



# ARS pro

## vertical fuse switch disconnectors

- fibre glass extra strenghtened, self extinguishing
- thermoplastics of VO flammability class
- double clearance between open contacts
- arc chambers with deionization plates over every contact
- reversibility - top/bottom cable terminal connection
- wide range of accesories

## GENERAL INFORMATION

**ARS pro** vertical fuse switch disconnectors are designed for distribution of electricity and protection against short circuits and overloads in three phase alternative current circuits. They are intended for direct installation on horizontal or vertical busbar systems.

**ARS pro** fuse switch disconnectors meet technical requirements of electricity boards and are conforming to EN 60947-1, EN 60947-3, IEC 60947-1, IEC 60947-3 standards. **ARS pro** fuse switch disconnectors are dedicated for applications which require reliability and safety like low voltage distribution boards installed in transformer substations, industrial low voltage distribution boards and cable cabinets.

Removal of the fuse links provides clearly noticeable, large isolating distances in the circuit.

**ARS pro** fuse switch disconnectors are designed to perform the following functions:

- protection,
- energy distribution,
- earthing,
- switching,
- touch protection.

## CONSTRUCTION

**ARS pro** fuse switch disconnectors are manufactured in two versions:

- one pole switching (separately each pole),
- three pole switching (three poles at the same time).

**ARS pro** fuse switch disconnectors have manually operated handle therefore making and breaking operations should be done with determined movement.

**ARS pro** fuse switch disconnectors are available in following sizes (according to rated current): 00 (160 A); 2 (400 A); also available are versions 910A and 1250A.

**ARS pro** fuse switch disconnectors (size 2-400A; 910A ; 1250A) are designed for installation on 185 mm busbar system. **ARS 00/100 mm pro** fuse switch disconnector (size 00) is designed for installation on 100 mm busbar system.

By using the adapter, it is possible to mount the **ARS 00 / 100mm pro** switch disconnector on busbar system with a spacing of 185 mm.

All plastic parts of fuse switch disconnector **ARS pro** are made of halogen free, fibre glass strengthened, self extinguishing materials. Thanks to the application of flame retardants the highest flammability class – V0 was achieved. Fuse switch disconnectors made from such thermoplastics self-extinguish in specified time after ignition source is removed. Also dripping of flaming parts of plastic does not occur.

Silver plated contacts provide low power loss. Depending on clamp type, **ARS pro** fuse switch disconnectors enable user to connect circular or sector-shaped conductors with bare ends or conductors with lug terminals. Arc chambers equipped with steel deionization plates are installed over each contact. **ARS pro** fuse switch disconnectors are designed for using current transformers and ammeters. Protection degree of IP30 from the front is provided. In opened position **ARS pro** provide protection degree IP20. Additionally offered accessories enable to install **ARS pro** fuse switch disconnectors of different sizes on common busbar systems and facilitate operation. All sizes of **ARS pro** fuse switch disconnectors are provided complete with clamps (i. e. screws, V-terminals, 2V-terminals) and shrouds for cable terminals.

Table 20. Technical data ARS pro

Parameter		ARS 00/60 mm pro	ARS 00/100 mm pro	ARS 400 pro	ARS 630 pro	ARS 630 kVA pro	RWS 600 pro	RWS 750 pro	RWS 1250 pro	ARS 1250 pro	
Rated thermal current $I_{th}=I_n$ with fuse links	A	160	160	400	630	910	-	-	-	1250	
Rated thermal current $I_{th}$ with solid links	A	-	-	-	-	-	600	750	1250	-	
Rated voltage $U_n$	V	690	690	690	690	400	690	500	400	400	
Utilization category	690 V	AC-22B	AC-22B	AC-22B	AC-22B	-	AC-22B	-	-	-	
	500 V	-	-	-	-	-		AC-22B	-	-	
	400 V	AC-23B	AC-23B	-	-	AC-22B		-	AC-22B	AC-21B	
Rated switching current $I_e$	A	160	160	400	630	910	600	750	1250	1250	
Rated short-circuit making current	690 V	kA	80	25	100	100	-	-	-	-	-
	500 V		120		120	-	-				-
	400 V		-		50	-	-				100
Rated short-circuit withstand current	690 V	kA	80	100	100	100	-	-	-	-	-
	500 V		120		120	-	-				-
	400 V		-		50	-	-				100
Rated insulation voltage $U_i$	V	1000	1000	1000	1000	1000	1000	1000	1000	1000	
Rated impulse withstand voltage $U_{imp}$	kV	8	8	12	12	12	12	12	12	12	
Rated short time withstand current $I_{cw}$	kA	-	-	-	-	-	15 <sup>3)</sup>	15 <sup>3)</sup>	15/20 <sup>2)</sup>	-	
Rated frequency	Hz	50-60	50-60	50-60	50-60	50-60	50-60	50-60	50-60	50-60	
Mechanical durability	Number of cycles	1600	1600	1000	1000	600	1000	1000	600	600	
Electrical durability		200	200	200	200	100	200	200	100	100	
IP degree of protection	IP	30	30	30	30	30	30	30	30	30	
Fuse links size	-	00	00	1,2	3	gTr 630 kVA <sup>1)</sup>	solid-links ZN2	solid-links ZN3	solid-links ZN3 -1250A	3	

<sup>1)</sup> fuse link gTr 630 kVA, DIN 43620, VDE 0636/2011, size NH3

<sup>2)</sup> with mechanical lock

<sup>3)</sup> use of mechanical lock recommended

## OPERATING CONDITIONS

- to be installed in the room free of any dust, aggressive or explosive gases,
- altitude up to 2000 meters above sea level,
- outdoor – in cabinets with protection degree > IP 34,
- ambient temperature from -25 °C to +55 °C,
- relative humidity of the air should not be higher than 50% at temperature of +40°.

## FUNCTIONALITY

- making and breaking operations should be done with determined movement,
- parallelly moving, double contact system,
- designed for installation on to 60 mm, 100 mm or 185 mm busbar system,
- two versions: single pole switching (separately each pole) or triple pole switching (three poles at the same time),
- width 50 mm (ARS 00/60 mm pro, ARS 00/100 mm pro); width 100 mm (ARS 400 pro, ARS 630 pro, RWS 600 pro, RWS 750 pro, RWS 1250 pro) or 200 mm (ARS 1250 pro),
- suitable for top cable terminal connection,
- possible connection of conductors with lug terminals (screw terminals) or circular/sector-shaped conductors with bare ends (V-terminals, 2V-terminals) using V-clamps,
- voltage test is performed through test holes leading to blade contacts,
- possible installation of various types of earthing devices.

## FUSE SWITCH DISCONNECTOR ARS 00/60 mm pro (160 A, 690 V)

Table 21. Technical data

Parameter	ARS 00/60 mm pro		
Rated thermal current $I_{th}=I_n$	A	160	
Rated voltage $U_n$	V	690	
Utilization category	-	AC-22B	AC-23B
Rated switching voltage $U_e$	V	690	400
Rated switching current $I_e$	A	160	
Rated short circuit making current	690 V	kA	80
	500 V		120
Rated short circuit withstand current	690 V	kA	80
	500 V		120
Rated insulation voltage $U_i$	V	1000	
Rated impulse withstand voltage $U_{imp}$	kV	8	
Rated frequency	Hz	50-60	
Mechanical durability	Number of cycles	1600	
Electrical durability	Number of cycles	200	
IP degree of protection	IP	30	
Fuse links size	-	00	



ARS 00/60 mm pro

Table 22. Versions

APASYS 60	Version of ARS 00/60 mm pro		Article No.
	<b>three pole switching - all phases simultaneously (for installation on to 60 mm busbar system)</b>		
ARS 00/60 mm pro	cable terminals: bridge terminals with bridge clamps (S) 4-70 mm <sup>2</sup> screw terminals with M8 screws		63-002354-001
ARS 00/60 mm-T pro	cable terminals: frame clamps 2,5-70 mm <sup>2</sup>		63-002354-002

Table 23. ARS 00/60 mm pro terminal clamps

Description	ARS 00/60 mm pro		
Clamp	S-bridge clamp 2 x M5 x 20	screw M8*	frame clamps
Picture of clamp			
Drawing of clamp			
Cross-section of conductors	4 - 70 mm <sup>2</sup>	Conductor with lug terminal max 95 mm <sup>2</sup>	2,5 - 70 mm <sup>2</sup>
Tightening torque	3 Nm**	10 Nm**	6 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

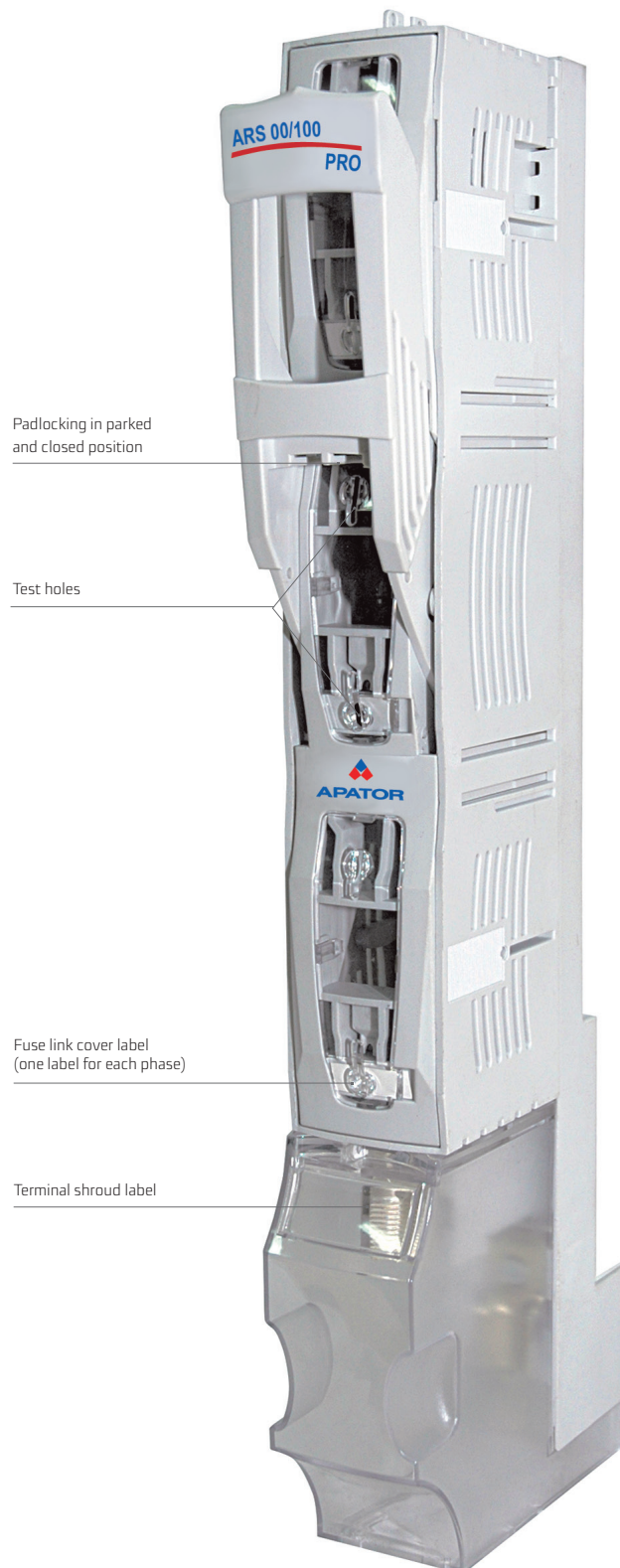
## FUSE SWITCH DISCONNECTOR ARS 00/100 mm pro (160 A, 690 V)

For installation on to 100 mm busbar system

Fuse switch disconnectors width 50 mm

Three pole switching - all phases simultaneously

ARS 00/100 mm pro



## ARS 00/100 mm pro (160 A, 690 V)

Table 24. Technical data

Parameter	ARS 00/100 mm pro	
Rated thermal current $I_{th}=I_n$	A	160
Rated voltage $U_n$	V	690
Utilization category	-	AC-22B AC-23B
Rated switching voltage $U_e$	V	690 400
Rated switching current $I_e$	A	160
Rated short circuit making current	kA	25
Rated short circuit withstand current	kA	100
Rated insulation voltage $U_i$	V	1000
Rated impulse withstand voltage $U_{imp}$	kV	8
Rated frequency	Hz	50-60
Mechanical durability	Number of cycles	1600
Electrical durability	Number of cycles	200
IP degree of protection	-	30
Fuse links size	-	00

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ARS 00/100 mm pro

ARS 00/100 mm pro

Table 25. Versions

Version		Weight	Article No.
<b>three pole switching - all phases simultaneously (for installation on to 100 mm busbar system)</b>			
ARS 00/100 mm pro	cable terminals: bridge terminals with bridge clamps (S) 4-70 mm <sup>2</sup> , screw terminals with M8 screws	1,3 kg	63-811628-041
ARS 00/100 mm-V pro	cable terminals: V-terminals with V-clamps 25-150 SW	1,5 kg	63-811628-061

Table 26. ARS 00/100 mm pro terminal clamps

Description	ARS 00/100 mm pro			
	S-bridge clamp 2 x M5 x 20	screw M8*	V-clamp 25-150 SW	HM 10-120
Picture of clamp				
Drawing of clamp				
Cross-section of conductors	4-70 mm <sup>2</sup>	Conductor with lug terminal max 185 mm <sup>2</sup>	re ● 16 mm <sup>2</sup> - 95 mm <sup>2</sup> se ◆ 25 mm <sup>2</sup> - 150 mm <sup>2</sup>	re ● 10 mm <sup>2</sup> - 70 mm <sup>2</sup> se ◆ 20 mm <sup>2</sup> - 120 mm <sup>2</sup>
			rm ⊗ 16 mm <sup>2</sup> - 95 mm <sup>2</sup> sm ⊗ 25 mm <sup>2</sup> - 150 mm <sup>2</sup>	rm ⊗ 10 mm <sup>2</sup> - 70 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

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

\*\*<sup>c</sup>) using tension wrench is recommended

\*\*\*<sup>d</sup>) 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.

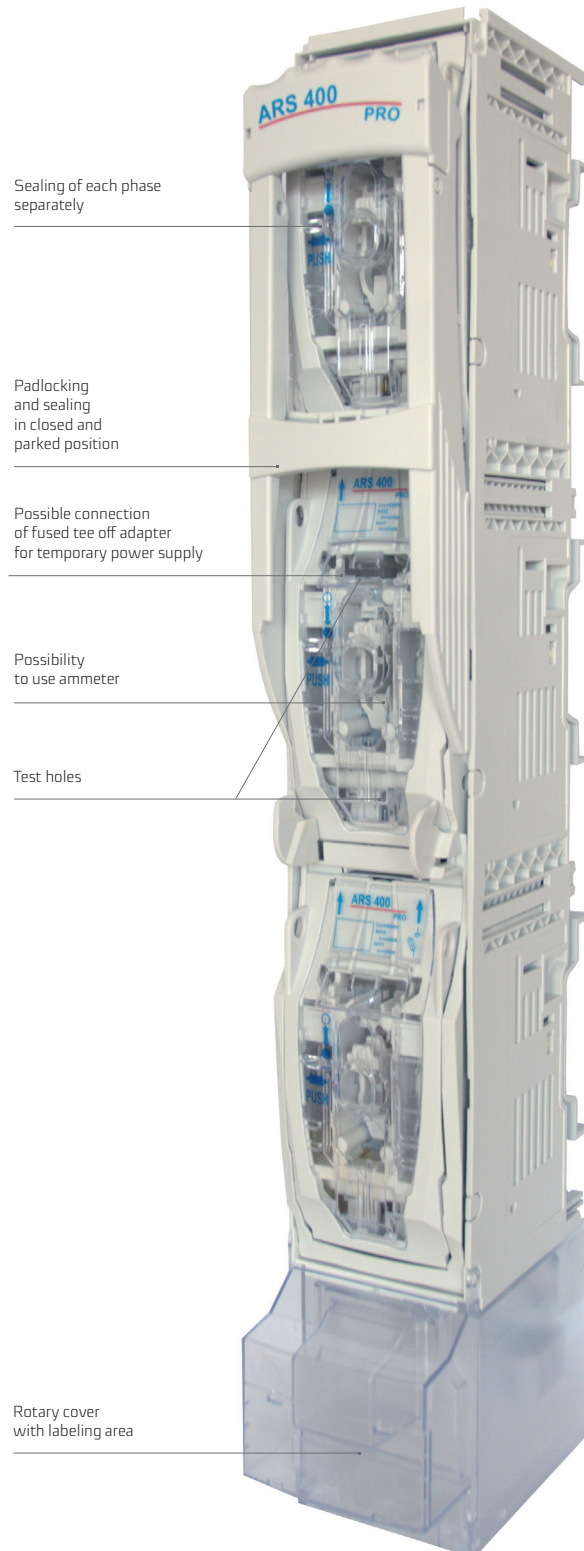
FUSE SWITCH DISCONNECTOR ARS 400 pro (400 A, 690 V)  
ARS 630 pro (630 A, 690 V)

For installation on to 185 mm busbar system

Fuse switch disconnectors' width 100 mm

Three pole switching - all phases simultaneously or one pole switching - each phase independently

ARS 400 pro, ARS 630 pro



Sealing of each phase separately

Padlocking and sealing in closed and parked position

Possible connection of fused tee off adapter for temporary power supply

Possibility to use ammeter

Test holes

Rotary cover with labeling area

## FUSE SWITCH DISCONNECTOR ARS 400 pro (400 A, 690 V)

Designed for operation with NH1 and NH2 fuse links

Table 27. Technical data

Parameter	ARS 400 pro		
Rated thermal current $I_{th}=I_n$	A	250(NH1), 400(NH2)	
Rated voltage $U_n$	V	690	
Utilization category	-	AC-22B	
Rated switching voltage $U_e$	V	690	
Rated switching current $I_e$	A	250(NH1), 400(NH2)	
Rated short circuit making current	690 V	kA	100
	500 V	kA	120
Rated short circuit withstand current	690 V	kA	100
	500 V	kA	120
Rated insulation voltage $U_i$	V	1000	
Rated impulse withstand voltage $U_{imp}$	kV	12	
Rated frequency	Hz	50-60	
Mechanical durability	Number of cycles	1000	
Electrical durability		200	
IP degree of protection	-	30	
Fuse links size	-	1, 2	

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ARS 400-1-M pro

ARS 400-6-M pro

ARS 400 pro

Table 28. Versions

Version	Weight	Article No.
<b>for installation on 185 mm busbar system, ONE POLE SWITCHING - each phase independently</b>		
ARS 400-1-V pro cable terminals: V-terminals: V-clamps 240 mm <sup>2</sup>	5,2 kg	63-001968-011
ARS 400-1-M pro cable terminals: screw terminals: pressed nuts M10	4,9 kg	63-001968-021
ARS 400-1-2V pro cable terminals: 2V-terminals: double V-clamps 240 mm <sup>2</sup>	5,8 kg	63-001968-031
<b>for installation on 185 mm busbar system, THREE POLE SWITCHING - all phases simultaneously</b>		
ARS 400-6-V pro cable terminals: V-terminals: V-clamps 240 mm <sup>2</sup>	5,2 kg	63-001971-011
ARS 400-6-M pro cable terminals: screw terminals: pressed nuts M10	4,9 kg	63-001971-021
ARS 400-6-2V pro cable terminals: 2V-terminals: double V-clamps 240 mm <sup>2</sup>	5,8 kg	63-001971-031

Table 29. ARS 400 pro terminal clamps

Description	ARS 400-x-V pro	ARS 400-x-2V pro	ARS 400-2-x-2V pro	ARS 400-x-M pro			
Clamp	V-clamp 35-300SW-B	V-clamp 2/50-300SW-B	V-clamp HS 2/50-240-C*	M-screw M10**			
Drawing 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>	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>	50 - 300 mm <sup>2</sup>	
Tightening torque	30 Nm		30 Nm		40 Nm		32 Nm

For stranded conductors using cable ferrules is recommended

\*) if the fuse switch disconnecter 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 (M10 screw) for screws fixing fuse switch disconnecter to busbar system – 32 Nm, recommended tightening torque for screws and nuts with property class 8.8 – 56 Nm.



## FUSE SWITCH DISCONNECTOR ARS 630 pro (630 A, 690 V)

Designed for operation with NH3 fuse links



ARS 630-1-M pro

ARS 630-6-M pro

Table 30. Technical data

Parameter	ARS 630 pro		
Rated thermal current $I_{th}=I_n$	A	630	
Rated voltage $U_n$	V	690	
Utilization category	-	AC-22B	
Rated switching voltage $U_e$	V	690	
Rated switching current $I_e$	A	630	
Rated short circuit making current	690 V	kA	100
	500 V		120
Rated short circuit withstand current	690 V	kA	100
	500 V		120
Rated insulation voltage $U_i$	V	1000	
Rated impulse withstand voltage $U_{imp}$	kV	12	
Rated frequency	Hz	50-60	
Mechanical durability	Number of cycles	1000	
Electrical durability		200	
IP degree of protection	-	30	
Fuse links size	-	3	

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Table 31. Versions

Versions	Weight	Article No.
<b>for installation on 185 mm busbar system, one pole switching - each phase independently</b>		
ARS 630-1-V pro cable terminals: V-terminals: V-clamps 240 mm <sup>2</sup>	5,8 kg	63-011801-011
ARS 630-1-M pro cable terminals: screw terminals: pressed nuts M12	5,5 kg	63-011801-021
ARS 630-1-2V pro cable terminals: 2V-terminals: double V-clamps 240 mm <sup>2</sup>	6,4 kg	63-011801-031
<b>for installation on 185 mm busbar system, THREE POLE SWITCHING - all phases simultaneously</b>		
ARS 630-6-V pro cable terminals: V-terminals: V-clamps 240 mm <sup>2</sup>	5,8 kg	63-011802-011
ARS 630-6-M pro cable terminals: screw terminals: pressed nuts M12	5,5 kg	63-011802-021
ARS 630-6-2V pro cable terminals: 2V-terminals: double V-clamps 240 mm <sup>2</sup>	6,4 kg	63-011802-031

Table 32. ARS 630 pro terminal clamps

Description	ARS 630-x-V pro	ARS 630-x-2V pro	ARS 630-x-2V pro	ARS 630-x-M pro
Clamp	V-clamp 35-300SW-B	V-clamp 2/50-300SW-B	V-clamp HS 2/50-240-C*	M-screw M12**
Drawing of clamp				
Cross-section of conductors	V-clamp for direct fixing of conductor with bare end with cross-section 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>
	35 - 240 mm <sup>2</sup>	35 - 300 mm <sup>2</sup>	50 - 240 mm <sup>2</sup>	50 - 300 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 disconnecter 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 disconnecter to busbar system – 32 Nm, recommended tightening torque for screws and nuts with property class 8.8 – 56 Nm.

## FUSE SWITCH DISCONNECTOR ARS 630 kVA pro

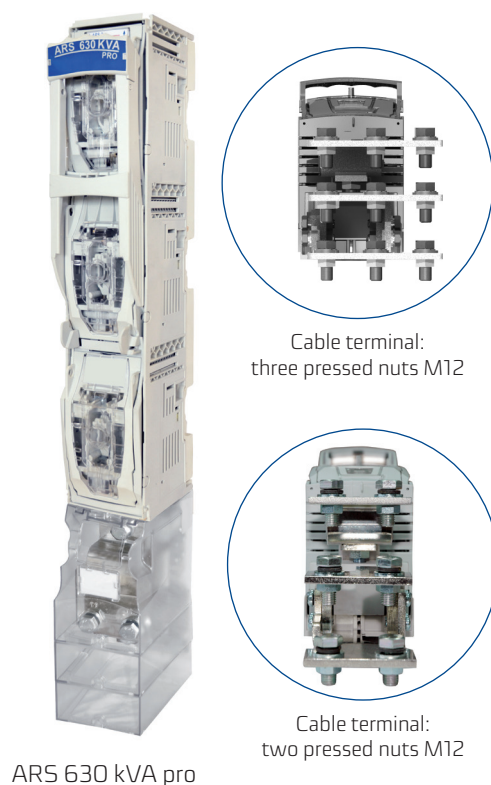
Fuse switch disconnector ARS 630 kVA pro is dedicated for protection of transformers up to 630 kVA  
 Fuse switch disconnector is designed for operation with NH fuse links of size 3, with gTr characteristic

Table 33. Technical data

Parameter	ARS 630 kVA pro	
Rated thermal current $I_{th}=I_n$	A	910
Rated voltage $U_n$	V	400
Utilization category	-	AC-22B
Rated switching voltage $U_e$	V	400
Rated switching current $I_e$	A	910
Rated short circuit making current	kA	50
Rated short circuit withstand current	kA	50
Rated insulation voltage $U_i$	V	1000
Rated impulse withstand voltage $U_{imp.}$	kV	12
Rated frequency	Hz	50-60
Mechanical durability	Number of cycles	600
Electrical durability		100
IP degree of protection	-	30
Weight	kg	8,7
Fuse links size	-	gTr 630 kVA <sup>1)</sup>

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<sup>1)</sup> Fuse link gTr 630 kVA, DIN 43620, VDE 0636/2011, size NH3



ARS 630 kVA pro

Table 34. Versions

Versions	Article No.
<b>for installation on 185 mm busbar system</b>	
<b>one pole switching - each phase independently</b>	
ARS 630 kVA-1-2M pro    cable terminals: screw terminals with two pressed nuts M12/pole, width 100 mm	63-811860-001
ARS 630 kVA-1-3M pro    cable terminals: screw terminals with three pressed nuts M12/pole, width 200 mm	63-811860-002
<b>three pole switching - all phases simultaneously</b>	
ARS 630 kVA-6-2M pro    cable terminals: screw terminals with two pressed nuts M12/pole, width 100 mm	63-811722-011
ARS 630 kVA-6-3M pro    cable terminals: screw terminals with three pressed nuts M12/pole, width 200 mm	63-811722-021

Recommended tightening torque (M12 screw) for screws fixing fuse switch disconnector to busbar system – 56Nm, screws and nuts property class 8.8.

Table 35. ARS 630 kVA pro terminal clamps

Description	ARS 630 kVA pro
Clamp	pressed nuts M12
Drawing of clamp	
Cross – section of conductors	Cable lugs, max 300 mm <sup>2</sup>
Tightening torque	56 Nm

# SWITCH DISCONNECTOR RWS 600 pro (600 A, 690 V)

Switch disconnecter designed for operation with solid links of size 2



RWS 600-6-V pro

Table 36. Technical data

Parameter	RWS 600 pro	
Rated thermal current $I_{th}=I_n$	A	600
Rated voltage $U_n$	V	690
Utilization category	-	AC-22B
Rated switching voltage $U_e$	V	690
Rated switching current $I_e$	A	600
Rated insulation voltage $U_i$	V	1000
Rated impulse withstand voltage $U_{imp}$	kV	12
Rated short time withstand current $I_{cw}$	kA	15 <sup>1)</sup>
Rated frequency	Hz	50-60
Mechanical durability	Number of cycles	1000
Electrical durability		200
IP degree of protection	-	30
Solid links size	-	2

[Accessories on page 52, 53](#)

<sup>1)</sup> use of mechanical lock recommended

Table 37. Versions

Version		Weight	Article No
<b>for installation on 185 mm busbar system, THREE POLE SWITCHING - all phases simultaneously</b>			
RWS 600-6-V pro	cable terminals: V-terminals: V-clamps 240 mm <sup>2</sup>	5,8 kg	63-002228-001
RWS 600-6-M pro	cable terminals: screw terminals: pressed nuts M12	5,7 kg	63-002228-002
RWS 600-6-2V pro	cable terminals: 2V-terminals: double V-clamps 240 mm <sup>2</sup>	6,4 kg	63-002228-003

Table 38. RWS 600 pro terminal clamps

Description	RWS 600-6-V pro	RWS 600-6-2V pro	RWS 600-6-2V pro	RWS 600-6-M pro
Clamp	V-clamp 35-300SW-B	V-clamp 2/50-300SW-B	V-clamp HS 2/50-240-C*	M-screw M12**
Drawing of clamp				
Cross – section of conductors	V-clamp for direct fixing of conductor with bare end with cross-section of:			Lug terminal
	35 - 185 mm <sup>2</sup>	35 - 240 mm <sup>2</sup>	50 - 185 mm <sup>2</sup>	
	35 - 240 mm <sup>2</sup>	35 - 300 mm <sup>2</sup>	50 - 240 mm <sup>2</sup>	50 - 300 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 disconnecter 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 disconnecter to busbar system – 32 Nm, recommended tightening torque for screws and nuts with property class 8.8 – 56 Nm.

## SWITCH DISCONNECTOR RWS 750 pro (750 A, 500 V)

Switch disconnecter designed for operation with solid links of size 3

Table 39. Technical data

Parameter	RWS 750 pro	
Rated thermal current $I_{th}=I_n$	A	750
Rated voltage $U_n$	V	500
Utilization category	-	AC-22B
Rated switching voltage $U_e$	V	500
Rated switching current $I_e$	A	750
Rated insulation voltage $U_i$	V	1000
Rated impulse withstand voltage $U_{imp}$	kV	12
Rated short time withstand current $I_{cw}$	kA	15 <sup>1)</sup>
Rated frequency	Hz	50-60
Mechanical durability	Number of cycles	1000
Electrical durability		200
IP degree of protection	-	30
Solid links size	-	3

Accessories on page 52, 53

<sup>1)</sup> use of mechanical lock recommended



RWS 750-6-V pro

RWS 750 pro

Table 40. Versions

Version	Weight	Article No
<b>for installation on 185 mm busbar system, THREE POLE SWITCHING - all phases simultaneously</b>		
RWS 750-6-V pro cable terminals: V-terminals: V-clamps 240 mm <sup>2</sup>	6,6 kg	63-002229-001
RWS 750-6-M pro cable terminals: screw terminals: pressed nuts M12	6,5 kg	63-002229-002
RWS 750-6-2V pro cable terminals: 2V-terminals: double V-clamps 240 mm <sup>2</sup>	7,2 kg	63-002229-003

Table 41. RWS 750 pro terminal clamps

Description	RWS 750-6-V pro	RWS 750-6-2V pro	RWS 750-6-2V pro	RWS 750-6-M pro	
Clamp	V-clamp 35-300SW-B	V-clamp 2/50-300SW-B	V-clamp HS 2/50-240-C*	M-screw M12**	
Drawing of clamp					
Cross – section of conductors	V-clamp for direct fixing of conductor with bare end with cross-section 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>	50 - 185 mm <sup>2</sup>
	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

<sup>\*)</sup> if the fuse switch disconnecter 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

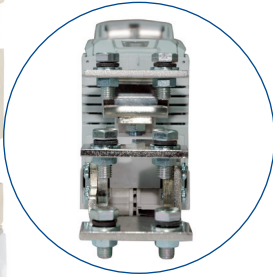
<sup>\*\*)</sup> bars of maximum width of 40 mm and maximum thickness of 8 mm can be fixed to M type screw terminals when protective barrier between phases is installed Apator takes responsibility for technical quality of V-terminals manufactured only by the company. Minimum tightening torque (M12 screw) for screws fixing fuse switch disconnecter to busbar system – 32 Nm, recommended tightening torque for screws and nuts with property class 8.8 – 56 Nm.

## SWITCH DISCONNECTOR RWS 1250 pro

Main switch-disconnector 1250 A, equipped with ZN3 1250A solid-links

Switch-disconnector's width 100 mm

For installation on 185 mm busbar system



Cable terminal:  
two pressed  
nuts M12

RWS 1250-6-2M pro

Table 42. Technical data

Parameter		RWS 1250 pro
Rated thermal current $I_{th}=I_n$	A	1250
Rated voltage $U_n$	V	400
Utilization category	-	AC-22B
Rated switching voltage $U_e$	V	400
Rated switching current $I_e$	A	1250
Rated insulation voltage $U_i$	V	1000
Rated impulse withstand voltage $U_{imp}$	kV	12
Rated short time withstand current $I_{cw}$	kA	15/20 <sup>1)</sup>
Rated frequency	Hz	50-60
Mechanical durability	Number of cycles	600
Electrical durability	Number of cycles	100
IP degree of protection	-	30
Weight	kg	8,7
Solid links size	-	ZN3 -1250 A


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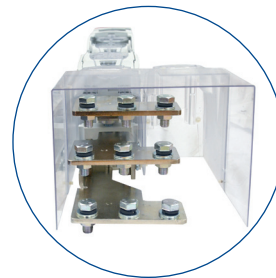
<sup>1)</sup> with mechanical lock

Table 43. Versions

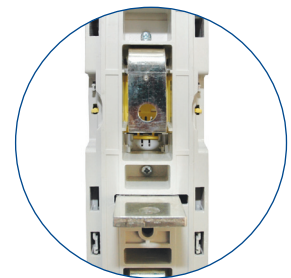
Version		Article No.
<b>for installation on 185 mm busbar system, THREE POLE SWITCHING - all phases simultaneously</b>		
RWS 1250 - 6 - 2M pro	cable terminals: screw terminals with two pressed nuts M12/pole, width 100 mm	63-811828-011
RWS 1250 - 6 - 3M pro	cable terminals: screw terminals with three pressed nuts M12/pole, width 200 mm	63-811828-021
RWS 1250 - 6 - T pro	power supply connection at the back of the switch disconnector, feeding rail's length = 120 mm, feeding rails designed for fixing with M12 screws	63-811861-001
RWS 1250 - 6 - T pro	power supply connection at the back of the switch disconnector, feeding rail's length = 170 mm, feeding rails designed for fixing with M12 screws	63-811861-002
RWS 1250 NL pro	coupling switch-disconnector with lateral busbar terminals; cable terminals: screw terminals with pressed nuts M12, lateral busbar terminal - left side	63-811862-005
RWS 1250 NR pro	coupling switch-disconnector with lateral busbar terminals; cable terminals: screw terminals with pressed nuts M12, lateral busbar terminal - right side	63-811862-001

Table 44. RWS 1250 pro terminal clamps

Description	RWS 1250 pro
Clamp	pressed nuts M12
Drawing of clamp	
Cross-section of conductors	Cable lugs, max 300 mm <sup>2</sup>
Tightening torque	56 Nm



cable terminals:  
screw terminals with three  
pressed nuts M12/pole



RWS 1250 pro  
with outgoing terminals  
at the back of the switch

## SWITCH DISCONNECTOR ARS 1250 pro

Fuse switch disconnectors width 200 mm

Table 45. Technical data

Parameter		ARS 1250 pro
Rated thermal current $I_{th}=I_n$	A	1250
Rated voltage $U_n$	V	400
Utilization category	-	AC-21B
Rated switching voltage $U_e$	V	400
Rated switching current $I_e$	A	1250
Rated short circuit making current	kA	100
Rated short circuit withstand current	kA	100
Rated insulation voltage $U_i$	V	1000
Rated impulse withstand voltage $U_{imp}$	kV	12
Rated frequency	Hz	50-60
Mechanical durability	Number of cycles	600
Electrical durability		100
IP degree of protection	-	30
Fuse links size	-	3

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ARS 1250-1-3M pro

ARS 1250-6-3M pro

ARS 1250 pro

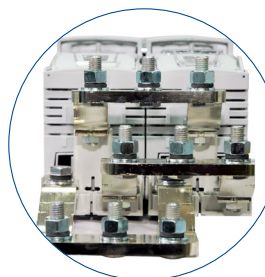
Table 46. Versions

Version		Weight	Article No.
<b>for installation on to 185 mm busbar system, fuse disconnectors width – 200 mm</b>			
<b>one pole switching - each phase independently</b>			
ARS 1250-1-3M pro	mechanically and electrically coupled two ARS 3 pro fuse switch disconnectors, cable terminals: screw terminals with three pressed screw M12/pole	16,3 kg	63-811757-011
ARS 1250-1-4M pro	mechanically and electrically coupled two ARS 3 pro fuse switch disconnectors, cable terminals: screw terminals with four pressed screw M12/pole	17 kg	63-811757-021
<b>three pole switching - all phases simultaneously</b>			
ARS 1250-6-3M pro	mechanically and electrically coupled two ARS 3 pro fuse switch disconnectors, cable terminals: screw terminals with three pressed screw M12/pole	16,3 kg	63-811756-011
ARS 1250-6-4M pro	mechanically and electrically coupled two ARS 3 pro fuse switch disconnectors, cable terminals: screw terminals with four pressed screw M12/pole	17 kg	63-811756-021

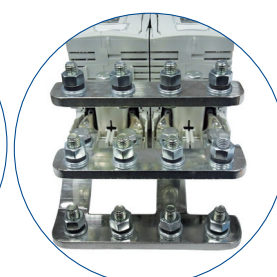
Recommended tightening torque (M12 screw) for screws fixing fuse switch disconnectors to busbar system – 56Nm, screws and nuts property class 8.8

Table 47. ARS 1250-x-M pro terminal clamps

Description	ARS 1250-x-3M pro	ARS 1250-x-4M pro
Clamp	three pressed nuts M12	four pressed nuts M12
Drawing of clamp		
Cross-section of conductors	Cable lugs, max 300 mm <sup>2</sup>	Cable lugs, max 300 mm <sup>2</sup>
Tightening torque	56 Nm	56 Nm



M3 type cable terminals: screw terminals with three pressed screw M12/pole



M3 type cable terminals: screw terminals with four pressed screw M12/pole

# FUSE SWITCH DISCONNECTOR with lateral busbar terminal

(separation, coupling of busbar systems)



ARS 400-6-NR pro

Table 48. Technical data

Parameter		ARS 400 pro
Rated thermal current $I_{th}=I_n$	A	400
Rated voltage $U_n$	V	690
Utilization category	-	AC-22B
Rated switching voltage $U_e$	V	690
Rated switching current $I_e$	A	400
Rated short circuit making current	690 V	100
	500 V	120
Rated short circuit withstand current	690 V	100
	500 V	120
Rated insulation voltage $U_i$	V	1000
Rated impulse withstand voltage $U_{imp}$	kV	12
Rated frequency	Hz	50-60
Mechanical durability	Number of cycles	1000
Electrical durability	Number of cycles	200
IP degree of protection	-	30
Fuse links size	-	1,2

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Table 49. Versions with lateral busbar terminal

Version		Weight	Article No
<b>for installation on 185 mm busbar system, ONE POLE SWITCHING - each phase independently</b>			
ARS 400-1-NL pro	cable terminals: screw terminals : pressed nuts M12; lateral busbar terminals - left side	5,1 kg	63-811837-011
ARS 400-1-NR pro	cable terminals: screw terminals : pressed nuts M12; lateral busbar terminals - right side	5,1 kg	63-811837-031
<b>for installation on 185 mm busbar system, THREE POLE SWITCHING - all phases simultaneously</b>			
ARS 400-6-NL pro	cable terminals: screw terminals : pressed nuts M12; lateral busbar terminals - left side	5,1 kg	63-811838-011
ARS 400-6-NR pro	cable terminals: screw terminals : pressed nuts M12; lateral busbar terminals - right side	5,1 kg	63-811838-031

Table 50. ARS 400 pro with lateral busbar terminals terminal clamps

Description	ARS 400-x-NL	ARS 400-x-NR
Clamp	M12 screw	M12 screw
Drawing of clamp		
Lateral busbar termina	Left side	Right side
Tightening torque	56 Nm	56 Nm