

Submersible Motor Control Boxes



Applications

QUICK DISCONNECT (QD) & CAPACITOR RUN CONTROL (CRC)

– These control boxes are designed for use with Franklin 3-wire single-phase submersible motors through 1 hp.

STANDARD & DELUXE – These control boxes are designed for use with Franklin 3-wire single-phase submersible motors from 1 through 15 hp. Recommended for water systems that use pressure switches, level switches, or other pilot devices. Deluxe boxes (only) contain magnetic line contactors carefully matched to the motor rating, eliminating the need for external line contactors.

Basic Features – All Boxes

- Suitable for outdoor mounting
- Capacitor Start / Capacitor Run design (except QD boxes)
- UL Listed for US and Canada (60 Hz models)

Basic Features – Standard & Deluxe Boxes

- Heavy duty box-type terminals accept up to AWG #2 wire
- External access to overload resets
- Multiple-size knockouts
- User-friendly connection diagrams
- Easy access to grounding lugs

Single-Phase Control Box Specifications

BOX TYPE	HZ	HP RANGE	KW RANGE	ENCLOSURE	TERMINAL BLOCK		MAG CONTACTOR	AGENCY APPROVALS
					TERMINALS	MAX WIRE		
Quick Disconnect (QD)	60	1/3 - 1	0.25 - 0.75	NEMA 3R, IP23	5	AWG 10	No	UL listed for US and Canada
Quick Disconnect (QD)	50	1/3 - 1	0.25 - 0.75	NEMA 3R, IP23	5	AWG 10	No	CSA Certified
Capacitor Run Control (CRC)	60	1/2 - 1	0.37 - 0.75	NEMA 3R, IP23	5	AWG 10	No	UL listed for US and Canada
Standard (S)	60	1 - 10	0.75 - 7.5	NEMA 3R, IP23	5	AWG 2	No	UL listed for US and Canada
Standard (S)	50	1.5 - 5	0.75 - 3.7	NEMA 3R, IP23	5	AWG 2	No	CSA Certified
Deluxe (D)	60	2 - 15	1.5 - 11	NEMA 3R, IP23	6	AWG 2	Yes	UL listed for US and Canada
Extra Large Deluxe (D-XL)	60	15	11	NEMA 3R, IP23	5	AWG 00	Yes	UL listed for US and Canada

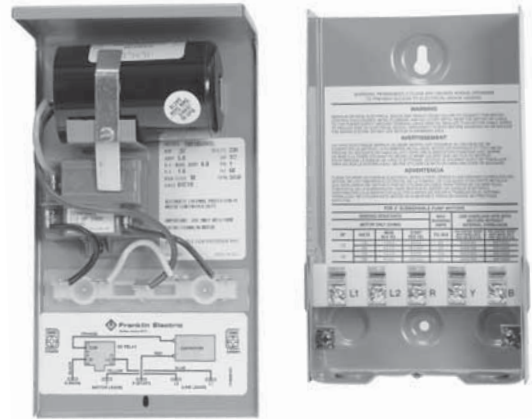
Submersible Motor Control Boxes

Enclosure – Quick Disconnect (QD) & Capacitor Run Control (CRC) Boxes

■ Knockouts:

- Bottom: Two 0.88” knockouts and one 1.31” knockout.
- Side: One 0.88” knockout and one 1.31” knockout on each side.

- ### ■ Terminal Block: five terminals provided for wiring up to AWG #10 wire.



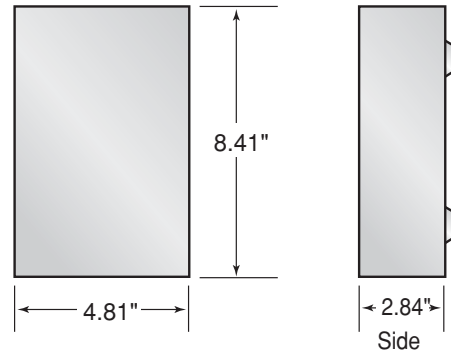
Quick Disconnect (QD) Control Boxes

HP	KW	SHIPPING WEIGHT		MOTOR CARTON SIZE (in inches)	ENC SIZE
		LBS	KG		
1/3	0.25	4	1.8	5.5 x 3.25 x 9	QD
1/2	0.37	4	1.8	5.5 x 3.25 x 9	QD
3/4	0.55	4	1.8	5.5 x 3.25 x 9	QD
1	0.75	4	1.8	5.5 x 3.25 x 9	QD

Capacitor Run Control (CRC) Boxes

HP	KW	SHIPPING WEIGHT		MOTOR CARTON SIZE (in inches)	ENC SIZE
		LBS	KG		
1/2	0.37	5	2.3	5.5 x 3.25 x 9	QD
3/4	0.55	5	2.3	5.5 x 3.25 x 9	QD
1	0.75	5	2.3	5.5 x 3.25 x 9	QD

QD Box Dimensions



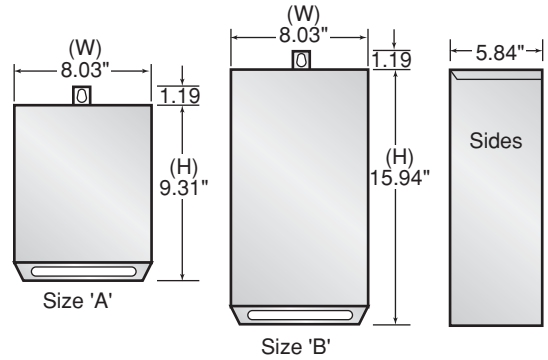
Submersible Motor Control Boxes

Enclosure – Standard & Deluxe Boxes

- **Knockouts:** Two 1.31" diameter holes for 1" conduit connection. One 1.75" knockout for 1.25" conduit. One 0.88" knockout for 0.5" conduit connection.
- **Terminal Block:** six terminals provided for wiring up to AWG 2 wire.



Standard & Deluxe Dimensions



Standard Control Boxes

HP	KW	SHIPPING WEIGHT		MOTOR CARTON SIZE (in inches)	ENC SIZE
		LBS	KG		
1.5	1.1	7	3.2	8.125 x 6.25 x 11.25	A
2	1.5	7	3.2	8.125 x 6.25 x 11.25	A
3	2.2	7	3.2	8.125 x 6.25 x 11.25	A
5 (60 Hz)	3.7	8	3.6	8.125 x 6.25 x 11.25	A
5 (50 Hz)	3.7	8	3.6	8.125 x 6.25 x 18	B
7.5	5.5	12	5.5	8.125 x 6.25 x 18	B
10	7.5	14	6.4	8.125 x 6.25 x 18	B

Deluxe Control Boxes

HP	KW	SHIPPING WEIGHT		MOTOR CARTON SIZE (in inches)	ENC SIZE
		LBS	KG		
2	1.5	7.0	3.2	8.125 x 6.25 x 11.25	A
3	2.2	7.3	3.3	8.125 x 6.25 x 11.25	A
5	3.7	11.2	5.1	8.125 x 6.25 x 18	B
7.5	5.5	13.1	6.0	8.125 x 6.25 x 18	B
10	7.5	14.7	6.7	8.125 x 6.25 x 18	B
15	11	16.5	7.5	8.125 x 6.25 x 18	B
15 (XL)	11	28.0	12.7	16 x 7.125 x 19	C

Submersible Motor Control Boxes

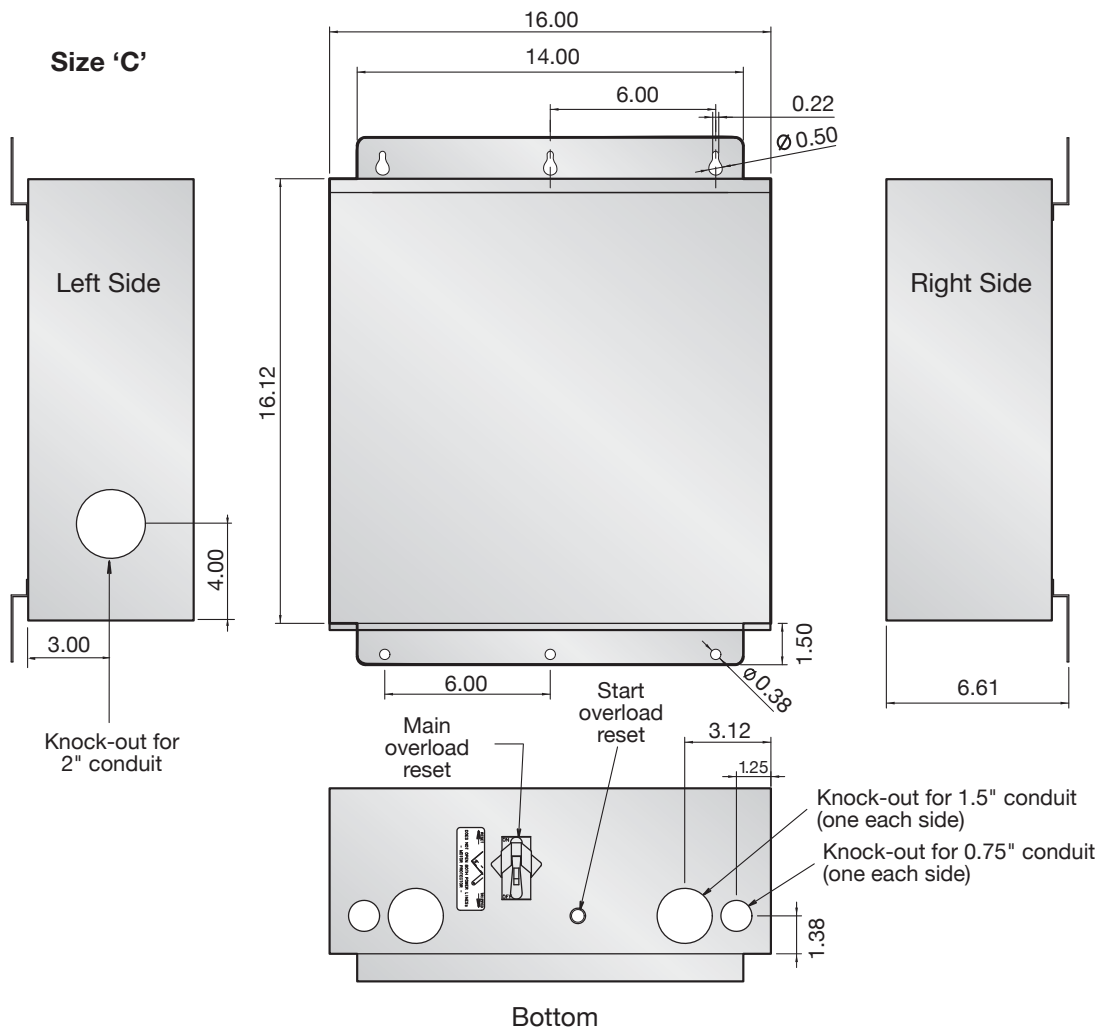
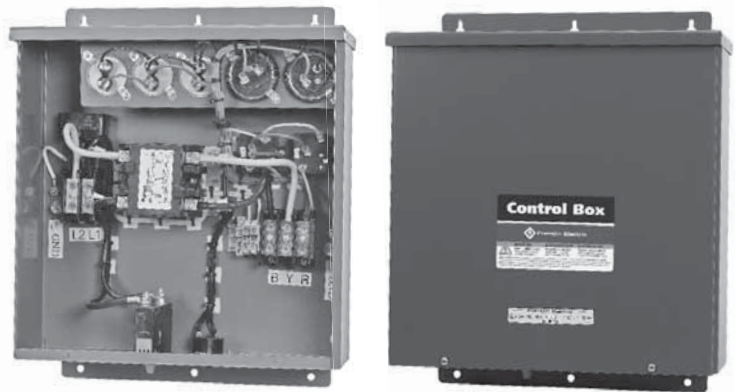
Enclosure - Extra Large Deluxe (D-XL) Boxes

■ Knockouts:

- Bottom: two knockouts for 0.75" conduit, and two for 1.5" conduit.
- Side: one knockout for 2" conduit.

■ **Terminal Block:** two terminals provided for incoming power and three terminals provided for drop cable for conductors from AWG 14 to 00.

■ **Control Switch Terminal Block:** accepts conductors from AWG 20 to 6.



Submersible Motor Control Boxes

Control Box Models

HP (KW)	DESCRIPTION				MODEL	STOCK STATUS
	PH	VOLTS	HZ	TYPE		
1/3 hp (0.25 kW)	1P	115	60	Q	280 102 4915	YES
	1P	220	50	Q	280 353 0115	
	1P	230	60	Q	280 103 4915	YES
1/2 hp (0.37 kW)	1P	115	60	Q	280 104 4915	YES
	1P	220	50	Q	280 355 0115	YES
	1P	230	60	Q	280 105 4915	YES
	1P	230	60	CRC	282 405 5015	YES
3/4 hp (0.55 kW)	1P	220	50	Q	280 357 0115	YES
	1P	230	60	Q	280 107 4915	YES
	1P	230	60	CRC	282 407 5015	YES
1 hp (0.75 kW)	1P	220	50	Q	280 358 0115	YES
	1P	230	60	Q	280 108 4915	YES
	1P	230	60	CRC	282 408 5015	YES
1.5 hp (1.1 kW)	1P	220	50	S	282 350 8110	YES
	1P	230	60	S	282 300 8110	YES
2 hp (1.5 kW)	1P	220	50	S	282 351 8110	YES
	1P	230	60	S	282 301 8110	YES
	1P	230	60	D	282 301 8310	YES
3 hp (2.2 kW)	1P	220	50	S	282 352 8110	YES
	1P	230	60	S	282 302 8110	YES
	1P	230	60	D	282 302 8310	YES
5 hp (3.7 kW)	1P	220	50	S	282 253 9010	YES
	1P	230	60	S	282 113 8110	YES
	1P	230	60	D	282 113 9310	YES
7.5 hp (5.5 kW)	1P	230	60	S	282 201 9210	YES
	1P	230	60	D	282 201 9310	YES
10 hp (7.5 kW)	1P	230	60	S	282 202 9230	YES
	1P	230	60	D	282 202 9330	YES
15 hp (11 kW)	1P	230	60	D	282 203 9330	YES
	1P	230	60	D-XL	282 203 9621	YES

NOTES:

Q = Quick Disconnect Control Box

CRC = Capacitor Run Control Box

S = Standard Control Box

D = Deluxe Control Box

D-XL = Extra Large Deluxe Control Box

Submersible Motor Control Boxes

Control Box Parts

QD Control Box Parts - 60 Hz

HP Voltage Model No.	Rating	No. Req.	Component Part No.	Kit Order No.
1/3 hp - 115 V 280 102 4915	Start Capacitor 159-191 MFD, 110 V	1	275 464 125	305 207 925
	QD Relay	1	223 415 905	305 101 905
1/3 hp - 230 V 280 103 4915	Start Capacitor 43-53 MFD, 220 V	1	275 464 126	305 207 926
	QD Relay	1	223 415 901	305 101 901
1/2 hp - 115 V 280 104 4915	Start Capacitor 250-300 MFD, 125 V	1	275 464 201	305 207 951
	QD Relay	1	223 415 906	305 101 906
1/2 hp - 230 V 280 105 4915	Start Capacitor 59-71 MFD, 220 V	1	275 464 105	305 207 905
	QD Relay	1	223 415 902	305 101 902
3/4 hp - 230 V 280 107 4915	Start Capacitor 86-103 MFD, 220 V	1	275 464 118	305 207 918
	QD Relay	1	223 415 903	305 101 903
1 hp - 230 V 280 108 4915	Start Capacitor 105-126 MFD, 220 V	1	275 464 113	305 207 913
	QD Relay	1	223 415 904	305 101 904
1/2 hp - 230 V CRC 282 405 5015	Start Capacitor 43-53 MFD, 220 V	1	275 464 126	305 207 926
	Run Capacitor 15 MFD, 370 V	1	156 362 101	305 203 907
	QD Relay	1	223 415 912	305 105 901
3/4 hp - 230 V CRC 282 407 5015	Start Capacitor 59-71 MFD, 220 V	1	275 464 105	305 207 905
	Run Capacitor 23 MFD, 370 V	1	156 362 102	305 203 908
	QD Relay	1	223 415 913	305 105 902
1 hp - 230 V CRC 282 408 5015	Start Capacitor 86-103 MFD, 220 V	1	275 464 118	305 207 918
	Run Capacitor 23 MFD, 370 V	1	156 362 102	305 203 908
	QD Relay	1	223 415 914	305 105 903

QD Control Box Parts - 50 Hz

HP Voltage Model No.	Rating	No. Req.	Component Part No.	Kit Order No.
1/3 hp - 220 V 280 353 0115	Start Capacitor 43-53 MFD, 220 V	1	275 461 123	305 205 923
	Capacitor Overload Assembly	1	151 033 957	305 218 957
	Relay 220 V	1	155 031 112	305 213 912
1/2 hp - 220 V 280 355 0115	Start Capacitor 43-53 MFD, 220 V	1	275 461 123	305 205 923
	Capacitor Overload Assembly	1	151 033 957	305 218 957
	Relay 220 V	1	155 031 112	305 213 912
3/4 hp - 220 V 280 357 0115	Start Capacitor 59-71 MFD, 220 V	1	275 461 108	305 205 908
	Capacitor Overload Assembly	1	151 033 918	305 218 918
	Relay 220 V	1	155 031 112	305 213 912
1 hp - 220 V 280 358 0115	Start Capacitor 86-103 MFD, 220V	1	275 461 106	305 205 906
	Capacitor Overload Assembly	1	151 033 906	305 218 906
	Relay 220 V	1	155 031 112	305 213 912

Replacement Parts for Older Style QD Control Boxes

Description	Rating	No. Req.	Component Part No.	Kit Order No.
Voltage Relay Kit	115 Volt with bracket and screws	1	155 031 901	305 102 901
	230 Volt with bracket and screws	1	155 031 902	305 102 902
	208 Volt with bracket and screws	1	155 031 903	305 102 903
Capacitor Overload Assembly	1/3 hp, 115 Volt	1	151 033 973	305 218 973
	1/3 hp, 230 Volt	1	151 033 974	305 218 974
	1/2 hp, 115 Volt	1	151 033 975	305 218 975
	1/2 hp, 230 Volt	1	151 033 976	305 218 976
	3/4 hp, 230 Volt	1	151 033 978	305 218 978
	1 hp, 230 Volt	1	151 033 979	305 218 979
Overload Kit	1.5 hp, 230 Volt	1	151 033 980	305 218 980
	1/3 hp, 115 Volt	1	NA	305 100 901
	1/3 hp, 230 Volt	1	NA	305 100 902
	1/2 hp, 115 Volt	1	NA	305 100 903
	1/2 hp, 230 Volt	1	NA	305 100 904
	3/4 hp, 230 Volt	1	NA	305 100 905
	1 hp, 230 Volt	1	NA	305 100 906

NOTE: Some Franklin motors, controls & parts are not stock items and may need to be special ordered.

Submersible Motor Control Boxes

Control Box Parts

Standard Control Box Parts - 60 Hz

HP Size Model No.	Rating	No. Req.	Component Part No.	Kit Order No.
1/1.5 hp - 4" 282 300 8110	Start Capacitor 105-126 MFD, 220 V	1	275 464 113	305 207 913
	Run Capacitor 10 MFD, 370 V	1	155 328 102	305 204 902
	Overload	1	275 411 107	305 215 907
	Relay - 230 V*	1	155 031 102	305 213 902
2 hp - 4" 282 301 8110	Start Capacitor 105-126 MFD, 220 V	1	275 464 113	305 207 913
	Run Capacitor 20 MFD, 370 V	1	155 328 103	305 204 903
	Start Overload	1	275 411 117	305 215 917
	Run Overload	1	275 411 113	305 215 913
3 hp - 4" 2823028110	Relay - 230 V*	1	155 031 102	305 213 902
	Start Capacitor 208-250 MFD, 220 V	1	275 463 111	305 206 911
	Run Capacitor 45 MFD, 370 V	1	155 327 109	305 203 909
	Start Overload	1	275 411 118	305 215 918
5 hp - 4" & 6" 282 113 8110	Run Overload	1	275 411 115	305 215 915
	Relay - 230 V*	1	155 031 102	305 213 902
	Start Capacitor 270-324 MFD, 330 V	1	275 468 119	305 208 919
	Run Capacitor 40 MFD, 370 V	2	155 327 114	305 203 914
7.5 hp - 6" 282 201 9210	Start Overload	1	275 411 119	305 215 919
	Run Overload	1	275 406 102	305 214 902
	Relay - 230V*	1	155 031 601	305 213 961
	Start Capacitor 270-324 MFD, 330 V	1	275 468 119	305 208 919
	Start Capacitor 216-259 MFD, 330 V	1	275 468 118	305 208 918
	Run Capacitor 45 MFD, 370 V	1	155 327 109	305 203 909
10 hp - 6" 282 202 9230	Start Overload	1	275 411 102	305 215 902
	Run Overload	1	275 406 122	305 214 922
	Relay - 230V*	1	155 031 601	305 213 961
	Start Capacitor 270-324 MFD, 330 V	1	275 468 119	305 208 919
	Start Capacitor 130-154 MFD, 330 V	1	275 463 120	305 206 920
	Start Capacitor 216-259 MFD, 330 V	1	275 468 118	305 208 918
All	Run Capacitor 35 MFD, 370 V	2	155 327 102	305 203 902
	Start Overload	1	275 406 103	305 214 903
	Run Overload	1	155 409 101	155 409 101
	Relay - 230V*	1	155 031 601	305 213 961
208 V Relay *	Lightning Arrestor	1	150 814 902	150 814 902
	Relay 1.5-3 hp (replaces 155031102)	1	155 031 103	305 213 903
	Relay 5-15 hp (replaces 155031601)	1	155 031 602	305 213 904

Standard Control Box Parts - 50 Hz

HP Voltage Model No.	Rating	No. Req.	Component Part No.	Kit Order No.
1.5 hp - 220 V 282 350 8110	Start Capacitor 105-126 MFD, 220 V	1	275 464 113	305 207 913
	Run Capacitor 10 MFD, 370 V	1	155 328 102	305 203 909
	Overload Assembly - Run	1	275 411 114	305 215 914
	Relay 220 V	1	155 031 112	305 213 912
2 hp - 220 V 282 351 8110	Start Capacitor 189-227 MFD, 220 V	1	275 468 115	305 208 915
	Run Capacitor 20 MFD, 370V	1	155 328 103	305 204 903
	Overload Assembly - Run	1	275 411 102	305 215 902
	Overload Assembly - Start	1	275 411 106	305 215 906
3 hp - 220 V 282 352 8110	Relay 220 V	1	155 031 112	305 213 912
	Start Capacitor 270-324 MFD, 220 V	1	275 468 119	305 208 919
	Run Capacitor 35 MFD, 370 V	1	155 327 102	305 203 902
	Overload Assembly - Run	1	275 406 107	305 214 907
5 hp - 220 V 282 253 9010	Overload Assembly - Start	1	275 411 107	305 215 907
	Relay 220 V	1	155 031 112	305 213 912
	Start Capacitor 189-227 MFD, 220 V	2	275 468 115	305 208 915
	Run Capacitor 30 MFD, 220 V	1	155 327 101	305 203 901
	Run Capacitor 45 MFD, 220 V	1	155 327 109	305 203 909
	Overload Assmby - Run	1	275 406 102	305 214 902
	Overload Assembly - Start	1	275 411 102	305 215 902
	Relay 220 V	1	155 031 112	305 213 912

NOTE: Some Franklin motors, controls and parts are not stock items and may need to be special ordered.

* For 208 V systems or where line voltage is between 200 V and 210 V a low voltage relay and larger cable are required:

- Use relay part number 155 031 103 in place of 155 031 102 on 1.5 through 3 hp applications.
- Use relay 115 031 602 for 5-15 hp applications.
- Use the next size larger cable than is specified in the 230 V table.
- Boost transformers are an alternative to special relay and cable.

Submersible Motor Control Boxes

Control Box Parts

Deluxe Control Box Parts

HP Size Model No.	Rating	No. Req.	Component Part No.	Kit Order No.
2 hp - 4" 282 301 8310	Start Capacitor 105-126 MFD, 220 V	1	275 464 113	305 207 913
	Run Capacitor 20 MFD, 370 V	1	155 328 103	305 204 903
	Start Overload	1	275 411 117	305 215 917
	Run Overload	1	275 411 113	305 215 913
	Contactactor	1	155 325 102	305 226 901
	Relay - 230 V*	1	155 031 102	305 213 902
3 hp - 4" 282 302 8310	Start Capacitor 208-250 MFD, 220 V	1	275 463 111	305 206 911
	Run Capacitor 45 MFD, 370 V	1	155 327 109	305 203 909
	Start Overload	1	275 411 118	305 215 918
	Run Overload	1	275 411 115	305 215 915
	Contactactor	1	155 325 102	305 226 901
	Relay - 230 V*	1	155 031 102	305 213 902
5 hp - 4" & 6" 282 113 9310	Start Capacitor 270-324 MFD, 330 V	1	275 468 119	305 208 919
	Run Capacitor 40 MFD, 370 V	2	155 327 114	305 203 914
	Start Overload	1	275 411 119	305 215 919
	Run Overload	1	275 406 102	305 214 902
	Contactactor	1	155 326 101	305 347 903
	Relay - 230 V*	1	155 031 601	305 213 961
7.5 hp - 6" 282 201 9310	Start Capacitor 270-324 MFD, 330 V	1	275 468 119	305 208 919
	Start Capacitor 216-259 MFD, 330 V	1	275 468 118	305 208 918
	Run Capacitor 45 MFD, 370 V	1	155 327 109	305 203 909
	Start Overload	1	275 411 102	305 215 902
	Run Overload	1	275 406 121	305 214 921
	Contactactor	1	155 326 102	305 347 902
	Relay - 230 V*	1	155 031 601	305 213 961
10 hp - 6" 282 202 9330	Start Capacitor 270-324 MFD, 330 V	1	275 468 119	305 208 919
	Start Capacitor 130-154 MFD, 330 V	1	275 463 120	305 206 920
	Start Capacitor 216-259 MFD, 330 V	1	275 468 118	305 208 918
	Run Capacitor 35 MFD, 370 V	2	155 327 102	305 203 902
	Start Overload	1	275 406 103	305 214 903
	Run Overload	1	155 409 101	155 409 101
	Contactactor	1	155 326 102	305 347 902
Relay - 230 V*	1	155 031 601	305 213 961	
15 hp - 6" 282 203 9330	Start Capacitor 270-324 MFD, 330 V	2	275 468 119	305 208 919
	Start Capacitor 161-193 MFD, 330 V	1	275 463 122	305 206 912
	Run Capacitor 45 MFD, 370 V	3	155 327 109	305 203 909
	Start Overload	1	275 406 103	305 214 903
	Run Overload	1	155 409 102	155 409 102
	Contactactor	1	155 429 101	305 347 901
	Relay - 230 V*	1	155 031 601	305 213 961
15 hp - 6" 282 203 9621 X-Large Enclosure	Start Capacitor 350-420 MFD, 330 V	2	275 468 120	305 208 920
	Run Capacitor 45 MFD, 370 V	3	155 327 109	305 203 909
	Start Overload	1	275 406 103	305 214 903
	Run Overload	1	155 409 102	155 409 102
	Contactactor	1	155 429 101	305 347 901
	Relay - 230 V*	2	155 031 601	305 213 961
All	Lightning Arrestor	1	150 814 902	150 814 902
208 V Relay*	Relay 1.5-3 hp (replaces 155 031 102)	1	155 031 103	305 213 903
	Relay 5-15 hp (replaces 155 031 601)	1	155 031 602	305 213 904

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- Use relay part number 155 031 103 in place of 155 031 102 on 1.5 through 3 hp applications.
- Use relay 115 031 602 for 5-15 hp applications.
- Use the next size larger cable than is specified in the 230 V table.
- Boost transformers are an alternative to special relay and cable.