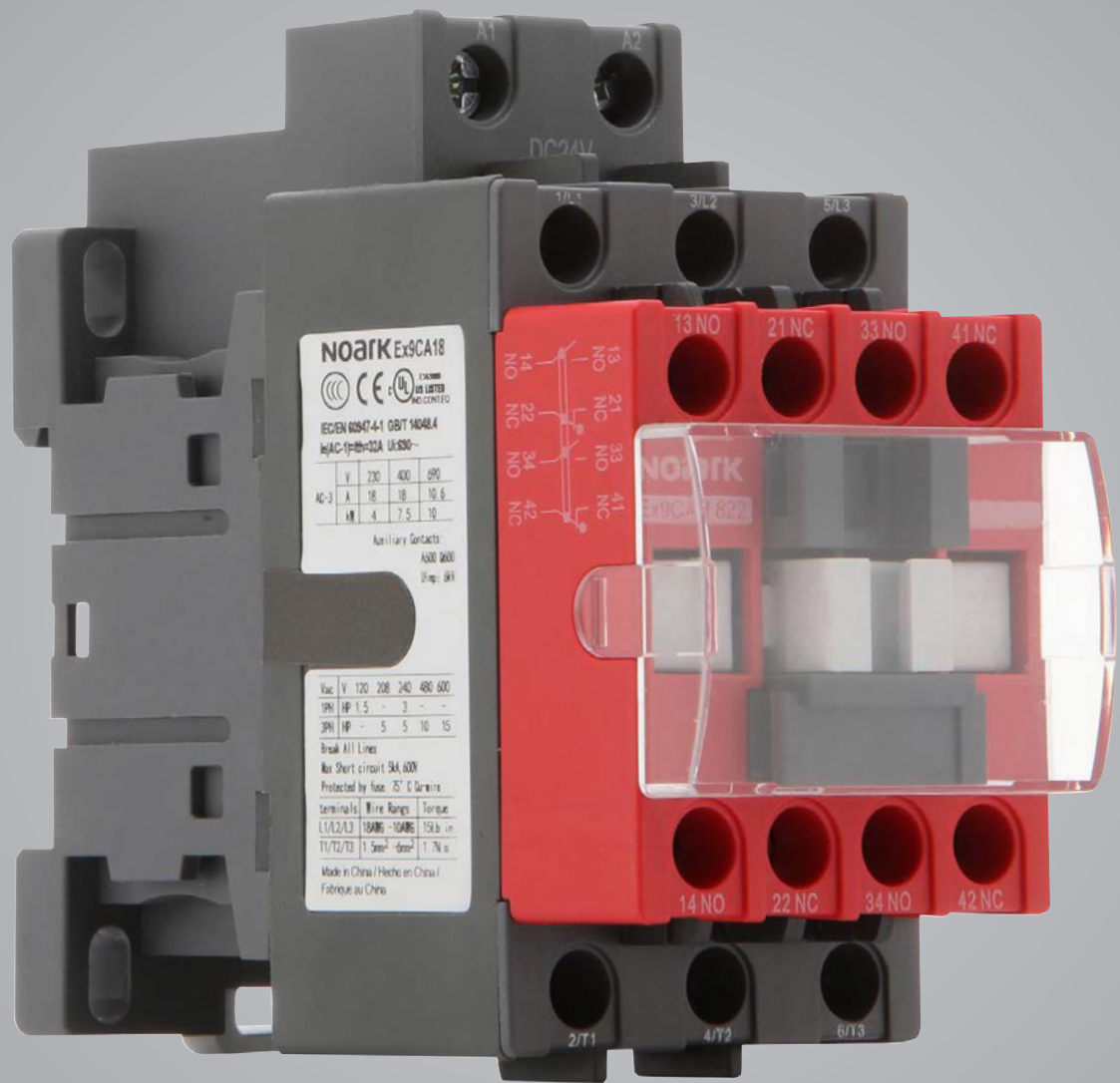


SAFETY CONTACTORS



Ex9CA

Safety Contactors

Ex9CA Product Overview

Features

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*.

*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

- 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

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Safety Contactors

Ex9CA National and International Standards

Certifications

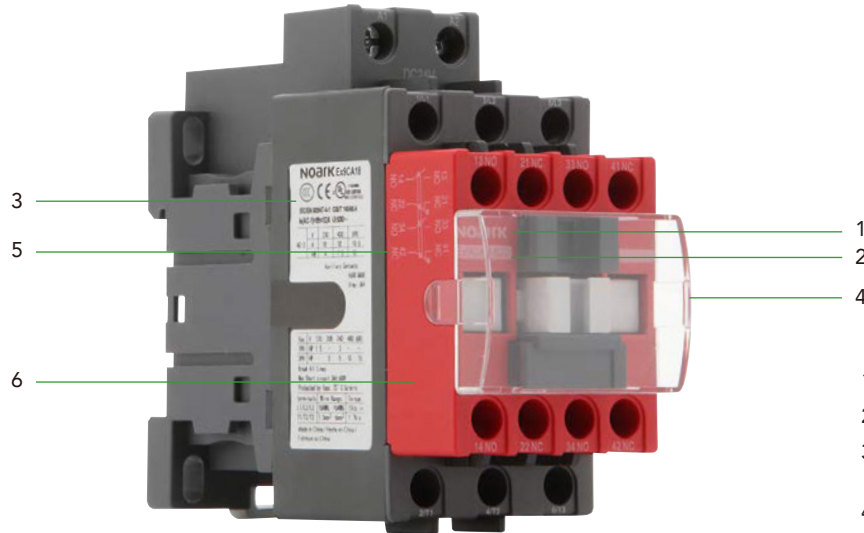
- UL Listed, File Number E353865, UL 60947-1
- Certified for Canada according to CSA standards
- IEC/EN 60947-4-1
- CE Approved
- CCC Certified
- RoHS Compliant



Safety Contactors

Ex9CA Product Selection Guide

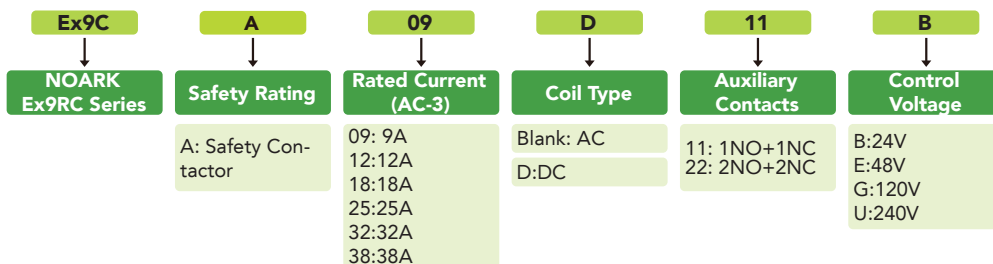
Label



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1. Brand
2. Product Selection
3. Label with UL logo, CE logo and data
4. Fixed clear anti-dust front cover
5. Mirror contact / mechanically linked contact symbol
6. Auxilliary contact block

Product Selection Guide



Safety Contactors

Ex9CA 9~18A



Certifications

IEC/EN 60947-1



Coil Voltage	09 A				12 A				
	Product	Part Number	Product	Part Number	Product	Part Number	Product	Part Number	
	1NO+1NC		2NO, 2NC		1NO+1NC		2NO, 2NC		
AC	24	Ex9CA0911B7	1321951	Ex9CA0922B7	1321975	Ex9CA1211B7	1321955	Ex9CA1222B7	1321979
	48	Ex9CA0911E7	1321952	Ex9CA0922E7	1321976	Ex9CA1211E7	1321956	Ex9CA1222E7	1321980
	120	Ex9CA0911G7	1321953	Ex9CA0922G7	1321977	Ex9CA1211G7	1321957	Ex9CA1222G7	1321981
	240	Ex9CA0911U7	1321954	Ex9CA0922U7	1321978	Ex9CA1211U7	1321958	Ex9CA1222U7	1321982
DC	24	Ex9CA09D11B	1321999	Ex9CA09D22B	1322023	Ex9CA12D11B	1322003	Ex9CA12D22B	1322027
	48	Ex9CA09D11E	1322000	Ex9CA09D22E	1322024	Ex9CA12D11E	1322004	Ex9CA12D22E	1322028
	120	Ex9CA09D11G	1322001	Ex9CA09D22G	1322025	Ex9CA12D11G	1322005	Ex9CA12D22G	1322029
	240	Ex9CA09D11U	1322002	Ex9CA09D22U	1322026	Ex9CA12D11U	1322006	Ex9CA12D22U	1322030

Coil Voltage	18 A				
	Product	Part Number	Product	Part Number	
	1NO+1NC		2NO, 2NC		
AC	24	Ex9CA1811B7	1321959	Ex9CA1822B7	1321983
	48	Ex9CA1811E7	1321960	Ex9CA1822E7	1321984
	120	Ex9CA1811G7	1321961	Ex9CA1822G7	1321985
	240	Ex9CA1811U7	1321962	Ex9CA1822U7	1321986
DC	24	Ex9CA18D11B	1322007	Ex9CA18D22B	1322031
	48	Ex9CA18D11E	1322008	Ex9CA18D22E	1322032
	120	Ex9CA18D11G	1322009	Ex9CA18D22G	1322033
	240	Ex9CA18D11U	1322010	Ex9CA18D22U	1322034

Safety Contactors

Ex9CA 25~38A



Certifications

IEC/EN 60947-1



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Coil Voltage	25 A				32 A				
	Product	Part Number	Product	Part Number	Product	Part Number	Product	Part Number	
	1NO+1NC		2NO, 2NC		1NO+1NC		2NO, 2NC		
AC	24	Ex9CA2511B7	1321963	Ex9CA2522B7	1321987	Ex9CA3211B7	1321967	Ex9CA3222B7	1321991
	48	Ex9CA2511E7	1321964	Ex9CA2522E7	1321988	Ex9CA3211E7	1321968	Ex9CA3222E7	1321992
	120	Ex9CA2511G7	1321965	Ex9CA2522G7	1321989	Ex9CA3211G7	1321969	Ex9CA3222G7	1321993
	240	Ex9CA2511U7	1321966	Ex9CA2522U7	1321990	Ex9CA3211U7	1321970	Ex9CA3222U7	1321994
DC	24	Ex9CA25D11B	1322011	Ex9CA25D22B	1322035	Ex9CA32D11B	1322015	Ex9CA32D22B	1322039
	48	Ex9CA25D11E	1322012	Ex9CA25D22E	1322036	Ex9CA32D11E	1322016	Ex9CA32D22E	1322040
	120	Ex9CA25D11G	1322013	Ex9CA25D22G	1322037	Ex9CA32D11G	1322017	Ex9CA32D22G	1322041
	240	Ex9CA25D11U	1322014	Ex9CA25D22U	1322038	Ex9CA32D11U	1322018	Ex9CA32D22U	1322042

Coil Voltage	38 A				
	Product	Part Number	Product	Part Number	
	1NO+1NC		2NO, 2NC		
AC	24	Ex9CA3811B7	1321971	Ex9CA3822B7	1321995
	48	Ex9CA3811E7	1321972	Ex9CA3822E7	1321996
	120	Ex9CA3811G7	1321973	Ex9CA3822G7	1321997
	240	Ex9CA3811U7	1321974	Ex9CA3822U7	1321998
DC	24	Ex9CA38D11B	1322019	Ex9CA38D22B	1322043
	48	Ex9CA38D11E	1322020	Ex9CA38D22E	1322044
	120	Ex9CA38D11G	1322021	Ex9CA38D22G	1322045
	240	Ex9CA38D11U	1322022	Ex9CA38D22U	1322046

Safety Contactors 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-3 380/400 V	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 (U e)	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	

Safety Contactors

Specifications

		Ex9CA					
		9	12	18	25	32	38
AC-12 Rated Thermal Current I_{th}							
Ambient temperature 40°C	24...240V (A)					10	
	230...500V (A)					10	
	230...690V (A)					10	
Ambient temperature 60°C I _{th}	24...240V (A)					10	
	230...500V (A)					10	
	230...690V (A)					10	
AC-15/A600							
I _e	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 _e	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 U _s)					0.85...1.1	
	dropout (x U _s)					0.2...0.75	
DC control	pick-up (x U _s)					0.8...1.1	
	dropout (x U _s)					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 _{10D} Value (Electrical)	DC Coil	1.08x10 ⁶			1.13x10 ⁶		
	AC Coil	1.28x10 ⁶			1.25x10 ⁶		

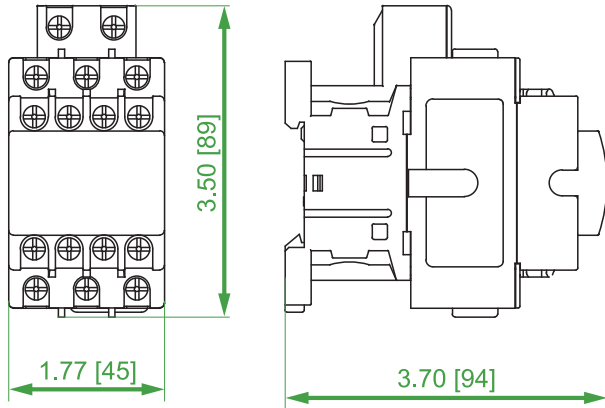
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Safety Contactors

Dimensions

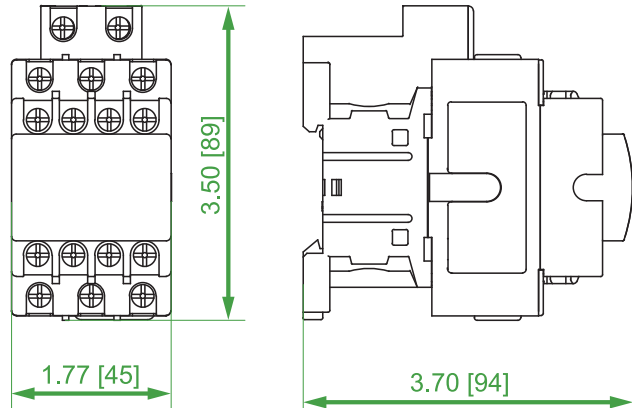
Ex9CA09-18

Unit: in. [mm]



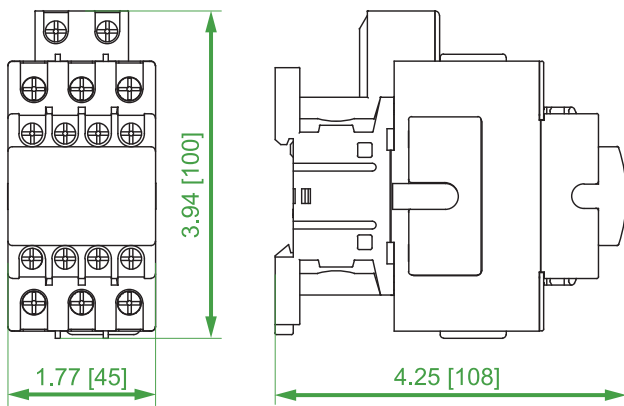
Ex9CA09D-18D

Unit: in. [mm]



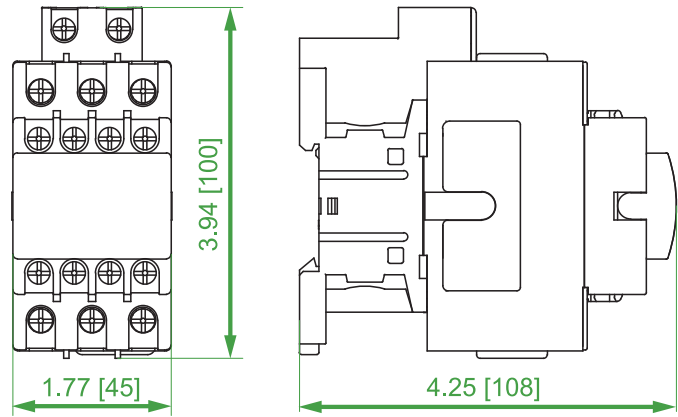
Ex9CA25-38

Unit: in. [mm]



Ex9CA25D-38D

Unit: in. [mm]



Safety Contactors

Contact Configuration

Poles	Configuration	Main Pole	NO Aux	NC Aux	SKU*	Mirror contacts	Mechanically Linked Contacts
3	<p>The diagram shows three main poles labeled A1, 2/T1, and 4/T2. The auxiliary contact is labeled 23NO. Other terminals shown include 1/L1, 3/L2, 5/L3, 6/T3, 11NC, 12NC, and 24NO.</p>	3	1	1	Ex9CA*11*	Yes	Yes
3	<p>The diagram shows three main poles labeled A1, 2/T1, and 4/T2. The auxiliary contacts are labeled 13NO and 21NC. Other terminals shown include 1/L1, 3/L2, 5/L3, 6/T3, 14NO, 22NC, 34NO, and 42NC.</p>	3	2	2	Ex9CA*22*	Yes	Yes

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