



SA Series Definite Purpose Contactors, 20~90A

1. General

1.1 Certificates: UL-E246810; CSA-256361; CCC-2013010304614127;

Semko/CE File No. EN60947-4-1:2010;

1.2 Application: HVACR;

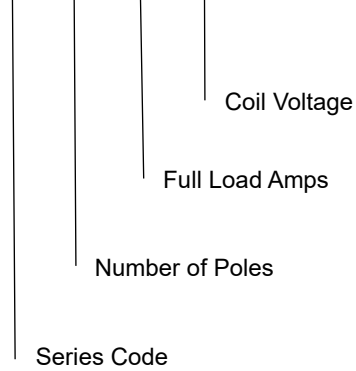
1.3 Standard: UL508; ARI 780/790;

1.4 RoHS Compliance;

1.5 Class 3211 04/ 3211 84; Class NLDX2/ NLDX8;

2. Type Designation

SA - □ P - □ A - □ V



3. Technical Data

3.1 Contactor

★ SA, 1Pole + Shunt

Model	SA-1.5P-30A/40A-24V/120V/240V							Coil Voltage 50/60Hz	Approx Unit Weight
	Full Load Amps	Locked Rotor Amps			Resistive Amps Rating	Max Horsepower Hp			
		240-277V	480V	600V		Single Phase			
		120V	240V						
SA-1P SA-1.5P	20	120	100	80	30	1	2	24 120 208/240 277	.5 lb .23 kg
	25	150	125	100	35	1	2		
	30	180	150	120	40	1	2		
	40	240	200	160	50	2	3		

★ SA, 2Poles, 20A/25A/30A/40A

Model	SA-2P-20A/25A/30A/40A-24V/120V/240V							Coil Voltage 50/60Hz	Approx Unit Weight
	Full Load Amps	Locked Rotor Amps			Resistive Amps Rating	Max Horsepower Hp			
		240-277V	480V	600V		Single Phase			
		120V	240V						
SA-2P	20	120	100	80	30	2	3	24 120 208/240 277	.6 lb .27 kg
	25	150	125	100	35	2	3		
	30	180	150	120	40	2	3		
	40	240	200	160	50	2	3		

★ SA, 2Poles, 50A/60A/75A/90A

Model	SA-2P-50A/60A/75A/90A-24V/120V/240V											Coil Voltage 50/60Hz	Approx Unit Weight	
	Full Load Amps	Locked Rotor Amps			Resistive Amps Rating	Max Horsepower Hp								
		240- 277V	480V	600V		Single Phase			Three Phases					
		110/120 V	200/208 V	240 V	200/208 V	240 V	480 V	600 V						
SA-2P	50	300	250	200	65	3	7.5	10	15	15	25	25	24 110/120 208/240 277	2 lbs .91 kg 4 lbs 1.81 kgs
	60	360	300	240	75	5	7.5	10	25	25	30	30		
	75	450	375	300	90	5	10	15	20	25	40	40		
	90	540	450	360	120	7.5	15	20	25	30	50	50		

★ SA, 3Poles, 20A/25A/30A/40A

Model	SA-3P-20A/25A/30A/40A-24V/120V/240V											Coil Voltage 50/60Hz	Approx Unit Weight	
	Full Load Amps	Locked Rotor Amps			Resistive Amps Rating	Max Horsepower Hp								
		240- 277V	480V	600V		Single Phase			Three Phases					
		110/120 V	200/240 V	240/277 V	200/208 V	240/277 V	480 V	600 V						
SA-3P	20	120	100	80	30	1.5	3	-	7.5	7.5	7.5	7.5	24 110/120 208/240 277	1 lb .45 kg
	25	150	125	100	35	2	-	5	7.5	7.5	15	20		
	30	180	150	120	40	2	-	5	10	10	15	20		
	40	240	200	160	50	3	-	7.5	10	10	20	25		

★ SA, 3Poles, 50A/60A/75A/90A

Model	SA-3P-50A/60A/75A/90A-24V/120V/240V											Coil Voltage 50/60Hz	Approx Unit Weight	
	Full Load Amps	Locked Rotor Amps			Resistive Amps Rating	Max Horsepower Hp								
		240- 277V	480V	600V		Single Phase			Three Phases					
		110/120 V	200/208 V	240 V	200/208 V	240/277 V	480 V	600 V						
SA-3P	50	300	250	200	65	3	7.5	10	15	15	25	25	24 110/120 208/240 277	2 lbs .91 kg 4 lbs 1.81 kgs
	60	360	300	240	75	5	7.5	10	25	25	30	30		
	75	450	375	300	90	5	10	15	20	25	40	40		
	90	540	450	360	120	7.5	15	20	25	30	50	50		

★ SA, 4Poles

Model	SA-4P-30A/40A-24V/120V/240V											Coil Voltage 50/60Hz	Approx Unit Weight
	Full Load Amps	Locked Rotor Amps			Resistive Amps Rating	Max Horsepower Hp							
		240-277V	480V	600V		Single Phase			Three Phases				
		110/120V	240/277V	200/208V	240/277V	480V	600V						
SA-4P	25	150	125	100	35	2	5	7.5	7.5	15	20	24 110/120 208/240 277	1.5 lbs .68 kg
	30	180	150	120	40	2	5	10	10	15	20		
	40	240	200	160	50	3	7.5	10	10	15	25		

3.2 Coil Specifications

1 & 1.5 Pole

Coil Technical Data 50/60Hz	Description			
Nominal Coil Voltage	24	120	208/240	277
Min Pickup Volts	18	88	177	221
Drop-Out Volts Range	6-15	20-70	40-140	50-165
Nominal Inrush VA @ 50Hz	31	31	35	31
Nominal Inrush VA @ 60Hz	28	28	32	28
Nominal Sealed VA @ 50Hz	6	6	7	6
Nominal Sealed VA @ 60Hz	5	5	6	5
Nominal DC Resistance-Ohms	18	420	1800	2500
Max Coil Voltage	30	132	264	300

20-40 FLA, 2 Poles

Coil Technical Data 50/60Hz	Description			
Nominal Coil Voltage	24	120	208/240	277
Min Pickup Volts	18	88	177	221
Drop-Out Volts Range	6-15	20-70	40-140	50-165
Nominal Inrush VA @ 50Hz	22	22	22	22
Nominal Inrush VA @ 60Hz	20	20	20	20
Nominal Sealed VA @ 50Hz	5.5	5.5	5.5	5.5
Nominal Sealed VA @ 60Hz	4.5	4.5	4.5	4.5
Nominal DC Resistance-Ohms	11	237	1000	1600
Max Coil Voltage	30	132	264	300

20-40 FLA, 3 Poles

Coil Technical Data 50/60Hz	Description				
Nominal Coil Voltage	24	120	208/240	277	480
Min Pickup Volts	18	88	177	220	384
Drop-Out Volts Range	6-15	20-70	40-140	65-185	150-270
Nominal Inrush VA @ 50Hz	65	65	65	65	65
Nominal Inrush VA @ 60Hz	60	60	60	60	60
Nominal Sealed VA @ 50Hz	7.5	7.5	7.5	7.5	7.5
Nominal Sealed VA @ 60Hz	6.0	6.0	6.0	6.0	6.0
Nominal DC Resistance-Ohms	7	180	720	900	3100
Max Coil Voltage	30	132	264	300	528

50-60 FLA, 2 & 3 Poles

Coil Technical Data 50/60Hz	Description				
Nominal Coil Voltage	24	120	208/240	277	480
Min Pickup Volts	18	93	177	235	374
Drop-Out Volts Range	6-15	20-70	40-135	50-180	150-286
Nominal Inrush VA @ 50Hz	140	140	140	140	140
Nominal Inrush VA @ 60Hz	132	132	132	132	132
Nominal Sealed VA @ 50Hz	20	20	20	20	20
Nominal Sealed VA @ 60Hz	14	14	14	14	14
Nominal DC Resistance-Ohms	2.3	53	180	280	852
Max Coil Voltage	30	132	264	300	528

75-90 FLA, 2 & 3 Poles

Coil Technical Data 50/60Hz	Description				
Nominal Coil Voltage	24	120	208/240	277	480
Min Pickup Volts	18	88	177	220	384
Drop-Out Volts Range	6-15	20-70	40-110	65-185	150-270
Nominal Inrush VA @ 50Hz	285	285	285	285	285
Nominal Inrush VA @ 60Hz	240	240	240	240	240
Nominal Sealed VA @ 50Hz	42	42	42	42	42
Nominal Sealed VA @ 60Hz	27	27	27	27	27
Nominal DC Resistance-Ohms	0.85	15.6	63.5	85	240
Max Coil Voltage	30	132	264	300	528

25-40 FLA, 4 Poles

Coil Technical Data 50/60Hz	Description				
	Nominal Coil Voltage	24	120	208/240	277
Min Pickup Volts	19.2	88	177	220	384
Drop-Out Volts Range	6-15	20-70	40-140	65-185	150-270
Nominal Inrush VA @ 50Hz	68	68	58	58	48
Nominal Inrush VA @ 60Hz	60	60	55	52	52
Nominal Sealed VA @ 50Hz	14	14	11	11	11
Nominal Sealed VA @ 60Hz	9	9	9.5	9.5	9
Nominal DC Resistance-Ohms	6	150	600	750	4200
Max Coil Voltage	30	132	264	300	528

3.3 Other Specifications

1.5 & 2 Pole

Specifications	20-30 FLA	40 FLA
Line and Load Terminals	#10-32 Screw	Box Lug
Wire Size AWG Min-Max	16-8*	14-4 Cu/Al
Tightening Torque(recommended)	25 in. lbs	40 in. lbs
Coil Termination	Dual .250" QC(2)	
Quick Connects .250" std. -1 or 1.5 Pole	Quad	
Quick Connects .250" std. -2 Pole	Dual or Quad	
ARC Cover	Optional	Standard
Insulation System	155°C Class F	
*Stranding must be split for #8 wire.		
Permissible Ambient Temperature: -40°C to 65°C -40°F to 150°F		

20-40 FLA, 3 Pole

Specifications	20-30 FLA	40 FLA
Line and Load Terminals	#10-32 Screw	Box Lug
Wire Size AWG Min-Max	16-8*	14-4 Cu/Al
Tightening Torque(recommended)	22 in. lbs	40 in. lbs
Quick Connects : Power Terminals Coil Terminals	Dual .250" QC Dual .250" QC(2)**	
ARC Cover	Standard	
Insulation System	155°C Class F	
*Stranding must be split for #8 wire.		
**(1) #6-32 screw and (1).250" QC are optional		
Permissible Ambient Temperature: -40°C to 65°C -40°F to 150°F		

50-60 FLA, 3 Pole

Specifications	50 FLA	60 FLA
Line and Load Terminals	Box Lug	
Wire Size AWG Min-Max	14-2 Cu/Al	
Tightening Torque(recommended)	50 in. lbs	
Quick Connects : Power Terminals Coil Terminals	Dual .250" QC #6-32 screw & .250" QC(2)	
ARC Cover	Standard	
Insulation System	155°C Class F	
Permissible Ambient Temperature: -40°C to 65°C -40°F to 150°F		

75-90 FLA, 3 Pole

Specifications	75 FLA	90 FLA
Line and Load Terminals	Box Lug	
Wire Size AWG Min-Max	14-1 Cu/Al	
Tightening Torque(recommended)	50 in. lbs	
Quick Connects : Power Terminals Coil Terminals	Dual .250" QC #6-32 screw & .250" QC(2)	
ARC Cover	Standard	
Insulation System	155°C Class F	
Permissible Ambient Temperature: -40°C to 65°C -40°F to 150°F		

25-40 FLA, 4 Pole

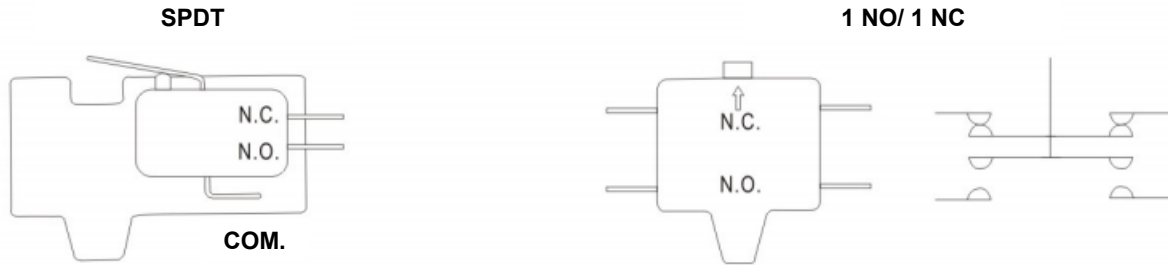
Specifications	25-30 FLA	40 FLA
Line and Load Terminals	#10-32 Screw	Box Lug
Wire Size AWG Min-Max	16-8*	14-4 Cu/Al
Tightening Torque(recommended)	22 in. lbs	40 in. lbs
Quick Connects : Power Terminals	Dual .250" QC	
Coil Terminals	Dual .250" QC(2)**	
ARC Cover	Standard	
Insulation System	155°C Class F	

*Stranding must be split for #8 wire.
 **(1) #6-32 screw and (1).250" QC are optional

Permissible Ambient Temperature: -40°C to 65°C -40°F to 150°F

4. Auxiliary Switches

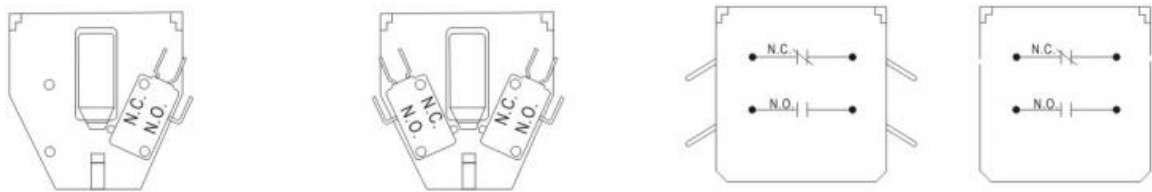
50 & 60 FLA, 2 & 3 Pole; 75 & 90 FLA, 2 & 3 Pole



Quick connect terminals .250" wide, screw terminals #6-32

Contact Rating Of SPDT	Contact Rating Of 1 NO/ 1 NC				Other Configurations Available	
10A, 1/3HP, 125 or 250VAC 1/2A, 125VDC; 1/4A, 250VDC; 4A, 120VAC on Lamp Load	Voltage Rating	120	240	480	600	One Normally Open Consult One Normally Closed Factory
	Amps-Break	3.0	1.5	.75	.6	
	Amps-Make	30	15	7.5	6	
	Amps-Continuous	10	10	10	10	

20-40 FLA, 3 & 4 Pole



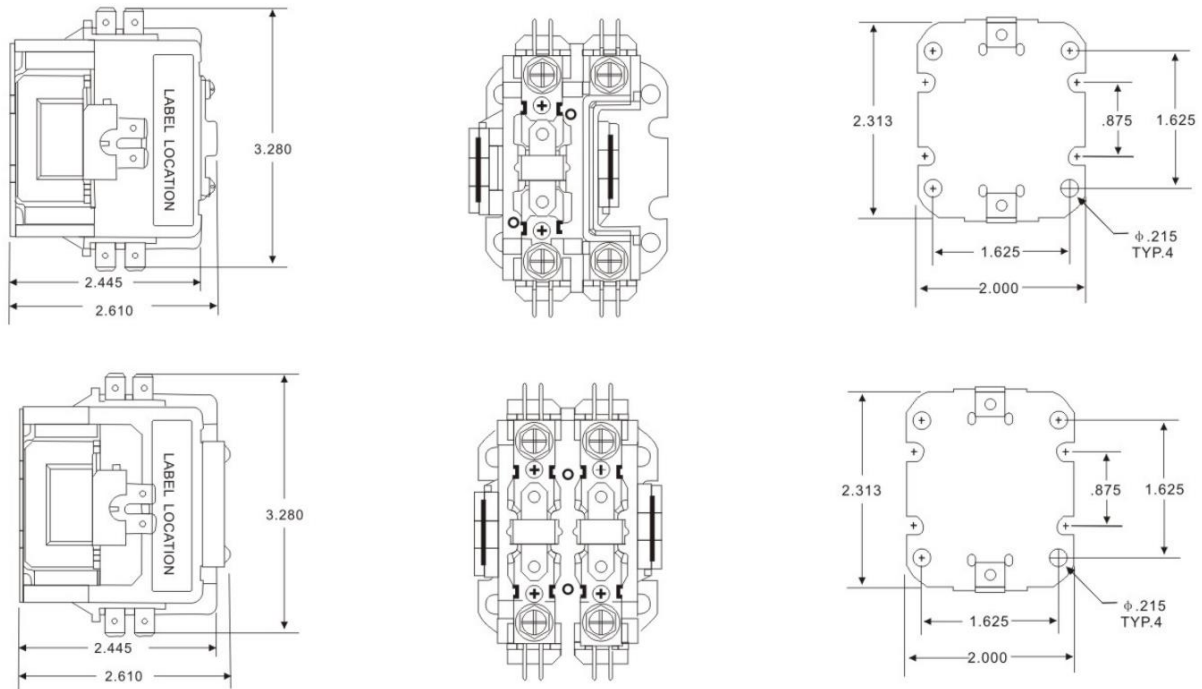
One SPDT Switch Per Side Two SPDT Switch Per Side 1 NO/1 NC Quick Connects 1 NO/1 NC Screw Terminals

Quick connect terminals .250" wide, screw terminals #6-32

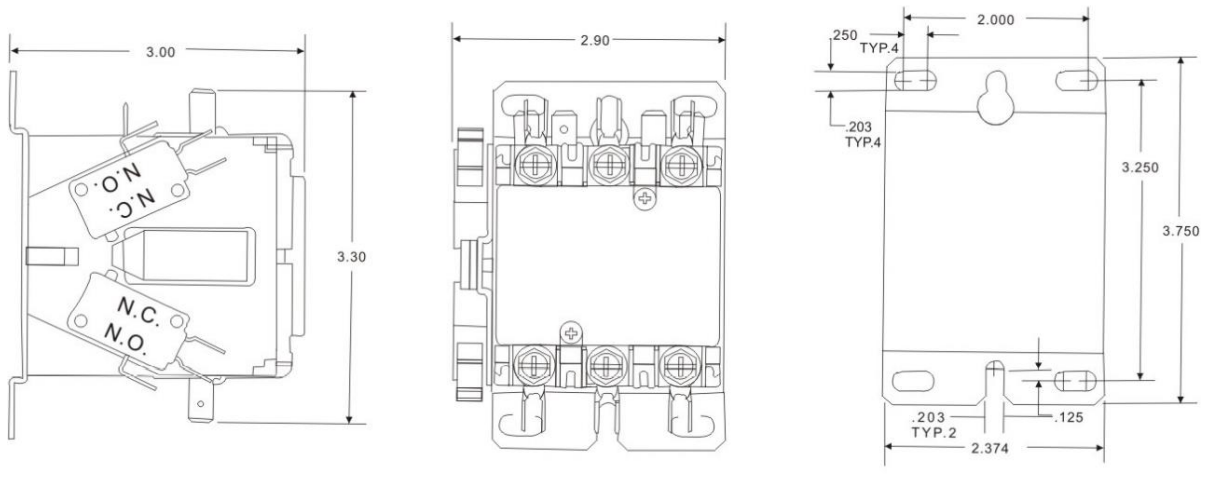
Contact Rating Of SPDT	Contact Rating Of 1 NO/ 1 NC				Other Configurations Available	
10A, 1/3HP, 125 or 250VAC 1/2A, 125VDC; 1/4A, 250VDC; 4A, 120VAC on Lamp Load	Voltage Rating	120	240	480	600	One Normally Open Two Normally Open Consult One Normally Closed Factory Two Normally Closed
	Amps-Break	3.0	1.5	.75	.6	
	Amps-Make	30	15	7.5	6	
	Amps-Continuous	10	10	10	10	

5. Outline Dimensions (shown in inches)

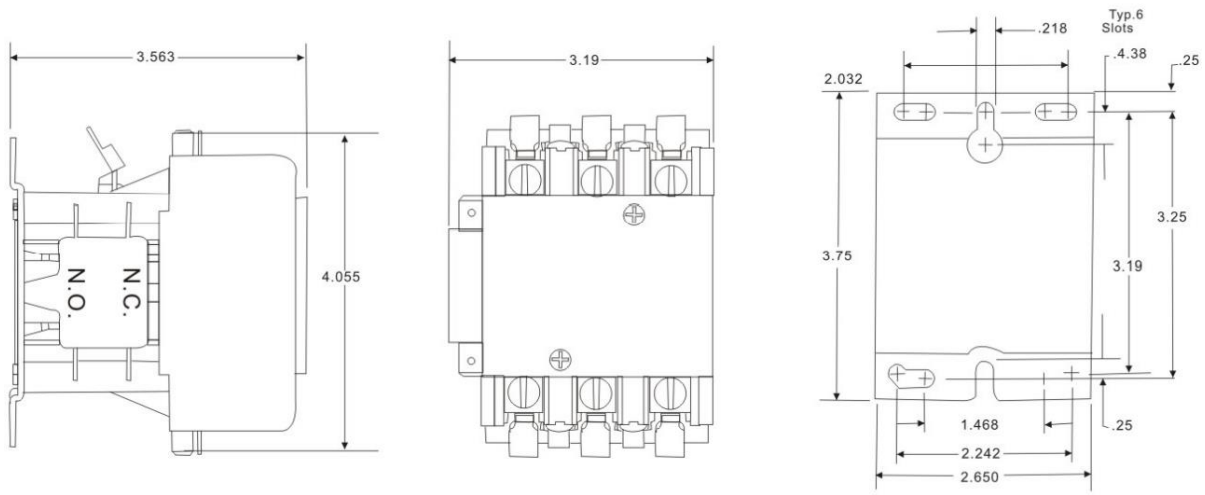
1.5 & 2 Pole



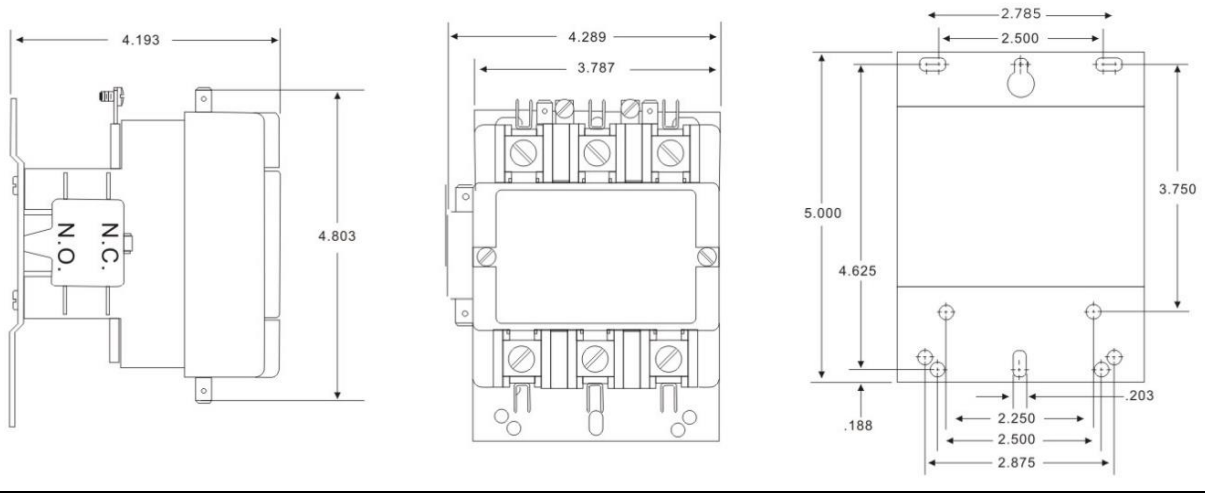
20~40 FLA, 3 Pole



50~60 FLA, 3 Pole



75~90 FLA, 3 Pole



25~40 FLA, 4 Pole

