



AF09-30-10-.. / AF09Z-30-10-.. 3-pole Contactors AC / DC Operated - with Screw Terminals

AF09(Z) contactors are used for controlling power circuits up to 690 V AC and 220 V DC. They are mainly used for controlling 3-phase motors, non-inductive or slightly inductive loads.



- AF.(Z) contactors include an electronic coil interface providing reduced pull-in and holding consumption, particularly for AC control circuits
- Only four coils are needed to cover control voltages between 24...500 V 50/60 Hz or 20...500 V DC.
- AF.(Z) offer extended operating limits and are suitable worldwide for different control voltages. e.g.: the coil 100...250 V 50/60 Hz - DC is suitable for Europe (230 V 50 Hz) and for North America (120 V 60 Hz and 208 V 60 Hz).
- AF.(Z) contactors can manage large control voltage variations
- AF.Z contactors equipped with a 24...60 V 50/60 Hz - 20...60 V DC coil allow direct control by 24 V DC 500 mA PLC-output
- AF.Z contactors withstand short voltage dips and voltage sags (SEMI F47-0706 compliance)
- AF.(Z) contactors have built-in surge protection and do not require additional surge suppressors.



		4 kW	
		5 hp	

3D CAD outline drawings available on «Control Product 3D» portal

Ordering Details

IEC	UL/CSA	Control voltage		Main contacts	Auxiliary contacts fitted	Type	Order code	EAN	Weight
Rated power	3-phase motor rating	Uc min. ... Uc max.							Pack ^(ing)
400 V									1 piece
AC-3	480 V	V 50/60 Hz	V DC						kg
kW	hp								

3-pole Contactors

4	5	24...60	20...60	3 0	1 0	AF09-30-10-11	1SBL137001R1110	3471523110014	0.270
		48...130	48...130	3 0	1 0	AF09-30-10-12	1SBL137001R1210	3471523110021	0.270
		100...250	100...250	3 0	1 0	AF09-30-10-13	1SBL137001R1310	3471523110038	0.270
		250...500	250...500	3 0	1 0	AF09-30-10-14	1SBL137001R1410	3471523110045	0.310






Note: AF09-30-10-11 not suitable for a direct control by PLC-output. AF09-30-10-11 available in some countries: please consult your ABB representative.

3-pole Contactors - Low Consumption



4	5	-	12...20	3 0	1 0	AF09Z-30-10-20	1SBL136001R2010	3471523113206	0.310
		24...60	20...60	3 0	1 0	AF09Z-30-10-21	1SBL136001R2110	3471523113213	0.310
		48...130	48...130	3 0	1 0	AF09Z-30-10-22	1SBL136001R2210	3471523113220	0.310
		100...250	100...250	3 0	1 0	AF09Z-30-10-23	1SBL136001R2310	3471523113237	0.310

Note: Only AF.Z contactors with DC control voltage 12...20 V DC need to respect the connection polarities indicated close to the coil terminals: A1+ for the positive pole and A2- for the negative pole

Certifications and Approvals

									
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Main Pole - Utilization Characteristics according to IEC

Standards	IEC 60947-1 / 60947-4-1 and EN 60947-1 / 60947-4-1	
Rated operational voltage U_e max.	690 V	
Rated frequency limits	25 ... 400 Hz	
Conventional free-air thermal current I_{th} acc. to IEC 60947-4-1, open contactors, $\theta \leq 40\text{ °C}$	35 A	
with conductor cross-sectional area	6 mm ²	
AC-1 Utilization category for air temperature close to contactor		
I_e / AC-1 rated operational current	$\theta \leq 40\text{ °C}$	25 A
U _e max. $\leq 690\text{ V}$, 50/60 Hz	$\theta \leq 60\text{ °C}$	25 A
	$\theta \leq 70\text{ °C}$	22 A
with conductor cross-sectional area	4 mm ²	
AC-3 Utilization category for air temperature close to contactor $\theta \leq 60\text{ °C}$ (for 1500 r.p.m., 50 Hz or 1800 r.p.m., 60 Hz, 3-phase motors)		
I_e / AC-3 max. rated operational current	220-230-240 V	9 A
 3-phase motors	380-400 V	9 A
	415 V	9 A
	440 V	9 A
	500 V	9.5 A
	690 V	7 A
	AC-3 rated operational power	220-230-240 V
 1500 r.p.m. 50 Hz 1800 r.p.m. 60 Hz 3-phase motors	380-400 V	4 kW
	415 V	4 kW
	440 V	4 kW
	500 V	5.5 kW
	690 V	5.5 kW
	Rated making capacity AC-3	10 x I _e AC-3 acc. to IEC 60947-4-1
Rated breaking capacity AC-3	8 x I _e AC-3 acc. to IEC 60947-4-1	
AC-8a Utilization category (without thermal overload relay - U _e 400 V - $\theta \leq 40\text{ °C}$)		
I_e / AC-8a rated operational current	12 A	
AC-8a rated operational power	5.5 kW	
Short-circuit protection for contactors without thermal O/L relay - Motor protection excluded U _e $\leq 500\text{ V AC}$ - gG type fuse	25 A	
Rated short-time withstand current I_{cw} at 40 °C ambient temperature, in free air from a cold state	1 s	300 A
	10 s	150 A
	30 s	80 A
	1 min	60 A
	15 min	35 A
Maximum breaking capacity	at 440 V	250 A
cos $\phi = 0.45$	at 690 V	106 A
Heat dissipation per pole	I _e / AC-1	0.8 W
	I _e / AC-3	0.1 W
Max. electrical switching frequency	AC-1	600 cycles/h
	AC-3	1200 cycles/h
	AC-2, AC-4	300 cycles/h