Definite Purpose Control

Catalog
8910CT9301R04/10

2011

Class 8910, 8911, 8965, 9998, 9999

CONTENTS

SQUARE D
by Schneider Electric

Contactors, Types DP and DPA—Class 8910

Definite purpose contactors are ideal for heating, air conditioning, refrigeration, data processing, and food service equipment. New, compact 1- and 2-pole contactors are available as well as full-size devices with 2, 3, or 4 poles. They feature the following:

- Quick connect terminals and binder head screws allow for easy wiring.
- Box lugs are standard on 40 A contactors and larger.
- An exclusive DIN track mounting option may reduce installation costs.
- Coils can be changed quickly, without a tool, on the Type DPA, 50–90 A contactors.
- Auxiliary contact modules snap on either side of the Type DPA contactors.

Type DP22V09
2 pole

Table 1: Compact 1-Pole Contactors—600 Vac Maximum

Full Load Amperes	Locked Rotor Amperes			Resistive Load Amperes	N.O. Poles	Type [1]
	277 V	460 V	575 V			
20	120	100	80	25	1	DP11
25	150	125	100	30	1	DP21
30	150	125	100	40	1	DP31
40	240	200	160	50 [2]	1	DP41

1 Specify the voltage code when ordering this product. Refer to Table 7 on page 4.

2 50 A resistive limited to 277 V. Voltages above 277 V are rated 40 A resistive.

Type DP42V14
2 pole

Table 2: Compact 2-Pole Contactors—600 Vac Maximum [1]

Full Load Amperes	Locked Rotor Amperes			Resistive Load Amperes	N.O. Poles	Type [2]
	277 V	460 V	575 V			
20	120	100	80	30	2	DP12
25	150	125	100	35	2	DP22
30	150	125	100	40	2	DP32
40	240	200	160	50	2	DP42

1 Above 240 V, all lines must be switched.

2 Specify the voltage code when ordering this product. Refer to Table 7 on page 4.

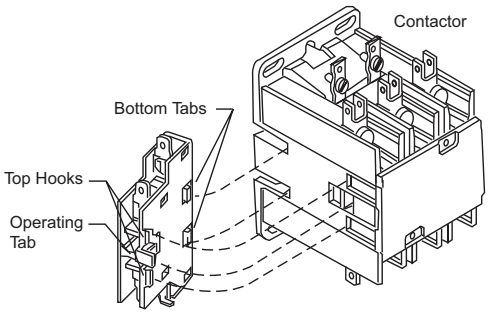
Type DPA33V04
3 pole

Table 3: 2, 3, and 4-Pole Contactors—600 Vac Maximum [1]

Full Load Amperes	Locked Rotor Amperes			Resistance Load Amperes	Horsepower Ratings				N.O. Poles	Type [2]
	230 V	460 V	575 V		115 V, 1Ø	230 V, 1Ø	230 V, 3Ø	460/575 V, 3Ø		
20	120	100	80	30	1.5	3	7.5	7.5	2 3 4	DPA12 DPA13 DPA14
25	150	125	100	35	2	5	10	15/20	2 3 4	DPA22 DPA23 DPA24
30	180	150	120	40	2	5	10	15/20	2 3 4	DPA32 DPA33 DPA34
40	240	200	160	50	3	7.5	10	20/25	2 3 4	DPA42 DPA43 DPA44
50	300	250	200	62	3	10	15	30	2 3	DPA52 DPA53
60	360	300	240	75	5	10	25	30	2 3	DPA62 DPA63
75	450	375	300	94	5	15	25	40	2 3	DPA72 DPA73
90	540	450	360	120	7.5	20	30	50	2 3	DPA92 DPA93

1 Above 240 V, all lines must be switched.

2 Specify the voltage code when ordering this product. Refer to Table 7 on page 4.



Auxiliary Contact Installation for 50–90 A (no tools required)

Table 4: 2 N.O. and 2 N.C. 4-Pole Contactors—600 Vac Maximum [1]

Full Load Amperes	Resistive Load Amperes	N.O. Poles	N.C. Poles [2]	Class 8910	
				Type [3]	Form
20	25	2	2	DPA14	Y392
25	35	2	2	DPA24	Y392
30	40	2	2	DPA34	Y392

1 Above 240 V, all lines must be switched.

2 The N.C. poles are on the outside. The N.C. poles open before the N.O. poles close.

3 Specify the voltage code when ordering this product. Refer to Table 7.

Table 5: Auxiliary Contacts

For Use with Class 8910 Type	Contact Arrangement	Class 9999 Type	
		20–40 A	50–90 A
DPA	1 N.O.	DD10	D10
	1 N.C.	DD01	D01
	1 N.O. and 1 N.C.	DD11	D11
	2 N.O.	DD20	D20

Table 6: NEMA Type 1 General Purpose Enclosures for Type DP and DPA Contactors

Class 8910 Type	Full Load Amperes	Poles	Class 9991 Type
DP	20–40	1 and 2	DPG1
DPA	20–40	2 and 3	DPG1
DPA	50	2 and 3	DPG2
DPA	20–40	4	DPG2
DPA	60–75	2 and 3	DPG3
DPA	90	2 and 3	DPG4

Table 7: Coil Voltage Codes

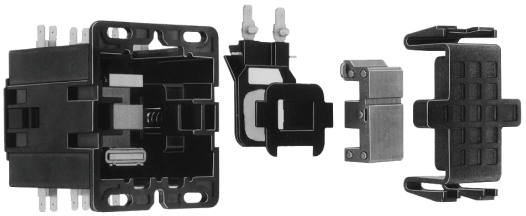
Voltage		Code Type
60 Hz	50 Hz	DP, DPA
24	24	V14
24	—	—
120	110	V02
208	—	—
208–240	220	V09
230–240	220	—
277	—	V04
480	440	V06
600	550	V07 [1]

1 Not available for Type DP, 1- and 2-pole devices.

Table 8: Types DP and DPA Specifications

Mechanical Life	500,000 operations [1]
Electrical Life **Type DP** **Type DPA**	 100,000 operations 200,000 operations
Duty Cycle	Continuous
Operating Temperature	0 °C to +65 °C (32 °F to +149 °F)
Slip-on Connector Rating	30 A 75 °C wire
Approvals	UL Recognized File E3190 CCN NLDX2

1 Actual product life will vary based on electrical load, duty cycle, application, and environmental conditions.



Coil Replacement 50–60 A (no tools required)

Table 9: Class 8910 Type DPA Replacement Coils

Full Load Amperes	Poles	Class 9998 Type [1]	Volt-Amperes [2]	
			Inrush	Sealed
50–60	2 and 3	DA2V	109	10
75–90	2 and 3	DA3V	214	19

1 Append the suffix from Table 10. For example, the coil for Class 8910 Type DPA53V02 120 V, 60 Hz would be a Class 9998 Type DA2V02.

2 For Types DP11 through DP32: Inrush 33 VA; Sealed 8 VA. Coils are not replaceable.
For Types DPA12 through DPA44: Inrush 60 VA, Sealed 6 VA. Coils are not replaceable.

Table 10: Type DPA Coil Voltage Codes

Voltage, 60 Hz	Voltage, 50 Hz	Voltage Code
24	24	V14
120	110	V02
208–240	220	V09
277	—	V04
480	440	V06
600	550	V07 [1]

1 Available for Type DPA contactors only.

Table 11: Power Terminals

Full Load Amperes	Power Terminals	
	Type of Lug	Sizes, AWG [1] Minimum-Maximum
20–30	binder head	16-8
40	box lug	14-4
50–60	box lug	14-2
75–90	box lug	14-1/0

1 Solid or stranded copper wire only.

Table 12: Mounting Attachment

Description	Class 9999 Type
DIN mounting bracket attachment	DMB1

Factory Modifications

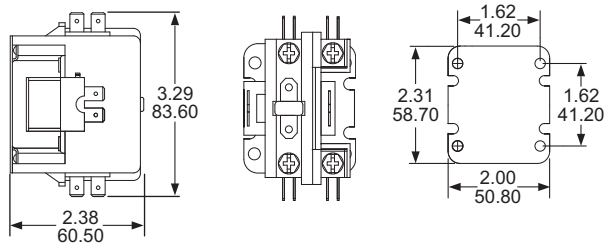
Table 13: Factory Modifications

Modification	Form
Factory installed auxiliary contacts	[1]
Pressure wire connectors (20–30 A)	Y122
Box lugs (20–30 A)	Y239
DIN mounting bracket attached (35 mm style) [2]	Y135

1 Contact your local Schneider Electric office.

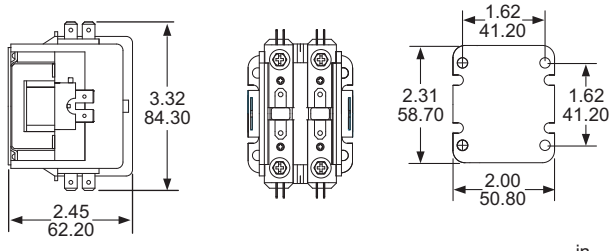
2 Available for 20–60 A devices only.

Figure 1: Type DP, 1 Pole
20–40 Full Load Amperes



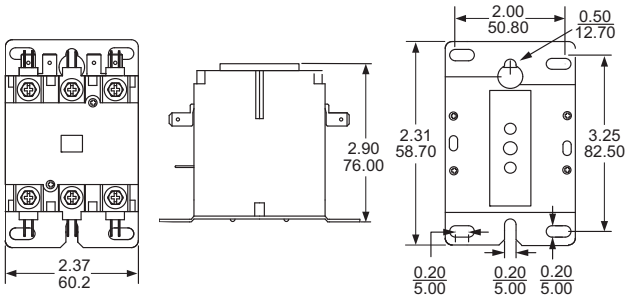
Dimensions: in. / mm

Figure 2: Type DP, 2 Pole
20–40 Full Load Amperes



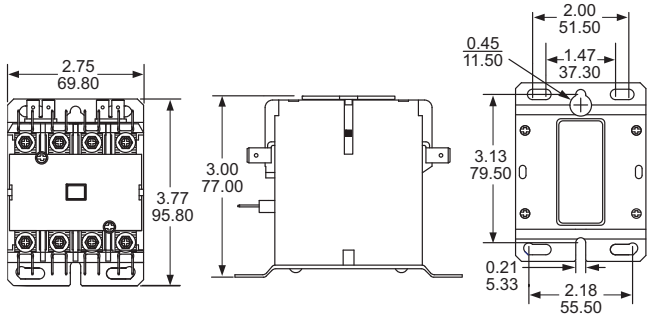
Dimensions: in. / mm

Figure 3: Type DPA, 2 and 3 Pole
20–40 Full Load Amperes



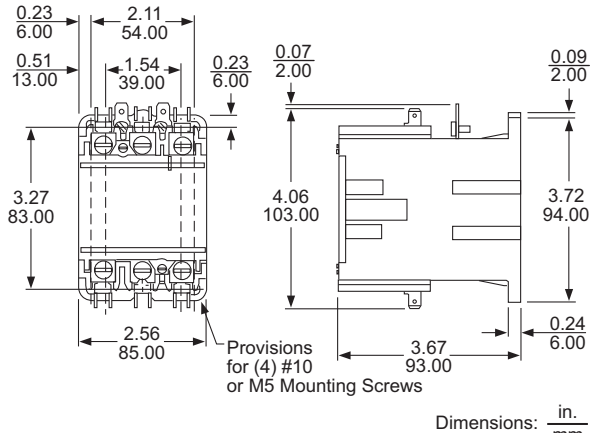
Dimensions: in. / mm

Figure 4: Type DPA, 4 Pole
20–40 Full Load Amperes



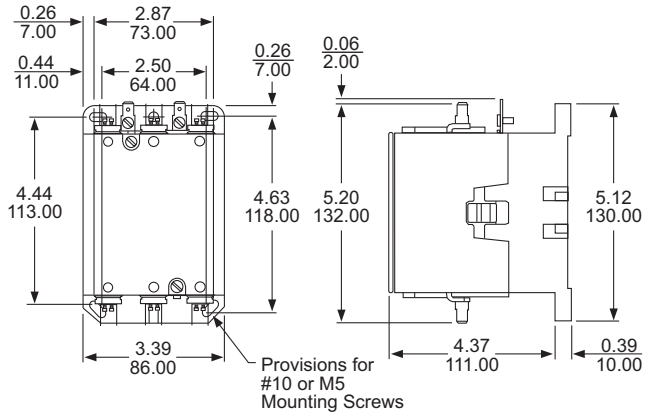
Dimensions: in. / mm

Figure 5: Type DPA, 2 and 3 Pole
50 and 60 Full Load Amperes



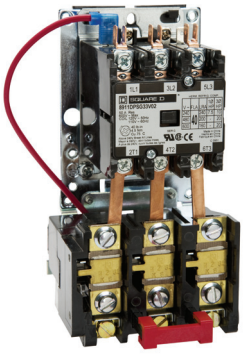
Dimensions: in. / mm

Figure 6: Type DPA, 2 and 3 Pole
75 and 90 Full Load Amperes



Dimensions: in. / mm

Starters, Types DPS and H through M—Class 8911



Type DPSO33V02

Type DPSG23V02

Class 8911 definite purpose starters are economical starters for applications with relatively low duty cycles. Typical applications include air compressors, agricultural equipment, pumps, and HVAC equipment. Definite purpose starters offer the following:

- Low cost
- Small size
- Melting-alloy overload block
- Trip-free reset mechanism
- Open type or enclosed option
- 500,000 mechanical operations (typical)

Table 14: 2, 3, and 4-Pole Starters——600 Vac Maximum

No. of Poles	Full Load Amperes	Horsepower Ratings				Open Type	NEMA Type 1 Enclosed	No. of Thermal Units [1]
		115 V, 1Ø	230 V, 1Ø	230 V, 3Ø	460/575 V, 3Ø	Type [2], [3]	Type [2], [3]	
2-pole single phase	20	1.5	3	—	—	DPSO12	DPSG12	1
	25	2	5	—	—	DPSO22	DPSG22	
	30	2	5	—	—	DPSO32	DPSG32	
	40	3	7.5	—	—	DPSO42	DPSG42	
	50	3	10	—	—	DPSO52	DPSG52	
3-pole poly-phase	20	1.5	3	7.5	7.5	DPSO13	DPSG13	3
	25	2	5	10	15/20	DPSO23	DPSG23	
	30	2	5	10	15/20	DPSO33	DPSG33	
	40	3	7.5	10	20/25	DPSO43	DPSG43	
	50	3	10	15	30	DPSO53	DPSG53	

1 See the instruction label for selection information.

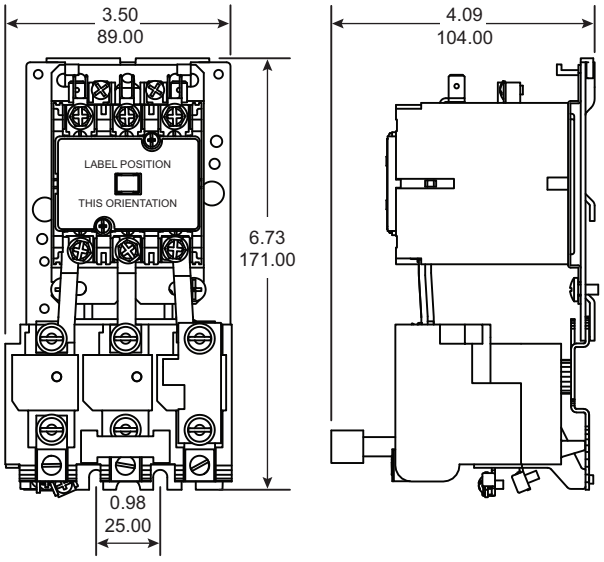
2 Holding circuit contacts do not come standard; refer to the instruction bulletin supplied with the contactor.

3 Specify the voltage code when ordering this product. Refer to the standard voltage codes listed in Table 22 on page 10.

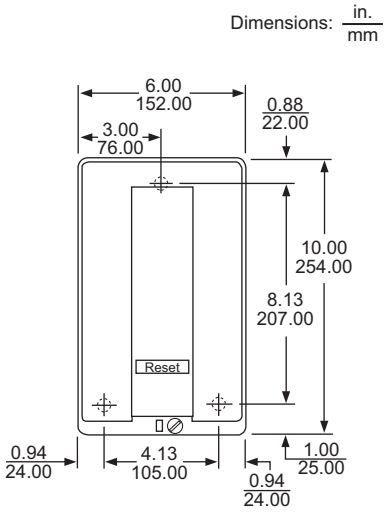
Approvals

UL Recognized
File E3190
CCN NLDX2

Figure 7: Approximate Dimensions

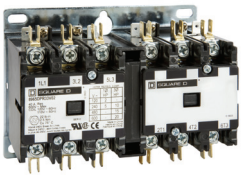


Type DPSO, 2 and 3 Pole
20–50 Full Load Amperes



Type DPSG, 2 and 3 Pole
20–40 Full Load Amperes

Reversing/Hoist Contactors, Type DPR—Class 8965



Type DPR33V02

Class 8965 Type DPR reversing/hoist contactors are designed for the control of motors in hoists, overhead doors, small elevators, commercial laundry equipment, and other related products that use reversing motors. They are rated to perform in the short periods of jogging experienced in hoist service.

The coils are designed to operate on line voltages of 85% to 110% of rated voltage, at 50 or 60 Hz only. Coils are easily replaced by removing the external base. Auxiliary contacts can be field-installed on any Class 8965 reversing contactor. Type DPR contactors accept one auxiliary contact module with up to two isolated circuits per side (two modules per device). Typically, when separate auxiliary contacts are ordered, two modules are used for each device—one for forward and one for reverse.

Approvals

UL Recognized
File E3190
CCN NLDX2

CSA Certified
File LR25490
Class 3211 04

Table 15: Reversing/Hoist Contactors—600 Vac Maximum

No. of Poles	Horsepower Ratings [1]				Open Type
	115 V 1Ø	230 V 1Ø	230 V 3Ø	460/575 V 3Ø	Type [2]
3-pole polyphase	1.5	3	7.5	7.5	DPR13
	2	5	10	15/20	DPR23
	2	5	10	15/20	DPR33
	3	7.5	10	20/25	DPR43
4-pole polyphase	2	5	10	15/20	DPR34
	3	7.5	10	20/25	DPR44

1 For rapid operation (jogging duty), use the next larger size contactor.

2 Specify the voltage code when ordering this product. Refer to the standard voltage codes in Table 16.

Table 16: Coil Voltage Codes

Volts, 60 Hz	Volts, 50 Hz	Voltage Code
24	24	V14
120	110	V02
208–240	220	V09
277	—	V04
480	440	V06
600	550	V07

Table 17: Auxiliary Contacts, Separate Module [1]

Description	Class 9999 Type
1 N.O.	DD10
1 N.C.	DD01
1 N.O.—1 N.C.	DD11
2 N.O.	DD20

1 Order two modules for Type DPR—one for each side.

Table 18: Factory Installed

Description	Form
1 N.O. each side	X1010
1 N.C. each side	X0101
1 N.O.—1 N.C. each side	X1111
2 N.O. each side	X2020

Figure 8: Type DPR 3-Pole Reversing/Hoist Contactors, Approximate Dimensions

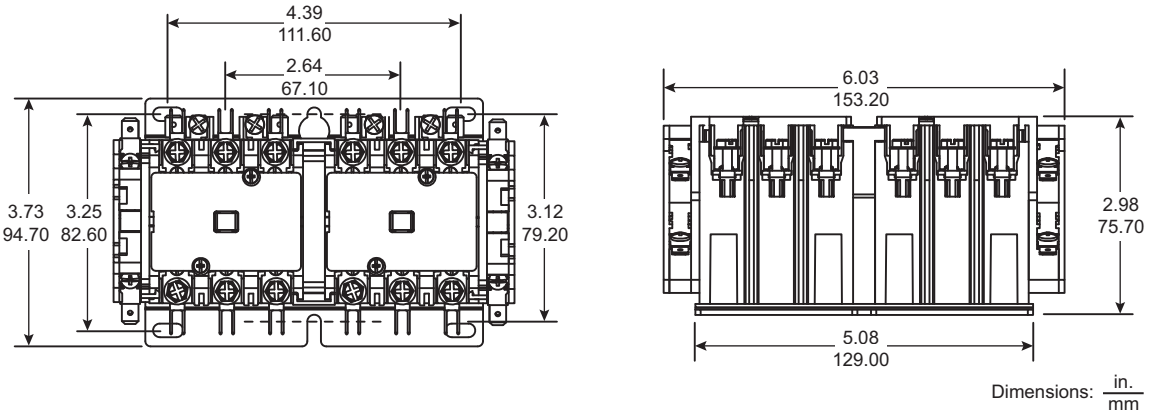


Figure 9: Type DPR 4-Pole Reversing/Hoist Contactors, Approximate Dimensions

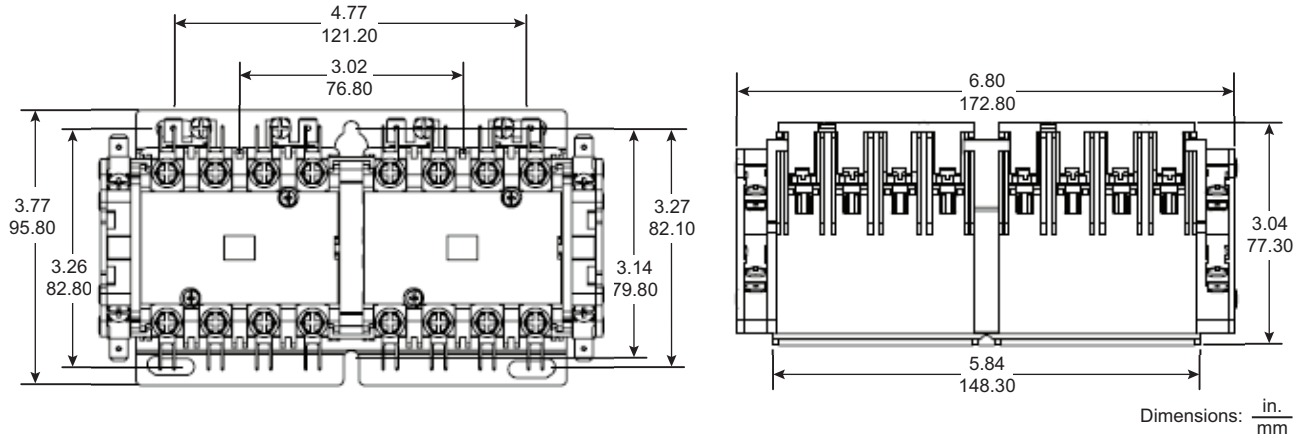


Table 19: Cross-Reference of Existing to Replacement Devices, Class 8911

Existing Device	Replacement Device	Existing Device	Replacement Device
HO33	DPSO13	LO33	DPSO43
HG33	DPSG13	LG33	DPSG43
JO33	DPSO23	MO33	DPSO53
JG33	DPSG23	MG33	DPSG53
KO33	DPSO33	MO43	[1]
KG33	DPSG33	MG43	
KO43	[1]	—	—
KG43		—	—

1 The type DPS 4-pole starter is not available. The 3-pole device with auxiliary contact is recommended.

Table 20: Parts and Accessories

Description	Class and Type
Start-Stop push button kit [1]	8911DPB1
Hand-Off-Auto selector switch kit [1]	8911DSS1
Standard N.C. overload relay contact	9998SO1
N.C. and N.O. isolated overload relay alarm contacts	9999SO4
Overload relay jumper strap	9998SO31

1 Use for 20–40 A starters; for larger sizes, contact your local Schneider Electric office.
These kits include the support bracket for the operator and slip-on connectors where required.

Table 21: Class 8911 Replacement Coils

Full Load Amperes	Poles	Class 9998 Type [1]	Volt-Amperes	
			Inrush	Sealed
50	2 and 3	DA2✱	109	10

1 Replace the asterisk with the voltage code from Table 22.

Table 22: Coil Voltage Codes

Voltage, 60 Hz	Voltage, 50 Hz	Voltage Code
24	24	V14
120	110	V02
208–240	220	V09
277	—	V04
480	440	V06
600	550	V07

Table 23: Auxiliary Contacts for Type DPS Starters [1]

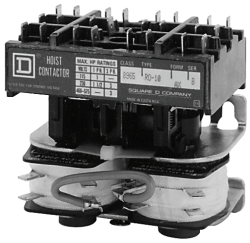
Description	Class 9999	
	20–40 A	50 A
1 N.O.	DD10	D10
1 N.C.	DD01	D01
1 N.O.—1 N.C.	DD11	D11
2 N.O.	DD20	D20

1 Auxiliary contacts must be field installed. Contact your local Schneider Electric office.

Table 24: Ratings—Overload Contacts and Auxiliary Contacts

Device	Volts AC	Pilot Duty—AC Only (35% Power Factor)		Continuous Current Rating
		Make	Carry and Break	
9998SO1	120 or less	30 A	3 A	5 A
9999SO4 9999 R10, R11, R12, R13 9999 D10, D01, D11, D20 9999 DD10, DD01, DD11, DD20	120–600	3600 VA	360 VA	5 A

Reversing/Hoist Contactors, Type R—Class 8965



Type RO10V02

Class 8965 reversing/hoist contactors meet the small space requirements found in electrical hoists, light duty cranes, door operators, and related products. They are designed to perform in the short periods of jogging experienced in hoist service. Note that these contactors must be mounted upright on the vertical plane; the contactors will not operate properly when mounted in any other position.

Application Data

Coils Duty: Hoist Duty, H4 Intermittent
Voltage Range: AC coils only +10%, -15% of nominal

Burden Inrush 76 VA, Sealed 27 VA

Approvals

UL Recognized
File E3190
CCN NLDX2

CSA Certified
File LR65665
Class 3211 04

Table 25: AC Reversing/Hoist Contactors—600 Vac Maximum

No. of Poles	Horsepower Ratings				Power Terminals	With [1] Jumper Straps	Without [1] Jumper Straps
	115 V, 1Ø	230 V, 1Ø	230 V, 3Ø	460/575 V, 3Ø		Open Type	Open Type
3-pole polyphase	1	1.5	3	3	quick connect	RO10 [2]	RO11 [2]
					pressure wire [3]	RO12 [2]	RO13 [2]

1 Jumper straps connect the line side power terminals of the same phase between the forward (up) and reverse (down) contactors in common; for example, L1 to L1, L2 to L2, and L3 to L3.

2 Specify the voltage code when ordering this product. Refer to the standard voltage codes in Table 28.

3 Coils that are rated 120 Vac or less are supplied only with quick connect terminals.

Table 26: Hoist Contactor Kits

For Use with Class 8965 Type	Description	Class	Type
RO10	Armature kit	9998	RP1
RO11 RO12 RO13	Contact carrier	Order as part number 31002-060-50.	

Table 27: Auxiliary Contacts Separate Module

Description	Terminals	Class 9999 Type
1 N.O. each side	quick connect	R10
	screw	R12
1 N.C. each side	quick connect	R11
	screw	R13

Table 28: Coil Voltage Codes

Voltage 60 Hz	Voltage 50 Hz	Voltage Code	Replacement Part Number
24	—	V01	31002-403-19 [1]
120	110	V02	31002-403-40 [1]

1 Tape wound coils, two per package.

Table 29: Approximate Dimensions (3 Poles per Contactor)

Type	A		B		C		D		E		F		G	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
RO10, 11	3.31	84	3.31	84	3.03	77	2.69	68	1.34	34	1.56	40	2.66	68
RO12, 13	3.31	84	3.69	94	2.69	68	2.69	68	1.34	34	1.56	40	2.66	68

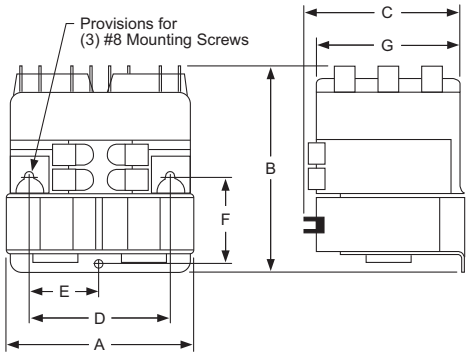
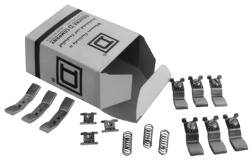


Table 30: Cross Reference—Obsolete Devices

Obsolete Device		Replacement Device		Auxiliary Contact Required	
Class	Type	Class	Type	Class	Type
8702 or 8965	HO3	8965	RO12	—	—
	HO4		RO12	9999	R12
	HO5		RO12	9999	R13
	HO6		RO12	—	—
	HO7		RO12	9999	R12
	HO8		RO12	9999	R13
8965	RG2S1	8965	RO10	9999	R10
	RG5S1		RO12	9999	R12
	RG5S2		RO12	9999	R12
	RO1		RO10	—	—
	RO1S1		RO11	—	—
	RO1S2		RO10	—	—
	RO1S3		RO11	—	—
	RO1S4		RO10	—	—
	RO1S5		RO10	—	—
	RO1S6		RO10	—	—
8965	RO2	8965	RO10	9999	R10
	RO2S1		RO11	9999	R10
	RO2S2		RO10	9999	R10
	RO3		RO10	9999	R11
	RO3S1		RO11	9999	R11
	RO3S2		RO10	9999	R11
	RO3S3		RO10	9999	R11
	RO4		RO12	—	—
	RO4S1		RO13	—	—
	RO5		RO12	9999	R12
	RO5S1		RO13	9999	R12
	RO5S2		RO12	9999	R12
	RO6		RO12	9999	R13
	RO6S1		RO13	9999	R13
	RO6S2		RO12	9999	R13

Replacement Parts Kits—Class 9998



Class 9998 replacement parts kits are available for servicing Square D contactors. Each kit contains the necessary movable and stationary contacts, contact springs, and additional hardware required to service the devices listed below.

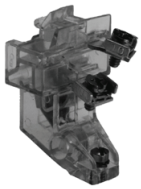
Table 31: Class 8965 Replacement Contact Kits

Equipment to Be Serviced		Class 9998 Parts Kit Type Number	Quantity
Type	Series		
RO10	All	RA10	One kit services three poles
RO11		RA11	
RO12		RA12	

Table 32: Class 8910 Replacement Contact Kits

Device to Be Serviced		Class 9998 Type Number	Quantity
Type	Series		
DPA5	A, B	DRC5	One kit per pole
DPA6	A, B	DRC6	
DPA7	A	DRC7	
DPA9	A	DRC9	

Contact Units for Melting Alloy Type Overload Relays



Class 9998 Type SO1

One N.C. contact, Class 9998 Type SO1, is provided in each overload relay block on Class 8911 Type DPS starters. Replacement contact modules are listed in the table below. Isolated overload relay alarm circuit contacts are available as an optional feature. A pilot light or audible alarm can be wired in series with this contact to indicate that the overload relay has tripped.

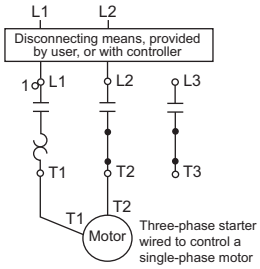
Table 33: Class 9998 Replacement Contact Modules

Magnetic Starter		Description	Parts Kit Number
Ampere Size	Type		
20–90	DPS	Standard N.C. contact unit	Class 9998, Type SO1
		N.O. isolated alarm contact and standard N.C. overload contact	Class 9998, Type SO4

Table 34: DP Type SO1 Contact Ratings

NEMA Contact Rating	Volts (110 V Minimum Recommended)	Inductive 35% Power Factor			
		Make		Break	
		A	VA	A	VA
B600	120	30	3600	3	360
	240	15	3600	1.5	360
	480	7.5	3600	0.75	360
	600	6	3600	0.6	360

Melting Alloy Overload Relay Jumper Strap Kits



Jumper strap kits are used only on three-phase magnetic starters with melting alloy overload relays, where a three-phase starter is used to control a single-phase motor. These kits include two jumper straps, a wiring diagram showing how to wire a three-phase starter to control a single-phase motor, and thermal unit selection tables for single-phase operation.

Table 35: Melting Alloy Overload Relay Jumper Strap Kits

Class	For Starter		Parts Kit Number
	Size	Type	
All	20–50 A	DPS	Class 9998, Type SO31

External Auxiliary Contacts—Class 9999

Table 36: Class 8910 and 8911 Definite Purpose Contactors and Starters—Auxiliary Contacts

Device to be Serviced Class 8910 or 8911 Type	Auxiliary Contact Kit		
	Contact Arrangement	Class 9999 Type	
		20–40 A	50–90 A
DPA DPS	1 N.O.	DD10	D10
	1 N.C.	DD01	D01
	1 N.O.—1 N.C.	DD11	D11
	2 N.O.	DD20	D20

Table 37: Class 8965 Reversing/Hoist Contactors—Auxiliary Contacts

Device to be Serviced	Auxiliary Contact Kit		
Class 8965 Type	Contact Arrangement	Type of Connector	Class 9999 Type
DPR	1 N.O.	screw/ quick connect	DD10
	1 N.C.		DD01
	1 N.O./1 N.C.		DD11
	2 N.O.		DD20
RO2 and RG2	1 N.O. each side	slip-on	R10
RO10 Form X1			
RO11 Form X1			
RO3 and RG3	1 N.C. each side	slip-on	R11
RO10 Form X2			
RO11 Form X2			
RO5 and RG5	1 N.O. each side	screw	R12
RO12 Form X1			
RO13 Form X1			
RO6 and RG6	1 N.C. each side	screw	R13
RO12 Form X2			
RO13 Form X2			

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