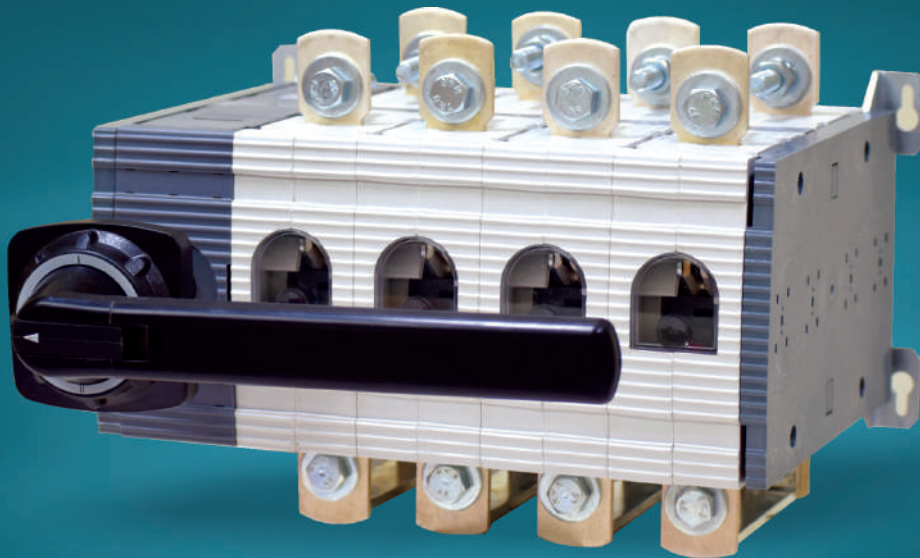
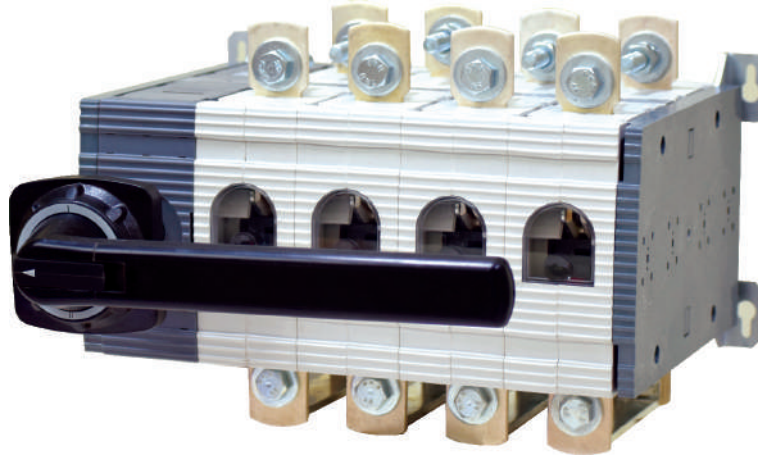


# A = N

## Change Over Switches



ABN offers wide range of Change Over Switches for manual operation. The range of Change Over Switches confirms to latest IEC 60947-3, 60947-6-1 standards. The products are in line with best design and quality standards

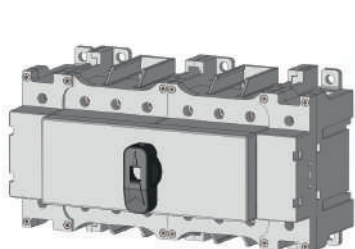


#### Features and benefits

- CB certifications for IEC 60947-3 from UL lab to conform IEC 60947-3/EN 60947-3/UL 60947-3/IS: 13947-3 for isolated Switch
- Compact and modular construction
- AC-23A and AC-33 rating for voltage level up to 690/1000V
- Double quick make/break operation feature that enhance performance
- Provision for add on auxiliary contact for identification of switch position
- Front operated mechanism
- Suitable for vertical, horizontal, upwards, downwards orientation
- Modular switch, can be configured from single pole to 8 pole

ABN Change Over Switches were developed according to IEC 60947-3 / IEC 60946-6-7 and enable the manual drive of motors, machines and other equipment. Besides carrying and interrupting electric currents under normal or over load conditions, the design of the switches provides complete physical insulation between the circuit on the power supply when in the Off position. In this position, it is possible to use 3 pad locks in order to prevent inadvertent actuations, increasing the safety of operators and maintenance personnel.

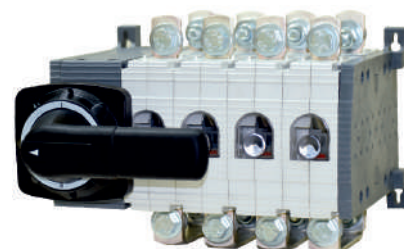
ABN Change Over Switches provide reliable protection for personnel and ensure high system availability in buildings, infrastructure and industrial plants.



**20...125A**



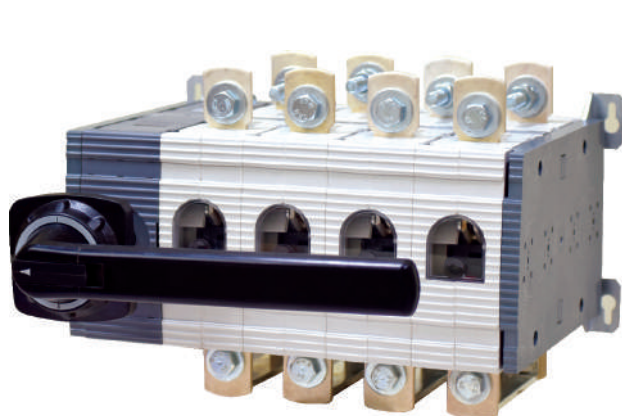
**125...250A**



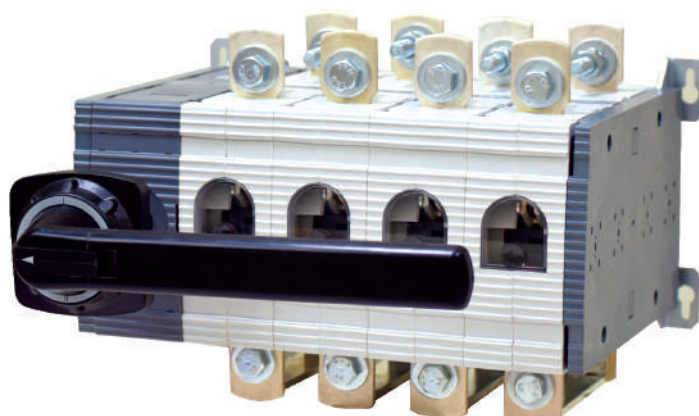
**315...630A**

## IEC

$I_{th}$ in A	20, 25, 32, 40, 50, 63, 80, 100, 125	125, 160, 200, 250	315, 400, 500, 630
$I_e$ AC 22A / AC23A / AC 33 A in A	20, 25, 32, 40, 50, 63, 80, 100, 125	125, 160, 200, 250	315, 400, 500, 630



**500...800A**



**1000...1600A**

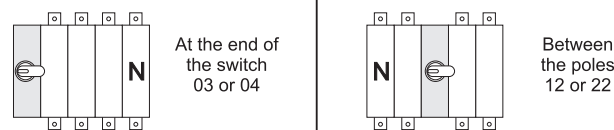
## IEC

$I_{th}$ in A	500, 630, 800	1000, 1250, 1600
$I_e$ AC 22A / AC23A / AC 33 A in A	500, 630, 800	1000, 1250, 1600

		Rating	A
Technical data according to IEC 60947-3		Switch type	
Rated insulation Voltage and rated Operational Voltage AC20/DC20			V
Dielectric Strength	Pollution degree 3	50 Hz 1min.	KV
Rated impulse Withstand Voltage			KV
Rated thermal current and rated operational current AC20/DC20	Ambient 40°C Ambient 40°C Ambient 60°C	In open air In enclosure In enclosure Cu	A A A mm <sup>2</sup>
With minimum conductor cross section			
Rated operational current, AC-21A		Up to 415 V 440...690 V	A A
Rated operational current, AC-22A		Up to 415 V 440...500 V 690 V	A A A
Rated operational current, AC-23A		Up to 415 V 440 V 500 V 690 V	A A A A
Rated operational current / poles in series,DC-21A		24...48 V 110 V 220 V 440 V 500 V	A A A A A
Rated operational current / poles in series,DC-22A		24...48 V 110 V 220 V 440 V	A A A A
Rated operational current / poles in series,DC-23A		24...48 V 110 V 220 V 440 V	A A A A
Rated operational power, AC-23A ( These values are given for guidance and may vary acc. to the motor manufacturer)		220...240 V 400...415 V 440 V 500 V 690V	kw kw kw kw kw
Rated breaking capacity, AC-23A		Up to 415 V 440 V 500 V 690 V	A A A A
Rated breaking capacity / poles in series, DC-23A		24...48 V 220 V 110 V 440 V	A A A A
Rated conditional short-circuit current $I_p$ (r.m.s.) and corresponding max. allowed cut-off current $\hat{I}_c$ .	$I_p$ (r.m.s.) max. fuse size gG/aM	50 kA ≤ 415 V	kA A
The cut-off current $\hat{I}_c$ refers to values listed by fuse manufacturers (single phase test acc. to IEC60269)	$I_p$ (r.m.s.) max. fuse size gG/aM	100 kA ≤ 500 V	kA A
	$I_p$ (r.m.s.) max. fuse size gG/aM	10 kA ≤ 690 V	kA A
	$I_p$ (r.m.s.) max. fuse size gG/aM	50 kA ≤ 690 V	kA A
	$I_p$ (r.m.s.) max. fuse size gG/aM	50 kA ≤ 690 V	kA A
Rated short -time withstand current	r.m.s. -value $I_{cw}$ r.m.s. -value $I_{cw}$	690 V, 0.25 s 690 V, 1 s	kA kA
Rated short circuit making capacity	Peak value $I_{cm}$	690 V/500 V	kA
Rated capacity power (the capacitor rating are limited by the fuse link.)		400...415 V	kVAr
Power loss / pole	At rated operational current		W
Mechanical endurance	Divide by two operation cycles		oper.
Weight without accessories	3-pole 4-pole		Kg Kg
Cable size	Cu-wire size suitable for terminal clamps		mm <sup>2</sup> AWG
Terminal tightening torque	Counter torque required		Nm
Operating torque	3-pole switch-disconnector		Nm

20	25	32	40	50	63	80	100	125
RVSD20	RVSD25	RVSD32	RVSD40	RVSD50	RVSD63	RVSD80	RVSD100	RVSD125
750 6 8	750 6 8	750 6 8	750 6 8	750 6 8	750 6 8	750 6 8	750 6 8	750 6 8
32 32 20 4	32 32 25 6	40 40 32 10	40 40 32 10	50 50 40 10	63 63 50 16	80 80 80 80	115 115 80 35	125 125 100 50
20 20	25 25	32 32	40 40	50 50	63 63	80 80	100 100	125 125
20 20 20	25 25 25	32 32 32	40 40 40	50 50 50	63 63 63	80 80 80	100 100 100	125 125 125
20 20 20	25 25 25	32 32 32	40 40 40	50 50 50	63 63 63	80 80 80	100 100 100	125 125 125
20 20 20 12	25 25 25 13	32 32 32 16	40 40 40 20	50 50 50 25	63 63 63 32	80 80 80 40	100 100 100 50	125 125 125 50
20/1 20/2 20/3 16/4 16/4	25/1 25/2 25/3 16/4 16/4	32/1 32/2 32/3 16/4 16/4	40/1 40/2 40/3 16/4 16/4	50/1 50/2 50/3 16/4 16/4	63/1 63/2 63/3 16/4 16/4	80/1 80/2 80/4 16/4 16/4	100/1 100/2 100/4 16/4 16/4	125/1 125/2 125/4 16/4 16/4
20/1 20/2 20/3 20/4	25/1 25/2 25/3 25/4	32/1 32/2 32/4 32/4	40/1 40/2 40/4 40/4	50/1 50/2 50/4 50/4	63/1 63/2 63/4 63/4	80/1 80/2 80/4 80/4	100/1 100/2 100/4 100/4	125/1 125/2 125/4 125/4
20/1 20/2 20/4 10/4	25/1 25/2 25/4 10/4	32/1 32/2 32/4 10/4	40/1 40/2 32/4 10/4	50/1 50/2 40/4 10/4	63/1 63/2 50/4 10/4	80/1 80/2 63/4 10/4	100/1 100/2 80/4 10/4	125/1 125/2 80/4 10/4
4 9 9 9 9	4 9 9 9 9	5 10 10 10 10	5.5 11 11 11 11	7.5 15 15 15 15	11 22 22 22 22	22 37 37 37 37	22 37 37 37 37	22 45 45 45 45
160 160 160 140	200 200 200 175	256 256 256 224	320 320 320 280	400 400 400 350	504 504 504 441	640 640 640 560	800 800 800 700	1000 1000 1000 875
80/1 80/2 80/4 32/4	100/1 100/2 100/4 40/4	110/1 110/2 110/4 40/4	128/1 128/2 128/4 40/4	128/1 128/2 128/4 50/4	180/1 180/2 180/4 40/4	252/1 252/2 180/4 40/4	400/1 400/2 252/4 60/4	500/1 500/2 252/4 60/4
6.5 40/32	6.5 40/32	6.5 40/32	6.5 40/32	6.5 100/80	13 100/80	13 100/80	16.5 125/125	16.5 125/125
					17 100/80	17 100/80		
							8.2 125/100	8.2 125/100
7 25/16	7 25/16	7 25/16	7 25/16	12 100/80	12 80/63	15 80/63	15 80/63	18 80/63
0.5	0.5	0.5	0.5	0.5	1	1.5	2.5	2.5
0.705	0.705	0.705	0.705	0.705	1.4	2.1	3.6	3.6
10	10	15	15	15	25	30	40	50
0.6 20 000	0.6 20 000	1.6 20 000	1.6 20 000	1.6 20 000	2.8 20 000	4.5 20 000	4.0 20 000	6.3 20 000
0.4 0.54	0.4 0.54	0.4 0.54	0.4 0.54	0.4 0.54	0.4 0.54	0.4 0.54	0.4 0.54	0.4 0.54
0.75...10 18-8	0.75...10 18-8	0.75...10 18-8	0.75...10 18-8	0.75...10 18-8	1.5...35 14-4	1.5...35 14-4	10...70 8-00	10...70 8-00
1.2 2	1.2 2	2.2 2	2.2 2	4 2	4 2	4 2	4 2	4 2

**Placing options of the operating mechanism for RVCO125...250**



			RATING	A	125	160	200	250	315
Technical data according to IEC 60947-3			Switch type		RVCO125	RVCO160	RVCO200	RVCO250	RVCO315
Rated insulation voltage and rated operational voltage AC-20, DC-20	Pollution degree 3	50 Hz 1min.	V		1000	1000	1000	1000	1000
Dielectric strength			kv		10	10	10	10	10
Rated impulse voltage			kv		12	12	12	12	12
Rated thermal current and rated operational current AC-20, DC-20 in ambient 40°C <sup>4)</sup>	Ambient 40°C	In open air	A		200	200	200	250	315
	Ambient 60°C	In enclosure	A <sub>2</sub>		125	160	200	250	315
with minimum cable cross section		Cu	mm		50	70	95	120	185
Rated operational current AC-21A		≤ 500V	A		125	200	200	250	315
		690V	A		125	160	200	250	315
		1000V	A		125	160	200	250	315
Rated operational current AC-22A		≤ 500V	A		125	200	200	250	315
		690V	A		125	160	200	250	315
		1000V	A		125	160	200	250	315
Rated operational current AC-23A		≤ 500V	A		125	160	200	250	315
		690V	A		125	160	200	250	315
		1000V	A		125	135	135	135	200
Rated operational current/ poles in series, DC-21A ...23A <sup>1)</sup>		24...110 V	A		125/2	160/2	200/2	250/2	315/1 <sup>2)</sup>
		220 V	A		125/2	160/2	200/2	250/2	315/2 <sup>2)</sup>
		440 V	A		125/3	160/3	200/3	250/3	315/3
		660 V	A		125/4	160/4	200/4	230/4 <sup>2)</sup>	315/4
Rated operational current/ poles in series, DC-21B		800 V	A		125/5	160/5	200/5	250/5	315/5
		1000 V	A		125/6	160/6	200/6	250/6	315/6
Rated operational power, AC-23 <sup>3)</sup>		230 V	KW		37	48	60	75	100
		400 V	KW		64	80	110	140	160
		415 V	KW		68	88	110	145	180
		500 V	KW		87	112	132	170	220
		690 V	KW		112	144	200	250	315
Rated breaking capacity in category AC-23		≤ 500 V	A		1000	1280	1600	2000	2520
		690 V	A		1000	1280	1600	2000	2520
Rated conditional short-circuit I <sub>p</sub> (r.m.s.) and corresponding max. allowed cut-off current $\hat{I}_c$ .	I <sub>p</sub> (r.m.s.)	100 KA,500 V	KA		40.5	40.5	40.5	40.5	61.5
	Max. fuse size	gG/aM	A		315/315	315/315	315/315	315/315	500/450
The cut-off current $\hat{I}$ refers to values listed by fuse manufacturers (Single phase test acc.to IEC60269).	I <sub>p</sub> (r.m.s.)	80 KA,690 V	KA		40.5	40.5	40.5	40.5	59
	Max. fuse size	gG/aM	A		355/315	355/315	355/315	355/315	500/500
Rated short-time making withstand current	r.m.s I <sub>cw</sub>	≤1000 V 0.15s	KA		15	15	15	15	15
		≤1000 V 0.25s	KA		15	15	15	15	15
		≤1000 V 1s	KA		8	8	8	8	8
Rated short-time circuit making capacity	Peak Value I <sub>cm</sub>	≤1000 V 1s	KA		30	30	30	30	30
Rated capacitor power when no initial charge on the capacitor	The capacitor rating are limited by the fuse link	415 V	KVAr		62	80	100	115	145
		500 V	KVAr		75	96	120	135	175
		690 V	KVAr		100	128	160	190	250
Power loss / pole	With rated current		W		3.2	3.2	4	6.5	10
Mechanical endurance	Operating cycle <sup>5)</sup>		Oper.		10 000	10 000	10 000	10 000	10 000
	No. of operations				20 000	20 000	20 000	20 000	20 000
Weight without accessories	3-pole switch		Kg		2.5	2.5	2.5	2.5	2.5
	4-pole switch		Kg		3.0	3.0	3.0	3.0	3.0
Terminal bolt size	Metric thread diameter x length		mm		M8x25	M8x25	M8x25	M8x25	M8x25
Terminal tightening torque	Counter torque required		Nm		15-22	15-22	15-22	15-22	15-22
Operating torque	3-pole switch disconnecter		Nm		7	7	7	7	7
<b>Data according to IEC 60947-6-1</b>									
Class of equipment					PC	PC	PC	PC	PC
Rated short - time withstand current	I <sub>cw</sub> (r.m.s.)	690 V 0.1s	kA		15	15	15	15	15
Rated operational current, AC-31B		up to 415V	A		125	160	200	250	250
Rated operational current, AC-33B		up to 415V	A		125	160	200	250	250

1) Further rating on request

2) Category B

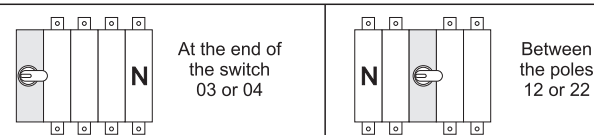
3) These values are given for guidance and may vary acc. to the motor manufacturer

4) Acc. to IEC 60947-1, § 6.1.1

5) Operating cycle O-I-O-II-O



Placing options of the operating mechanism for RVCO315...630



				RATING	A	315	400	500	630
Technical data according to IEC 60947-3				Switch type		RVCO315	RVCO400	RVCO500	RVCO630
Rated insulation voltage and rated operational voltage AC-20, DC-20	Pollution degree 3	50 Hz 1min.	V			1000	1000	1000	1000
Dielectric strength			kv			10	10	10	10
Rated impulse voltage			kv			12	12	12	12
Rated thermal current and rated operational current AC-20, DC-20 in ambient 40°C <sup>1)</sup>	Ambient 40°C	In open air	A			315	400	500	630
	Ambient 60°C	In enclosure	A			315	400	500	630
with minimum cable cross section		Cu	mm <sup>2</sup>			185	240	2x150	2x185
Rated operational current AC-21A		≤ 500V	A			315	400	500	630
		690V	A			315	400	500	630
		1000V	A			315	400	500	630
Rated operational current AC-22A		≤ 500V	A			315	400	500	630
		690V	A			315	400	500	630
		1000V	A			315	400	500	630
Rated operational current AC-23A		≤ 500V	A			315	400	500	630
		690V	A			315	400	500	630
		1000V	A			200	200	200	400
Rated operational current/ poles in series, DC-21A ...23A <sup>1)</sup>		24...110 V	A			315/1 <sup>2)</sup>	400/1 <sup>2)</sup>	500/1 <sup>2)</sup>	630/1
		220 V	A			315/2 <sup>2)</sup>	400/2 <sup>2)</sup>	500/2 <sup>2)</sup>	630/1
		440 V	A			315/3	360/3	360/3	360/2
		660 V	A			315/4	360/4	360/4	630/4 <sup>2)</sup>
Rated operational current / poles in series, DC-21B		800 V	A			315/5	400/5	500/5	400/5
		1000 V	A			315/6	400/6	500/6	400/6
Rated operational power, AC-23 <sup>3)</sup>		230 V	KW			100	132	165	200
		400 V	KW			160	220	275	355
		415 V	KW			180	230	287	355
		500 V	KW			220	280	287	400
		690 V	KW			315	400	500	630
Rated breaking capacity in category AC-23		≤ 500 V	A			2520	3200	3200	5040
		690 V	A			2520	3200	3200	5040
Rated conditional short-circuit I <sub>p</sub> (r.m.s.) and corresponding max. allowed cut-off current I <sub>c</sub> .	I <sub>p</sub> (r.m.s.)	100 KA,500 V	KA			61.5	61.5	61.5	90
	Max. fuse size	gG/aM	A			500/450	500/450	500/450	800/1000
The cut-off current I <sub>c</sub> refers to values listed by fuse manufacturers (Single phase test acc.to IEC60269).	I <sub>p</sub> (r.m.s.)	80 KA,690 V	KA			59	59	59	83.5
	Max. fuse size	gG/aM	A			500/500	500/500	500/500	800/1000
Rated short-time making withstand current	r.m.s I <sub>cw</sub>	≤1000 V 0.15s	KA			31	31	31	38
		≤1000 V 0.25s	KA			24	24	24	36
		≤1000 V 1s	KA			15	15	15	20
Rated short-time circuit making capacity	Peak Value I <sub>cm</sub>	≤1000 V 1s	KA			65	65	65	80
Rated capacitor power when no initial charge on the capacitor	The capacitor rating are limited by the fuse link	415 V	KVAr			145	180	225	250
		500 V	KVAr			175	215	268	300
		690 V	KVAr			250	325	406	450
Power loss / pole	With rated current		W			6.5	10	15	25
Mechanical endurance	Operating cycle <sup>5)</sup>		Oper.			8 000	8 000	8 000	8 000
	No. of operations					16 000	16 000	16 000	16 000
Weight without accessories	3-pole switch		Kg			4.8	4.8	4.8	4.8
	4-pole switch		Kg			5.8	5.8	5.8	5.8
Terminal bolt size	Metric thread diameter x length		mm			M10x30	M10x30	M10x30	M12x40
Terminal tightening torque	Counter torque required		Nm			30-44	30-44	30-44	50-75
Operating torque	3-pole switch disconnecter		Nm			16	16	16	27

Data according to IEC 60947-6-1

Class of equipment				PC	PC	PC	PC
Rated short - time withstand current	I <sub>cw</sub> (r.m.s.)	690 V 0.1s	kA	25	25	25	25
Rated operational current, AC-31B		up to 415V	A	315	400	500	630
Rated operational current, AC-33B		up to 415V	A	315	400	500	630

1) Further rating on request

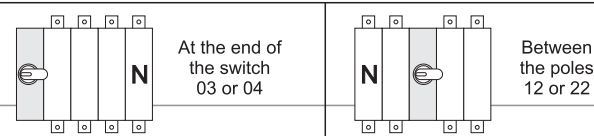
2) Category B

3) These values are given for guidance and may vary acc. to the motor manufacturer

4) Acc. to IEC 60947-1, § 6.1.1

5) Operating cycle O-I-O-II-O

Placing options of the operating mechanism for RVCO500...800



		RATING		A	500	630	800
Technical data according to IEC 60947-3		Switch type			RVCO0500	RVCO0630	RVCO0800
Rated insulation voltage and rated operational voltage AC-20, DC-20	Pollution degree 3	50 Hz 1min.	V		1000	1000	1000
Dielectric strength			kV		10	10	10
Rated impulse voltage			kV		12	12	12
Rated thermal current and rated operational current AC-20, DC-20 in ambient 40°C <sup>4)</sup>	Ambient 40°C	In open air	A		500	630	800
	Ambient 60°C	In enclosure	A <sub>2</sub>		500	630	800
with minimum cable cross section		Cu	mm		2x150	2x185	2x240
Rated operational current AC-21A		≤ 500V	A		500	630	800
		690V	A		500	630	800
		1000V	A		500	630	800
Rated operational current AC-22A		≤ 500V	A		500	630	800
		690V	A		500	630	800
		1000V	A		500	630	800
Rated operational current AC-23A		≤ 500V	A		500	630	800
		690V	A		500	630	800
		1000V	A		200	400	400
Rated operational current/ poles in series, DC-21A ...23A <sup>1)</sup>		24...110 V	A		500/1 <sup>2)</sup>	630/1	800/1
		220 V	A		500/2 <sup>2)</sup>	630/1	800/1
		440 V	A		360/3	360/2	800/2
		660 V	A		360/4	630/4 <sup>2)</sup>	650/4 <sup>2)</sup>
Rated operational current / poles in series, DC-21B		800 V	A		500/5	400/5	600/5
		1000 V	A		500/6	400/6	600/6
Rated operational power, AC-23 <sup>3)</sup>		230 V	KW		165	200	250
		400 V	KW		275	355	450
		415 V	KW		287	355	450
		500 V	KW		287	400	560
		690 V	KW		500	630	800
Rated breaking capacity in category AC-23		≤ 500 V	A		3200	5040	6400
		690 V	A		3200	5040	6400
Rated conditional short-circuit I <sub>p</sub> (r.m.s.) and corresponding max, allowed cut-off current I <sub>c</sub> .	I <sub>p</sub> (r.m.s.)	100 KA, 500 V	KA		61.5	90	90
	Max. fuse size	gG/aM	A		500/450	800/1000	800/1000
The cut-off current I <sub>c</sub> refers to values listed by fuse manufacturers (Single phase test acc.to IEC60269).	I <sub>p</sub> (r.m.s.)	80 KA, 690 V	KA		59	83.5	83.5
	Max. fuse size	gG/aM	A		500/500	800/1000	800/1000
Rated short-time making withstand current	r.m.s I <sub>cw</sub>	≤1000 V 0.1s	KA		38	38	38
		≤1000 V 0.25s	KA		36	36	36
		≤1000 V 1s	KA		20	20	20
Rated short-time circuit making capacity	Peak Value I <sub>cm</sub>	≤1000 V 1s	KA		65	80	80
Rated capacitor power when no initial charge on the capacitor	The capacitor rating are limited by the fuse link	415 V	KVAr		225	250	310
		500 V	KVAr		268	300	375
		690 V	KVAr		406	450	550
Power loss / pole	With rated current		W		15	25	40
Mechanical endurance	Operating cycle <sup>5)</sup>		Oper.		5 000	5 000	5 000
	No. of operations				10 000	10 000	10 000
Weight without accessories	3-pole switch		Kg		12.8	12.8	12.8
	4-pole switch		Kg		15.6	15.6	15.6
Terminal bolt size	Metric thread diameter x length		mm		M12x40	M12x40	M12x40
Terminal tightening torque	Counter torque required		Nm		50-75	50-75	50-75
Operating torque	3-pole switch disconnecter		Nm		27	27	27
Data according to IEC 60947-6-1							
Class of equipment					PC	PC	PC
Rated short - time withstand current	I <sub>scw</sub> (r.m.s.)	690 V 0.1s	kA		38	38	38
Rated operational current, AC-31B		up to 415V	A		500	630	800
Rated operational current, AC-33B		up to 415V	A		500	630	800

1) Further rating on request

2) Category B

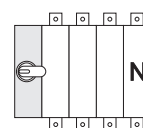
3) These values are given for guidance and may vary acc, to the motor manufacturer

4) Acc. to IEC 60947-1, § 6.1.1

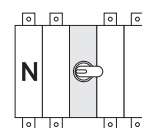
5) Operating cycle O-I-O-II-O



**Placing options of the operating mechanism for RVCO1000...1600**



At the end of  
the switch  
03 or 04



Between  
the poles  
12 or 22

				RATING	A	1000	1250	1600
Technical data according to IEC 60947-3				Switch type		RVCO1000	RVCO1250	RVCO1600
Rated insulation voltage and rated operational voltage AC20, Dc20	Pollution degree 3	50 Hz 1min.	V			1000	1000	1000
Dielectric strength			kv			10	10	10
Rated impulse voltage			kv			12	12	12
Rated thermal current and rated operational current AC20/DC20	Ambient 40°C	In open air	A			1000	1250	1600
	Ambient 60 C	In enclosure	A			1000	1250	1600
with minimum conductor cross section		Cu	mm <sup>2</sup>			2x300	2x400	2x500
Rated operational current AC-21A		Up to 690 V	A			1000	1250	1600
		1000 V	A			1000	1250	1600
Rated operational current AC-22A		Up to 415 V	A			1000	1250	1600
		500 - 690 V	A			1000	1250	1600
Rated operational current AC-23A		Up to 500 V	A			1000	1250	1250
		690 V	A			1000	1250	1250
Rated operational power, AC-23A (These values are given for guidance and may vary acc to the motor manufacturer)		400...415 V	KW			560	710	890
		440 V	KW			630	800	1000
		500 V	KW			710	900	1100
		690 V	KW			1000	1200	1600
Rated breaking capacity, AC-23A		Up to 500 V	A			8000	10000	12800
		690 V	A			8000	10000	12800
Rated conditional short-circuit current $I_p$ (r.m.s.) and corresponding max. allowed cut-off current $\hat{I}_c$	$I_p$ (r.m.s.)	80 KA	KA			100	100	100
	Max. fuse size	≤ 415 V	A			1250/1250	1250/1250	1250/1250
The cut-off current $\hat{I}$ refers to values listed by fuse manufacturers (Single phase test acc.to IEC60269).	$I_p$ (r.m.s.)	100 KA	KA			106	106	106
	Max. fuse size	≤ 500 V	A			1250/1250	1250/1250	1250/1250
Rated short-time withstand current	r.m.s $I_{cw}$	690 V, 0.25s	KA			50	50	50
		690 V, 1s	KA			50	50	50
Rated short-time circuit making capacity	Peak Value $I_{cw}$	690 V	KA			110 <sup>(1)</sup>	110 <sup>(1)</sup>	110 <sup>(1)</sup>
	Max. distance from switch frame to nearest busbar/cable support		mm			150	150	150
Rated capacitor power when no initial charge on the capacitor	The capacitor rating are limited by the fuse links	415 V	KVAr			460	575	730
		500 V	KVAr			550	690	880
		690 V	KVAr			750	950	1200
Power loss / pole	At rated operational current		W			19	29	48
Mechanical endurance	Operating cycle <sup>(1)</sup>		Oper.			3 000	3 000	3 000
	No. of operations					6 000	6 000	6 000
Weight without accessories	3-pole		Kg			29.00	29.00	33.60
	4-pole switch		Kg			35.70	35.70	42.20
Terminal bolt size	Metric thread diameter x length		mm			M12x50	M12x50	M12x60
Terminal tightening torque	Counter torque required		Nm			50...75	50...75	50...75
Operating torque	3-pole switch disconnecter		Nm			65	65	65

**Data according to IEC 60947-6-1**

Class of equipment				PC	PC	PC
Rated short - time withstand current	$I_{cw}$ (r.m.s.)	690 V 0.1s	kA	50	50	50
Rated operational current, AC-31B		up to 415V	A	1000	1250	1600
Rated operational current, AC-33B		up to 415V	A	1000	1250	1600

1) Operating cycle O-I-O-II-O