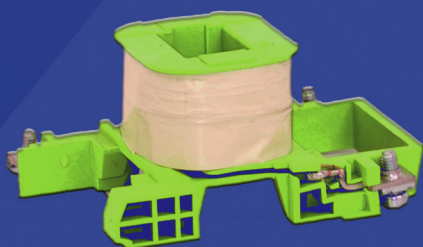




ELECTRICAL COMPONENTS

Contactors, Overloads and Accessories

- 9 FVNR models, 9A to 95A
- Coil Voltages from 24 to 600VAC
- Auxiliary Contacts ▪ Interlocks
- Thermal Overload Relays



Contactors, Overloads and Accessories



Features



- 9 models of contactors, with ratings from 9A to 95A (to 30HP @230/240VAC 1-phase - to 50HP @500/675VAC 3-phase)
- Coil voltages from 24 to 600VAC, 50/60Hz
- All contactors are Full Voltage Non-Reversing (FVNR) standard; FVR available upon request
 - FVR contactors can be assembled using 2 FVNR contactors, bus-bars and a mechanical interlock
- IP20 finger and back-of-hand safe
- Wire connection by screw-clamp: accepts solid or stranded wire (with or without ferrule)
- Built-in NO or NC auxiliary contacts to 32A
- 3 and 4 pole versions available, including 2NO+2NC and 4NO configurations
- All models mount on standard 35mm DIN Rail
- Coil replacement is possible on all models
- Compatible with NR2 series (models Ex9RD) thermal overload relays
- Accessories include spare coils, auxiliary contact blocks, interlocks, DIN adapters for overload relays
- **Approvals:** IEC/EN 60947, cULus certified
- **Markings:** CE-marked, RoHS compliant
- The IEC load values (in A) indicate the maximum current values for contactors (make and break) depending on the type and cycle of load
 - **AC1 category:** AC loads with a power factor (cos phi) greater than or equal to 0.95 (RESISTIVE loads) [Examples: lighting, heating]
 - **AC3 category:** AC loads with a power factor (cos phi) lesser than 0.95 (INDUCTIVE loads). Note that cos phi varies greatly depending on the operating cycle [Examples: all AC motors, air conditioning units, etc.]
- Other sizes available (115A to 630A); consult ITC



9A Contactors with AC Coil

Technical Characteristics

Frame type (3 and 4 poles)		1
Rated Insulation Voltage	VAC	690
UL/CSA Rating (Resistive AC1)	A	20
UL/CSA Rating (Inductive AC3)	A	9
Operating frequency (AC3)	Operations/h	1200
Operating frequency (mechanical)	Operations/h	3600
Electrical life (AC3)	Operations	1 x 10 ⁶
Mechanical life	Operations	10 x 10 ⁶
Terminal connection (stranded wire with ferrule) min.	mm ² / AWG	1.5 / 16
Terminal connection (stranded wire with ferrule) max.	mm ² / AWG	2.5 / 14
Terminal connection (stranded wire without ferrule) min.	mm ² / AWG	1.5 / 16
Terminal connection (stranded wire without ferrule) max.	mm ² / AWG	4.0 / 12
Terminal connection (solid wire) min.	mm ² / AWG	1.5 / 16
Terminal connection (solid wire) max.	mm ² / AWG	4.0 / 12
Screw size		M3.5
Tightening torque	Nm / in-lb	0.8 / 7
Overload Relay type		NR2-25G/...



Ratings

		120V	208-240V	200-240V	460-600V	220/230V	380/400V	600/690V
1-phase	HP	0.5	1	-	-	-	-	-
3-phase	HP	-	-	3	5	-	-	-
AC-3	kW	-	-	-	-	2.2	4	5.5

Dimensions (Refer to figure 1 - page 15)

	A	B	C	D	E	a	b	Φ	L	P	S
mm	47	76	86	120.5	140.5	35	50/60	4.5	60	10.5	8.6
in.	1.85	2.99	3.38	4.74	5.53	1.38	1.97/2.36	.18	2.36	.41	.34

9A contactors (Order by Part No.)

Coil Voltage (VAC)	Part No.	Model	Part No.	Model
	3 poles (3NO + 1NO aux.)		3 poles (3NO + 1NC aux.)	
24	NC1-0910-24	Ex9CDS09A30B7A	NC1-0901-24	Ex9CDS09A30B7B
48 (*)	NC1-0910-48	Ex9CDS09A30E7A	NC1-0901-48	Ex9CDS09A30E7B
120	NC1-0910-120	Ex9CDS09A30G7A	NC1-0901-120	Ex9CDS09A30G7B
208	NC1-0910-208	Ex9CDS09A30H7A	NC1-0901-208	Ex9CDS09A30H7B
220	NC1-0910-220	Ex9CDS09A30M7A	NC1-0901-220	Ex9CDS09A30M7B
240	NC1-0910-240	Ex9CDS09A30U7A	NC1-0901-240	Ex9CDS09A30U7B
380	NC1-0910-380	Ex9CDS09A30Q7A	NC1-0901-380	Ex9CDS09A30Q7B
440	NC1-0910-440	Ex9CDS09A30R7A	NC1-0901-440	Ex9CDS09A30R7B
480	NC1-0910-480	Ex9CDS09A30T7A	NC1-0901-480	Ex9CDS09A30T7B
600	NC1-0910-600	Ex9CDS09A30Y7A	NC1-0901-600	Ex9CDS09A30Y7B
	4 poles (4 NO)		4 poles (2NO + 2NC)	
24	NC1-0904-24	Ex9CDS09A40B7	NC1-0908-24	Ex9CDS09A22B7
48 (*)	NC1-0904-48	Ex9CDS09A40E7	NC1-0908-48	Ex9CDS09A22E7
120	NC1-0904-120	Ex9CDS09A40G7	NC1-0908-120	Ex9CDS09A22G7
208	NC1-0904-208	Ex9CDS09A40H7	NC1-0908-208	Ex9CDS09A22H7
220	NC1-0904-220	Ex9CDS09A40M7	NC1-0908-220	Ex9CDS09A22M7
240	NC1-0904-240	Ex9CDS09A40U7	NC1-0908-240	Ex9CDS09A22U7
380	NC1-0904-380	Ex9CDS09A40Q7	NC1-0908-380	Ex9CDS09A22Q7
440	NC1-0904-440	Ex9CDS09A40R7	NC1-0908-440	Ex9CDS09A22R7
480	NC1-0904-480	Ex9CDS09A40T7	NC1-0908-480	Ex9CDS09A22T7
600	NC1-0904-600	Ex9CDS09A40Y7	NC1-0908-600	Ex9CDS09A22Y7

(*) Special request only - Information subject to change without notice

12A Contactors with AC Coil

Technical Characteristics

Frame type (3 and 4 poles)		1
Rated Insulation Voltage	VAC	690
UL/CSA Rating (Resistive AC1)	A	20
UL/CSA Rating (Inductive AC3)	A	12
Operating frequency (AC3)	Operations/h	1200
Operating frequency (mechanical)	Operations/h	3600
Electrical life (AC3)	Operations	1 x 10 ⁶
Mechanical life	Operations	10 x 10 ⁶
Terminal connection (stranded wire with ferrule) min.	mm ² / AWG	1.5 / 16
Terminal connection (stranded wire with ferrule) max.	mm ² / AWG	2.5 / 14
Terminal connection (stranded wire without ferrule) min.	mm ² / AWG	1.5 / 16
Terminal connection (stranded wire without ferrule) max.	mm ² / AWG	4.0 / 12
Terminal connection (solid wire) min.	mm ² / AWG	1.5 / 16
Terminal connection (solid wire) max.	mm ² / AWG	4.0 / 12
Screw size		M3.5
Tightening torque	Nm / in-lb	0.8 / 7
Overload Relay type		NR2-25G/...



Ratings

		120V	208-240V	200-240V	460-600V	220/230V	380/400V	600/690V
1-phase	HP	0.75	2	-	-	-	-	-
3-phase	HP	-	-	5	7.5	-	-	-
AC-3	kW	-	-	-	-	3	5.5	7.5

Dimensions (Refer to figure 1 - page 15)

	A	B	C	D	E	a	b	Φ	L	P	S
mm	47	76	86	120.5	140.5	35	50/60	4.5	60	10.5	10.4
in.	1.85	2.99	3.38	4.74	5.53	1.38	1.97/2.36	.18	2.36	.41	.41

12A Contactors (Order by Part No.)

Coil Voltage (VAC)	Part No.	Model	Part No.	Model
	3 poles (3NO + 1NO aux.)		3 poles (3NO + 1NC aux.)	
24	NC1-1210-24	Ex9CDS12A30B7A	NC1-1201-24	Ex9CDS12A30B7B
48 (*)	NC1-1210-48	Ex9CDS12A30E7A	NC1-1201-48	Ex9CDS12A30E7B
120	NC1-1210-120	Ex9CDS12A30G7A	NC1-1201-120	Ex9CDS12A30G7B
208	NC1-1210-208	Ex9CDS12A30H7A	NC1-1201-208	Ex9CDS12A30H7B
220	NC1-1210-220	Ex9CDS12A30M7A	NC1-1201-220	Ex9CDS12A30M7B
240	NC1-1210-240	Ex9CDS12A30U7A	NC1-1201-240	Ex9CDS12A30U7B
380	NC1-1210-380	Ex9CDS12A30Q7A	NC1-1201-380	Ex9CDS12A30Q7B
440	NC1-1210-440	Ex9CDS12A30R7A	NC1-1201-440	Ex9CDS12A30R7B
480	NC1-1210-480	Ex9CDS12A30T7A	NC1-1201-480	Ex9CDS12A30T7B
600	NC1-1210-600	Ex9CDS12A30Y7A	NC1-1201-600	Ex9CDS12A30Y7B
	4 poles (4 NO)		4 poles (2NO + 2NC)	
24	NC1-1204-24	Ex9CDS12A40B7	NC1-1208-24	Ex9CDS12A22B7
48 (*)	NC1-1204-48	Ex9CDS12A40E7	NC1-1208-48	Ex9CDS12A22E7
120	NC1-1204-120	Ex9CDS12A40G7	NC1-1208-120	Ex9CDS12A22G7
208	NC1-1204-208	Ex9CDS12A40H7	NC1-1208-208	Ex9CDS12A22H7
220	NC1-1204-220	Ex9CDS12A40M7	NC1-1208-220	Ex9CDS12A22M7
240	NC1-1204-240	Ex9CDS12A40U7	NC1-1208-240	Ex9CDS12A22U7
380	NC1-1204-380	Ex9CDS12A40Q7	NC1-1208-380	Ex9CDS12A22Q7
440	NC1-1204-440	Ex9CDS12A40R7	NC1-1208-440	Ex9CDS12A22R7
480	NC1-1204-480	Ex9CDS12A40T7	NC1-1208-480	Ex9CDS12A22T7
600	NC1-1204-600	Ex9CDS12A40Y7	NC1-1208-600	Ex9CDS12A22Y7

(*) Special request only - Information subject to change without notice

18A Contactors with AC Coil

Technical Characteristics

Frame type (3 poles)		2
Rated Insulation Voltage	VAC	690
UL/CSA Rating (Resistive AC1)	A	32
UL/CSA Rating (Inductive AC3)	A	18
Operating frequency (AC3)	Operations/h	1200
Operating frequency (mechanical)	Operations/h	3600
Electrical life (AC3)	Operations	1 x 10 ⁶
Mechanical life	Operations	10 x 10 ⁶
Terminal connection (stranded wire with ferrule) min.	mm ² / AWG	1.5 / 16
Terminal connection (stranded wire with ferrule) max.	mm ² / AWG	4.0 / 12
Terminal connection (stranded wire without ferrule) min.	mm ² / AWG	1.5 / 16
Terminal connection (stranded wire without ferrule) max.	mm ² / AWG	6.0 / 10
Terminal connection (solid wire) min.	mm ² / AWG	1.5 / 16
Terminal connection (solid wire) max.	mm ² / AWG	6.0 / 10
Screw size		M3.5
Tightening torque	Nm / in-lb	0.8 / 7
Overload Relay type		NR2-25G/...



Ratings

		120V	208-240V	200-240V	460-480V	220/230V	380/400V	600/690V
1-phase	HP	1	3	-	-	-	-	-
3-phase	HP	-	-	7.5	10	-	-	-
AC-3	kW	-	-	-	-	4	7.5	10

Dimensions (Refer to figure 1 - page 15)

	A	B	C	D	E	a	b	Φ	L	P	S
mm	47	76	86	120.5	140.5	35	50/60	4.5	61	11.3	10.4
in.	1.85	2.99	3.38	4.74	5.53	1.38	1.97/2.36	.18	2.40	.44	.41

18A Contactors (Order by Part No.)

Coil Voltage (VAC)	Part No.	Model	Part No.	Model
	3 poles (3NO + 1NO aux.)		3 poles (3NO + 1NC aux.)	
24	NC1-1810-24	Ex9CDS18A30B7A	NC1-1801-24	Ex9CDS18A30B7B
48 (*)	NC1-1810-48	Ex9CDS18A30E7A	NC1-1801-48	Ex9CDS18A30E7B
120	NC1-1810-120	Ex9CDS18A30G7A	NC1-1801-180	Ex9CDS18A30G7B
208	NC1-1810-208	Ex9CDS18A30H7A	NC1-1801-208	Ex9CDS18A30H7B
220	NC1-1810-220	Ex9CDS18A30M7A	NC1-1801-220	Ex9CDS18A30M7B
240	NC1-1810-240	Ex9CDS18A30U7A	NC1-1801-240	Ex9CDS18A30U7B
380	NC1-1810-380	Ex9CDS18A30Q7A	NC1-1801-380	Ex9CDS18A30Q7B
440	NC1-1810-440	Ex9CDS18A30R7A	NC1-1801-440	Ex9CDS18A30R7B
480	NC1-1810-480	Ex9CDS18A30T7A	NC1-1801-480	Ex9CDS18A30T7B
600	NC1-1810-600	Ex9CDS18A30Y7A	NC1-1801-600	Ex9CDS18A30Y7B

(*) Special request only - Information subject to change without notice

25A Contactors with AC Coil

Technical Characteristics

Frame type (3 and 4 poles)		3
Rated Insulation Voltage	VAC	690
UL/CSA Rating (Resistive AC1)	A	40
UL/CSA Rating (Inductive AC3)	A	25
Operating frequency (AC3)	Operations/h	1200
Operating frequency (mechanical)	Operations/h	3600
Electrical life (AC3)	Operations	1 x 10 ⁶
Mechanical life	Operations	10 x 10 ⁶
Terminal connection (stranded wire with ferrule) min.	mm ² / AWG	1.5 / 16
Terminal connection (stranded wire with ferrule) max.	mm ² / AWG	4.0 / 12
Terminal connection (stranded wire without ferrule) min.	mm ² / AWG	1.5 / 16
Terminal connection (stranded wire without ferrule) max.	mm ² / AWG	6.0 / 10
Terminal connection (solid wire) min.	mm ² / AWG	1.5 / 16
Terminal connection (solid wire) max.	mm ² / AWG	6.0 / 10
Screw size		M4
Tightening torque	Nm / in-lb	1.2 / 10
Overload Relay type		NR2-25G/...



Ratings

		120V	208-240V	200-240V	460-480V	220/230V	380/400V	600/690V
1-phase	HP	1	3	-	-	-	-	-
3-phase	HP	-	-	7.5	10	-	-	-
AC-3	kW	-	-	-	-	4	7.5	10

Dimensions (Refer to figure 1 - page 15)

	A	B	C	D	E	a	b	Φ	L	P	S
mm	57	86	95	133.5	153.5	40	48	4.5	70	13.2	11.7
in.	2.25	3.38	3.74	5.25	6.04	1.57	1.89	.18	2.76	.52	.46

25A contactors (Order by Part No.)

Coil Voltage (VAC)	Part No.	Model	Part No.	Model
	3 poles (3NO + 1NO aux.)		3 poles (3NO + 1NC aux.)	
24	NC1-2510-24	Ex9CDS25A30B7A	NC1-2501-24	Ex9CDS25A30B7B
48 (*)	NC1-2510-48	Ex9CDS25A30E7A	NC1-2501-48	Ex9CDS25A30E7B
120	NC1-2510-120	Ex9CDS25A30G7A	NC1-2501-250	Ex9CDS25A30G7B
208	NC1-2510-208	Ex9CDS25A30H7A	NC1-2501-208	Ex9CDS25A30H7B
220	NC1-2510-220	Ex9CDS25A30M7A	NC1-2501-220	Ex9CDS25A30M7B
240	NC1-2510-240	Ex9CDS25A30U7A	NC1-2501-240	Ex9CDS25A30U7B
380	NC1-2510-380	Ex9CDS25A30Q7A	NC1-2501-380	Ex9CDS25A30Q7B
440	NC1-2510-440	Ex9CDS25A30R7A	NC1-2501-440	Ex9CDS25A30R7B
480	NC1-2510-480	Ex9CDS25A30T7A	NC1-2501-480	Ex9CDS25A30T7B
600	NC1-2510-600	Ex9CDS25A30Y7A	NC1-2501-600	Ex9CDS25A30Y7B
	4 poles (4 NO)		4 poles (2NO + 2NC)	
24	NC1-2504-24	Ex9CDS25A40B7	NC1-2508-24	Ex9CDS25A22B7
48 (*)	NC1-2504-48	Ex9CDS25A40E7	NC1-2508-48	Ex9CDS25A22E7
120	NC1-2504-120	Ex9CDS25A40G7	NC1-2508-120	Ex9CDS25A22G7
208	NC1-2504-208	Ex9CDS25A40H7	NC1-2508-208	Ex9CDS25A22H7
220	NC1-2504-220	Ex9CDS25A40M7	NC1-2508-220	Ex9CDS25A22M7
240	NC1-2504-240	Ex9CDS25A40U7	NC1-2508-240	Ex9CDS25A22U7
380	NC1-2504-380	Ex9CDS25A40Q7	NC1-2508-380	Ex9CDS25A22Q7
440	NC1-2504-440	Ex9CDS25A40R7	NC1-2508-440	Ex9CDS25A22R7
480	NC1-2504-480	Ex9CDS25A40T7	NC1-2508-480	Ex9CDS25A22T7
600	NC1-2504-600	Ex9CDS25A40Y7	NC1-2508-600	Ex9CDS25A22Y7

(*) Special request only - Information subject to change without notice

32A Contactors with AC Coil

Technical Characteristics

Frame type (3 poles)		4
Rated Insulation Voltage	VAC	690
UL/CSA Rating (Resistive AC1)	A	50
UL/CSA Rating (Inductive AC3)	A	32
Operating frequency (AC3)	Operations/h	600
Operating frequency (mechanical)	Operations/h	3600
Electrical life (AC3)	Operations	0.8 x 10 ⁶
Mechanical life	Operations	8 x 10 ⁶
Terminal connection (stranded wire with ferrule) min.	mm ² / AWG	1.5 / 16
Terminal connection (stranded wire with ferrule) max.	mm ² / AWG	4.0 / 12
Terminal connection (stranded wire without ferrule) min.	mm ² / AWG	1.5 / 16
Terminal connection (stranded wire without ferrule) max.	mm ² / AWG	6.0 / 10
Terminal connection (solid wire) min.	mm ² / AWG	1.5 / 16
Terminal connection (solid wire) max.	mm ² / AWG	6.0 / 10
Screw size		M4
Tightening torque	Nm / in-lb	1.2 / 10
Overload Relay type		NR2-36G/...



Ratings

		120V	208-240V	200V	240V	460-480V	220/230V	380/400V	600/690V
1-phase	HP	3	5	-	-	-	-	-	-
3-phase	HP	-	-	10	15	20	-	-	-
AC-3	kW	-	-	-	-	-	7.5	15	18.5

Dimensions (Refer to figure 1 - page 15)

	A	B	C	D	E	a	b	Φ	L	P	S
mm	57	86	100	138.5	158.5	40	48	4.5	71.6	14.5	13
in.	2.25	3.38	3.94	5.45	6.24	1.57	1.89	.18	2.82	.57	.51

32A Contactors (Order by Part No.)

Coil Voltage (VAC)	Part No.	Model	Part No.	Model
	3 poles (3NO + 1NO aux.)		3 poles (3NO + 1NC aux.)	
24	NC1-3210-24	Ex9CDS32A30B7A	NC1-3201-24	Ex9CDS32A30B7B
48 (*)	NC1-3210-48	Ex9CDS32A30E7A	NC1-3201-48	Ex9CDS32A30E7B
120	NC1-3210-120	Ex9CDS32A30G7A	NC1-3201-180	Ex9CDS32A30G7B
208	NC1-3210-208	Ex9CDS32A30H7A	NC1-3201-208	Ex9CDS32A30H7B
220	NC1-3210-220	Ex9CDS32A30M7A	NC1-3201-220	Ex9CDS32A30M7B
240	NC1-3210-240	Ex9CDS32A30U7A	NC1-3201-240	Ex9CDS32A30U7B
380	NC1-3210-380	Ex9CDS32A30Q7A	NC1-3201-380	Ex9CDS32A30Q7B
440	NC1-3210-440	Ex9CDS32A30R7A	NC1-3201-440	Ex9CDS32A30R7B
480	NC1-3210-480	Ex9CDS32A30T7A	NC1-3201-480	Ex9CDS32A30T7B
600	NC1-3210-600	Ex9CDS32A30Y7A	NC1-3201-600	Ex9CDS32A30Y7B

(*) Special request only - Information subject to change without notice



40A Contactors with AC Coil

Technical Characteristics

Frame type (3 and 4 poles)		5
Rated Insulation Voltage	VAC	690
UL/CSA Rating (Resistive AC1)	A	60
UL/CSA Rating (Inductive AC3)	A	40
Operating frequency (AC3)	Operations/h	600
Operating frequency (mechanical)	Operations/h	3600
Electrical life (AC3)	Operations	10.8x 10 ⁶
Mechanical life	Operations	8 x 10 ⁶
Terminal connection (stranded wire with ferrule) min.	mm ² / AWG	6.0 / 10
Terminal connection (stranded wire with ferrule) max.	mm ² / AWG	25.0 / 4
Terminal connection (stranded wire without ferrule) min.	mm ² / AWG	6.0 / 10
Terminal connection (stranded wire without ferrule) max.	mm ² / AWG	25.0 / 4
Terminal connection (solid wire) min.	mm ² / AWG	6.0 / 10
Terminal connection (solid wire) max.	mm ² / AWG	25.0 / 4
Screw size		M8
Tightening torque	Nm / in-lb	3.5 / 45
Overload Relay type		NR2-93G/...



Ratings

		120V	208-240V	200V	240V	460-480V	220/230V	380/400V	600/690V
1-phase	HP	3	7.5	-	-	-	-	-	-
3-phase	HP	-	-	15	20	25	-	-	-
AC-3	kW	-	-	-	-	-	11	18.5	30

Dimensions (Refer to figure 2 - page 15)

	A	B	C	D	E	a	b	Φ	L	P	S
mm	77 / 84	129	116	154.5	174.5	40	105	6.5	78	20	8.6
in.	3.03 / 3.3	5.08	4.56	6.08	6.87	1.57	4.13	.26	3.07	.79	.34

(Dimension A shown: value for 3NO+1NO/NC / value for other models)

40A contactors (Order by Part No.)

Coil Voltage (VAC)	Part No.	Model	Part No.	Model
	3 poles (3NO + 1NO/NC aux.)			
24	NC1-4011-24	Ex9CDS40A30B7C		
48 (*)	NC1-4011-48	Ex9CDS40A30E7C		
120	NC1-4011-120	Ex9CDS40A30G7C		
208	NC1-4011-208	Ex9CDS40A30H7C		
220	NC1-4011-220	Ex9CDS40A30M7C		
240	NC1-4011-240	Ex9CDS40A30U7C		
380	NC1-4011-380	Ex9CDS40A30Q7C		
440	NC1-4011-440	Ex9CDS40A30R7C		
480	NC1-4011-480	Ex9CDS40A30T7C		
600	NC1-4011-600	Ex9CDS40A30Y7C		
	4 poles (4 NO)		4 poles (2NO + 2NC)	
24	NC1-4004-24	Ex9CDS40A40B7	NC1-4008-24	Ex9CDS40A22B7
48 (*)	NC1-4004-48	Ex9CDS40A40E7	NC1-4008-48	Ex9CDS40A22E7
120	NC1-4004-120	Ex9CDS40A40G7	NC1-4008-120	Ex9CDS40A22G7
208	NC1-4004-208	Ex9CDS40A40H7	NC1-4008-208	Ex9CDS40A22H7
220	NC1-4004-220	Ex9CDS40A40M7	NC1-4008-220	Ex9CDS40A22M7
240	NC1-4004-240	Ex9CDS40A40U7	NC1-4008-240	Ex9CDS40A22U7
380	NC1-4004-380	Ex9CDS40A40Q7	NC1-4008-380	Ex9CDS40A22Q7
440	NC1-4004-440	Ex9CDS40A40R7	NC1-4008-440	Ex9CDS40A22R7
480	NC1-4004-480	Ex9CDS40A40T7	NC1-4008-480	Ex9CDS40A22T7
600	NC1-4004-600	Ex9CDS40A40Y7	NC1-4008-600	Ex9CDS40A22Y7

(*) Special request only - Information subject to change without notice

50A Contactors with AC Coil

Technical Characteristics

Frame type (3 and 4 poles)		5
Rated Insulation Voltage	VAC	690
UL/CSA Rating (Resistive AC1)	A	80
UL/CSA Rating (Inductive AC3)	A	50
Operating frequency (AC3)	Operations/h	600
Operating frequency (mechanical)	Operations/h	3600
Electrical life (AC3)	Operations	0.6x 10 ⁶
Mechanical life	Operations	8 x 10 ⁶
Terminal connection (stranded wire with ferrule) min.	mm ² / AWG	6.0 / 10
Terminal connection (stranded wire with ferrule) max.	mm ² / AWG	25.0 / 4
Terminal connection (stranded wire without ferrule) min.	mm ² / AWG	6.0 / 10
Terminal connection (stranded wire without ferrule) max.	mm ² / AWG	25.0 / 4
Terminal connection (solid wire) min.	mm ² / AWG	6.0 / 10
Terminal connection (solid wire) max.	mm ² / AWG	25.0 / 4
Screw size		M8
Tightening torque	Nm / in-lb	3.5 / 45
Overload Relay type		NR2-93G/...



Ratings

		120V	208-240V	200V	240V	460-480V	220/230V	380/400V	600/690V
1-phase	HP	5	10	-	-	-	-	-	-
3-phase	HP	-	-	15	20	30	-	-	-
AC-3	kW	-	-	-	-	-	15	22	37

Dimensions (Refer to figure 2 - page 15)

	A	B	C	D	E	a	b	Φ	L	P	S
mm	77 / 84	129	116	154.5	174.5	40	105	6.5	78	20	8.6
in.	3.03 / 3.3	5.08	4.56	6.08	6.87	1.57	4.13	.26	3.07	.79	.34

(Dimension A shown: value for 3NO+1NO/NC / value for other models)

50A contactors (Order by Part No.)

Coil Voltage (VAC)	Part No.	Model	Part No.	Model
	3 poles (3NO + 1NO/NC aux.)			
24	NC1-5011-24	Ex9CDS50A30B7C		
48 (*)	NC1-5011-48	Ex9CDS50A30E7C		
120	NC1-5011-120	Ex9CDS50A30G7C		
208	NC1-5011-208	Ex9CDS50A30H7C		
220	NC1-5011-220	Ex9CDS50A30M7C		
240	NC1-5011-240	Ex9CDS50A30U7C		
380	NC1-5011-380	Ex9CDS50A30Q7C		
440	NC1-5011-440	Ex9CDS50A30R7C		
480	NC1-5011-480	Ex9CDS50A30T7C		
600	NC1-5011-600	Ex9CDS50A30Y7C		
	4 poles (4 NO)		4 poles (2NO + 2NC)	
24	NC1-5004-24	Ex9CDS50A40B7	NC1-5008-24	Ex9CDS50A22B7
48 (*)	NC1-5004-48	Ex9CDS50A40E7	NC1-5008-48	Ex9CDS50A22E7
120	NC1-5004-120	Ex9CDS50A40G7	NC1-5008-120	Ex9CDS50A22G7
208	NC1-5004-208	Ex9CDS50A40H7	NC1-5008-208	Ex9CDS50A22H7
220	NC1-5004-220	Ex9CDS50A40M7	NC1-5008-220	Ex9CDS50A22M7
240	NC1-5004-240	Ex9CDS50A40U7	NC1-5008-240	Ex9CDS50A22U7
380	NC1-5004-380	Ex9CDS50A40Q7	NC1-5008-380	Ex9CDS50A22Q7
440	NC1-5004-440	Ex9CDS50A40R7	NC1-5008-440	Ex9CDS50A22R7
480	NC1-5004-480	Ex9CDS50A40T7	NC1-5008-480	Ex9CDS50A22T7
600	NC1-5004-600	Ex9CDS50A40Y7	NC1-5008-600	Ex9CDS50A22Y7

(*) Special request only - Information subject to change without notice

65A Contactors with AC Coil

Technical Characteristics

Frame type (3 and 4 poles)		5
Rated Insulation Voltage	VAC	690
UL/CSA Rating (Resistive AC1)	A	80
UL/CSA Rating (Inductive AC3)	A	65
Operating frequency (AC3)	Operations/h	600
Operating frequency (mechanical)	Operations/h	3600
Electrical life (AC3)	Operations	0.6x 10 ⁶
Mechanical life	Operations	8 x 10 ⁶
Terminal connection (stranded wire with ferrule) min.	mm ² / AWG	6.0 / 10
Terminal connection (stranded wire with ferrule) max.	mm ² / AWG	25.0 / 4
Terminal connection (stranded wire without ferrule) min.	mm ² / AWG	6.0 / 10
Terminal connection (stranded wire without ferrule) max.	mm ² / AWG	25.0 / 4
Terminal connection (solid wire) min.	mm ² / AWG	6.0 / 10
Terminal connection (solid wire) max.	mm ² / AWG	25.0 / 4
Screw size		M8
Tightening torque	Nm / in-lb	3.5 / 45
Overload Relay type		NR2-93G/...



Ratings

		120V	240V	200V	240V	460-480V	220/230V	380/400V	600/690V
1-phase	HP	5	15	-	-	-	-	-	-
3-phase	HP	-	-	20	25	40	-	-	-
AC-3	kW	-	-	-	-	-	18.5	30	37

Dimensions (Refer to figure 2 - page 15):

	A	B	C	D	E	a	b	Φ	L	P	S
mm	77 / 84	129	116	154.5	174.5	40	105	6.5	78	20	8.6
in.	3.03 / 3.3	5.08	4.56	6.08	6.87	1.57	4.13	.26	3.07	.79	.34

(Dimension A shown: value for 3NO+1NO/NC / value for other models)

65A contactors (Order by Part No.)

Coil Voltage (VAC)	Part No.	Model	Part No.	Model
	3 poles (3NO + 1NO/NC aux.)			
24	NC1-6510-24	Ex9CDS65A30B7C		
48 (*)	NC1-6510-48	Ex9CDS65A30E7C		
120	NC1-6510-120	Ex9CDS65A30G7C		
208	NC1-6510-208	Ex9CDS65A30H7C		
220	NC1-6510-220	Ex9CDS65A30M7C		
240	NC1-6510-240	Ex9CDS65A30U7C		
380	NC1-6510-380	Ex9CDS65A30Q7C		
440	NC1-6510-440	Ex9CDS65A30R7C		
480	NC1-6510-480	Ex9CDS65A30T7C		
600	NC1-6510-600	Ex9CDS65A30Y7C		
	4 poles (4 NO)		4 poles (2NO + 2NC)	
24	NC1-6504-24	Ex9CDS65A40B7	NC1-6508-24	Ex9CDS65A22B7
48 (*)	NC1-6504-48	Ex9CDS65A40E7	NC1-6508-48	Ex9CDS65A22E7
120	NC1-6504-120	Ex9CDS65A40G7	NC1-6508-120	Ex9CDS65A22G7
208	NC1-6504-208	Ex9CDS65A40H7	NC1-6508-208	Ex9CDS65A22H7
220	NC1-6504-220	Ex9CDS65A40M7	NC1-6508-220	Ex9CDS65A22M7
240	NC1-6504-240	Ex9CDS65A40U7	NC1-6508-240	Ex9CDS65A22U7
380	NC1-6504-380	Ex9CDS65A40Q7	NC1-6508-380	Ex9CDS65A22Q7
440	NC1-6504-440	Ex9CDS65A40R7	NC1-6508-440	Ex9CDS65A22R7
480	NC1-6504-480	Ex9CDS65A40T7	NC1-6508-480	Ex9CDS65A22T7
600	NC1-6504-600	Ex9CDS65A40Y7	NC1-6508-600	Ex9CDS65A22Y7

(*) Special request only - Information subject to change without notice

80A Contactors with AC Coil

Technical Characteristics

Frame type (3 and 4 poles)		6
Rated Insulation Voltage	VAC	690
UL/CSA Rating (Resistive AC1)	A	95
UL/CSA Rating (Inductive AC3)	A	80
Operating frequency (AC3)	Operations/h	600
Operating frequency (mechanical)	Operations/h	3600
Electrical life (AC3)	Operations	0.6x 10 ⁶
Mechanical life	Operations	6x 10 ⁶
Terminal connection (stranded wire with ferrule) min.	mm ² / AWG	6.0 / 10
Terminal connection (stranded wire with ferrule) max.	mm ² / AWG	25.0 / 4
Terminal connection (stranded wire without ferrule) min.	mm ² / AWG	6.0 / 10
Terminal connection (stranded wire without ferrule) max.	mm ² / AWG	25.0 / 4
Terminal connection (solid wire) min.	mm ² / AWG	6.0 / 10
Terminal connection (solid wire) max.	mm ² / AWG	25.0 / 4
Screw size		M10
Tightening torque	Nm / in-lb	10 / 89
Overload Relay type		NR2-93G/...



Ratings

		120V	240V	200V	240V	460-480V	220/230V	380/400V	600/690V
1-phase	HP	7.5	20	-	-	-	-	-	-
3-phase	HP	-	-	25	30	40	-	-	-
AC-3	kW	-	-	-	-	-	22	37	45

Dimensions (Refer to figure 2 - page 15)

	A	B	C	D	E	a	b	Φ	L	P	S
mm	87/96/96	129	128/122/135	165.5/160.5/160.5	185.5/180.5/180.5	40	105	6.5	83	23.5	12
in.	3.42/3.78/3.78	5.08	5/4.8/5.31	6.51/6.31/6.31	7.3/7.1/7.1	1.57	4.13	.26	3.27	.93	.47

(Dimensions A, C, D, E shown: values for 3NO+1NO/NC / for 4NO / for 2NO+2NC)

80A contactors (Order by Part No.)

Coil Voltage (VAC)	Part No.	Model	Part No.	Model
	3 poles (3NO + 1NO/NC aux.)			
24	NC1-8010-24	Ex9CDS80A30B7C		
48 (*)	NC1-8010-48	Ex9CDS80A30E7C		
120	NC1-8010-120	Ex9CDS80A30G7C		
208	NC1-8010-208	Ex9CDS80A30H7C		
220	NC1-8010-220	Ex9CDS80A30M7C		
240	NC1-8010-240	Ex9CDS80A30U7C		
380	NC1-8010-380	Ex9CDS80A30Q7C		
440	NC1-8010-440	Ex9CDS80A30R7C		
480	NC1-8010-480	Ex9CDS80A30T7C		
600	NC1-8010-600	Ex9CDS80A30Y7C		
	4 poles (4 NO)		4 poles (2NO + 2NC)	
24	NC1-8004-24	Ex9CDS80A40B7	NC1-8008-24	Ex9CDS80A22B7
48 (*)	NC1-8004-48	Ex9CDS80A40E7	NC1-8008-48	Ex9CDS80A22E7
120	NC1-8004-120	Ex9CDS80A40G7	NC1-8008-120	Ex9CDS80A22G7
208	NC1-8004-208	Ex9CDS80A40H7	NC1-8008-208	Ex9CDS80A22H7
220	NC1-8004-220	Ex9CDS80A40M7	NC1-8008-220	Ex9CDS80A22M7
240	NC1-8004-240	Ex9CDS80A40U7	NC1-8008-240	Ex9CDS80A22U7
380	NC1-8004-380	Ex9CDS80A40Q7	NC1-8008-380	Ex9CDS80A22Q7
440	NC1-8004-440	Ex9CDS80A40R7	NC1-8008-440	Ex9CDS80A22R7
480	NC1-8004-480	Ex9CDS80A40T7	NC1-8008-480	Ex9CDS80A22T7
600	NC1-8004-600	Ex9CDS80A40Y7	NC1-8008-600	Ex9CDS80A22Y7

(*) Special request only - Information subject to change without notice



95A Contactors with AC Coil

Technical Characteristics

Frame type (3 and 4 poles)		6
Rated Insulation Voltage	VAC	690
UL/CSA Rating (Resistive AC1)	A	95
UL/CSA Rating (Inductive AC3)	A	95
Operating frequency (AC3)	Operations/h	600
Operating frequency (mechanical)	Operations/h	3600
Electrical life (AC3)	Operations	0.6x 10 ⁶
Mechanical life	Operations	6x 10 ⁶
Terminal connection (stranded wire with ferrule) min.	mm ² / AWG	6.0 / 10
Terminal connection (stranded wire with ferrule) max.	mm ² / AWG	25.0 / 4
Terminal connection (stranded wire without ferrule) min.	mm ² / AWG	6.0 / 10
Terminal connection (stranded wire without ferrule) max.	mm ² / AWG	25.0 / 4
Terminal connection (solid wire) min.	mm ² / AWG	6.0 / 10
Terminal connection (solid wire) max.	mm ² / AWG	25.0 / 4
Screw size		M10
Tightening torque	Nm / in-lb	10 / 89
Overload Relay type		NR2-93G/...



Ratings

		120V	240V	200V	240V	460/600V	220/230V	380/400V	600/690V
1-phase	HP	7.5	20	-	-	-	-	-	-
3-phase	HP	-	-	30	30	50	-	-	-
AC-3	kW	-	-	-	-	-	25	45	45

Dimensions (Refer to figure 2 - page 15)

	A	B	C	D	E	a	b	Φ	L	P	S
mm	87/96/96	129	128/122/135	165.5/160.5/160.5	185.5/180.5/180.5	40	105	6.5	83	23.5	12
in.	3.42/3.78/3.78	5.08	5/4.8/5.31	6.51/6.31/6.31	7.3/7.1/7.1	1.57	4.13	.26	3.27	.93	.47

(Dimensions A, C, D, E shown: values for 3NO+1NO/NC / for 4NO / for 2NO+2NC)

95A contactors (Order by Part No.)

Coil Voltage (VAC)	Part No.	Model	Part No.	Model
	3 poles (3NO + 1NO/NC aux.)			
24	NC1-9510-24	Ex9CDS95A30B7C		
48 (*)	NC1-9510-48	Ex9CDS95A30E7C		
120	NC1-9510-120	Ex9CDS95A30G7C		
208	NC1-9510-208	Ex9CDS95A30H7C		
220	NC1-9510-220	Ex9CDS95A30M7C		
240	NC1-9510-240	Ex9CDS95A30U7C		
380	NC1-9510-380	Ex9CDS95A30Q7C		
440	NC1-9510-440	Ex9CDS95A30R7C		
480	NC1-9510-480	Ex9CDS95A30T7C		
600	NC1-9510-600	Ex9CDS95A30Y7C		
	4 poles (4 NO)		4 poles (2NO + 2NC)	
24	NC1-9504-24	Ex9CDS95A40B7	NC1-9508-24	Ex9CDS95A22B7
48 (*)	NC1-9504-48	Ex9CDS95A40E7	NC1-9508-48	Ex9CDS95A22E7
120	NC1-9504-120	Ex9CDS95A40G7	NC1-9508-120	Ex9CDS95A22G7
208	NC1-9504-208	Ex9CDS95A40H7	NC1-9508-208	Ex9CDS95A22H7
220	NC1-9504-220	Ex9CDS95A40M7	NC1-9508-220	Ex9CDS95A22M7
240	NC1-9504-240	Ex9CDS95A40U7	NC1-9508-240	Ex9CDS95A22U7
380	NC1-9504-380	Ex9CDS95A40Q7	NC1-9508-380	Ex9CDS95A22Q7
440	NC1-9504-440	Ex9CDS95A40R7	NC1-9508-440	Ex9CDS95A22R7
480	NC1-9504-480	Ex9CDS95A40T7	NC1-9508-480	Ex9CDS95A22T7
600	NC1-9504-600	Ex9CDS95A40Y7	NC1-9508-600	Ex9CDS95A22Y7

(*) Special request only - Information subject to change without notice



Accessories: Coils

Spare AC coils are available for all sizes of contactors and for every voltage. Replacing a coil is extremely simple and can be done without specialized tools.

Replacing a coil does not alter the information appearing on the label affixed on the body of the contactor.

Spare AC coils for contactors (Order by Part No.)

	9-18A		25-32A		40-95A	
VAC	Part No.	Model	Part No.	Model	Part No.	Model
24	NC1-09-18A-24	AXDA09B7	NC1-25-32A-24	AXDA25B7	NC1-40-95A-24	AXDA40B7
48 (*)	NC1-09-18A-48	AXDA09E7	NC1-25-32A-48	AXDA25E7	NC1-40-95A-48	AXDA40E7
110 (*)	NC1-09-18A-110	AXDA09F7	NC1-25-32A-110	AXDA25F7	NC1-40-95A-110	AXDA40F7
120	NC1-09-18A-120	AXDA09G7	NC1-25-32A-120	AXDA25G7	NC1-40-95A-120	AXDA40G7
208	NC1-09-18A-208	AXDA09H7	NC1-25-32A-208	AXDA25H7	NC1-40-95A-208	AXDA40H7
220	NC1-09-18A-220	AXDA09M7	NC1-25-32A-220	AXDA25M7	NC1-40-95A-220	AXDA40M7
230 (*)	NC1-09-18A-230	AXDA09P7	NC1-25-32A-230	AXDA25P7	NC1-40-95A-230	AXDA40P7
240	NC1-09-18A-240	AXDA09U7	NC1-25-32A-240	AXDA25U7	NC1-40-95A-240	AXDA40U7
277 (*)	NC1-09-18A-277	AXDA09N7	NC1-25-32A-277	AXDA25N7	NC1-40-95A-277	AXDA40N7
380	NC1-09-18A-380	AXDA09Q7	NC1-25-32A-380	AXDA25Q7	NC1-40-95A-380	AXDA40Q7
440	NC1-09-18A-440	AXDA09R7	NC1-25-32A-440	AXDA25R7	NC1-40-95A-440	AXDA40R7
480	NC1-09-18A-480	AXDA09T7	NC1-25-32A-480	AXDA25T7	NC1-40-95A-480	AXDA40T7
600	NC1-09-18A-600	AXDA09Y7	NC1-25-32A-600	AXDA25Y7	NC1-40-95A-600	AXDA40Y7

(*) Special request only - Information subject to change without notice

Accessories: Auxiliary contacts

Auxiliary contacts (Order by Part No.)

Contacts		Front Mount		Side Mount	
NO	NC	Part No.	Model	Part No.	Model
2	0	F4-20	AXA20	-	
1	1	F4-11	AXA11	NCF1-11C	AXFA11
0	2	F4-02	AXA02	-	
4	0	F4-40	AXA40	-	
3	1	F4-31	AXA31	-	
2	2	F4-22	AXA22	-	
1	3	F4-13	AXA13	-	

Information subject to change without notice - Side Mount not UL approved.



Accessories: Mechanical Interlocks

Mechanical interlocks (Order by Part No.)

For Contactor Size	Part No.*	Model
9A	CJX2(NC1)09/32	AXEA09A
12A	CJX2(NC1)09/32	AXEA09A
18	CJX2(NC1)09/32	AXEA09A
25	CJX2(NC1)09/32	AXEA09A
32	CJX2(NC1)09/32	AXEA09A
40	CJX2(NC1)40/65	AXEA40A
65	CJX2(NC1)40/65	AXEA40A
80	CJX2(NC1)80/95	AXEA80A
95	CJX2(NC1)80/95	AXEA80A

Information subject to change without notice



Pneumatic Timer Blocks

How to order pneumatic timer blocks (Order by Part No.):

Delay	NO	NC	Range	Part No.	Model
On	1	1	0.1-3s	F5-T0	AXCT0
On	1	1	0.1-30s	F5-T2	AXCT2
On	1	1	10-180s	F5-T4	AXCT4
Off	1	1	0.1-3s	F5-D0	AXCD0
Off	1	1	0.1-30s	F5-D2	AXCD2
Off	1	1	10-180s	F5-D4	AXCD4

Information subject to change without notice



Accessories: DIN Rail Adapter Blocks for NR2 Overloads

DIN rail adapters blocks for overload relays (Order by Part No.)

For Overload Size	Part No.	Model
NR2-25G	NR2-D13	Ex9RD25
NR2-36G	NR2-D23	Ex9RD36
NR2-93G	NR2-D33	Ex9RD93

Information subject to change without notice



Thermal Overload Relays (Bimetallic)

Features

- Phase failure protection function; Temperature compensation.
- Automatic and manual reset; Tripping indicator.
- Mounting mode: plug-in or independent.
- Aux. contacts: 1NO+1NC, 2.73A@220VAC - 1.58A@380VAC - 0.2A@220VDC.
- Approvals: cULus certified.

Thermal Overload relays (Order by Part No.)

Relay Setting Range	Part No.	Model	Fits Contactor Frames:
0.10A to 0.16A	NR2-25G/0.1-0.16	Ex9RD25A	9A to 25A
0.16A to 0.25A	NR2-25G/0.16-0.25	Ex9RD25A	
0.25A to 0.40A	NR2-25G/0.25-0.4	Ex9RD25A	
0.40A to 0.63A	NR2-25G/0.4-0.63	Ex9RD25A	
0.63A to 1.00A	NR2-25G/0.63-1	Ex9RD25A	
1.00A to 1.60A	NR2-25G/1-1.6	Ex9RD25A	
1.25A to 2.00A	NR2-25G/1.25-2	Ex9RD25A	
1.60A to 2.50A	NR2-25G/1.6-2.5	Ex9RD25A	
2.50A to 4.00A	NR2-25G/2.5-4	Ex9RD25A	
4.00A to 6.00A	NR2-25G/4-6	Ex9RD25A	
5.50A to 8.00A	NR2-25G/5.5-8	Ex9RD25A	
7.00A to 10.0A	NR2-25G/7-10	Ex9RD25A	
9.00A to 13.0A	NR2-25G/9-13	Ex9RD25A	
12.0A to 18.0A	NR2-25G/12-18	Ex9RD25A	
17.0A to 25.0A	NR2-25G/17-25	Ex9RD25A	32A
23.0A to 32.0A	NR2-36G/23-32	Ex9RD36A	
28.0A to 36.0A	NR2-36G/28-36	Ex9RD36A	
23.0A to 32.0A	NR2-93G/23-32	Ex9RD93A	40A to 95A
30.0A to 40.0A	NR2-93G/30-40	Ex9RD93A	
37.0A to 50.0A	NR2-93G/37-50	Ex9RD93A	
48.0A to 65.0A	NR2-93G/48-65	Ex9RD93A	
55.0A to 70.0A	NR2-93G/55-70	Ex9RD93A	
63.0A to 80.0A	NR2-93G/63-80	Ex9RD93A	
80.0A to 93.0A	NR2-93G/80-93	Ex9RD93A	

Information subject to change without notice - See next page for dimensions



Contactor and Overload dimensions

Figure 1 - 9 to 32A Contactors

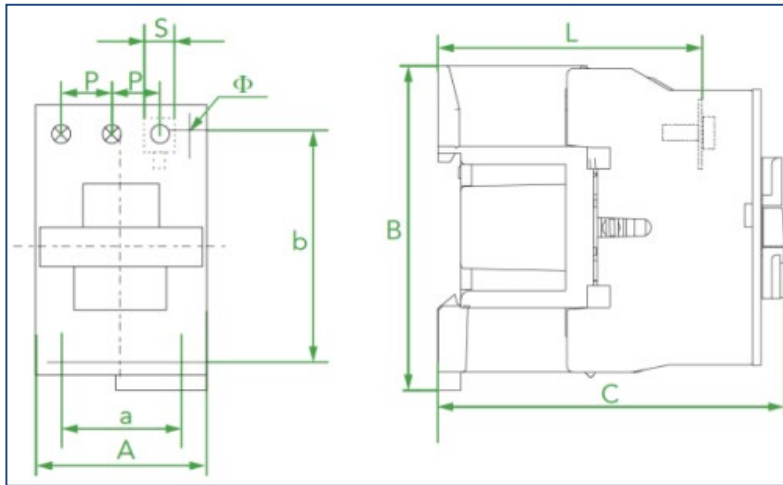


Figure 2 - 40 to 95A Contactors

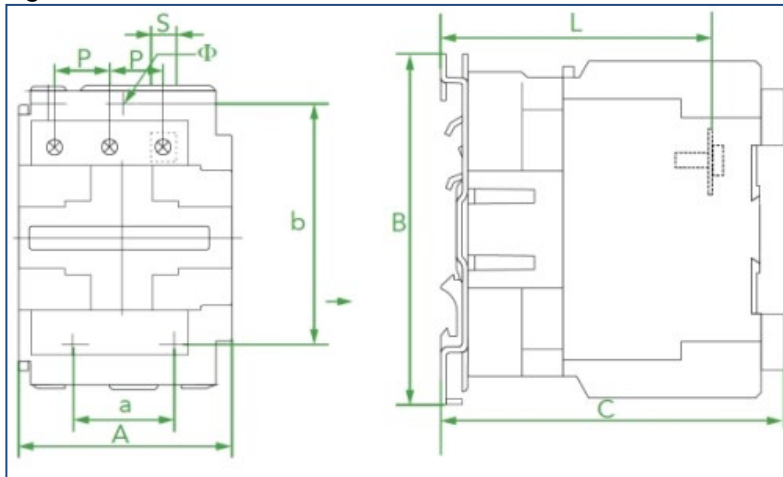


Figure 5 - Overloads, NR2-93G series

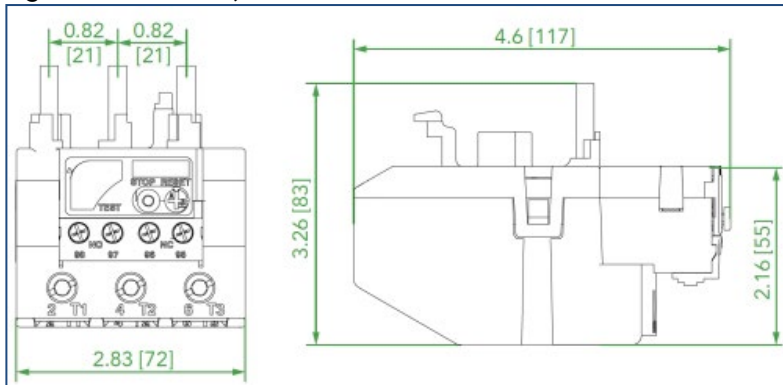


Figure 3 - Overloads, NR2-25G series

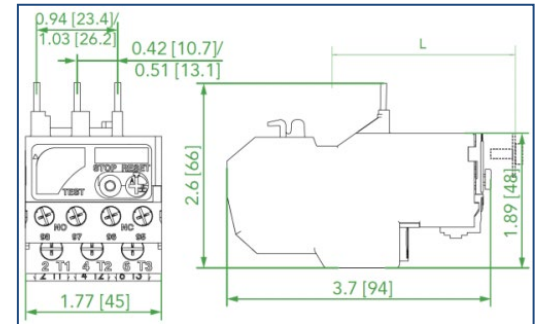
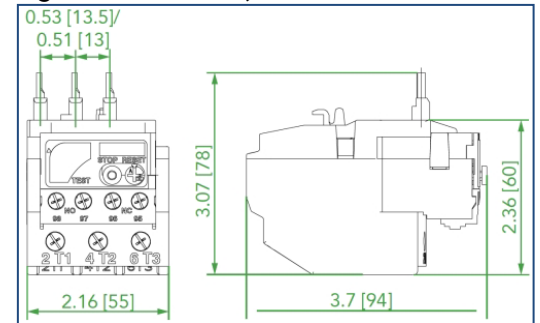


Figure 4 - Overloads, NR2-36G series





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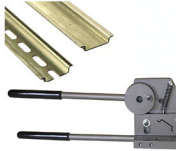
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