Circuit breakers and switch-disconnectors
NW08 to NW63

PB104423A35

PB104433A65

Common characteristics

Number of poles		3/4
Rated insulation voltage (V)	**Ui**	1000/1250
Impulse withstand voltage (kV)	**Uimp**	12
Rated operational voltage (V AC 50/60 Hz)	**Ue**	690/1150
Suitability for isolation	IEC 60947-2	
Degree of pollution	IEC 60664-1	4 (1000 V) / 3 (1250 V)

Basic circuit-breaker

Circuit-breaker as per IEC 60947-2

Rated current (A)		at 40 °C / 50 °C (1)
Rating of 4th pole (A)		
Sensor ratings (A)		

Type of circuit breaker		
Ultimate breaking capacity (kA rms) V AC 50/60 Hz	**Icu**	220/415/440 V 525 V 690 V 1150 V
Rated service breaking capacity (kA rms)	**Ics**	% Icu
Utilisation category		
Rated short-time withstand current (kA rms) V AC 50/60 Hz	**Icw**	1 s 3 s
Integrated instantaneous protection (kA peak ±10 %)		
Rated making capacity (kA peak) V AC 50/60 Hz	**Icm**	220/415/440 V 525 V 690 V 1150 V
Break time (ms) between tripping order and arc extinction		
Closing time (ms)		

Circuit-breaker as per NEMA AB1

Breaking capacity (kA) V AC 50/60 Hz		240/480 V 600 V

Unprotected circuit-breaker

Tripping by shunt trip as per IEC 60947-2

Type of circuit breaker		
Ultimate breaking capacity (kA rms) V AC 50/60 Hz	**Icu**	220...690 V
Rated service breaking capacity (kA rms)	**Ics**	% Icu
Rated short-time withstand current (kA rms)	**Icw**	1 s 3 s
Overload and short-circuit protection External protection relay: short-circuit protection, maximum delay: 350 ms (4)		
Rated making capacity (kA peak) V AC 50/60 Hz	**Icm**	220...690 V

Switch-disconnector as per IEC 60947-3 and Annex A

Type of switch-disconnector		
Rated making capacity (kA peak) **AC23A/AC3 category** V AC 50/60 Hz	**Icm**	220...690 V 1150 V
Rated short-time withstand current (kA rms) **AC23A/AC3 category** V AC 50/60 Hz	**Icw**	1 s 3 s

Earthing switch

Latching capacity (kA peak)		135	
Rating short time withstand (kA rms)	**Icw**	1 s 3 s	60 Hz 50 Hz

Mechanical and electrical durability as per IEC 60947-2/3 at In/Ie

Service life	Mechanical	with maintenance		
C/O cycles x 1000		without maintenance		
Type of circuit breaker				
Rated current			**In (A)**	
C/O cycles x 1000	Electrical	without maintenance		440 V (5)
IEC 60947-2				690 V
				1150 V
Type of circuit breaker or switch-disconnector				
Rated operational current			**Ie (A)**	**AC23A**
C/O cycles x 1000	Electrical	without maintenance		440 V (5)
IEC 60947-3				690 V
Type of circuit breaker or switch-disconnector				
Rated operational current			**Ie (A)**	**AC3** (6)
Motor power				380/415 V (kW)
				440 V (5) (kW)
				690 V (kW)
C/O cycles x 1000	Electrical	without maintenance		440/690 V (5)
IEC 60947-3 Annex M/IEC 60947-4-1				

(1) 50 °C: rear vertical connected. Refer to temperature derating tables for other connection types.
(2) See the current-limiting curves in the "additional characteristics" section.
(3) Equipped with a trip unit with a making current of 90 kA peak.
(4) External protection must comply with permissible thermal constraints of the circuit breaker (please consult us). No fault-trip indication by the SDE or the reset button.
(5) Available for 480 V NEMA.
(6) Suitable for motor control (direct-on-line starting).

Sensor selection

Sensor rating (A)	250 (1)	400	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300
Ir threshold setting(A)	100 to 250	160 to 400	250 to 630	320 to 800	400 to 1000	500 to 1250	630 to 1600	800 to 2000	1000 to 2500	1250 to 3200	1600 to 4000	2000 to 5000	2500 to 6300

(1) For circuit-breaker NW02 , please consult us.

	NW08	NW10	NW12	NW16		NW20					NW25	NW32	NW40		NW40b	NW50	NW63
	800	1000	1250	1600		2000					2500	3200	4000		4000	5000	6300
	800	1000	1250	1600		2000					2500	3200	4000		4000	5000	6300
	400 to 800	400 to 1000	630 to 1250	800 to 1600		1000 to 2000					1250 to 2500	1600 to 3200	2000 to 4000		2000 to 4000	2500 to 5000	3200 to 6300
	N1	H1	H2	L1 (2)	H10	H1	H2	H3	L1 (2)	H10	H1	H2	H3	H10	H1	H2	
	42	65	100	150	-	65	100	150	150	-	65	100	150	-	100	150	
	42	65	85	130	-	65	85	130	130	-	65	85	130	-	100	130	
	42	65	85	100	-	65	85	100	100	-	65	85	100	-	100	100	
	-	-	-	-	50	-	-	-	-	50	-	-	-	50	-	-	
	100 %					100 %					100 %				100 %		
	B					B					B				B		
	42	65	85	30	50	65	85	65	30	50	65	85	65	50	100	100	
	22	36	50	30	50	36	75	65	30	50	65	75	65	50	100	100	
	-	-	190	80	-	-	190	150	80	-	-	190	150	-	-	270	
	88	143	220	330	-	143	220	330	330	-	143	220	330	-	220	330	
	88	143	187	286	-	143	187	286	286	-	143	187	286	-	220	286	
	88	143	187	220	-	143	187	220	220	-	143	187	220	-	220	220	
	-	-	-	-	105	-	-	-	-	105	-	-	-	105	-	-	
	25	25	25	10	25	25	25	25	10	25	25	25	25	25	25	25	
	< 70					< 70					< 70				< 80		
	42	65	100	150	-	65	100	150	150	-	65	100	150	-	100	150	
	42	65	85	100	-	65	85	100	100	-	65	85	100	-	100	100	
		HA	HF (3)			HA	HF (3)				HA	HF (3)			HA		
		50	85			50	85				55	85			85		
		100 %				100 %					100 %				100 %		
		50	85			50	85				55	85			85		
		36	50			36	75				55	75			85		
		-	-			-	-				-	-			-		
		105	187			105	187				121	187			187		

	NW08/NW10/NW12				NW16			NW20			NW25/NW32/NW40			NW40b/NW50/NW63	
	NA	HA	HF	HA10	HA	HF	HA10	HA	HF	HA10	HA	HF	HA10	HA	
	88	105	187	-	105	187	-	105	187	-	121	187	-	187	
	-	-	-	105	-	-	105	-	-	105	-	-	105	-	
	42	50	85	50	50	85	50	50	85	50	55	85	50	85	
	-	36	50	50	36	50	50	36	75	50	55	75	50	85	
	25							20						10	
	12.5							10						5	
	N1/H1/H2	L1	H10					H1/H2	H3	L1	H10	H1/H2	H3	H10	H1	H2
	800/1000/1250/1600							2000				2500/3200/4000			4000b/5000/6300	
	10	3	-					8	2	3	-	5	1.25	-	1.5	1.5
	10	3	-					6	2	3	-	2.5	1.25	-	1.5	1.5
	-	-	0.5					-	-	-	0.5	-	-	0.5	-	-
	H1/H2/HA/HF							H1/H2/H3/HA/HF				H1/H2/H3/HA/HF			H1/H2/HA	
	800/1000/1250/1600							2000				2500/3200/4000			4000b/5000/6300	
	10							8				5			1.5	
	10							6				2.5			1.5	
	H1/H2/HA/HF							H1/H2/H3/HA/HF								
	800	1000	1250	1600				2000								
	335 to 450	450 to 560	560 to 670	670 to 900				900 to 1150								
	400 to 500	500 to 630	500 to 800	800 to 1000				1000 to 1300								
	≤ 800	800 to 1000	1000 to 1250	1250 to 1600				1600 to 2000								
	6															

Characteristics according to IEC 60 947-2

				NW08H2	NW10H2	NW12H2	NW16H2	NW20H2	NW25H2	NW32H2	NW40bH2
Number of poles				3, 4							
Rated insulation voltage		**Ui** (V)		1000							
Rated operational voltage		**Ue** (V)		690							
Closing time (ms)				< 50							
Rated current	**In** (A)	Vertical connection	40 °C	800	1000	1250	1600	2000	2500	3200	4000
			45 °C	800	1000	1250	1600	2000	2500	3200	4000
			50 °C	800	1000	1250	1600	2000	2500	3200	4000
			55 °C	800	1000	1250	1550	1900	2500	3150	4000
			60 °C	800	1000	1250	1500	1800	2500	3000	4000
		Horizontal connection	40 °C	800	1000	1250	1600	2000	2500	-	4000
			45 °C	800	1000	1250	1550	1900	2500	-	4000
			50 °C	800	1000	1250	1500	1800	2500	-	4000
			55 °C	800	1000	1250	1450	1700	2400	-	4000
			60 °C	800	1000	1250	1400	1600	2300	-	3900
4th pole rating				800	1000	1250	1600	2000	2500	3200	4000
Rated utlimate breaking capacity	**Icu** (kA rms) CA 50/60 Hz		220/440 V	100	100	100	100	100	100	100	100
			690 V	85	85	85	85	85	85	85	85
Rated service breaking capacity	**Ics** = Icu x...			100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %
Break time (ms)			Total maxi	25 to 30 with no intentional delay							

Dimensions and connection

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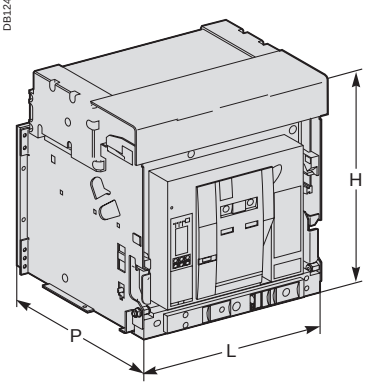

Masterpact NW08 to NW32 with corrosion protection.

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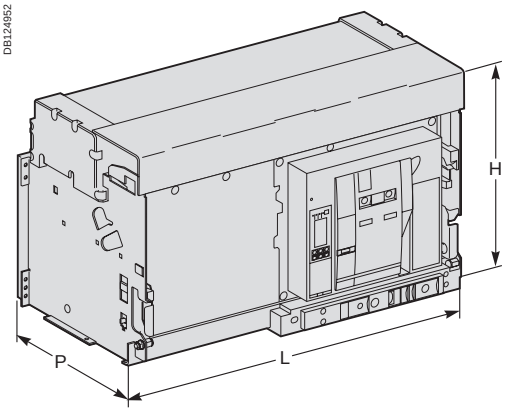

Masterpact NW40b with corrosion protection.

Drawout device	L (mm)		H (mm)	P (mm)
	3P	4P		
800 to 3200 A	441	556	439	395
4000 A	786	1016	479	395

Connection

- ■ Power circuits:
- □ vertical rear connection
- □ horizontal rear connection (except for 3200 A)
- ■ Auxiliaries connected to terminal block on circuit breaker front face.