

DRIVES, CONTROLS, & PROTECTION

RESIDENTIAL & LIGHT COMMERCIAL



RESIDENTIAL & LIGHT COMMERCIAL DRIVES, CONTROLS, & PROTECTION

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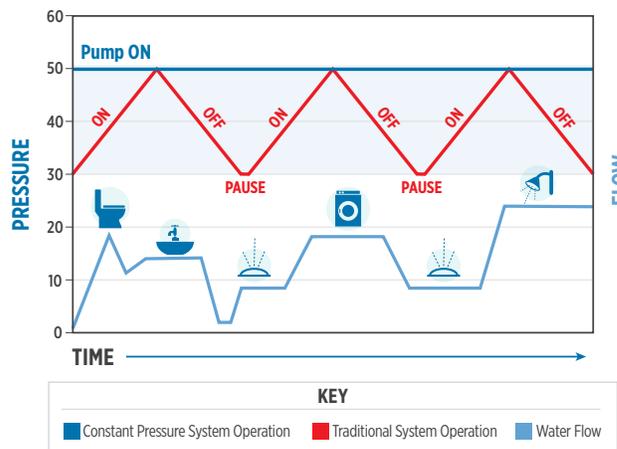


WHAT IS A CONSTANT PRESSURE SYSTEM?

A constant pressure system delivers the water experience users want, how and when they want it: consistently and reliably. Constant pressure systems accommodate a range of flow demands so homeowners and end users can consistently get the water delivery they expect, even if their usage fluctuates.

In comparison to a traditional water system, where water pressure decreases as water demand changes, a constant pressure system eliminates these pressure fluctuations -- no matter how many faucets or water appliances you need to run at the same time.

Here's how we make it happen:



THE SIMPLIFIED SOLUTION TO UPGRADE: THE SUBDRIVE FAMILY

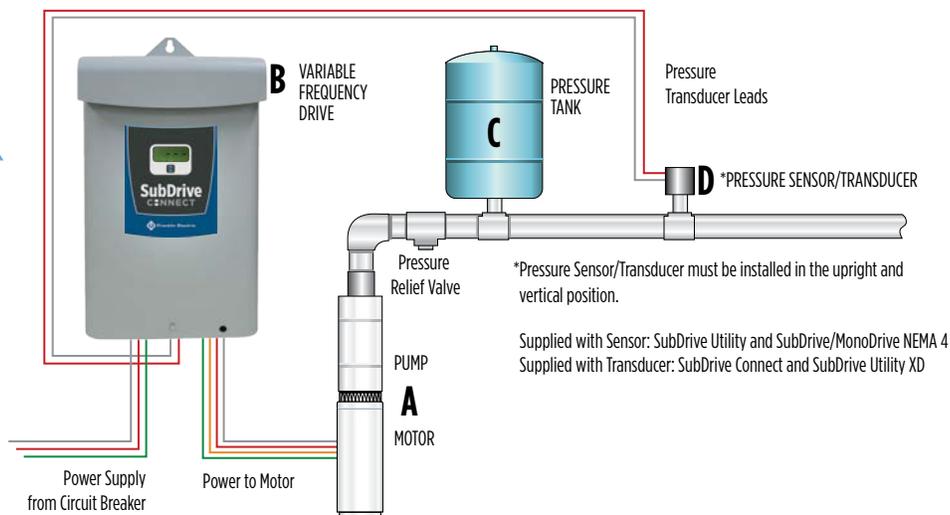
From residential to agricultural and commercial applications, Franklin Electric's SubDrive family of variable frequency drives offers a cost-effective, easy-to-install upgrade to traditional systems. Simply wire up the unit, flip a switch or two, and you instantly have motor protection, pressure boosting, and constant pressure delivery. The SubDrive family offers a range of motor voltage and horsepower ratings to meet a variety of submersible and above ground pumping system application needs.

FEATURES & BENEFITS

- **Designed for Water Systems, Optimized for Constant Pressure:** Designed specifically for water pumping applications, the SubDrive family of drives delivers unique features tailored to your installation needs.
- **Simple Installation:** The easy-to-install platform uses an array of setup, monitoring, and assisted troubleshooting solutions to help you save time during initial setup and servicing.
- **Versatility for Multiple Applications:** Whether you need a complete packaged solution or a drive to upgrade an existing job, find an extensive catalog of product solutions that fulfills a variety of application needs up to 30 horsepower.
- **Smaller Footprint, Smarter Use of Space:** Compact self-contained enclosure designs are ideal for wall-mounting and can be used indoors or outside.
- **Fully Supported:** Comes fully supported by the industry-leading technical support professionals and field service engineers

APPLICATIONS

- Residential water systems
- Landscape irrigation systems
- Constant pressure boosting
- Water treatment systems
- Geothermal systems



PRODUCT COMPARISON

FEATURES & PROTECTION

GOOD: ★ BETTER: ★★ BEST: ★★★

| Description | Control | Protection | | | Variable Frequency Drives (VFD) | | | | | | |
|-----------------------|---|------------|---------|--------------|---------------------------------|-----------------------|------------------------|--------------------------|----------------------------|--------------------------|--------------------|
| | Control Box | QD Pumptec | Pumptec | Pumptec Plus | SubDrive Utility UT2W | SubDrive Utility UT3P | MonoDrive/ MonoDriveXT | SubDrive 75/ 100/150/300 | SubDrive 20/ 30/50 Connect | SubDrive Connect Plus | |
| Features | Constant Pressure | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| | Electrical Filtering | | | | ★ | ★ | ★★★ | ★★★ | ★★ | ★★ | |
| | Compatibility w/High Efficiency Systems | | | | | | | | ✓ | ✓ | |
| Protection | Rating | NEMA 3R | | NEMA 3R | NEMA 3R | NEMA 3R | NEMA 3R | NEMA 4 | NEMA 4 | NEMA 3R | NEMA 3R |
| | Underload | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Under/Over Voltage | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Rapid Cycle | | | ✓ | ✓ | | Soft Start | Soft Start | Soft Start | Soft Start | Soft Start |
| | Overload/Locked Pump | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Open Circuit | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Input/Output/Control | Short Circuit | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Phase Imbalance | | | | | | | | ✓ | ✓ | ✓ |
| | Pressure Sensor (Hobbs) | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Pressure Transducer (4-20mA) | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ |
| | Run Relay Output | | | | | | | Accessory | Accessory or SubDrive300 | ✓ | ✓ |
| | Fault Relay Output | | | | | | | | | ✓ | ✓ |
| | Broken Pipe | | | | | ✓ | ✓ | | | ✓ | ✓ |
| | Pressure Sensor Error | | | | | ✓ | ✓ | | | ✓ | ✓ |
| | Auxilliary Control | | | | | | | | | ✓ | Run/Stop Hand/Auto |
| Wet Floor Sensor | | | | | | | | | ✓ | ✓ | |
| Lead/Lag/Alternate | | | | | Accessory, 2 Drives | Accessory, 2 Drives | Accessory, 2 Drives | Accessory, 2 Drives | Built-in, 2 Drives | Built-in, Up to 8 Drives | |
| FE Connect Mobile App | | | | | | | | | ✓ | ✓ | |

Note: Applications containing sensitive electronic equipment such as LEDs, dimmer switches, and AM radio may require higher levels of electrical filtering.

SUBMERSIBLE MOTORS

| Phase | Description | | Control | Protection | | | Variable Frequency Drives (VFD) | | | | | |
|----------------|-------------|-----------------|-------------|------------|---------|--------------|---------------------------------|-----------------------|------------------------|--------------------------|----------------------------|-----------------------|
| | Volts | Horsepower | Control Box | QD Pumptec | Pumptec | Pumptec Plus | SubDrive Utility UT2W | SubDrive Utility UT3P | MonoDrive/ MonoDriveXT | SubDrive 75/ 100/150/300 | SubDrive 20/ 30/50 Connect | SubDrive Connect Plus |
| 1-Phase 2-Wire | 115 V | 1/3 hp - 1/2 hp | | | ✓ | | ✓ | | | | | |
| | 230 V | 1/3 hp - 1.5 hp | | | ✓ | ✓ | ✓ | | | | | |
| 1-Phase 3-Wire | 230 V | 1/3 hp - 1/2 hp | ✓ | | ✓ | | | | | | | |
| | | 1/3 hp | ✓ | ✓ | ✓ | | | | | | | |
| | | 1/2 hp - 1 hp | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | | |
| | | 1.5 hp | ✓ | | ✓ | | ✓ | ✓ | | ✓ | | |
| | | 2 hp | ✓ | | ✓ | | ✓ | ✓ | | ✓ | | |
| | | 3 hp | ✓ | | ✓ | | ✓ | ✓ | | ✓ | | |
| | | 5 hp | ✓ | | ✓ | | ✓ | ✓ | | ✓ | | |
| 3-Phase | 230 V | 1/2 hp - 3/4 hp | | | | | | ✓ | | | | ✓ |
| | | 1 hp - 2 hp | | | | | | ✓ | | | | ✓ |
| | | 1.5 hp - 5 hp | | | | | | | | ✓ | ✓ | ✓ |
| | | 5 hp - 15 hp | | | | | | | | ✓ | ✓ | ✓ |
| | 460 V | 1/2 hp - 30 hp | | | | | | | | | | ✓ |

SURFACE PUMPS

| Phase | Description | | Control | Protection | | | Variable Frequency Drives (VFD) | | | | | |
|----------------|-------------|---------------|-------------|------------|---------|--------------|---------------------------------|-----------------------|------------------------|--------------------------|----------------------------|-----------------------|
| | Volts | Horsepower | Control Box | QD Pumptec | Pumptec | Pumptec Plus | SubDrive Utility UT2W | SubDrive Utility UT3P | MonoDrive/ MonoDriveXT | SubDrive 75/ 100/150/300 | SubDrive 20/ 30/50 Connect | SubDrive Connect Plus |
| 1-Phase 2-Wire | 115 V | 1/3 hp - 1 hp | | | | | ✓ | | | | | |
| | 230 V | 1/2 hp - 2 hp | | | | | ✓ | | | | | |
| 3-Phase | 230 V | 1/2 hp - 2 hp | | | | | | ✓ | | | | ✓ |
| | | 3 hp - 5 hp | | | | | | | | | ✓ | ✓ |
| | | 5 hp - 15 hp | | | | | | | | | ✓ | ✓ |
| | 460 V | 5 hp - 30 hp | | | | | | | | | | ✓ |

PRODUCT COMPARISON

DRIVE HIGHLIGHTS

SubDrive Utility

- Economical solution for 115 V and 230 V single-phase, two-wire systems and 230 V three-wire and three-phase systems up to 2 hp.

SubDrive Connect

- Enhanced solution for 1/2 to 3 hp single-phase, three-wire and 1 to 5 hp three-phase systems supported by mobile connectivity for monitoring, advanced setup, and troubleshooting.
- Quick, easy startups and reliable protection for projects powered by MagForce High Efficiency Motors.

SubDrive Connect Plus

- Full-featured solution for systems performing with three-phase motors up to 30 hp supported by enhanced mobile connectivity for monitoring, advanced setup, and troubleshooting.
- Quick, easy startups and reliable protection for projects powered by MagForce High Efficiency Motors.

SubDrive/MonoDrive & MonoDrive XT NEMA 4

- Rugged, watertight solution for 1/2 to 2 hp single-phase, three-wire and 1-1/2 to 5 hp three-phase systems.

Note: Applications containing sensitive electronic equipment such as LEDs, dimmer switches, and AM radio may require higher levels of electrical filtering. For ideal electrical filtering drive qualities, please refer to the Drive Comparison table.



ENCLOSURE OPTIONS

- NEMA 3R: The NEMA 3R enclosure is rated for indoor and outdoor use. It provides a degree of protection against falling rain and sleet.
- NEMA 4: The NEMA 4 weatherproof enclosure is designed for both indoor and outdoor use and offers robust protection against harsh environmental conditions.



NEMA 3R

NEMA 4

VARIABLE FREQUENCY DRIVES - SUBDRIVE UTILITY

Franklin Electric's SubDrive Utility™ Variable Frequency Drives provide an easy-to-install constant pressure solution for 115 V and 230 V single-phase, two-wire systems and 230 V three-wire and three-phase systems up to 2 hp.

Requiring only a small pressure tank in most applications, they offer a more compact overall footprint compared to traditional water systems while providing the added value of constant water pressure and built-in motor protection.

FEATURES & BENEFITS

- **Designed for Water Systems, Optimized for Constant Pressure:** Designed specifically for water pumping applications, SubDrive Utility delivers unique features:
 - Provides consistent water pressure across a system, eliminating fluctuations
- **Additional built-in protections include:**
 - Underload (Dry-run) with customizable sensitivity
 - Overload / Locked pump
 - Output short circuit and open circuit
 - Undervoltage
- **Simple Installation:** Easy-to-install drive; most applications require the simple flip of one switch, saving significant time during installation.
- **Versatility for Multiple Applications:**
 - Ideal for retrofitting or optimizing existing single-phase, two-wire or three-wire, and three-phase submersible or above ground pumping systems up to 2 hp
- **Smaller Footprint, Smarter Use of Space:**
 - Compact design, that is ideal for wall-mounting, works with small pressure tanks or existing units
 - Cost-effective solution that replaces the need for multiple control boxes, a pressure switch, and larger tanks; delivers a total system cost at or below standard installations with pump flows of 10 gpm and greater
 - Can be used indoors or outside since the self-contained NEMA 3R-rated drive provides a degree of protection against falling rain or sleet
- **Fully Supported:** Comes fully supported by the industry-leading technical support professionals and field service engineers



ORDERING INFORMATION

| | | Submersible Applications | | | | | | | | | | | | | |
|---|--------------|--------------------------|--------|--------------|--------|------|--------|---------------------------|--------|------|--------|------|---------------|--------|------|
| Drive Model | Order No. | 115 V 2-Wire | | 230 V 2-Wire | | | | 230 V Single-Phase 3-Wire | | | | | 230 V 3-Phase | | |
| | | 1/3 HP | 1/2 HP | 1/2 HP | 3/4 HP | 1 HP | 1.5 HP | 1/2 HP | 3/4 HP | 1 HP | 1.5 HP | 2 HP | 1 HP | 1.5 HP | 2 HP |
| SubDrive Utility UT2W with Pressure Sensor | 5870202003 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | - | - | - | - | - | - | - | - |
| SubDrive Utility UT2W with Analog Pressure Transducer | 5870202003XD | | | | | | | | | | | | | | |
| SubDrive Utility UT3P with Pressure Sensor | 5870202303 | - | - | - | - | - | - | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| SubDrive Utility UT3P with Analog Pressure Transducer | 5870202303XD | | | | | | | | | | | | | | |

| | | Surface Applications | | | | | | | | | | | | | | |
|---|--------------|-----------------------------------|---------------------------|--------|--------|------|---------------------------|--------|------|--------|------|---------------|--------|------|--------|------|
| Drive Model | Order No. | Motor Overload Protection Ratings | 115 V Single Phase 2-Wire | | | | 230 V Single Phase 2-Wire | | | | | 230 V 3-Phase | | | | |
| | | | 1/3 HP | 1/2 HP | 3/4 HP | 1 HP | 1/2 HP | 3/4 HP | 1 HP | 1.5 HP | 2 HP | 1/2 HP | 3/4 HP | 1 HP | 1.5 HP | 2 HP |
| SubDrive Utility UT2W with Pressure Sensor | 5870202003 | 4.6 - 13.1 A | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | - | - | - | - | |
| SubDrive Utility UT2W with Analog Pressure Transducer | 5870202003XD | | | | | | | | | | | | | | | |
| SubDrive Utility UT3P with Pressure Sensor | 5870202303 | 2.6 - 8.1 A | - | - | - | - | - | - | - | - | - | ✓ | ✓ | ✓ | ✓ | |
| SubDrive Utility UT3P with Analog Pressure Transducer | 5870202303XD | | | | | | | | | | | | | | | |

NOTE: Not equipped with FE Connect mobile app



VARIABLE FREQUENCY DRIVES - SUBDRIVE UTILITY

SPECIFICATIONS

| Model No. | Indoor/Outdoor | SubDrive Utility UT2W (NEMA 3R) | SubDrive Utility UT3P (NEMA 3R) |
|--------------------------------------|--|---|---|
| | | Model 5870202003 & 5870202003XD | Model 5870202303 & 5870202303XD |
| Input from Power Source | Voltage | 115/208/230 +/- 10% VAC | 230 +/- 10% VAC |
| | Phase In | Single-phase | Single-phase |
| | Frequency | 60 Hz | 60 Hz |
| | Current (max) | 20 Amps | 20 Amps |
| | Power Factor | - 0.52 | - 0.52 |
| | Power (idle) | 3 Watts | 3 Watts |
| | Power (max) | 2500 Watts | 2500 Watts |
| Wire Gauge Size(s) | Consult Federal, State, and Local codes for branch circuit installations | | Consult Federal, State, and Local codes for branch circuit installations |
| Output to Motor | Voltage | Variable based on frequency | Adjusts with frequency |
| | Phase Out | Single-phase (2-wire) | Single-phase (3-wire) or three-phase |
| | Frequency Range | 35-63 Hz | Single-phase (3-wire) Submersible: 30-63 Hz Three-phase Submersible: 30-60 Hz Three-phase Surface: 15-60 Hz |
| | Current (max) | 13.1 A (based on motor SFA) | 13.2 A (based on 2 hp, single-phase, 3-wire motor) |
| | Wire Gauge Size(s) | Consult Federal, State, and Local codes for branch circuit installations | |
| Pressure Setting | Factory preset | 50 psi (3.4 bar) | 50 psi (3.4 bar) |
| | Adjustment Range | Pressure Sensor: 25-80 psi (1.7-5.5 bar) Pressure Transducer: 5-95% of transducer range | Pressure Sensor: 25-80 psi (1.7-5.5 bar) Pressure Transducer: 5-95% of transducer range |
| Operating Conditions (A) | Temperature (at 230 VAC input) | -13 °F to 122 °F (-25 °C to 50 °C) | |
| | Relative Humidity | 20-95%, non-condensing | |
| Controller Size (B) (approximate) | Outer Dimensions | 9-3/4" x 16-3/4" x 5-1/4" (25 x 42.5 x 13 cm) | |
| | Weight | 7.7 lbs (3.5 kg) | |
| For Use With (C) | Pump (60 Hz) | 1/3 hp, 0.25 kW with 244502-Series motor 1/2 hp, 0.37 kW with 244504- or 244505-Series motor 3/4 hp, 0.55 kW with 244507-Series motor 1.0 hp, 0.75 kW with 244508-Series motor 1.5 hp, 1.1 kW with 244309-Series motor | 1/2 hp (0.37 kW) pump with 214505-series motor 3/4 hp (0.55 kW) pump with 214507-series motor 1.0 hp (0.75 kW) pump with 214508-series motor 1.5 hp (1.1 kW) pump with 224300-series motor 2.0 hp (1.5 kW) pump with 224301-series motor 1/2 hp (0.37 kW) pump with 234511-series motor 3/4 hp (0.55 kW) pump with 234512-series motor 1.0 hp (0.75 kW) pump with 234513-series motor 1.5 hp (1.1 kW) pump with 234514-series motor 2.0 hp (1.5 kW) pump with 234515-series motor |
| | FE 115V Submersible Motor (Requires 115 VAC Input) | 244502-Series (1/3 hp, 0.25 kW), 115 VAC, single-phase, 2-wire 244504-Series (1/2 hp, 0.37 kW), 115 VAC, single-phase, 2-wire | - |
| | FE 230V Submersible Motor (Requires 230 VAC Input) | 244505-Series (1/2 hp, 0.37 kW), 230 VAC, single-phase, 2-wire 244507-Series (3/4 hp, 0.55 kW), 230 VAC, single-phase, 2-wire 244508-Series (1.0 hp, 0.75 kW), 230 VAC, single-phase, 2-wire 244309-Series (1.5 hp, 1.1 kW), 230 VAC, single-phase, 2-wire | 214505-Series (0.5 hp, 0.37 kW) single-phase, 3-wire 214507-Series (0.75 hp, 0.55 kW) single-phase, 3-wire 214508-Series (1.0 hp, 0.75 kW) single-phase, 3-wire 224300-Series (1.5 hp, 1.1 kW) single-phase, 3-wire 224301-Series (2.0 hp, 1.5 kW) single-phase, 3-wire 234511-Series (0.5 hp, 0.37 kW) three-phase 234512-Series (0.75 hp, 0.55 kW) three-phase 234513-Series (1.0 hp, 0.75 kW) three-phase 234514-Series (1.5 hp, 1.1 kW) three-phase 234515-Series (2.0 hp, 1.5 kW) three-phase |
| | Other Pumps | Submersible PSC and Surface Pumps 4.6-13.1 Amps, single-phase, 2-wire, 115 VAC and 230 VAC | Surface Pumps 2.6-8.1 Amps, three-phase, 230 VAC |

NOTES: Refer to Franklin Electric's SubDrive Utility Installation Manual.
 (A) Operating temperature is specified at full output power when installed as described in Controller Location Selection.
 (B) Refer to detailed Mounting Dimensions.
 (C) If a pump other than the default rating is used, refer to Drive Configuration.

VARIABLE FREQUENCY DRIVES - SUBDRIVE CONNECT

Franklin Electric's SubDrive Connect Variable Frequency Drives provide an easy-to-install constant pressure solution and built-in protection for single-phase 3-wire and three-phase motors. Enhanced with advanced connectivity, they enable real-time local monitoring, quick setup and streamlined troubleshooting through the FE Connect mobile app.

FEATURES & BENEFITS

- **Designed for Water Systems, Optimized for Constant Pressure:** Designed specifically for water pumping applications, SubDrive Connect delivers unique features:
 - Provides consistent water pressure across a system, eliminating fluctuations
 - Soft start maximizes system life
 - Advanced filtering to remove radio frequency interference
 - Power Factor Correction that optimizes the system for a wider performance range
- **Additional built-in protections include:**
 - Underload (Dry-run) with customizable sensitivity and off time
 - Overload / Locked pump
 - Broken pipe detection
 - Output short circuit and open circuit
 - Undervoltage
 - Electrical surge
 - Overheated controller
 - Moisture sensor input
 - Run and fault relays
- **Simple Installation, Made Easier Through Connectivity:** The easy-to-install platform uses an array of setup, local monitoring, and assisted troubleshooting solutions to help you save time during installation and servicing:
 - LCD display provides immediate feedback and read-outs on pressure and system status
 - No programming is required with easy DIP switches for basic drive configuration
 - Integrated connectivity and compatibility with our FE Connect mobile app for real-time data and monitoring; access to advanced features such as motor frequency range, lead/lag/alternation, broken pipe detection, and fault log retrieval
- **Versatility for Multiple Applications:**
 - Ideal for new construction or retrofitting and optimizing submersible and surface systems from 1/2 – 5 hp
 - Built-in lead/lag and alternation capability for duplex systems
 - Comes standard with various input/output (I/O) ports for streamlined compatibility with adjacent systems
- **Smaller Footprint, Smarter Use of Space:**
 - Compact design, that is ideal for wall-mounting, works with small pressure tanks or existing larger tanks
 - Can be used indoors or outside since the self-contained NEMA 3R-rated drive provides a degree of protection against falling rain or sleet
- **Fully Supported:** Comes fully supported by the industry-leading technical support professionals and field service engineers



Compatible with MagForce High Efficiency Motors

ORDERING INFORMATION

| Drive Model | Order No. | Max Current (A) | Single-Phase (3-Wire) HP | | | | | | | Three-Phase HP | | | | |
|-------------|-------------|-----------------|--------------------------|------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|---|
| | | | 0.5 | 0.75 | 1.0 | 1.5 | 2.0 | 3.0 | 1.0 | 1.5 | 2.0 | 3.0 | 5.0 | |
| SubDrive20 | 5870205313C | 8.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| SubDrive30 | 5870205403C | 10.9 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| SubDrive50 | 5870205503C | 17.8 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

NOTE: Drives can operate all motors up to their maximum output rating as shown in the table above



VARIABLE FREQUENCY DRIVES - SUBDRIVE CONNECT

SPECIFICATIONS

| Model No. | Indoor/Outdoor | SubDrive20 (NEMA 3R) | SubDrive30 (NEMA 3R) | SubDrive50 (NEMA 3R) |
|-----------------------------------|--------------------------------|--|--|--|
| | | Model 587020513C | Model 5870205403C | 5870205503C |
| Input from Power Source | Voltage | 208/230 VAC +/- 10% | 208/230 VAC +/- 10% | 208/230 +/- 10% VAC |
| | Phase In | Single-phase | Single-phase | Single-phase |
| | Frequency | 60/50 Hz | 60/50 Hz | 60/50 Hz |
| | Current (max) | 19 Amps | 23 Amps | 36 Amps |
| | Power Factor | - 0.95 | - 0.95 | - 0.95 |
| | Power (idle) | 5 Watts | 5 Watts | 7 Watts |
| | Power (max) | 4200 Watts | 4200 Watts | 7200 Watts |
| | Wire Gauge Size(s) | Consult Federal, State, and Local codes for branch circuit installations | Consult Federal, State, and Local codes for branch circuit installations | Consult Federal, State, and Local codes for branch circuit installations |
| Output to Motor | Voltage | Adjusts with Frequency | Adjusts with Frequency | Variable based on frequency |
| | Phase Out | Single-phase (3-wire) OR Three-phase | Single-phase (3-wire) OR Three-phase | Single-phase (3-wire) OR three-phase |
| | Frequency Range | 30-78 Hz (1 hp, 0.75 kW) pump 30-72 Hz (1.5 hp, 1.1 kW) pump 30-60 Hz (2 hp, 1.5 kW) pump 30-63 Hz (Single-phase Motors) | 30-78 Hz (1.5 hp, 1.1 kW) pump 30-70 Hz (2 hp, 1.5 kW) pump 30-60 Hz (3 hp, 2.2 kW) pump 30-63 Hz (Single-Phase Motors) | 30-78 Hz: 1/2-rated mismatched pump with three-phase motor 30-70 Hz: 2/3 or 3/4-rated mismatched pump with three-phase motor 30-60 Hz: Matched pump with three-phase motor 30-63 Hz: Matched pump with single-phase motor |
| | Current (max) | 8.1 A / phase | 10.9 A / phase | 17.8 (three-phase), 17.0 A (single-phase) |
| | Wire Gauge Size(s) | #6 - #14* ga. | #6 - #14* ga. | #6 - #12* ga. |
| Pressure Setting | Factory Preset | 50 psi (3.4 bar) | 50 psi (3.4 bar) | 50 psi (3.4 bar) |
| | Adjustment Range | 25-80 psi (1.7 - 5.5 bar) | 25-80 psi (1.7 - 5.5 bar) | Analog Transducer: 5-95 PSI (0.3 - 6.6 bar) Pressure Sensor: 25-80 psi (1.7 - 5.5 bar) |
| Operating Conditions (A) | Temperature (at 230 VAC input) | -13 °F to 122 °F (-25 °C to 50 °C) | -13 °F to 122 °F (-25 °C to 50 °C) | -13 °F to 122 °F (-25 °C to 50 °C) |
| | Relative Humidity | 20-95%, non-condensing | 20-95%, non-condensing | 20-95%, non-condensing |
| Controller Size (B) (approximate) | Outer Dimensions | 9-3/4" x 19-3/4" x 5-1/4" (25 x 50 x 13 cm) | 9-3/4" x 19-3/4" x 5-1/4" (25 x 50 x 13 cm) | 26 1/8" x 15 3/8" x 11 1/2" (66 x 39 x 29 cm) |
| | Weight | 26 lbs (11.8 kg) | 26 lbs (11.8 kg) | 31 lbs (14.1 kg) |
| For Use With (C) | Pump (60 Hz) | 0.5 hp (0.37 kW) pump with 214505-series motor 0.75 hp (0.55 kW) pump with 214507-series motor 1.0 hp (0.75 kW) pump with 214508-Series motor 1.5 hp (1.1 kW) pump with 224300-Series motor 2.0 hp (1.5 kW) pump with 224301-Series motor 0.5 hp (0.37 kW), 0.75 hp (0.55kW), or 1.0 hp (0.75 kW) pump with 234513-Series motor 0.75 hp (0.55 kW), 1.0 hp (0.75 kW), or 1.5 hp (1.1 kW) pump with 234514-Series motor 1.0 hp (0.75 kW), 1.5 hp (1.1 kW), or 2.0 hp (1.5 kW) pump with 234315-Series motor | 0.5 hp (0.37 kW) pump with 214505-series motor 0.75 hp (0.55 kW) pump with 214507-series motor 1.0 hp (0.75 kW) pump with 214508-Series motor 1.5 hp (1.1 kW) pump with 224300-Series motor 2.0 hp (1.5 kW) pump with 224301-Series motor 0.5 hp (0.37 kW), 0.75 hp (0.55kW), or 1.0 hp (0.75 kW) pump with 234513-Series motor 0.75 hp (0.55 kW), 1.0 hp (0.75 kW), or 1.5 hp (1.1 kW) pump with 234514-Series motor 1.0 hp (0.75 kW), 1.5 hp (1.1 kW), or 2.0 hp (1.5 kW) pump with 234315-Series motor 1.5 hp (1.1 kW), 2.0 hp (1.5 kW), or 3.0 hp (2.2 kW) pump with 234316-Series motor | 0.5 hp (0.37 kW) pump with 214505-Series motor 0.75 hp (0.55 kW) pump with 214507-Series motor 1.0 hp (0.75 kW) pump with 214508-Series motor 1.5 hp (1.1 kW) pump with 224300-Series motor 2.0 hp (1.5 kW) pump with 224301-Series motor 3.0 hp (2.2 kW) pump with 224302-Series motor 0.5 hp (0.37 kW), 0.75 hp (0.55kW), or 1.0 hp (0.75 kW) pump with 234513-Series motor 0.75 hp (0.55 kW), 1.0 hp (0.75 kW), or 1.5 hp (1.1 kW) pump with 234514-Series motor 1.0 hp (0.75 kW), 1.5 hp (1.1 kW), or 2.0 hp (1.5 kW) pump with 234315-Series motor 1.5 hp (1.1 kW), 2.0 hp (1.5 kW), or 3.0 hp (2.2 kW) pump with 234316-Series motor 3.0 hp (2.2 kW), or 5.0 hp (3.7 kW) pump with 234317-Series motor |
| | FE Motor | 214505-Series (0.5 hp, 0.37 kW) single-phase, 3-wire 214507-Series (0.75 hp, 0.55 kW) single-phase, 3-wire 214508-Series (1 hp, 0.75 kW) single-phase, 3-wire 224300-Series (1.5 hp, 1.1 kW) single-phase, 3-wire 224301-Series (2 hp, 1.5 kW) single-phase, 3-wire 234513-Series (1.0 hp, 0.75 kW) three-phase 234514-Series (1.5 hp, 1.1 kW) three-phase 234315-Series (2.0 hp, 1.5 kW) three-phase | 214505-Series (0.5 hp, 0.37 kW) single-phase, 3-wire 214507-Series (0.75 hp, 0.55 kW) single-phase, 3-wire 214508-Series (1 hp, 0.75 kW) single-phase, 3-wire 224300-Series (1.5 hp, 1.1 kW) single-phase, 3-wire 224301-Series (2 hp, 1.5 kW) single-phase, 3-wire 234513-Series (1.0 hp, 0.75 kW) three-phase 234514-Series (1.5 hp, 1.1 kW) three-phase 234315-Series (2.0 hp, 1.5 kW) three-phase 234316-Series (3.0 hp, 2.2 kW) three-phase | 214505-Series (0.5 hp, 0.37 kW) single-phase, 3-wire 214507-Series (0.75 hp, 0.55 kW) single-phase, 3-wire 214508-Series (1.0 hp, 0.75 kW) single-phase, 3-wire 224300-Series (1.5 hp, 1.1 kW) single-phase, 3-wire 224301-Series (2.0 hp, 1.5 kW) single-phase, 3-wire 224302-Series (3.0 hp, 2.2 kW) single-phase, 3-wire 234513-Series (1.0 hp, 0.75 kW) three-phase 234514-Series (1.5 hp, 1.1 kW) three-phase 234315-Series (2.0 hp, 1.5 kW) three-phase 234316-Series (3.0 hp, 2.2 kW) three-phase 234317-Series (5.0 hp, 3.7 kW) three-phase |
| | Surface Pumps | 2.0-8.1 Amps, three-phase, 230 VAC three-phase | 2.0-10.9 Amps, three-phase, 230 VAC three-phase | 2.0 - 17.8 Amps, three-phase, 230 VAC three-phase |

NOTES: Refer to Franklin Electric's SubDrive/MonoDrive Installation Manual.
 (A) Operating temperature is specified at full output power when installed as described in Controller Location Selection.
 (B) Refer to detailed Mounting Dimensions.
 (C) If a pump other than the default rating is used, refer to Drive Configuration.
 * Refer to detailed Circuit Breaker and Wire Sizing charts.

VARIABLE FREQUENCY DRIVES - SUBDRIVE & MONODRIVE NEMA 4

From demanding residential to agricultural and commercial applications, Franklin Electric's SubDrive & MonoDrive NEMA 4 Variable Frequency Drives provide an easy-to-install constant pressure solution and built-in protection for jobs up to 5 horsepower.

Designed within a NEMA 4 weatherproof enclosure, they offer rugged, watertight variable frequency drive solutions that meet water demand changes.

FEATURES & BENEFITS

■ **Designed for Water Systems, Optimized for Constant Pressure:** Designed specifically for water pumping applications, SubDrive & MonoDrive deliver unique features:

- Provides consistent water pressure across a system, eliminating fluctuations
- Soft start maximizes system life
- Advanced filtering to remove radio frequency interference

Additional built-in protections include:

- Underload (Dry-run) with customizable sensitivity
- Overload / Locked pump
- Output short circuit and open circuit
- Undervoltage
- Electrical surge
- Overheated controller

■ **Simple Installation:** Easy-to-install drive; most applications require the simple flip of one switch, saving significant time during installation.

■ **Versatility for Multiple Applications:**

- From SubDrive75 thru SubDrive300, SubDrive (NEMA 4) models are designed to provide constant pressure for three-phase motors using single-phase input power for 1-1/2 – 5 hp jobs.
- MonoDrive and MonoDriveXT (NEMA 4) are designed to convert a conventional 1/2 hp to 2 hp, single-phase, 3-wire pump system into a constant pressure system by simply replacing the control box and pressure switch.

■ **Smaller Footprint, Smarter Use of Space:**

- Compact design, that is ideal for wall-mounting, works with small pressure tanks or existing larger tanks
- Ideal for demanding applications since the self-contained NEMA 4 enclosures (rated for indoor or outdoor use) offer robust protection against harsh environmental conditions

■ **Fully Supported:** Comes fully supported by the industry-leading technical support professionals and field service engineers



ORDERING INFORMATION

| SubDrive & MonoDrive NEMA 4 Variable Frequency Drives | | |
|---|---------------------------|------------|
| VFD | Enclosure Type | Model No. |
| MonoDrive | NEMA 4 Variable Frequency | 5870203114 |
| MonoDriveXT | | 5870204114 |
| SubDrive 75 | | 5870203384 |
| SubDrive 100 | | 5870204104 |
| SubDrive 150 | | 5870204154 |
| SubDrive 300 | | 5870206300 |



VARIABLE FREQUENCY DRIVES - MONODRIVE & MONODRIVE XT NEMA 4

SPECIFICATIONS

| Model No. | Indoor/Outdoor | Monodrive (NEMA 4) | MonoDriveXT (NEMA 4) |
|-----------------------------------|--|---|--|
| | | Model 5870203114 | Model 5870204114 |
| Input from Power Source | Voltage | 190-260 VAC | 190-260 VAC |
| | Phase In | Single-phase | Single-phase |
| | Frequency | 60/50 Hz | 60/50 Hz |
| | Current (max) | 5.7 Amps (RMS) 1/2 hp, 0.37 kW system 8.7 Amps (RMS) 3/4 hp, 0.55 kW system 11 Amps (RMS) 1 hp, 0.75 kW system | 13 Amps (RMS) 1.5 hp, 1.1 kW system 16 Amps (RMS) 2 hp, 1.5 kW system |
| | Power Factor | 1.0 (constant) | 1.0 (constant) |
| | Power (idle) | 35 Watts | 65 Watts |
| | Power (max) | 1150 Watts (1/2 hp, 0.37 kW) system 1750 Watts (3/4 hp, 0.55 kW) system 2150 Watts (1 hp, 0.75 kW) system | 2500 Watts (1.5 hp, 1.1 kW) system 3100 Watts (2 hp, 1.5 kW) system |
| Wire Gauge Size(s) | Consult Federal, State, and Local codes for branch circuit installations | | |
| Output to Motor | Voltage | Adjusts with Frequency | Adjusts with Frequency |
| | Phase Out | Single-phase (3-wire) | Single-phase (3-wire) |
| | Frequency Range | 30-60 Hz | 30-60 Hz |
| | Current (max) | Main Phase: 6 Amps (RMS) 1/2 hp, 0.37 kW system Main Phase: 8 Amps (RMS) 3/4 hp, 0.55 kW system Main Phase: 10.4 Amps (RMS) 1 hp, 0.75 kW system | Main Phase: 11.5 Amps (RMS) 1.5 hp, 1.1 kW system Main Phase: 13.2 Amps (RMS) 2 hp, 1.5 kW system |
| | Wire Gauge Size(s) | #6 - #18 * ga. | #6 - #18 * ga. |
| Pressure Setting | Factory Preset | 50 psi (3.4 bar) | 50 psi (3.4 bar) |
| | Adjustment Range | 25-80 psi (1.7 - 5.5 bar) | 25-80 psi (1.7 - 5.5 bar) |
| Operating Conditions (A) | Temperature (at 230 VAC input) | -13 °F to 125 °F (-25 °C to 50 °C) | -13 °F to 125 °F (-25 °C to 50 °C) |
| | Relative Humidity | 0-100%, condensing | 0-100%, condensing |
| Controller Size (B) (approximate) | Outer Dimensions | 17-1/2" x 16-3/8" x 11-3/8" (44.45 x 41.59 x 28.89 cm) | 17-1/2" x 16-3/8" x 11-3/8" (44.45 x 41.59 x 28.89 cm) |
| | Weight | 24.14 lbs (10.95 kg) | 28.32 lbs (12.84 kg) |
| For Use With (C) | Pump (60 Hz) | 0.5 hp (0.37 kW) pump with 214505-Series motor 0.75 hp (0.55 kW) pump with 214507-Series motor 1.0 hp (0.75 kW) pump with 214508-Series motor | 1.5 hp (1.1 kW) pump with 224300-Series motor 2.0 hp (1.5 kW) pump with 224301-Series motor |
| | FE Motor | 214505-Series (0.5 hp, 0.37 kW) single-phase, 3-wire 214507-Series (0.75 hp, 0.55 kW) single-phase, 3-wire (default) 214508-Series (1.0 hp, 0.75 kW) single-phase, 3-wire | 224300-Series (1.5 hp, 1.1 kW) single-phase, 3-wire (default) 224301-Series (2.0 hp, 1.5 kW) single-phase, 3-wire |

NOTES: Refer to Franklin Electric's SubDrive/MonoDrive Installation Manual.
 (A) Operating temperature is specified at full output power when installed as described in Controller Location Selection.
 (B) Refer to detailed Mounting Dimensions.
 (C) If a pump other than the default rating is used, refer to Drive Configuration.
 * Refer to detailed Circuit Breaker and Wire Sizing charts.

VARIABLE FREQUENCY DRIVES - SUBDRIVE NEMA 4

SPECIFICATIONS

| Model No. | Indoor/Outdoor | SubDrive75 (NEMA 4) | SubDrive100 (NEMA 4) |
|-----------------------------------|--------------------------------|---|---|
| | | Model 5870203384 | Model 5870204104 |
| Input from Power Source | Voltage | 190-260 VAC | 190-260 VAC |
| | Phase In | Single-phase | Single-phase |
| | Frequency | 60/50 Hz | 60/50 Hz |
| | Current (max) | 19 Amps (RMS) | 19 Amps (RMS) |
| | Power Factor | 1.0 (constant) | 1.0 (constant) |
| | Power (idle) | 65 Watts | 65 Watts |
| | Power (max) | 3800 Watts | 3800 Watts |
| | Wire Gauge Size(s) | Consult Federal, State, and Local codes for branch circuit installations | |
| Output to Motor | Voltage | Adjusts with Frequency | |
| | Phase Out | Three-phase (3-wire) | |
| | Frequency Range | 30-80 Hz (1 hp, 0.75 kW) pump 30-70 Hz (1.5 hp, 1.1 kW) pump 30-60 Hz (2 hp, 1.5 kW) pump | 30-80 Hz (1 hp, 0.75 kW) pump 30-70 Hz (1.5 hp, 1.1 kW) pump 30-60 Hz (2 hp, 1.5 kW) pump |
| | Current (max) | 8.1 Amps (RMS, each phase) | |
| | Wire Gauge Size(s) | #6 - #18* ga. | |
| Pressure Setting | Factory Preset | 50 psi (3.4 bar) | 50 psi (3.4 bar) |
| | Adjustment Range | 25-80 psi (1.7 - 5.5 bar) | 25-80 psi (1.7 - 5.5 bar) |
| Operating Conditions (A) | Temperature (at 230 VAC input) | -13 °F to 125 °F (-25 °C to 50 °C) | |
| | Relative Humidity | 0-100%, condensing | |
| Controller Size (B) (approximate) | Outer Dimensions | 17-1/2" x 16-3/8" x 11-3/8" (44.45 x 41.59 x 28.89 cm) | |
| | Weight | 28.32 lbs (12.84 kg) | |
| For Use With (C) | Pump (60 Hz) | 3/4 hp (0.55 kW) [default] 1.0 hp (0.75 kW) 1.5 hp (1.1 kW) | 1 hp (0.75 kW) [default] 1.5 hp (1.1 kW) 2 hp (1.5 kW) |
| | FE Motor | 234514-Series (1.5 hp, 1.1 kW) | |

| Model No. | Indoor/Outdoor | SubDrive150 (NEMA 4) | SubDrive300 (NEMA 4) |
|-----------------------------------|--------------------------------|--|--|
| | | Model 5870204154 | Model 5870206300 |
| Input from Power Source | Voltage | 190-260 VAC | 220-260 VAC |
| | Phase In | Single-phase | Single-phase |
| | Frequency | 60/50 Hz | 60/50 Hz |
| | Current (max) | 23 Amps (RMS) | 36 Amps (RMS) |
| | Power Factor | 1.0 (constant) | 1.0 (constant) |
| | Power (idle) | 65 Watts | 65 Watts |
| | Power (max) | 4600 Watts | 7200 Watts |
| | Wire Gauge Size(s) | Consult Federal, State, and Local codes for branch circuit installations | |
| Output to Motor | Voltage | Adjusts with Frequency | |
| | Phase Out | Three-phase (3-wire) | |
| | Frequency Range | 30-80 Hz (1.5 hp, 1.1 kW) pump 30-70 Hz (2 hp, 1.5 kW) pump 30-60 Hz (3 hp, 2.2 kW) pump | 30-80 Hz (3 hp, 2.2 kW) pump 30-70 Hz (5 hp, 3.7 kW) pump |
| | Current (max) | 10.9 Amps (RMS, each phase) | |
| | Wire Gauge Size(s) | #6 - #18* ga. | |
| Pressure Setting | Factory preset | 50 psi (3.4 bar) | 50 psi (3.4 bar) |
| | Adjustment Range | 25-80 psi (1.7 - 5.5 bar) | 25-80 psi (1.7 - 5.5 bar) |
| Operating Conditions (A) | Temperature (at 230 VAC input) | -13 °F to 125 °F (-25 °C to 50 °C) | |
| | Relative Humidity | 0-100%, condensing | |
| Controller Size (B) (approximate) | Outer Dimensions | 17-1/2" x 16-3/8" x 11-3/8" (44.45 x 41.59 x 28.89 cm) | 19-7/8" x 17-1/2" x 14-1/4" (50.48 x 44.45 x 36.20 cm) |
| | Weight | 28.32 lbs (12.84 kg) | 35.15 lbs (15.94 kg) |
| For Use With (C) | Pump (60 Hz) | 1.5 hp (1.1 kW) [default] 2 hp (1.5 kW) 3 hp (2.2 kW) | 3 hp (2.2 kW) [default] 5 hp (3.7 kW) |
| | FE Motor | 234316-Series (3 hp, 2.2 kW) | |

NOTES: Refer to Franklin Electric's SubDrive/MonoDrive Installation Manual.

(A) Operating temperature is specified at full output power when installed as described in Controller Location Selection.

(B) Refer to detailed Mounting Dimensions.

(C) If a pump other than the default rating is used, refer to Drive Configuration.

* Refer to detailed Circuit Breaker and Wire Sizing charts.

VARIABLE FREQUENCY DRIVES - SUBDRIVE CONNECT PLUS

Franklin Electric's SubDrive Connect Plus™ Variable Frequency Drives are engineered to provide a simple, powerful constant pressure solution for water pumping systems in an array of submersible and above ground applications that utilize three-phase motors up to 30 horsepower (hp). Enhanced with advanced connectivity, they enable real-time local monitoring, quick setup and streamlined troubleshooting through the FE Connect mobile app.

FEATURES & BENEFITS

■ **Designed for Water Systems, Optimized for Constant Pressure:** Designed specifically for water pumping applications, SubDrive Connect Plus delivers unique features:

- Provides consistent water pressure across a system, eliminating fluctuations
- Dual set point and adjustable drawdown for exact pressure control
- Soft start maximizes system life
- Run/stop and hand/auto control

Additional built-in protections include:

- Pipe fill mode to reduce water hammer
- Underload (Dry-run) with customizable sensitivity and off time
- Overload / Locked pump
- Broken pipe detection
- Output short circuit and open circuit
- Undervoltage
- Electrical surge
- Overheated controller
- Moisture sensor input
- Run and fault relays

■ **Simple Installation, Made Easier Through Connectivity:** The easy-to-install platform uses an array of setup, local monitoring, and assisted troubleshooting solutions to help you save time during installation and servicing:

- LCD display provides immediate feedback and read-outs of pressure and system status
- No advanced programming is required with single-level menu and DIP switches for basic drive configuration
- Integrated connectivity and compatibility with our FE Connect mobile app for real-time data and monitoring; access to advanced features such as motor frequency range, lead/lag alternation, broken pipe detection, and fault log retrieval

■ **Versatility for Multiple Applications:**

- Ideal for new construction or retrofitting and optimizing submersible and surface systems up to 30 horsepower, including projects powered by MagForce High Efficiency Motors
- Built-in lead/lag and alternation capability for up to 8 drives
- Phase conversion allows for single-phase or 3-phase input in 230 V models
- Comes standard with various input/output (I/O) connections or terminals for streamlined compatibility with adjacent systems

■ **Smaller Footprint, Smarter Use of Space:**

- Compact design, that is ideal for wall-mounting, provides a cost-effective solution when compared to high-horsepower systems that use starters or VFD panel packages
- Can be used indoors or outside since the self-contained NEMA 3R-rated drive provides a degree of protection against falling rain or sleet

■ **Fully Supported:** Comes fully supported by the industry-leading technical support professionals and field service engineers



 **Compatible with MagForce High Efficiency Motors**

VARIABLE FREQUENCY DRIVES - SUBDRIVE CONNECT PLUS

ORDERING INFORMATION

| SubDrive Connect Plus - Variable Frequency Drive (VFD) | | | | | |
|--|-------------------|---------------------|-------------------|---------------------|-----------------------|
| Rated Voltage | 1-Phase Input | | 3-Phase Input | | Model No. / Order No. |
| | Rated Output (HP) | Rated Output (Amps) | Rated Output (HP) | Rated Output (Amps) | |
| 230 | 3 | 11 | 7.5 | 28 | SDCP-SUB0723 |
| | 5 | 18 | 10 | 37 | SDCP-SUB1023 |
| | 7.5 | 27 | 15 | 48 | SDCP-SUB1523 |
| 460 | - | - | 10 | 18 | SDCP-SUB1043 |
| | - | - | 15 | 26 | SDCP-SUB1543 |
| | - | - | 20 | 31 | SDCP-SUB2043 |
| | - | - | 25 | 39 | SDCP-SUB2543 |
| | - | - | 30 | 46 | SDCP-SUB3043 |
| | - | - | - | - | - |

SPECIFICATIONS

| Model No. | Indoor/Outdoor | SubDrive Connect Plus (NEMA 3R) | |
|-----------------------------------|--|---|--|
| | | Model SDCP-XXXXXXX | |
| Input from Power Source | Voltage | 208/230 ± 10% VAC or 460 ± 10% VAC, depending on model | |
| | Phase In | Single-Phase or Three-Phase (208/230 VAC) or Three-Phase (460 VAC), depending on model | |
| | Frequency | 60 Hz | |
| | Current (max) | Model dependent, refer to "Input Wire Sizing" on Owner's Manual | |
| | Power Factor | - 0.75 | |
| | Power (idle) | 230V Frame 2/Frame 3: 25W 460V Frame 2/Frame 3: 32W | |
| | Power (max) | Model dependent, refer to "Input Wire Sizing" on Owner's Manual | |
| Output to Motor | Wire Gauge Size(s) | Refer to "Input Wire Sizing" on Owner's Manual | |
| | Voltage | 208/230VAC or 460VAC depending on model | |
| | Phase Out | Three-Phase | |
| | Frequency Range | 30-60 Hz: Submersible Pump (Three-Phase) | |
| | | 15-60 Hz: Centrifugal Pump (Three-Phase) | |
| Current (max) | 60-120 Hz: MagForce High Efficiency Submersible Motors (Three-Phase) | | |
| Wire Gauge Size(s) | Model-dependent, refer to "Applications" on Owner's Manual | | |
| Pressure Setting | Factory Preset | Refer to "Centrifugal Pump Motors" on Owner's Manual | |
| | Transducer Range | 0 PSI for Setpoint 1 and Setpoint 2 Transducer: 0 to 5PSI below Transducer maximum. The programmed drive Transducer range is selectable from 100 to 300 PSI in 10 PSI increments. | |
| Operating Conditions (A) | Temperature | -13 °F to 104 °F (-25 °C to 40 °C) | |
| | Relative Humidity | 20-95%, non-condensing | |
| | Environment | Pollution Degree 2 | |
| Controller Size (B) (approximate) | Outer Dimensions | Frame 2: 10.7" x 9.4" x 27.2" Frame 3: 13.8" x 9.9" x 34.3" | |
| | Weight | Refer to Owner's Manual | |
| Storage | Temperature | -13 °F to 149 °F (-25 °C to 65 °C) | |
| | Shelf Life | 1.5 Years | |

* Operating temperature is specified at full output power when installed as recommended. Refer to "Over Temperature Foldback" on Owner's Manual.

** Shelf life can be extended for one year by powering the drive for 60 minutes with no load.



VARIABLE FREQUENCY DRIVES - FE CONNECT MOBILE APP



Service Franklin Electric products in more ways with FE Connect. Using intuitive setup features as well as real-time logs and monitoring, FE Connect delivers comprehensive insight and support that enhances the way you service Franklin Electric product equipped with wireless connectivity.

You get convenient access to all compatible Franklin Electric products in a single tool – now and in the future. Plus, FE Connect helps you save time and enhances safety during installation and service with an array of startup, monitoring and troubleshooting solutions that minimize hands-on interaction with the drive or protection device. It's one more way Franklin Electric is supporting professionals so you can get on to the next job faster.

■ Robust Interface Helps Professionals Quickly Service More Jobs

- Intuitive setup pairs quickly with compatible drives and protections
- Save connected devices and manage locations to quickly reconnect
- Create and manage templates to easily save and load configurations from one installation to the next
- Access over-the-air firmware updates for effortless upgrades

■ Discover a Streamlined Setup & Support Experience

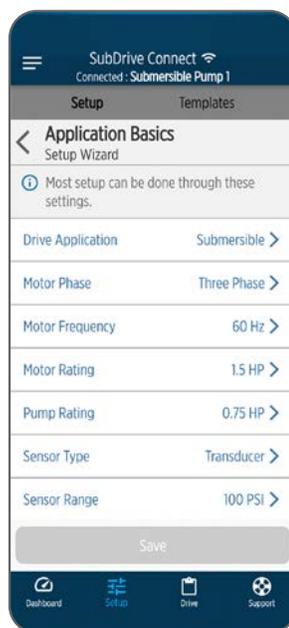
- In-app guidance leads you through startups
- Get real-time product status
- Conveniently collect auto-generated commissioning reports and time-stamped logs
- In-app support troubleshoots potential issues and recommends corrective actions – no internet connection required

■ Service Compatible Franklin Electric Products in One Place

- SubDrive Connect
- SubDrive Connect Plus



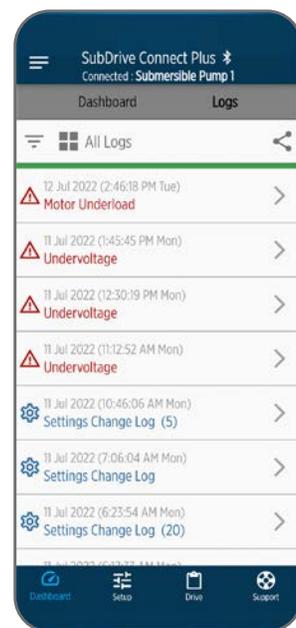
Access local monitoring



Discover the intuitive setup



Quickly service more jobs



Unlock full-view logs and reporting

VARIABLE FREQUENCY DRIVES - ACCESSORIES

ACCESSORIES

| Accessories | Detail | Used With | Part No. |
|--|---|---|------------------------|
| Air Screen Kit | Helps prevent insects from entering and damaging the internal components of the drive | SubDrive20/30 Connect and MonoDrive/ MonoDriveXT Connect (date code 18A and older) | 226550901 |
| | | SubDrive50 Connect (date code 18A and older) | 226550902 |
| | | SubDrive/MonoDrive Utility | 226115920 |
| | Replacement Kit: For the included standard kit with SubDrive/MonoDrive Connect models built February 2018 and after | SubDrive20/30/50 Connect and MonoDrive/ MonoDriveXT Connect (date code 18B & newer) | 575214902 |
| Analog Pressure Transducer | 4-20mA analog pressure transducer (includes 10 ft cable) | All Connect and Utility Models - 100 PSI | 226905902 |
| | | All Connect and Utility Models - 150 PSI | 226905903 |
| | | All Connect and Utility Models - 200 PSI | 226905904 |
| | Cable Kit: Outdoor rated cable to connect analog pressure transducer to the drive | All Connect and Utility models - 10 ft | 226910901 |
| | | All Connect and Utility models - 25 ft | 226910902 |
| | | All Connect and Utility models - 50 ft | 226910903 |
| | | All Connect and Utility models - 100 ft | 226910904 |
| | | All Connect and Utility models - 150 ft | 226910905 |
| | | All Connect and Utility models - 200 ft | 226910906 |
| Conduit Plate Kit | Blank Kit: Replacement blank conduit plate without knockouts. May be used to customize conduit hole size and location. | All SubDrive Connect Plus Frame 2 units with model numbers ending in -0723, -1023, -1043, -1543, -2043 | 224759908 |
| | | All SubDrive Connect Plus Frame 3 units with model numbers ending in -1523, -2543, and -3043 | 224759909 |
| | Replacement Kit: Conduit plate with knockouts. Contains the same knockout sizes and locations as the standard conduit plate preinstalled on the drive. | All SubDrive Connect Plus Frame 2 units with model numbers ending in -0723, -1023, -1043, -1543, -2043 | 224759906 |
| | | All SubDrive Connect Plus Frame 3 units with model numbers ending with -1523, -2543, and -3043 | 224759907 |
| Conduit Grounding Kit | Provides a means to ground metal conduit when used in with a nonmetallic enclosure | SubDrive/MonoDrive Utility - 1/2" SubDrive/MonoDrive Utility - 3/4" | 224471901 224471902 |
| Control Board Replacement Kit | Replacement control board for drives with a damaged display, buttons, or terminal blocks. | All SD Connect Plus models | 224759901 |
| Duplex Alternator | Allows a water system to alternate between two parallel pumps controlled by separate drives. Must use pressure sensor; not compatible with analog pressure transducer. | All Models | 5850012000 |
| Duplex Alternator Cable Kit | Communication cable kit required to use built-in Duplex Alternator function in drives equipped with this feature | All Connect models - 10 ft | 226895901 |
| | | All Connect models - 50 ft | 226895902 |
| | | All Connect models - 100 ft | 226895903 |
| Enhanced Display Board | Replacement Kit: For drives with damaged display, battery holder, or Duplex Alternator communication issue | All Connect models | 226540912 |
| Enhanced Pressure Input Board | Replacement Kit: Board for drives that have experienced a surge on the control inputs | All Connect models | 226540902 |
| Filter | Input: Filter used on the input side of the drive to help eliminate interference | All models | 225198901 |
| | Input AMR: Filter used on the input side of the drive to help eliminate interference with automated meter reading systems. | All models (excluding SubDrive30/50, SubDrive150, and SubDrive300) | 226030901 |
| | Input IGF: Filter used in the input side of the drive to help eliminate interference on the ground wire | All models | 226035901 |
| | Output: Filter used on the output side of the drive to help eliminate interference | All Models (excluding SubDrive300) | 225300901 |
| | Surge Capacitor (3-lead): Capacitor used on the service panel to help eliminate interference | All Models | 225199901 |
| | Surge Capacitor (4-lead): Capacitor used on the service panel to help eliminate interference. Additional ground lead suitable for subpanel installation and effective against LED lighting interference. | All Models | 225199902 |
| System: Dedicated filter box for SubDrive/MonoDrive Utility systems to help eliminate electrical interference | SubDrive/MonoDrive Utility | 226115912 | |
| Heatsink Cover Kit | Assists in preventing critters from entering and blocking the fan area | All NEMA 4 models (excluding SubDrive300) | 225805901 |
| Fan Replacement Kit | Replacement Fan | SubDrive50 Connect SubDrive/MonoDrive Utility | 226545903 226115915 |
| | Replacement fan (date code prior to 08K) | SubDrive75 and MonoDrive NEMA 3R | 225635907 |
| | Replacement fan (date code 14L and after) | MonoDrive Connect and NEMA 3R | 226545901 |
| | Replacement fan (date code 14L and after) | SubDrive20/30, MonoDriveXT Connect and NEMA 3R | 226545902 |
| NEMA 4 Cooling Fan Replacement Kit | Replacement External fan | SubDrive75 and MonoDrive NEMA 4 SubDrive100/150 and MonoDriveXT NEMA 4 | 225635901 225635902 |
| | Replacement External fan (includes 2 fans) | SubDrive300 | 225635903 |
| | Replacement Internal Stirring fan | All NEMA 4 models | 225635904 |



VARIABLE FREQUENCY DRIVES - ACCESSORIES

ACCESSORIES

| Accessories | Detail | Used With | Part No. |
|-------------------------------------|--|--|-----------|
| SD Connect Plus Fan Replacement Kit | Internal: Contains replacement fans for both the internal stirring fan and output filter cooling fan | All SubDrive Connect Plus Frame 2 units with model numbers ending in -0723, -1023, -1043, -1543, -2043 | 224759902 |
| | External: Contains two replacement external cooling fans | | 224759904 |
| | Internal: Contains replacement fans for both the internal stirring fan and output filter cooling fan | All SubDrive Connect Plus Frame 3 units with model numbers ending in -1523, -2543, and -3043 | 224759903 |
| | External: Contains two replacement external cooling fans | | 224759905 |
| Lightning Arrestor | Provides additional surge suppression on the single-phase input power side of the drive | All models | 150814902 |
| Low Voltage Kit | Make adjustments to the input voltage of the SubDrive300 in low voltage applications | SubDrive300 | 225950901 |
| Moisture Sensor Kit | External sensor device that shuts down the drive when water is detected | All Connect and Connect Plus models | 226770901 |
| Multidrive Cable Kit | Communication cable kit required to use the built-in MultiDrive function | SubDrive Connect Plus - 10 ft | 226895901 |
| | | SubDrive Connect Plus - 50 ft | 226895902 |
| | | SubDrive Connect Plus - 100 ft | 226895903 |
| NEMA 4 Auxiliary Relay Board | Offers Run-Indication Relay (date code 09J and after) | All NEMA 4 models (excluding SubDrive300) | 225755901 |
| NEMA 4 Option Card | Offers Run-Indication Relay and Underload Extended Off-Time Adjustment (date code 09J and after) | All NEMA 4 models (excluding SubDrive300) | 225880901 |
| Pressure Sensor | High Pressure: 75-150 PSI, NSF Rated; adjusts pressure in the water system from 75-150 PSI (2-leaded 10 ft cable included) | All Models | 225970901 |
| | Standard Pressure: 25-80 PSI, NSF Rated; adjusts pressure in the water system from 25-80 PSI (2-leaded 10 ft cable included) | All Models | 226941901 |
| | High Pressure Shut-Off Kit: Includes pressure sensor (25-80 PSI), high pressure shut-off sensor (100 PSI), and 4-leaded 10 ft cable | SubDrive300 | 225495901 |
| Sensor Cable Kit | Outdoor: 100 feet of 22 AWG cable (2-leaded) | All models (excluding SubDrive300) | 223995902 |
| | Indoor: 100 feet of 22 AWG cable (4-leaded) | SubDrive300 | 225495902 |
| | Direct Burial Cable: Designed to run in an underground trench without conduit | All models - 10 ft (3 m) | 225800901 |
| | | All models - 30 ft (9 m) | 225800902 |
| Tank Drawdown Kit | Allows the use of water stored in the during low flow demands | All models - 100 ft (30 m) | 225800903 |
| | | SubDrive20/30/50 and MonoDrive/MonoDriveXT Connect, and SubDrive300 | 225770901 |
| | | SubDrive75/100/150 and MonoDrive/MonoDriveXT NEMA 4 (requires Auxiliary Relay Board or NEMA 4 Option Card kit) | 225770901 |

*N1 = NEMA 1 (Indoors), N3R = NEMA 3R (Indoor/Outdoor), N4 = NEMA 4 (Outdoor)

PUMPTEC

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, as well as shut down the pump to prevent damage, the Pumptec family of products protect your water system investment. QD Pumptec, 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.

PUMPTEC FAMILY COMPARISON

| | 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

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.

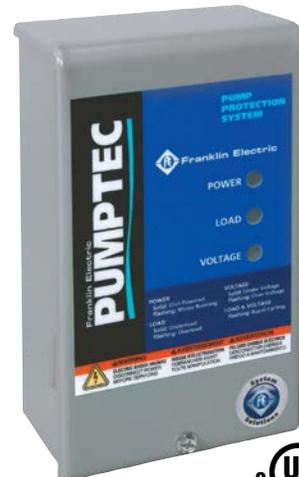


PUMPTEC

For 2- & 3-wire single-phase motors of 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

PUMPTEC-PLUS

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



SPECIFICATIONS & ORDERING INFORMATION

| | 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% |

