

# 4" SUPER STAINLESS SUBMERSIBLE MOTORS

Motors  
Drives  
Controls  
Protection

1/3 - 1.5 hp, 2 Wire: 1/3 - 3 hp 3 Wire, Single- & Three-Phase

## Application Data:

These motors are built for dependable operation in 4" diameter or larger water wells. Continuous rating in 86 °F (30 °C) water.

For further information, refer to Franklin Electric's "Submersible Motors: Application, Installation, Maintenance Manual."

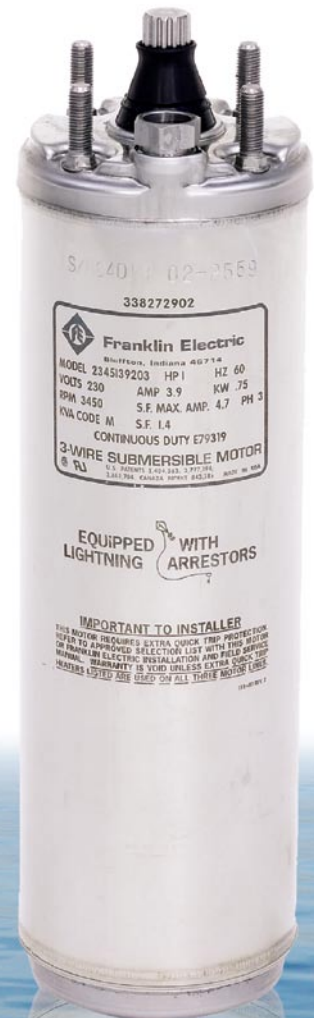
## Special Features:

- No flow inducer sleeve required in water up to 86 °F (30 °C) for motors through 2 hp.
- Two-wire motors are split-phase designs with integral starting components and on-winding thermal overload protection, and do not require a control box. They feature Franklin's patented 2-wire BIAC starting switch which provides reverse impact torque to aid starting in adverse environments.
- Three-wire 60 Hz motors 1/3 - 1 hp use Franklin's exclusive 3-wire QD (Quick-Disconnect) Control Box with the patented QD Relay. This relay provides the ultimate in operational life.

## Basic Features:

- Corrosion-Resistant All Stainless Steel Exterior Construction
- Stainless Steel Splined Shaft
- Hermetically-Sealed Windings
- Anti-Track Self-Healing Resin System
- Water Lubrication
- Filter Check Valve
- Kingsbury-Type Thrust Bearing
- Pressure Equalizing Diaphragm
- Built-In Lightning Arrestors (all single-phase; 200 and 230 Volt three-phase)
- Removable "Water-Bloc" lead installed in North American 60 Hz water well motors. Consult factory for additional leads.
- UL 778 Recognized (North American Voltages)
- CSA Certified
- ANSI/NSF 61 Certified
- NEMA Mounting Dimensions
- Rotation: single-phase - CCW; three-phase electrically reversible

**WARNING:** Serious or fatal electrical shock or fire hazard may result from failure to follow the instructions for proper installation and use which accompany this equipment. Do not use motor in swimming areas.



# Availability

## Single-Phase

### 2-Wire, Split-Phase, 60 Hz, 3450 rpm

HP	KW	VOLTS	"L" DIM		
			INS	LBS	KGS
1/3	0.25	115 OR 230	8.78	16	7.2
1/2	0.37	115 OR 230	9.53	18	8.1
3/4	0.55	230	10.66	21	9.5
1	0.75	230	11.75	24	10.9
1.5	1.1	230	15.12	31	14.1

### 2-Wire, Split-Phase, 50 Hz, 2875 rpm

HP	KW	VOLTS	"L" DIM		
			INS	LBS	KGS
1/2	0.37	220	9.53	18	8.1
3/4	0.55	220	10.66	21	9.5
1	0.75	220	11.75	24	10.9
1.5	1.1	220	15.12	31	14.1

### 3-Wire, Capacitor Start, 60 Hz, 3450 rpm<sup>①</sup>

HP	KW	VOLTS	"L" DIM		
			INS	LBS	KGS
1/3	0.25	115 OR 230	8.78	17	7.7
1/2	0.37	115 OR 230	9.53	19	8.6
3/4	0.55	230	10.66	21	9.5
1	0.75	230	11.75	24	10.9
1.5	1.1	230	13.62	28	12.7
2	1.5	230	15.12	33	15.0
3	2.2	230	19.06	41	18.6

### 3-Wire, Capacitor Start, 50 Hz, 2875 rpm<sup>①</sup>

HP	KW	VOLTS	"L" DIM		
			INS	LBS	KGS
1/3	0.25	220	8.78	17	7.7
1/2	0.37	220	9.53	19	8.6
3/4	0.55	220	10.66	21	9.5
1	0.75	220	11.75	24	10.9
1.5	1.1	220	13.62	28	12.7
2	1.5	220	15.12	33	15.0
3	2.2	220	19.06	41	18.6

## Three-Phase

### 200, 230, 380, 460, 575 Volt-60 Hz; 220, 380 Volt-50 Hz

Consult factory for dimensional and weight data.

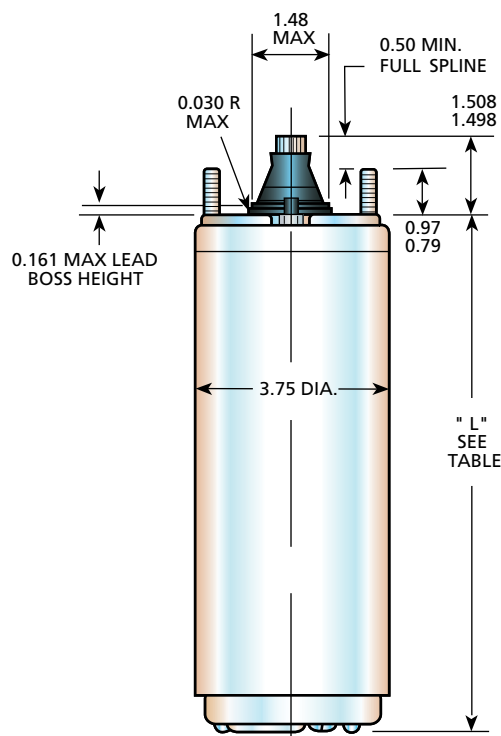
# Construction Materials

Components	Standard Water Well
Casting	304 SS Over Iron
Stator Shell	301 SS
Shaft Extension	17-4 SS
Fasteners	305 SS or 302 SS
Seal Cover	Acetal
Seal	Nitrile Rubber Lip
Diaphragm	Nitrile Rubber
Diaphragm Cover	301 SS
Slinger	Nitrile Rubber
Lead Wire (or Cable)	XLPE <sup>②</sup>
Lead Potting	Epoxy
Lead Jam Nut	303 SS

① Franklin Electric control box required.

② Removable type installed in North American 60 Hz rated water well motors. Consult factory for additional leads.

Specifications subject to change without notice. Contact Franklin Electric if material types are required for bid specifications.



**Franklin Electric**

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# SUBMERSIBLE MOTOR CONTROL BOXES

Motors  
Drives  
**Controls**  
Protection

## Providing Optimal System Performance

Franklin Electric submersible control boxes are designed and optimized specifically for Franklin three-wire, single-phase motors rated 1/3 to 15 hp. Control boxes are an integral part of a submersible motor power system and our rigorous component testing ensures the most robust products in the industry. Franklin control boxes provide long-lasting, reliable operation for best system performance.

### QD & CRC Features:

- Exclusive Franklin Electric QD Relay
- Suitable for outdoor mounting
- Capacitor Start
- Run Capacitor (Only CRC Boxes)
- UL listed for US and Canada (60 Hz models)

### Standard, Deluxe & XL Deluxe Features:

- 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



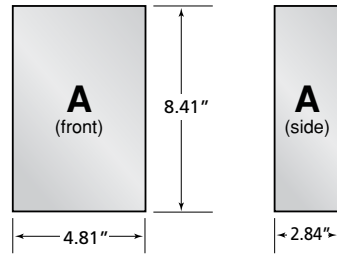
## QD & CRC Control Boxes

These highly engineered control boxes are designed for use with Franklin 3-wire, single-phase submersible motors 1/3 to 1 hp. Quick Disconnect (QD) boxes make trouble shooting simple by automatically disconnecting the control components from the system when the lid is removed. Solid state switching, with the QD Relay, provides longer life than voltage relays, and improves the operation of the system. QD and Capacitor Run Control (CRC) boxes offer the same functionality, but CRC boxes feature a run capacitor for smoother motor operation.

### Specifications:

QD & CRC - Single-Phase, 60 Hz

HP (KW)	VOLTS	TYPE	MODEL	ENCLOSURE
1/3 hp (0.25 kW)	115	QD	280 102 4915	A
	230	QD	280 103 4915	A
1/2 hp (0.37 kW)	115	QD	280 104 4915	A
	230	QD	280 105 4915	A
3/4 hp (0.55 kW)	230	QD	280 107 4915	A
	230	CRC	282 407 5015	A
1 hp (0.75 kW)	230	QD	280 108 4915	A
	230	CRC	282 408 5015	A



## Standard, Deluxe & XL Deluxe Control Boxes

Standard and Deluxe boxes are for 1 hp - 15 hp single-phase water systems that use standard/heavy-duty pressure switches, level switches or other pilot devices. Deluxe boxes contain magnetic line contactors carefully matched to the motor rating, eliminating the need for external line contactors. The 15 hp XL Deluxe box has a larger enclosure that provides the space you need for heavy-duty wire and plenty of room for add-ons.

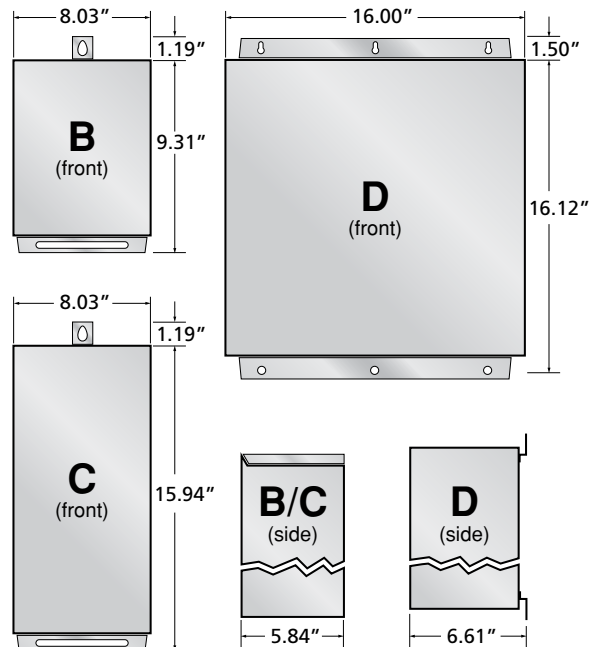
### Specifications:

Standard, Deluxe & XL Deluxe - Single-Phase, 60 Hz

HP (KW)	VOLTS	TYPE	MODEL	ENCLOSURE
1/1.5 hp (1.1 kW)	230	S	282 300 8110	B
2 hp (1.5 kW)	230	S	282 301 8110	B
	230	D	282 301 8310	B
3 hp (2.2 kW)	230	S	282 302 8110	B
	230	D	282 302 8310	B
5 hp (3.7 kW)	230	S	282 113 8110	B
	230	D	282 113 9310	C
7.5 hp (5.5 kW)	230	S	282 201 9210	C
	230	D	282 201 9310	C
10 hp (7.5 kW)	230	S	282 202 9230	C
	230	D	282 202 9330	C
15 hp (11 kW)	230	D	282 203 9330	C
	230	D-XL	282 203 9621	D

#### NOTES:

S = Standard Control Box  
 D = Deluxe Control Box  
 D-XL = Extra Large Deluxe Control Box



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	QD PUMPTEC	PUMPTEC	PUMPTEC-PLUS
Model Number	5800070600	5800020610	5800060100 (60 Hz) 5800060502 (50 Hz)
HP Rating	1/3 to 1	1/3 to 1.5	1/2 to 5
Voltage Rating	230 V	115 V / 230 V	60 Hz - 230 V 50 Hz - 220 V
Frequency	60 Hz	50 / 60 Hz	50 or 60 Hz
Mounting Location	Inside Franklin QD Control Box	Indoor/Outdoor	Indoor/Outdoor
Indicator Lights	No	Yes - Load/Voltage/Status	Yes - Load/Voltage/Status
Remote (IR) Accessible	No	Yes	No
Response Time	3 Seconds	3 Seconds	3 Seconds
Reset Time	Adjustable: 2 to 240 min.	Adjustable: 2 to 120 min.	Adjustable: 1 to 256 min.
Alarm Contact Rating	N/A	1 Amp 115 V / 230 V	N/A
Under/Overvoltage Time-out	2 minutes	2 minutes	2 minutes
Operating Temp Range	-15 °F to 130 °F	-15 °F to 130 °F	-15 °F to 140 °F
Sensitivity Adjustment	± 20%	40 to 90% SFL	N/A
Overvoltage Trip	+10%	+10%	+10%
Undervoltage Trip	-10%	-10%	-10%

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Protection

# SINGLE-PHASE PUMP PROTECTION



 **Franklin Electric**

# PUMP PROTECTION

## AT ITS BEST

The facts are clear and so are the choices. Franklin Electric's Pumptec family provides the high performance pump protection you need deep down in the well. Designed to monitor motor load and supply voltage and to shut down the pump to prevent damage, Pumptec family products protect your water system investment.

Pumptec, QD Pumptec, and Pumptec-Plus are the only single-phase load monitoring devices designed specifically for Franklin single-phase motors. They cover a broad range of ratings and fault conditions:

	QD PUMPTEC	PUMPTEC	PUMPTEC-PLUS
Air or Gas Locked Pump (Cavitation)	•	•	•
Broken Shaft or Coupling	•	•	•
Clogged Well Screen	•	•	•
Drop in Water Level	•	•	•
Faulty Check Valve		•	•
High Voltage	•	•	•
Low Voltage	•	•	•
Low Yield Wells	•	•	•
Rapid Cycling		•	•
Water Logged Tank		•	•
Worn Pump Parts	•	•	•

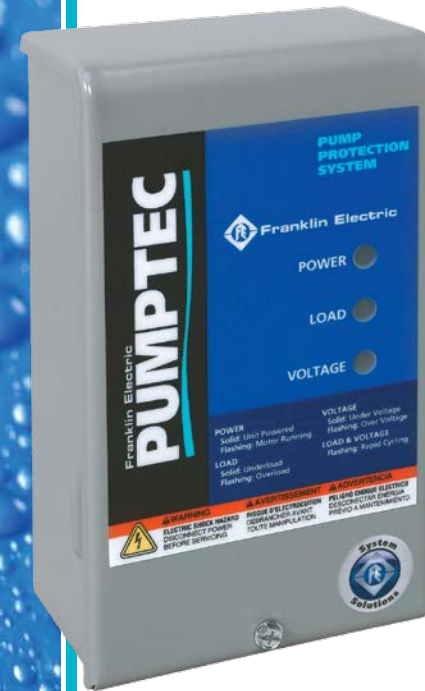
## QD PUMPTEC

### For Franklin QD Control Boxes.

Exclusively designed for Franklin QD Relay Control Boxes, QD Pumptec is a solid state sensing device that monitors motor load and incoming power to automatically shut off a Franklin single-phase, 3-wire motor when related fault conditions are detected. QD Pumptec protects the life of your 4-inch pump and reduces the odds that you will ever have to see the motor again.

QD Pumptec allows the user to choose the standard factory calibration for underload or to calibrate to a particular system. Control knobs make it easy to adjust sensitivity and timeout settings.

QD Pumptec easily plugs into 3-wire QD Relay Control Boxes in minutes, without additional wiring or tools.



## PUMPTEC

### For 2- & 3-wire single-phase motors, 1/3 to 1.5 hp.

Pumptec is a microcomputer-based pump protection device. It monitors motor load and power line conditions to provide protection against dry well conditions, waterlogged tanks, and abnormal line voltage conditions. Pumptec interrupts power to the motor whenever the load drops quickly or below a preset level. Indicator lights on the cover provide complete system status.

#### Additional features:

- Easily Adjustable Sensitivity Settings
- Run and Fault Indicator Lights
- Heavy Duty Relay
- Alarm Circuit Contacts
- UL/CSA Listed



## PUMPTEC-PLUS

### For installations up to 5 hp.

The Pumptec-Plus solid state pump protection system is designed for 1/2 to 5 hp single-phase submersible pump motors. Pumptec-Plus protects against a variety of fault conditions. Run and fault lights on the cover make diagnosis quick and easy. Push button Snap Shot™ calibration makes Pumptec-Plus simple to install and an effective troubleshooting tool.

#### Additional features:

- Push Button Calibration
- Run and Fault Indicator Lights
- Heavy Duty (30A) Contactor
- Works with PSC, Split-phase CSCR and CSIR motors
- UL/CSA Listed