

Safety Contactor

NOARK Ex9CA

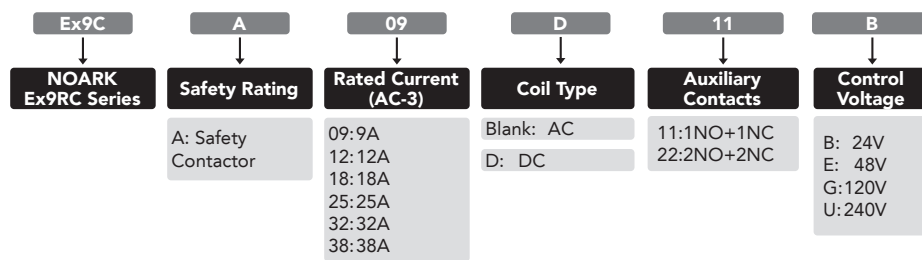
The NOARK Ex9CA Safety Contactor is designed for use in safety function applications. It offers special features that allow the design of safe control circuits with current ratings up to 38 Amps. The Normally Closed (NC) Auxiliary contact is a mirror contact to the main contacts and is mechanically linked to the Normally Open (NO) Auxiliary contacts. This allows for optimal design selections in SRP/CS*.

- Positively guided mirror contacts/mechanically linked contacts according to IEC/UL60947-4-1 Annex F, IEC/UL60947-5-1 Annex L
- Mirror contacts/ mechanically linked symbol on the side of Aux block
- Fixed transparent anti-dust cover for easy identification of the device action and prevents the manual operation
- AC or DC operating coils
- Integrated body with built in auxiliary contacts up to 2 NC and 2NO
- Integrated surge suppression on DC coil models
- 5-Year limited warranty

* SRP/CS is the term given by ISO short for safety-related part of a control system, meaning part of a control system that responds to safety-related input signals and generates safety-related output signals

General	
Certifications	IEC/UL 60947-4-1, GBT/14048.4
Number of Poles	3
Mounting	Mounts on DIN rail 35 mm or panel
Rated Insulation Voltage U_i (V)	IEC 690
Rated Operating Voltage U_e (V)	AC 50/60 Hz
	DC 24, 48, 120, 240
Rated Impulse Withstand Voltage U_{imp} (kV)	6

Product Selection Guide



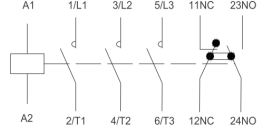
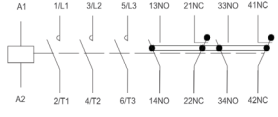
Safety Contactor Specifications

		Ex9CA						
		9	12	18	25	32	38	
General Information								
Pole		3						
Production Standard		IEC 60947-1, IEC 60947-4-1, UL 60947-1, UL 60947-4-1, GB/T14048.4						
Environmental Testing According to		IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-11, IEC 60068-2-30						
Rated Frequency (Hz)		50/60						
Conventional Free Air Thermal Current Ith (A)	0≤104 °F (0≤40 °C)	25		32		40		50
	0≤140 °F (0≤60 °C)							
	0≤158 °F (0≤70 °C)	17		22		28		35
Rated Insulating Voltage Ui (V)		690						
Rated Impulse Withstand Voltage Uimp (kV)		6						
Electrical Life (x10 ⁴ cycles)	AC-3	120						
	AC-4	5	4		5		4	
Mechanical Life (x10 ⁴ cycles)		1,000						
Operating Cycles Per Hour (cycles/h)	AC-3	1,200			1,000			
	AC-4	300			150			
Environmental Temperature	Transportation or Storage	-76 to 176 °F (-60 to +80 °C)						
	Working At	-4 to 140 °F (-20 to +60 °C)						
	Maximum	-40 to 158 °F (-40 to +70 °C)						
Altitude ft (m)		6,562 (2,000)						
Pollution Degree		Class III						
Rated Operating Voltage (Ue)	AC 50/60 HZ							
	DC	24, 48, 120, 240						
Rated Operational Current Ie (A)								
At -82 to 131 °F (-25 to 40 °C)	AC-1 690 V	25		32		40		50
	AC-3 380/400 V	9	12	18	25	32	38	
	AC-3 660/690 V	6.7	9	10.6	17.3		21.9	
	AC-4 380/400 V	9	12	18	25		32	
	AC-4 660/690 V		6.7	8.9	14		17.3	
Rated Power of 3-Phase Motor								
For IEC (kW)	AC-3 230 Vac	-						
	AC-4 230 Vac	-						
	AC-3 380/400 Vac	4	5.5	7.5	11	15	18.5	
	AC-4 380/400 Vac						15	
	AC-3 660/690 Vac	5.5	7.5	9	15		18.5	
	AC-4 660/690 Vac		5.5	7.5	11		15	
AC-3 1,000 Vac	-							
AC-4 1,000 Vac	-							
UL Rating								
Ith (A)		25		32		40		50
Single-Phase (HP)	110-120 Vac	0.5	1	1.5	2		3	
	220-240 Vac	1.5	2		3		5	
Three-Phase (HP)	200-208 Vac	3		5	7.5		10	
	220-240 Vac							
	440-480 Vac	5	7.5	10	15		20	
	550-600 Vac	7.5	10	15	20		25	

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AC-12 Rated Thermal Current / th							
Ambient temperature 40°C	24...240V (A)					10	
	230...500V (A)					10	
	230...690V (A)					10	
Ambient temperature 60°C / th	24...240V (A)					10	
	230...500V (A)					10	
	230...690V (A)					10	
AC-15/A600							
<i>I_e</i>	24V (A)					—	
	48 (A)					—	
	120V (A)					6	
	230V (A)					3	
	240V (A)					3	
	400V (A)					1.9	
	480V (A)					1.5	
	500V (A)					1.4	
	600V (A)					1.2	
690V (A)					—		
DC-13							
<i>I_e</i>	24V(A)					2.8	
	48V(A)					1.2	
	110V(A)					0.55	
	220V(A)					0.27	
	440V(A)					0.15	
Load Carrying Capacity per UL							
Rated voltage AC (V)						Max. 600	
Continuous rating 40 °C (A)						10	
Switching capacity AC (A)						A600	
Rated voltage DC (V)						Max. 600	
Switching capacity DC (A)						Q600	
Tolerance of Control Voltage							
AC control (50/60 Hz)	pick-up (x Us)					0.85...1.1	
	dropout (x Us)					0.2...0.75	
DC control	pick-up (x Us)					0.8...1.1	
	dropout (x Us)					0.1...0.75	
Coil Power Consumption							
AC control (50/60 Hz)	pick-up (VA)					120VA(9CA09-18)/140VA(9CA25-38)	
	hold-in (VA)					12VA(9CA09-18)/14VA(9CA25-38)	
DC control	pick-up (W)					≤70	
	hold-in (W)					≤3.5	
Operating Time							
AC	closing delay (ms)					15...30	
	opening delay (ms)					15...25	
DC	closing delay (ms)					100...170	
	opening delay (ms)					30-100	
Typical Lifetime							
B ₁₀₀ Value (Electrical)	DC Coil	1.08x10 ⁶			1.13x10 ⁶		
	AC Coil	1.28x10 ⁶			1.25x10 ⁶		

Safety Contactor Contact Configuration

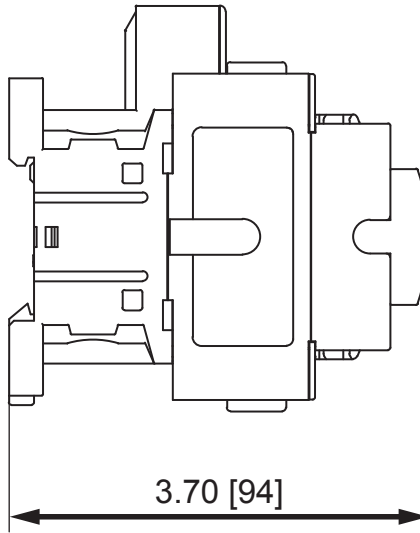
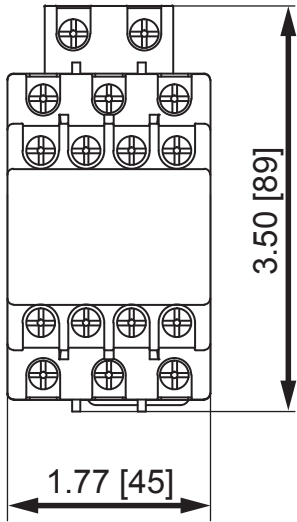
Poles	Configuration	Main Pole	NO Aux	NC Aux	SKU*	Mirror contacts	Mechanically Linked Contacts
3		3	1	1	Ex9CA*11*	Yes	Yes
3		3	2	2	Ex9CA*22*	Yes	Yes

*Incomplete SKU. Please refer to the NOARK Electric catalog of Control products for a complete listing of Ex9CA product SKUs.

Safety Contactor Dimensions

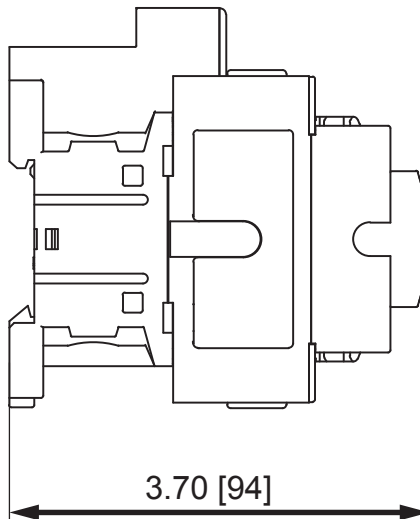
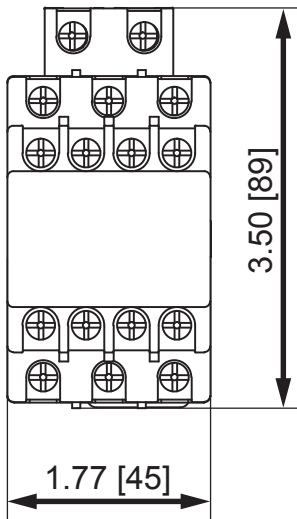
Ex9CA09-18

Unit: in. [mm]



Ex9CA09D-18D

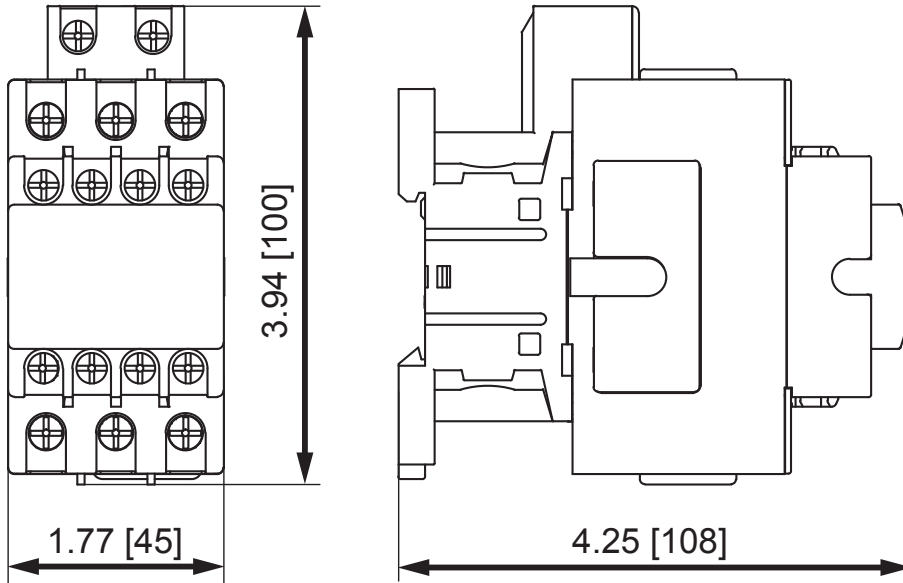
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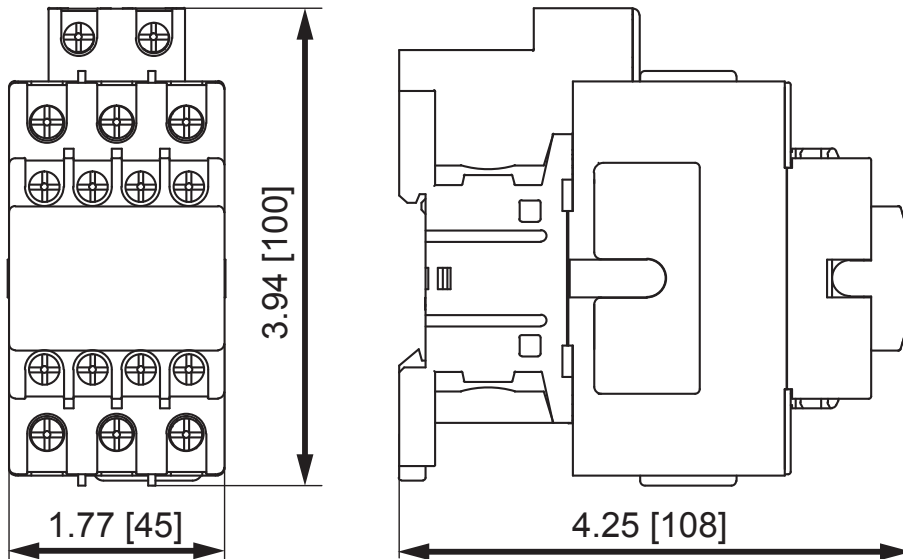
Ex9CA25-38

Unit: in. [mm]



Ex9CA25D-38D

Unit: in. [mm]



Safety Contactor Mounting Positions

