



IEC Technical data

AL9 — AL40

Across the line
contactors

1

Main Pole - Utilization Characteristics

Contactor types:	AL	AL9	AL12	AL16	AL26	AL30	AL40	
Rated operational voltage U_e max.	V	690						
Rated frequency limits	Hz	25-400						
Conventional free-air thermal current I_{th} acc. to IEC 60947-4-1,								
open contactors $\varnothing \leq 40$ °C	A	26	28	30	45	65	65	
with conductor cross-sectional area mm^2	4	4	4	6	16	16	35	
Rated operational current I_e / AC-1 for air temperature close to contactor								
U_e max. 690 V	$\varnothing \leq 40$ °C	A	25	27	30	45	55	60
	$\varnothing \leq 55$ °C	A	22	25	27	40	55	60
	$\varnothing \leq 70$ °C ^③	A	18	20	23	32	39	42
with conductor cross-sectional area mm^2		2.5	4	4	6	10	16	
Utilization categorie AC-3 for air temperature close to contactor ≤ 55 °C								
Rated operational current I_e AC-3 ^①								
3-phase motors 	220-230-240 V	A	9	12	17	26	33	40
	380-400 V	A	9	12	17	26	32	37
	415 V	A	9	12	17	26	32	37
	440 V	A	9	12	16	26	32	37
	500 V	A	9	12	14	22	28	33
	690 V	A	7	9	10	17	21	25
	1000 V	A	—	—	—	—	—	—
Rated operational power AC-3 ^①								
1500 r.p.m. 50 Hz 1800 r.p.m. 60 Hz 3-phase motors 	220-230-240 V	kW	2.2	3	4	6.5	9	11
	380-400 V	kW	4	5.5	7.5	11	15	18.5
	415 V	kW	4	5.5	9	11	15	18.5
	440 V	kW	4	5.5	9	15	18.5	22
	500 V	kW	5.5	7.5	9	15	18.5	22
	690 V	kW	5.5	7.5	9	15	18.5	22
	1000 V	kW	—	—	—	—	—	—
Rated making capacity AC-3 according to IEC 60947-4-1								
		10 x I_e AC-3						
Rated breaking capacity AC-3 according to IEC 60947-4-1								
		8 x I_e AC-3						
Short-circuit protection for contactors without thermal O/L relay - Motor protection excluded								
$U_e \leq 500$ V a.c. - gG type fuse	A	25	32	32	50	63		
Rated short-time withstand current I_{cw} at 40 °C ambient temp., in free air, from a cold state								
1 s	A	250	280	300	400	600		
10 s	A	100	120	140	210	400		
30 s	A	60	70	80	110	225		
1 min	A	50	55	60	90	150		
15 min	A	26	28	30	45	65		
Maximum breaking capacity $\cos \varnothing = 0.45$ ($\cos \varnothing = 0.35$ for $I_e > 100$ A)								
at 440 V	A	250	—	—	420	820		
at 690 V	A	90	—	—	170	340		
Heat dissipation per pole								
I_e / AC-1	W	0.8	1	1.2	1.8	2.5		
I_e / AC-3	W	0.1	0.2	0.35	0.6	0.9		
Max. electrical switching frequency								
- for AC-1	cycles/h	600						
- for AC-3	cycles/h	1200						
- for AC-2, AC-4	cycles/h	300						
Mechanical durability								
- millions of operating cycles		10						
- max. mechanical switching frequency	cycles/h	3600						