# **Definite Purpose Control**

Catalog 8910CT9301R12/13

2014

Class 8910, 8911, 8965, 9998, 9999



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## Contactors, Class 8910 Types DP and DPA

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

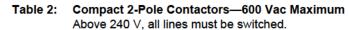
#### **Features**

- · Quick connect terminals and binder head screws allow for easy wiring.
- Box lugs are standard on contactors 40 A 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.

To order, specify the Class, Type, and Voltage Code (where indicated).



Full Load	Loci	ked Rotor Amp	eres	Resistive Load	N.O. Poles	Class 8910
Amperes	277 V	460 V	575 V	Amperes	N.O. Poles	Type [1]
20	120	100	80	30	1	DP11
25	150	125	100	35	1	DP21
30	150	125	100	40	1	DP31
40	240	200	160	40 (50 for 277 V)	1	DP41



Full Load	ad Locked Rotor Amperes Resistive Load		N.O. Poles	Class 8910		
Amperes	277 V	460 V	575 V	Amperes	N.O. Poles	Type [1]
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

Table 3: 2, 3, and 4-Pole Contactors—600 Vac Maximum Above 240 V, all lines must be switched.

Full Load	Locked	Locked Rotor Amperes Resistance Horsepower Ratings					s	N.O.	Class 8910	
Amperes	230 V	460 V	575 V	Load Amperes	115 V, 1Ø	230 V, 1Ø	230 V, 3Ø	460/575 V, 3Ø	Poles	Type [1]
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	DPA52 DPA53
60	360	300	240	75	5	10	25	30	2	DPA62 DPA63
75	450	375	300	94	5	15	25	40	2	DPA72 DPA73
90	540	450	360	120	7.5	20	30	50	2	DPA92 DPA93

<sup>[1]</sup> Add the voltage code suffix from Table 7 on page 4.



Type DP22V09 2 pole



Type DP42V14 2 pole



Type DPA33V04 3 pole

Table 4: 2 N.O. and 2 N.C. 4-Pole Contactors

600 Vac Maximum

Above 240 V, all lines must be switched.

Full Load	Resistive Load	Po	les		actors 8910
Amperes	Amperes	N.O.	N.C. [1]	Type [2]	Form
20	25	2	2	DPA14	Y392
25	35	2	2	DPA24	Y392
30	40	2	2	DPA34	Y392

[1] The N.C. poles are on the outside.

Table 5: Auxiliary Contacts

For Use with Class 8910 Type	Contact Arrangement	Auxiliary Contacts Class 9999 Type		
Class boto type	Arrangement	20-40 A	50-90 A	
	1 N.O.	DD10	D10	
DPA	1 N.C.	DD01	D01	
DFA	1 N.O. / 1 N.C.	DD11	D11	
	2 N.O.	DD20	D20	

Figure 1: Auxiliary Contact Installation, 50–90 A (no tools required)

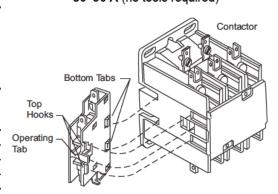


Table 6: NEMA Type 1 General Purpose Enclosures for Type DP and DPA Contactors

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

Table 7: Coil Voltage Codes

	Voltage	Voltage Code		
60 Hz	50 Hz	Type 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 (not available for Type DP, 1-pole and 2-pole devices)		

Table 8: Types DP and DPA Specifications

Mechanical Life	•	500,000 operations (actual product life will vary based on electrical load, duty cycle, application, and environmental conditions)				
Electrical Life	Type DP	100,000 operations				
Electrical Life	Type DPA	200,000 operations				
Duty Cycle		Continuous				
Operating Temp	perature	0–65 °C (32–149 °F)				
Slip-on Connec	tor Rating	30 A, 75 °C wire				
Approvals		UL Recognized File E3190 CCN NLDX2  CSA Certified File LR25490 Class 3211 04				

The N.C. poles open before the N.O. poles close.

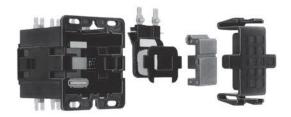
<sup>[2]</sup> Add the voltage code suffix from Table 7. Add the Form after the voltage code (example: 8910DPA14V02Y392).

Table 9: Replacement Coils for Class 8910 Type DPA

For	For Full Load		Poles Class 9998 Type [1]		Volt-Amperes		
Types	Amperes	Foles	Type [1]	Inrush	Sealed		
DP	50–60	2, 3	DA2	109	10		
DP	75–90	2, 3	DA3	214	19		
DP11- DP32	Coils are not replaceable.			33	8		
DPA12- DPA44	Coils are not replaceable.			60	6		

<sup>[1]</sup> Add the voltage code suffix from Table 10. For example, a 120 V, 60 Hz coil for an 8910DPA53V02 contactor is 9998DA2V02.

Figure 2: Coil Replacement, 50-60 A (no tools required)



#### 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 (Type DPA contactors only)

**Table 11: Power Terminals** 

	Power Terminals			
Full Load Amperes	Type of Lug	Wire Range, AWG solid or stranded copper wire only		
20–30	binder head	16 – 8		
40	box lug	14 – 4		
50–60	box lug	14 – 2		
75–90	box lug	14 – 1/0		

Table 12: Mounting Attachment

Description	Class 9999 Type
DIN mounting bracket attachment	DMB1

## **Factory Modifications**

**Table 13: Factory Modifications** 

Modification	Form (add to he catalog number after the voltage code)
Factory installed auxiliary contacts	Contact your local Schneider Electric office.
Pressure wire connectors (20–30 A)	Y122
Box lugs (20–30 A)	Y239
DIN mounting bracket attached, 35 mm style (available for 20–60 A devices only)	Y135

## Definite Purpose Control Contactors, Class 8910 Types DP and DPA

Figure 3: Type DP, 1 Pole 20–40 Full Load Amperes

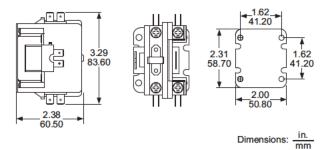


Figure 4: Type DP, 2 Pole 20–40 Full Load Amperes

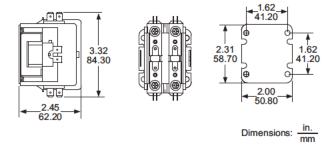


Figure 5: Type DPA, 2 and 3 Pole 20–40 Full Load Amperes

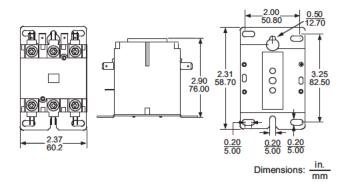


Figure 6: Type DPA, 4 Pole 20–40 Full Load Amperes

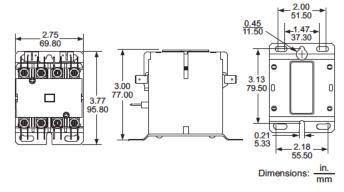


Figure 7: Type DPA, 2 and 3 Pole 50 and 60 Full Load Amperes

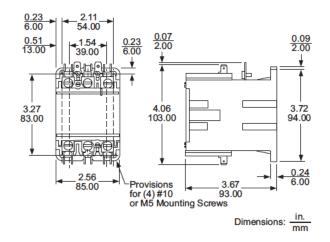
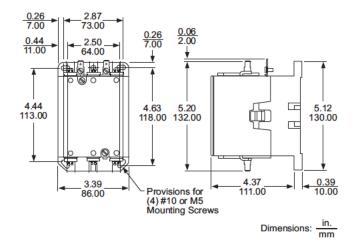


Figure 8: Type DPA, 2 and 3 Pole 75 and 90 Full Load Amperes



## Starters, Class 8911 Types DPS and H-M



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 style or enclosed option
- 500,000 mechanical operations (typical)

To order, specify the Class, Type, and Voltage Code (where indicated).

8911DPSO33V02



8911DPSG12V02

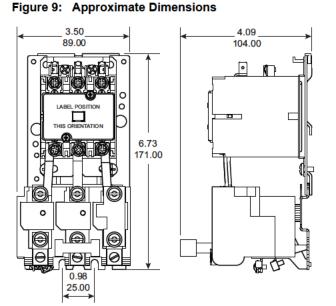
Table 14: 2, 3, and 4-Pole Starters-600 Vac Maximum

No. of	Full Load		Horsep	ower Rating	js	Class 8911	Type <sup>[1] [2]</sup>	No. of
Poles Amperes	115 V, 1Ø	230 V, 1Ø	230 V, 3Ø	460/575 V, 3Ø	Open Style	NEMA Type 1 Enclosed	Thermal Units <sup>[3]</sup>	
	20	1.5	3	_	_	DPSO12	DPSG12	
2-pole	25	2	5	_	_	DPSO22	DPSG22	
single	30	2	5	_	_	DPSO32	DPSG32	1
phase	40	3	7.5	_	_	DPSO42	DPSG42	
	50	3	10	_	_	DPSO52	DPSG52	]
	20	1.5	3	7.5	7.5	DPSO13	DPSG13	
3-pole	25	2	5	10	15/20	DPSO23	DPSG23	]
poly-	30	2	5	10	15/20	DPSO33	DPSG33	3
phase	40	3	7.5	10	20/25	DPSO43	DPSG43	]
	50	3	10	15	30	DPSO53	DPSG53	

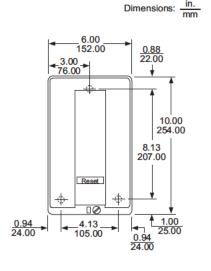
- [1] Holding circuit contacts do not come standard; refer to the instruction bulletin supplied with the contactor.
- [2] Add the voltage code suffix from Table 22 on page 10.
- [3] See the instruction label for selection information.

Approvals





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



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

## Definite Purpose Control Reversing/Hoist Contactors, Class 8965 Type DPR

## Reversing/Hoist Contactors, Class 8965 Type DPR



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 85–110% 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.

To order, specify the Class, Type, and Voltage Code (where indicated).

**Approvals** 



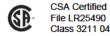


Table 15: Reversing/Hoist Contactors—600 Vac Maximum

No. of		Horsepower Ratings [1]				
Poles	115 V, 1Ø	230 V, 1Ø	230 V, 3Ø	460/575 V, 3Ø	Class 8965 Type [2]	
	1.5	3	7.5	7.5	DPR13	
3-pole	2	5	10	15/20	DPR23	
polyphase	2	5	10	15/20	DPR33	
	3	75	10	20/25	DPR43	
4-pole	2	5	10	15/20	DPR34	
polyphase	3	7.5	10	20/25	DPR44	

<sup>[1]</sup> For rapid operation (jogging duty), use the next larger size contactor.

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

Description	Class 9999 Type [1]
1 N.O.	DD10
1 N.C.	DD01
1 N.O. / 1 N.C.	DD11
2 N.O.	DD20

<sup>[1]</sup> Order two modules for Type DPR—one for each side.

Table 18: Auxiliary Contacts, Factory Installed

Description	Form [1]
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

<sup>[1]</sup> Add to the catalog number after the voltage code.

<sup>[2]</sup> Add the voltage code suffix from Table 16.

Figure 10: Type DPR 3-Pole Reversing/Hoist Contactors, Approximate Dimensions

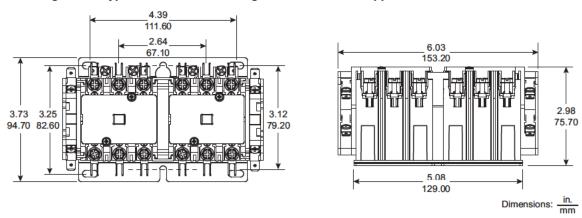


Figure 11: Type DPR 4-Pole Reversing/Hoist Contactors, Approximate Dimensions

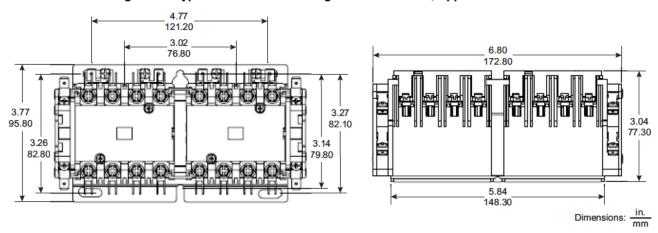


Table 19: Cross-Reference of Existing to Replacement Devices, Class 8911

C	Class 8911 Type		Class 8911 Type	
Existing Device	Replacement Device	Existing Device	Replacement Device	
HO33	DPSO13	LO33	DPSO43	
HG33	DPSG13	1000	DP3043	
JO33	DPSO23	LG33	DPSG43	
JG33	DPSG23	LGSS	DP3G43	
KO33	DPSO33	MO33	DPSO53	
KG33	DPSG33	MG33	DPSG53	
KO43	[1]	MO43	[1]	
KG43		MG43		

[1] A 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

<sup>[1]</sup> 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.



## Definite Purpose Control Reversing/Hoist Contactors, Class 8965 Type DPR

Table 21: Class 8911 Replacement Coils

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

<sup>[1]</sup> Add the voltage code suffix 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

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

Description	Class 9999				
Description	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			

Table 24: Ratings—Overload Contacts and Auxiliary Contacts

Device	Vac	Pilot Duty—AC Only	Continuous	
Device	vac	Make	Carry and Break	Current Rating
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

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## Reversing/Hoist Contactors, Class 8965 Type R



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.

To order, specify the Class, Type, and Voltage Code (where indicated).

Table 25: 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 LR60905 Class 3211 04			

#### Table 26: AC Reversing/Hoist Contactors—600 Vac Maximum

No of		Horsepower Ratings Open Style, Class 8965 Type					
No. of Poles	115 V, 1Ø	230 V, 1Ø	230 V, 3Ø	460/575 V, 3Ø		With <sup>[2]</sup> Jumper Straps	Without <sup>[2]</sup> Jumper Straps
3-pole	1	1.5	q	2	Quick connect	RO10	RO11
polyphase	-	1.5	3	3	Pressure wire [3]	RO12	RO13

<sup>[1]</sup> Add the voltage code suffix from Table 29.

#### Table 27: Hoist Contactor Kits

For Use with Class 8965 Type	Description	Catalog Number
RO10	Armature kit	9998RP1
RO11 RO12 RO13	Contact carrier	31002-060-50

#### Table 28: Auxiliary Contacts Separate Module

Description	Terminals	Class 9999 Type
1 N.O. each side	Quick connect	R10
1 N.O. each side	Screw	R12
1 N.C. each side	Quick connect	R11
I N.O. Each side	Screw	R13

#### Table 29: Replacement Coils

Description	Voltage, 60 Hz	Voltage, 50 Hz	Voltage Code	Replacement Part Number
Tape wound coils, two per package	24	_	V01	31002-403-19
rape would coils, two per package	120	110	V02	31002-403-40

<sup>[2]</sup> 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.

<sup>[3]</sup> Coils rated 120 Vac or less are available with quick connect terminals only.

## Definite Purpose Control Reversing/Hoist Contactors, Class 8965 Type R

Table 30: Approximate Dimensions (3 Poles per Contactor)

Turne	-	4	E	3	(	:		)	E		ı	=	0	;
Туре	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

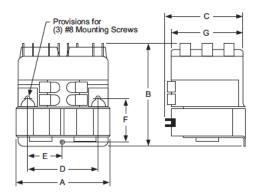


Table 31: Cross Reference—Obsolete Devices

Obsolete Device		Rep	Replacement Device		ry Contact Required
-71		Class	Туре	Class	Туре
	HO3		RO12	<u> </u>	_
	HO4		RO12	9999	R12
8702 or 8965	HO5	0005	RO12	9999	R13
	HO6	8965	RO12		_
	HO7		RO12	9999	R12
	HO8		RO12	9999	R13
RG	RG2S1		RO10	9999	R10
RG5S1 RG5S2 RO1 RO1S1 RO1S2 RO1S3 RO1S4 RO1S5		RO12	9999	R12	
	RG5S2		RO12	9999	R12
	RO1		RO10	_	_
	RO1S1	8965	RO11	_	_
	RO1S2	8965	RO10		_
	RO1S3		RO11		_
	RO1S4		RO10		_
	RO1S5		RO10		_
	RO1S6		RO10		_
	RO2		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
8965	RO4	8965	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

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## Replacement Parts Kits, Class 9998

Class 9998 replacement parts kits are available for servicing Square D™ contactors.

## **Replacement Contact Kits**

Each Class 9998 replacement contact kit contains the necessary movable and stationary contacts, contact springs, and additional hardware required to service the devices listed below.

Table 32: Class 9998 Replacement Contact Kits for Class 8965 Reversing/Hoist Contactors

Device To I	Be Serviced	Contact Kit	Quantity	
Contactor, Class 8965 Type	Series	Class 9998 Type		
RO10		RA10		
RO11	All	RA11	One kit services three poles	
RO12		RA12		

Table 33: Class 9998 Replacement Contact Kits for Class 8910 Definite Purpose Contactors

Device To E	Be Serviced	Contact Kit	Quantity	
Contactor, Class 8910 Type	Series	Class 9998 Type		
DPA5	A, B	DRC5		
DPA6	A, B	DRC6	One kit per pele	
DPA7	Α	DRC7	One kit per pole	
DPA9	Α	DRC9		

## **Contact Units for Melting Alloy Overload Relays**

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 Table 34.

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.



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

Table 35: DP Type SO1 Contact Ratings

NEMA Contact Rating	Volts (110 V Minimum Recommended)	Inductive 35% Power Factor			
		Make		Break	
		Α	VA	Α	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



Type RA10



Class 9998 Type SO1



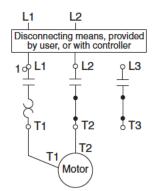
## Melting Alloy Overload Relay Jumper Strap Kits

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 36: Melting Alloy Overload Relay Jumper Strap Kits

Class	For S	Parts Kit	
Class	Size	Type	Class 9998 Type
All	20-50 A	DPS	SO31

Figure 12: Three-phase starter wiring to control a single-phase motor



## **External Auxiliary Contacts, Class 9999**

Table 37: Class 8910 and 8911 Definite Purpose Contactors and Starters—Auxiliary Contacts

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

Table 38: 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	
	1 N.O.		DD10	
DPR	1 N.C.	screw/	DD01	
DPK	1 N.O. / 1 N.C.	quick connect	DD11	
	2 N.O.		DD20	
RO2 and RG2				
RO10 Form X1	1 N.O. each side	slip-on	R10	
RO11 Form X1	7			
RO3 and RG3		slip-on	R11	
RO10 Form X2	1 N.C. each side			
RO11 Form X2	7			
RO5 and RG5		screw	R12	
RO12 Form X1	1 N.O. each side			
RO13 Form X1	7			
RO6 and RG6		screw	R13	
RO12 Form X2	1 N.C. each side			
RO13 Form X2				