

Power-Wave

Characteristics

Performance Data

Characteristics	Symbol	Units	400		630		800		1000		1250	
Rated current (40°C)	In	A	400		630		800		1000		1250	
Endurance(n° of operating cycles)			20000		20000		20000		20000		20000	
Mechanical (with maintenance)			10000		10000		10000		10000		10000	
Mechanical (without maintenance)			5000		5000		5000		5000		5000	
Rated service voltage(50/60 Hz)	Ue	V	690		690		690		690		690	
Rated insulation voltage	Ui	V	1000		1000		1000		1000		1000	
Rated impulse withstand voltage	Uimp	V	8000		8000		8000		8000		8000	
Number of poles			3 & 4		3 & 4		3 & 4		3 & 4		3 & 4	
Rating of 4th pole			100%		100%		100%		100%		100%	
ACB type			S	N	S	N	S	N	S	N	S	N
Framesize			1	1	1	1	1	1	1	1	1	1
Rated ultimate short-circuit	Icu	kA (rms)										
Breaking capacity			50	65	50	65	50	65	50	65	50	65
	220V		50	65	50	65	50	65	50	65	50	65
	415V		50	65	50	65	50	65	50	65	50	65
	500V		50	65	50	65	50	65	50	65	50	65
	600V		50	50	50	50	50	50	50	50	50	50
	690V		40	40	40	40	40	40	40	40	40	40
Rated service short-circuit	Ics	kA (rms)										
Breaking capacity			50	65	50	65	50	65	50	65	50	65
	220V		50	65	50	65	50	65	50	65	50	65
	415V		50	65	50	65	50	65	50	65	50	65
	500V		50	65	50	65	50	65	50	65	50	65
	600V		50	50	50	50	50	50	50	50	50	50
	690V		40	40	40	40	40	40	40	40	40	40
Rated short time withstand current												
1 second	Icw	kA (rms)	50	65	50	65	50	65	50	65	50	65
3 seconds	Icw	kA (rms)	40	50	40	50	40	50	40	50	40	50
Rated short-circuit making capacity		kA (peak)	143	143	143	143	143	143	143	143	143	143
	415V		143	143	143	143	143	143	143	143	143	143
	500V		143	105	143	105	143	105	143	105	143	105
	600V		84	84	84	84	84	84	84	84	84	84
	690V		84	84	84	84	84	84	84	84	84	84
Power dissipation at In (fixed breaker)	W	Watt	16	11	39	27	63	43	106	68	175	105
Power dissipation at In (withdrawable)	W	Watt	33	22	75	53	127	86	211	135	351	211

Temperature deratings

Free Air ⁽¹⁾

The Power-Wave Plus ACBs may operate at higher ambient temperatures than 40°C in certain installation conditions. In this case the current rating in Amperes should be reduced as indicated below.

Ambient temp. around the breaker	Current rating(A) above 40°C							
Rated current (A)	800	1000	1250	1600	2000	2500	3200	4000
50°C	800	1000	1250	1600	2000	2450	3200	3727
60°C	800	1000	1250	1445	2000	2232	3200	3367

The figures specified apply to withdrawable ACBs with flat face vertical copper connections.

(1) Protection degree IP00. For use in enclosures with interior temperatures of 40°C to 60°C the relevant IP values can be applied.

Rated short-circuit capacity

In accordance with IEC 947-2 at 415V

Breaker range	Rating (A)	Type	Icu	Ics	Icw 1 sec	500 ms
S	400 to 4000	Fixed or withdrawable	50kA	50kA	50kA	-
N	400 to 4000	Fixed or withdrawable	65kA	65kA	65kA	-

Recommended minimum copper size

In accordance with IEC 947-2

Rating(A)	Copper / phase
400	2 x 50 x 5
630	2 x 50 x 5
800	2 x 50 x 5
1000	2 x 60 x 5
1250	2 x 50 x 10
1600	2 x 50 x 10
2000	3 x 50 x 10
2500	4 x 50 x 10
3200	4 x 100 x 10
4000	4 x 100 x 10 + 1 x 100 x 5

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1600		2000		2500		3200		4000	
20000		20000		20000		20000		20000	
10000		10000		10000		10000		10000	
5000		5000		5000		5000		5000	
690		690		690		690		690	
1000		1000		1000		1000		1000	
8000		8000		8000		8000		8000	
3 & 4		3 & 4		3 & 4		3 & 4		3 & 4	
100%		100%		100%		100%		100%	
S	N	S	N	S	N	S	N	S	N
1	1	1/2	1/2	1/2	1/2	2	2	2	2
50	65	50	65	50	65	50	65	50	65
50	65	50	65	50	65	50	65	50	65
50	65	50	65	50	65	50	65	50	65
50	50	50	50	50	50	50	50	50	50
40	40	40	40	40	40	40	40	40	40
50	65	50	65	50	65	50	65	50	65
50	65	50	65	50	65	50	65	50	65
50	65	50	65	50	65	50	65	50	65
50	50	50	50	50	50	50	50	50	50
40	40	40	40	40	40	40	40	40	40
50	65	50	65	50	65	50	65	50	65
40	50	40	50	40	50	40	50	40	50
143	143	143	143	143	143	143	143	143	143
143	143	143	143	143	143	143	143	143	143
143	105	143	105	143	105	143	105	143	105
84	84	84	84	84	84	84	84	84	84
287	196	224	224	224	224	418	418	571	571
574	392	490	490	490	490	888	888	1224	1224

Dimensions (mm)

Framesize	Rating(A)	Poles	Version ⁽¹⁾	Height ⁽²⁾	Length ⁽³⁾	Depth ⁽⁴⁾
1	400 to 2500	3	W	440	329	390
			F	430	329	328
		4	W	440	429	390
			F	430	429	328
2	800 to 3200	3	W	440	419	392
			F	430	419	328
		4	W	440	549	392
			F	430	549	328
2	4000	3	W	440	419	482
			F	430	419	328
		4	W	440	549	482
			F	430	549	328

- (1) Version
W = Withdrawable
F = Fixed
- (2) Height (H) is from mounting surface to highest part of the ACB
- (3) Length (L) is distance between widest part of the breaker
- (4) Depth (D) is from the cubicle door to the rear moulding

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Weights (kg)

Fixed pattern ACB	Frame	S range		N range	
		3 Pole	4 Pole	3 Pole	4 Pole
400 to 1600A	1	36	44	39	49
2000 to 2500A	1	43	54	43	54
800 to 3200A	2	53	68	53	68
4000A	2	53	68	53	68
Withdrawable ACB	Frame	3 Pole	4 Pole	3 Pole	4 Pole
400 to 1600A	1	63	77	68	84
2000 to 2500A	1	72	90	72	90
800 to 3200A	2	90	117	90	117
4000A	2	111	144	111	144
Cassette only	Frame	3 Pole	4 Pole	3 Pole	4 Pole
400 to 1600A	1	27	33	29	36
2000 to 2500A	1	29	36	29	36
800 to 3200A	2	37	49	37	49
4000A	2	58	76	58	76