

Franklin 2145079004S

Franklin 3/4 HP Deep Well Submersible Pump Motor Instruction Manual

Model: 2145079004S | Brand: Franklin

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Franklin 3/4 HP Deep Well Submersible Pump Motor, Model 2145079004S. Please read these instructions thoroughly before installation or operation to ensure proper function and longevity of the product.



Image 1.1: Franklin 3/4 HP Deep Well Submersible Pump Motor. This image displays the cylindrical motor unit, primarily stainless steel, with electrical connection points and a splined shaft visible at the top.

2. SAFETY INFORMATION

Always observe basic safety precautions to reduce the risk of fire, electric shock, and personal injury. Failure to follow these instructions may result in serious injury or death.

- **Electrical Safety:** Ensure all electrical connections are made by a qualified electrician and comply with

local codes. Disconnect power before servicing.

- **Grounding:** The motor must be properly grounded to prevent electric shock.
- **Water Quality:** Do not use this pump for flammable liquids or in hazardous locations.
- **Lifting:** Use appropriate lifting equipment when handling the pump motor due to its weight.
- **Temperature:** Do not operate the motor in ambient temperatures exceeding 86°F (30°C).

3. SETUP AND INSTALLATION

Proper installation is crucial for the performance and longevity of your submersible pump motor. Consult a professional for installation if you are unsure about any steps.

1. **Pre-Installation Check:** Verify that the motor specifications (voltage, HP, phase) match your power supply and pump requirements. Inspect the motor for any shipping damage.
2. **Motor-Pump Assembly:** Carefully align and attach the motor to the pump end, ensuring the splined shaft engages correctly. Secure all fasteners according to the pump manufacturer's recommendations.
3. **Electrical Connections:** Connect the motor leads (3 wires) to the control box or power supply. Ensure all connections are watertight and insulated using appropriate splicing kits for submersible applications.
4. **Grounding:** Connect the motor's ground wire to a reliable earth ground.
5. **Lowering into Well:** Use a strong, non-corrosive safety rope or cable attached to the pump assembly. Carefully lower the pump and motor into the well, ensuring it hangs freely and does not touch the well casing.
6. **Pipe Connection:** Connect the discharge pipe to the pump outlet. Ensure all pipe connections are secure and leak-free.

4. OPERATION

Once installed, the motor is designed for continuous operation within its specified parameters.

- **Initial Start-up:** After installation, prime the pump if necessary (refer to pump manual). Restore power to the system. The motor should start smoothly.
- **Monitoring:** Observe the system for unusual noises, vibrations, or leaks during initial operation.
- **Water Level:** Ensure the well water level remains above the pump intake during operation to prevent dry running, which can damage the motor.
- **Thermal Protection:** The motor features automatic thermal protection. If the motor overheats, it will shut off and restart once it cools down. Investigate the cause of overheating if this occurs frequently.

5. MAINTENANCE

The Franklin submersible pump motor is designed for minimal maintenance. However, periodic checks of the overall pumping system are recommended.

- **Annual System Check:** Have a qualified technician inspect the entire well system annually, including the pump, motor, control box, and pressure tank.
- **Electrical Connections:** Periodically check for loose or corroded electrical connections in the control box.
- **Water Quality:** Monitor water quality for excessive sediment or abrasive particles, which can reduce pump and motor life.

- **Motor Housing:** The corrosion-resistant stainless steel shell requires no specific maintenance.

6. TROUBLESHOOTING

Refer to the following table for common issues and their potential solutions. Always disconnect power before attempting any troubleshooting or repairs.

Problem	Possible Cause	Solution
Motor does not start	No power; tripped breaker; faulty control box; wiring issue.	Check power supply, reset breaker, inspect control box components, verify wiring connections.
Motor runs but no water	Low well water level; clogged pump intake; faulty pump end; air lock.	Check well level, inspect pump intake, consult pump manual, bleed air from system.
Motor cycles frequently	Pressure tank issue; leaky plumbing; low well yield.	Inspect pressure tank, check for leaks, assess well capacity.
Motor overheats and shuts off	Low voltage; excessive load; insufficient cooling flow; dry running.	Verify voltage, reduce load if possible, ensure proper water flow around motor, check well level.

7. TECHNICAL SPECIFICATIONS

Detailed specifications for the Franklin 3/4 HP Deep Well Submersible Pump Motor, Model 2145079004S.

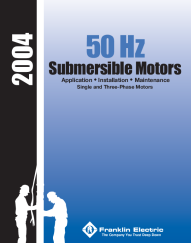
Specification	Value
Item	Deep Well Submersible Pump Motor
Motor Application	Pumps
Motor Sub Application	Deep Well Submersible Pumps
Motor Type	Capacitor-Start
Enclosure	Totally Enclosed Nonventilated
Horsepower (HP)	3/4
Nameplate RPM	3450
Voltage	230V
Phase	1
Full Load Amps	6.8 A
Max. Service Factor Amps	8.0 A
Frequency (Hz)	60 Hz

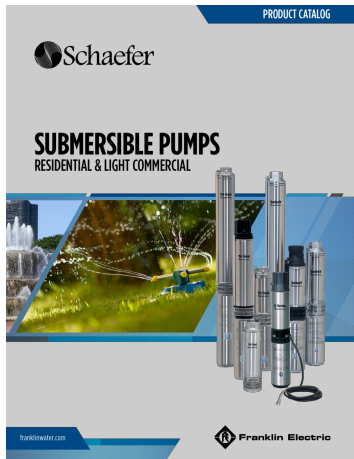
Specification	Value
Service Factor	1.5
Max. Ambient Temperature	86°F (30°C)
Thrust Rating	300 lb.
Number of Wires	3
Thermal Protection	Auto
Rotation	CCWSE (Counter-Clockwise Shaft End)
Diameter	4 inches
Diaphragm Type	Pressure Equalizing
Shaft Material	Splined Stainless Steel
Shell Material	Corrosion Resistant Stainless Steel
Stator Type	Hermetically Sealed
Lead Length	48 inches
Height	10-5/8 inches
RPM Range	3001-3600
Part Number	2145079004S
ASIN	B096BFMDN2
Date First Available	June 1, 2021

8. WARRANTY AND CUSTOMER SUPPORT

For warranty information, please refer to the documentation provided at the time of purchase or contact your authorized Franklin dealer. Keep your purchase receipt as proof of purchase.

For technical assistance or customer support, please contact your product supplier or an authorized service center. When contacting support, please have your model number (2145079004S) and purchase date readily available.

	Franklin Electric Date Codes and Serial Number Guide Learn how to interpret Franklin Electric motor date codes and serial numbers, including year, month, plant, day, and sequence information. This guide details the structure and provides lookup tables for manufacturing details.
	Franklin Electric 50 Hz Submersible Motors: Application, Installation, and Maintenance Manual A comprehensive technical manual from Franklin Electric detailing the application, installation, and maintenance of 50 Hz submersible motors. Covers single-phase and three-phase models, electrical specifications, troubleshooting, and control systems.
	Franklin Electric VS 4" 50 Hz Submersible Pumps for 4" or Larger Wells This catalog provides detailed information on the Franklin Electric VS 4" 50 Hz series of submersible pumps, designed for 4" or larger wells. It includes product overview, features, benefits, technical data, performance curves, and spare parts for models VS 1-2-3, VS 4-6, VS 7-8-10-15.
	Franklin Electric Guardian Series Three Phase Pump Controller Datasheet Datasheet for the Franklin Electric Guardian Series™ Three Phase Pump Controller, detailing its features, specifications, capabilities, and ordering information for fixed-speed submersible turbine pump applications.
	Franklin Electric VS 4" 50 Hz Submersible Pumps Catalog Catalog of Franklin Electric VS 4" 50 Hz submersible pumps for 4" or larger wells, detailing features, benefits, technical data, performance curves, and spare parts.
	Franklin BT01 PRO Mini Bluetooth Speaker User Manual Comprehensive user manual for the Franklin BT01 PRO Mini Bluetooth Speaker, covering charging, Bluetooth pairing, stereo mode, mode switching, specifications, and FCC compliance.



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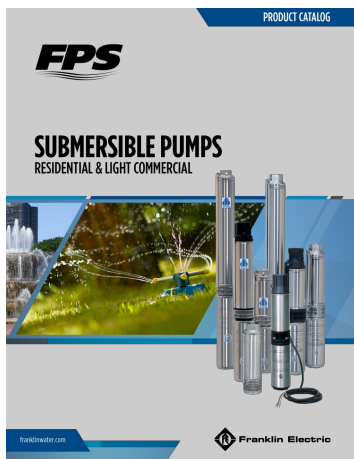
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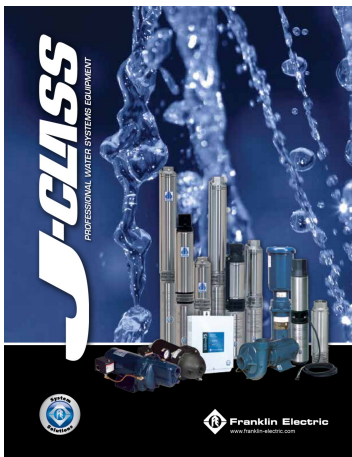
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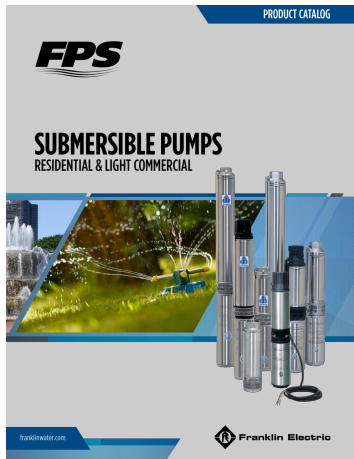
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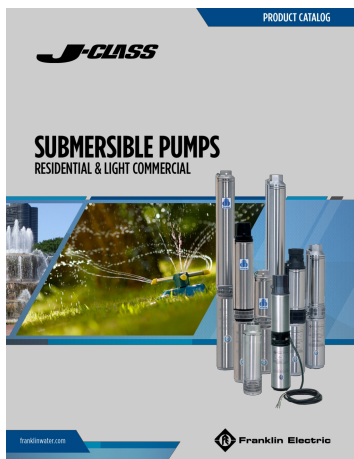


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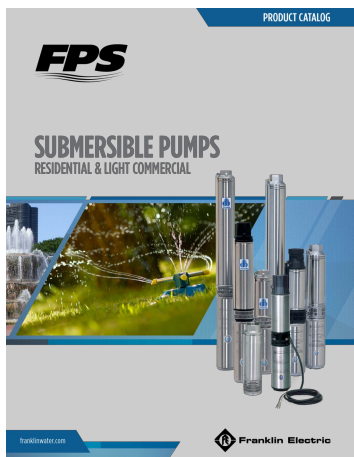


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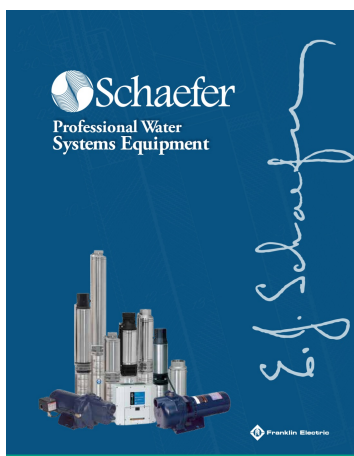
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