

Safe
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Use of NZM circuit breakers at 1000 VAC

The special series for up to 1000 VAC rated operational voltage stretches the range of application of the performance and switch disconnector continues to pull out. They are suitable for use under special environmental conditions like mines, road tunnels, refineries, chemical plants and electric railways. Typical applications are drives for high performance and general industrial power supply with long supply lines.



Circuit-breakers, switch-disconnectors

Technical overview for 1000 VAC

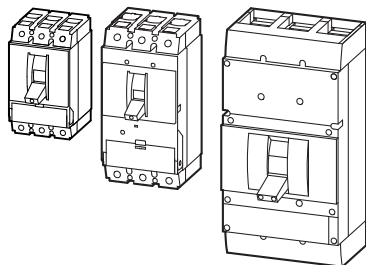
NZM...-S1

With main switch characteristics to IEC/EN 60204 and isolating characteristics to IEC/EN 60947, VDE 660

Circuit-breakers for 1000 VAC, 3 pole

Switching capacity

1000 VAC	kA/p.f.	I_{cu}
		I_{cs}
Rated uninterrupted current I_u =		I_u
Rated current I_n		I_n

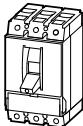
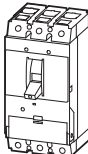
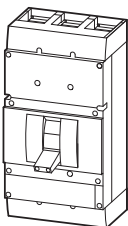


System and cable protection			Selectivity protection		Motor protection	
10/0.5	15/0.5	20/0.3	10/0.5	20/0.3	15/0.5	20/0.3
3/0.5	10/0.5	15/0.3	3/0.5	15/0.3	10/0.5	15/0.3
I _u	I _u	I _u	I _u	I _u	I _u	I _u
NZMH2-A...-S1	NZMH3-AE...-S1	NZMH4-AE...-S1	NZMH2-VE...-S1	NZMH4-VE...-S1	NZMH3-ME...-S1	NZMH4-ME...-S1
20	250	630	100	630	220	550
25	400	800	160	800	350	875
32	630	1000	250	1000	450	1400
40		1250		1250		
50		1600		1600		
63						
80						
100						
125						
160						
200						
250						
300						

Circuit-breakers, switch-disconnectors

Circuit-breakers for 1000 VAC, 3 pole

HPL17047EN

	Switching capacity 1000 VAC 50/60 Hz	Rated current = Rated uninterrupted current	Setting range		Fixed mounting Part no. Article no.	Std. pack		
			Overload releases	Short-circuit releases				
				Non-delayed $I_t = I_n \times \dots$			Delayed $I_{sd} = I_r \times \dots$	
	I_{cu} kA	$I_n = I_u$ A	I_r A					
								
System and cable protection								
Thermomagnetic releases								
	10	20	15-20	350 A fest	–	NZMH2-A20-S1 290355	S	1 off
		25	20-25	350 A fest	–	NZMH2-A25-S1 290356	S	
		32	25-32	350 A fest	–	NZMH2-A32-S1 290357	S	
		40	32-40	8 - 10	–	NZMH2-A40-S1 290358	S	
		50	40-50	6 - 10	–	NZMH2-A50-S1 290359	S	
		63	50-63	6 - 10	–	NZMH2-A63-S1 290360	S	
		80	63-80	6 - 10	–	NZMH2-A80-S1 290361	S	
		100	80-100	6 - 10	–	NZMH2-A100-S1 290362	S	
		125	100-125	6 - 10	–	NZMH2-A125-S1 290363	S	
		160	125-160	6 - 10	–	NZMH2-A160-S1 290364	S	
		200	160-200	6 - 10	–	NZMH2-A200-S1 290365	S	
		250	200-250	6 - 10	–	NZMH2-A250-S1 290366	S	
Electronic releases								
R.m.s. value measurement and “thermal memory”								
	15	250	125-250	2 - 11	–	NZMH3-AE250-S1 119361	S	1 off
		400	200-400	2 - 11	–	NZMH3-AE400-S1 119362	S	
		630	315-630	2 - 8	–	NZMH3-AE630-S1 119363	S	
	20	630	315-630	2 - 12	–	NZMH4-AE630-S1 290370	S	
		800	400-800	2 - 12	–	NZMH4-AE800-S1 290371	S	
		1000	500-1000	2 - 12	–	NZMH4-AE1000-S1 290372	S	
		1250	630-1250	2 - 12	–	NZMH4-AE1250-S1 290373	S	
		1600	800-1600	2 - 12	–	NZMH4-AE1600-S1 290374	S	

Notes

B = box terminals
S = screw terminals

IEC/EN 60947-2

Terminal type:

NZM2: Cover NZM2-XKSA required

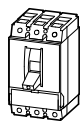
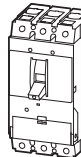
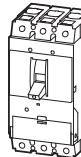
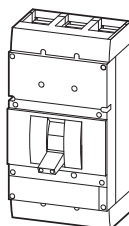
NZM3: Cover NZM3-XKSA required

NZM4: Isolated bar connection (screw terminal NZM4-XKS)

Circuit-breakers, switch-disconnectors

Circuit-breakers for 1000 VAC, 3 pole

HPL17048EN

Switching capacity 1000 VAC 50/60 Hz		Rated current = Rated uninterrupted current	Setting range		Fixed mounting Part no. Article no.		Std. pack	
			Overload releases	Short-circuit releases				
				Non-delayed	Delayed			
I_{cu} kA		$I_n = I_u$ A	I_r A	$I_i = I_n \times \dots$	$I_{sd} = I_r \times \dots$			
								
Systems protection, cable protection, selectivity, generator protection								
IEC/EN 60947-2 R.m.s. value measurement and “thermal memory” Adjustable delay setting t_r • 2 – 20 s at 6 x I_r and infinite (without overload release) Adjustable delay t_{sd} • Steps: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms i^2t constant function • NZM2 fixed OFF • NZM3, NZM4 switchable								
	10	100	50-100	1200 A fest	2 - 10	NZMH2-VE100-S1 100777	S	1 off
		160	80-160	1920 A fest	2 - 10	NZMH2-VE160-S1 100778	S	
		250	125-250	3000 A fest	2 - 10	NZMH2-VE250-S1 100779	S	
		400	200-400	2 - 11	2 - 10	NZMH3-VE400-S1 119367	S	
		630	315-630	2 - 8	1,5 - 7	NZMH3-VE630-S1 119368	S	
	20	630	315-630	2 - 12	2 - 10	NZMH4-VE630-S1 290375	S	
		800	400-800	2 - 12	2 - 10	NZMH4-VE800-S1 290376	S	
		1000	500-1000	2 - 12	2 - 10	NZMH4-VE1000-S1 290377	S	
		1250	630-1250	2 - 12	2 - 10	NZMH4-VE1250-S1 290378	S	
		1600	800-1600	2 - 12	2 - 10	NZMH4-VE1600-S1 290379	S	
Motor protection								
IEC/EN 60947-4-1, IEC/EN 60947-2 Phase-failure sensitivity R.m.s. value measurement and “thermal memory” Adjustable delay setting t_r • 2 – 20 s at 6 x I_r and infinite (without overload release)								
	15	220	110-220	2 - 14	–	NZMH3-ME220-S1 119364	S	1 off
		350	175-350	2 - 14	–	NZMH3-ME350-S1 119365	S	
		450	225-450	2 - 12	–	NZMH3-ME450-S1 119366	S	
	20	550	275-550	2 - 14	–	NZMH4-ME550-S1 290383	S	
		875	438-875	2 - 14	–	NZMH4-ME875-S1 290384	S	
		1400	700-1400	2 - 14	–	NZMH4-ME1400-S1 290385	S	

Notes

B = box terminals
S = screw terminals

Terminal type:
NZM2: Cover NZM2-XKSA required
NZM3: Cover NZM3-XKSA required
NZM4: Isolated bus connection (screw terminal NZM4-XKS)



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Eaton Industries (Austria) GmbH
Scheydgasse 42
1210 Vienna
Austria

Eaton
EMEA Headquarters
Route de la Longeraie 7
1110 Morges, Switzerland

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