> - 95 mm <sup>2</sup>	rm ⊗ 10 mm <sup>2</sup> - 70 mm <sup>2</sup>
			sm ⊕ 25 mm <sup>2</sup> - 150 mm <sup>2</sup>	sm ⊕ 25 mm <sup>2</sup> - 95 mm <sup>2</sup>
Tightening torque	3 Nm**	12 Nm**	20 Nm**	15 Nm**

For stranded conductors using cable ferrules is recommended

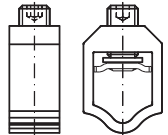
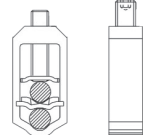
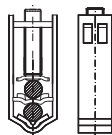

\*) bars of maximum width of 20 mm and maximum thickness of 5 mm can be fixed to M type screw terminals

\*\*\*) using tension wrench is recommended

\*\*\*\*) fuse switch disconnectors with V-terminals are equipped with steel V-clamp HM 10-120 on request

Apator takes responsibility for technical quality of V-terminals manufactured only by the company. Minimum tightening torque (M8 screw) for screws fixing fuse switch disconnector to busbar system – 12 Nm, recommended tightening torque for screws and nuts with property class 8.8 – 21 Nm.

**Table 21. smartARS 2,3 pro-PV terminal clamps**

Description	smartARS 2,3-x-V pro-PV	smartARS 2,3-x-2V pro-PV	smartARS 2,3-x-2V pro-PV	smartARS 2,3-x-M pro-PV	
Clamp	V-clamp 35-300SW-B	V-clamp 2/50-300SW-B	V-clamp HS 2/50-240-C*	M-screw M12**	
Picture of clamp					
Cross – section of conductors	V-clamp for direct fixing of conductor with bare end with crosssection of				
	35 - 185 mm <sup>2</sup> ⊗	35 - 240 mm <sup>2</sup> ●	50 - 185 mm <sup>2</sup> ⊗	50 - 240 mm <sup>2</sup> ●	Lug terminal
35 - 240 mm <sup>2</sup> ⊕	35 - 300 mm <sup>2</sup> ◆	50 - 240 mm <sup>2</sup> ⊕	50 - 300 mm <sup>2</sup> ◆	50 - 240 mm <sup>2</sup> ⊗	
Tightening torque	30 Nm	30 Nm	40 Nm	56 Nm	

For stranded conductors using cable ferrules is recommended

\*) if the fuse switch disconnector with a 2V-type clamp is to be equipped with a steel V-clamp HS 2/50-240-C, it should be included in the order

\*\*\*) bars of maximum width of 40 mm and maximum thickness of 8 mm can be fixed to M type screw terminals when protective barrier between phases is installed

Apator takes responsibility for technical quality of V-terminals manufactured only by the company. Minimum tightening torque (M12 screw) for screws fixing fuse switch disconnector to busbar system – 32 Nm, recommended tightening torque for screws and nuts with property class 8.8 – 56 Nm.