

# SubDrive

## CONSTANT PRESSURE CONTROLLERS

SUBDRIVE AND MONODRIVE

Franklin Electric's SubDrive and MonoDrive constant pressure controllers provide constant pressure by continually adjusting the speed of the pump to match water demand. Instead of draining and filling a large tank, a SubDrive system pumps more or less water as you need it. Finally, you'll be able to run the dishwasher, do laundry, and water the lawn - all at the same time!





## DESCRIPTION

### Benefits

- Constant water pressure with a wide range of settings (25 to 80 psi)
- Single-phase input power
- FE Connect Smartphone app for advanced settings and monitoring (NEMA 3R only excluding SD2W)
- User-configurable motor frequency range (NEMA 3R only excluding SD2W)
- Easy installation
- Soft-start feature prevents water hammer and increases motor life
- Works with small pressure tanks or existing larger tanks
- Advanced filtering to remove radio frequency interference
- UL and cUL listed
- Built-in diagnostics and protection
  - Surge Protection
  - Underload
  - Undervoltage
  - Locked pump
  - Open circuit
  - Short circuit
  - Overheated controller
  - Broken pipe detection (NEMA 3R only excluding SD2W)
  - User-configurable underload off time (NEMA 3R only excluding SD2W)

### Applications

- Residential homes
- Restaurants
- Farms
- Schools
- Car washes
- Landscape irrigation systems

### MonoDrive Models

MonoDrive and MonoDriveXT are designed to convert a conventional ½ hp to 2 hp pump system to a variable speed constant pressure system by simply replacing the 3-wire control box and pressure switch.

- Single-phase input, 3-wire motor control
- Plug & play
- ½ hp to 2 hp performance
- Easily replaceable fan kit
- Easy to install
- UL and cUL listed
- NEMA 3R and NEMA 4 enclosure options (indoor/outdoor)

### SubDrive 3-Phase Models

SubDrive15, SubDrive20, SubDrive30, SubDrive75, SubDrive100, SubDrive150, and SubDrive300 are designed for three-phase motors to provide constant pressure with three-phase performance using single-phase input power.

- Single-phase input, three-phase motor control
- Plug & play
- ¾ hp to 5 hp performance
- Smooth running
- Easy to install
- Easily replaceable fan kit
- High starting torque
- UL and cUL listed
- NEMA 3R and NEMA 4 enclosure options (indoor/outdoor)

### SubDrive2W

SubDrive2W is designed to convert a conventional ½ hp, ¾ hp, and 1 hp pump system to a variable speed constant pressure system by simply replacing the pressure switch. Maximum pump output using the SD2W is similar to the performance achieved using a conventional pressure switch. Therefore, the pump selection criteria are the same as if a pressure switch were used. (Refer to the pump manufacturer's literature for details of the pump selection procedure.)

- Single-phase input, 2-wire motor control
- Plug & play
- ½ hp, ¾ hp, or 1 hp performance
- Easily replaceable air filter kit
- Easy retrofit installation
- Easily replaceable fan kit
- NEMA 3R rated enclosure
- UL and cUL listed

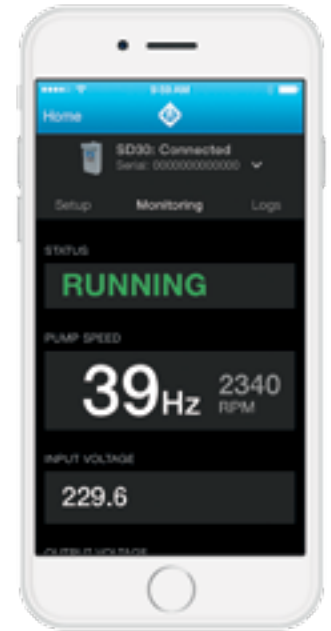
## FE CONNECT MOBILE APP

### SubDrive/MonoDrive NEMA 3R Models

Wi-Fi connectivity is included in the drive to enable a connection to be made between the drive and a single mobile device (smartphone and tablet). This connection can be used to monitor drive characteristics; adjust advanced settings; and view and email fault history and configuration changes.

### Connecting to Wi-Fi

- Cycle power – Wi-Fi radio can only be connected within the first 15 minutes of power up.
- The FE Connect light will illuminate solid to indicate that a connection is available.
- Open the Wi-Fi connection settings on the mobile device you wish to use to connect to the drive.
- Select the “FECNCT\_XXXX” hotspot, where “XXXX” is the ending portion of the serial number of the drive being connected to.
- The FE Connect light on the drive will flash to indicate that a connection is being made.
  - Only one (1) mobile device can be connected to a drive at any given time.
- After making a successful connection, launch the FE Connect App on your mobile device.
  - App can be downloaded from the Apple App Store or Google Play depending on the device being used.
- This connection will stay active until the connection is broken or device is out of range.
- Connection can be re-established for up to one hour following a disconnection.



### Monitoring

This page allows for real-time monitoring of the system including:

- System Status
- Output Current
- Motor Speed
- Input Voltage
- System Information (Drive Model, Hardware Version, Software Version)

### Setup

The Setup page allows for the setup of additional features of the drive including:

- Drive Output\*
- Minimum Frequency
- Aggressive Bump
- Motor Size\*
- Maximum Frequency
- Broken Pipe Detection
- Pump Size\*
- Bump Mode
- Steady Flow\*
- Underload Sensitivity\*
- Tank Size Mode
- Units (hp or kW)
- Underload Off Time

\* In order to change and use app settings for the Drive Output, Motor Size, Pump Size, Underload Sensitivity, and Steady Flow, the FE Connect DIP switch (SW1, Position 1) on the drive must be on (up). Otherwise, the drive will default to the settings made via the DIP switches and Underload Sensitivity rotary knob on the drive itself.

### Logs

This page allows for viewing and emailing Fault History and Configuration Changes.

- View drive power up time
- View motor run time
- View and email up to 500 Fault History events
- View and email Configuration Changes

## ENCLOSURE OPTIONS

### ■ NEMA 3R:

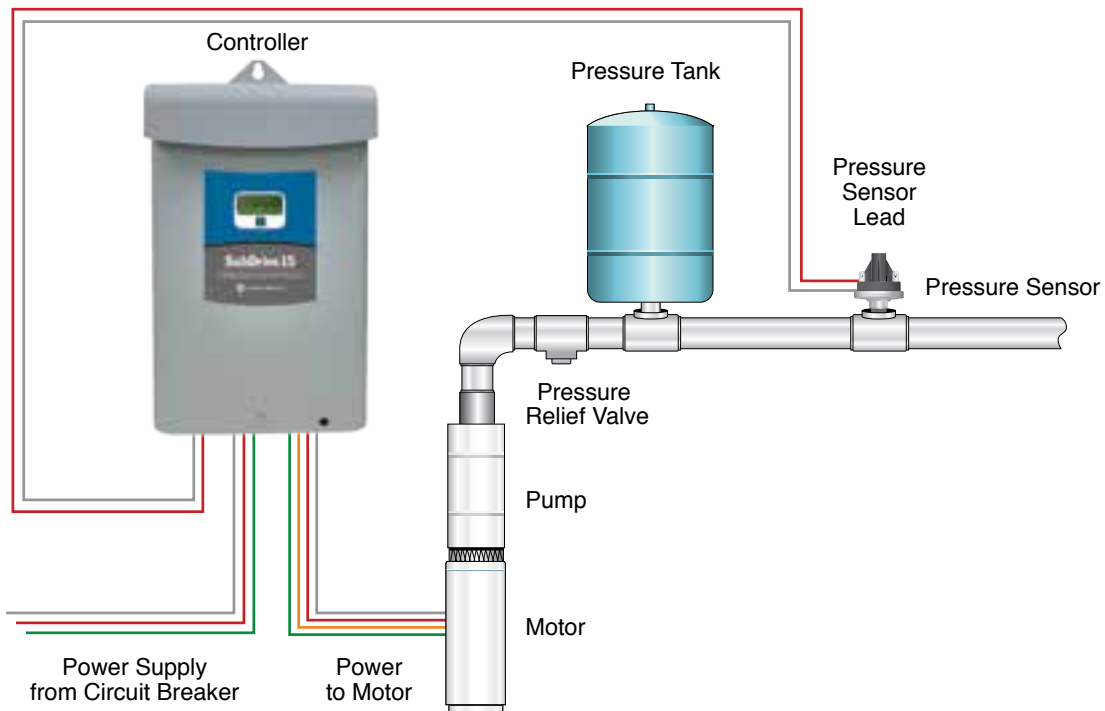
The NEMA 3R enclosure is rated for indoor and outdoor use. It provides a degree of protection against falling rain and sleet.

### ■ NEMA 4:

The NEMA 4 weatherproof enclosure is designed for both indoor and outdoor use and offers robust protection against harsh environmental conditions.



## CONSTANT PRESSURE SYSTEM



## SPECIFICATIONS

		MONODRIVE (NEMA 3R)	MONODRIVE (NEMA 4)
Model No.	Indoor/Outdoor	Model 5870205003	Model 5870203114
Input from Power Source	Voltage	208/230 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	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
	Power Factor	~ 0.95	1.0 (constant)
	Power (idle)	4 Watts	35 Watts
	Power (max)	2.5 kW	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
	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	Adjusts with Frequency	Adjusts with Frequency
	Phase Out	Single-phase (3-wire)	Single-phase (3-wire)
	Frequency Range	30-63 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: 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
	Wire Gauge Size(s)	#6 - #14 * 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 <sup>(A)</sup>	Temperature (at 230 VAC input)	-13 °F to 122 °F (-25 °C to 50 °C)	-13 °F to 125 °F (-25 °C to 50 °C)
	Relative Humidity	20-95%, non-condensing	0-100%, condensing
Controller Size <sup>(B)</sup> (approximate)	Outer Dimensions Weight	9-3/4" x 16-3/4" x 5-1/4" (25 x 42.5 x 13 cm) 20 lbs (9 kg)	17-1/2" x 16-3/8" x 11-3/8" (44.45 x 41.59 x 28.89 cm) 24.14 lbs (10.95 kg)
For Use With <sup>(C)</sup>	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	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
	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 (1.0 hp, 0.75 kW) single-phase, 3-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 (default) 214508-series (1.0 hp, 0.75 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.

## SPECIFICATIONS

		MONODRIVEXT (NEMA 3R)	MONODRIVEXT (NEMA 4)
Model No.	Indoor/Outdoor	Model 5870205203	Model 5870204114
Input from Power Source	Voltage	208/230 VAC	190-260 VAC
	Phase In	Single-phase	Single-phase
	Frequency	60/50 Hz	60/50 Hz
	Current (max)	13 Amps (RMS) 1.5 hp, 1.1 kW system 16 Amps (RMS) 2 hp, 1.5 kW system	13 Amps (RMS) 1.5 hp, 1.1 kW system 16 Amps (RMS) 2 hp, 1.5 kW system
	Power Factor	~ 0.95	1.0 (constant)
	Power (idle)	5 Watts	65 Watts
	Power (max)	4.2 kW	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	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	30-63 Hz	30-60 Hz
	Current (max)	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	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 - #14 * 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 and 5.5 bar)	25-80 psi (1.7 - 5.5 bar)
Operating Conditions <sup>(A)</sup>	Temperature (at 230 VAC input)	-13 °F to 122 °F (-25 °C to 50 °C)	-13 °F to 125 °F (-25 °C to 50 °C)
	Relative Humidity	20-95%, non-condensing	0-100%, condensing
Controller Size <sup>(B)</sup> (approximate)	Outer Dimensions	9-3/4" x 19-3/4" x 5-1/4"	17-1/2" x 16-3/8" x 11-3/8"
	Weight	(25 x 50 x 13 cm) 26 lbs (11.8 kg)	(44.45 x 41.59 x 28.89 cm) 28.32 lbs (12.84 kg)
For Use With <sup>(C)</sup>	Pump (60 Hz)	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	1.0 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	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	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.

## SPECIFICATIONS

		SubDrive15 (NEMA 3R) <sup>(D)</sup>	SubDrive20 (NEMA 3R) <sup>(D)</sup>
Model No.	Indoor/Outdoor	Model 5870205103	Model 5870205303
Input from Power Source	Voltage	208/230 VAC	208/230 VAC
	Phase In	Single-phase	Single-phase
	Frequency	60/50 Hz	60/50 Hz
	Current (max)	12 Amps	19 Amps
	Power Factor	- 0.95	- 0.95
	Power (idle)	4 Watts	5 Watts
	Power (max)	2.5 kW	4.2 kW
	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	Adjusts with Frequency	Adjusts with Frequency
	Phase Out	Single-phase (3-wire) OR Three-phase	Single-phase (3-wire) OR Three-phase
	Frequency Range	30-77 Hz (3/4 hp, 0.55 kW) pump 30-72 Hz (1 hp, 0.75 kW) pump 30-60 Hz (1.5 hp, 1.1 kW) pump 30-63 Hz (Single-phase Motors)	30-78 Hz (1hp, 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)
	Current (max)	5.9 A / phase	8.1 A / phase
	Wire Gauge Size(s)	#6 - #14 * ga.	#6 - #14 * 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 <sup>(A)</sup>	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)
	Relative Humidity (NEMA 3R)	20-95%, non-condensing	20-95%, non-condensing
Controller Size <sup>(B)</sup> (approximate)	Outer Dimensions	9-3/4" x 19-3/4" x 5-1/4"	9-3/4" x 19-3/4" x 5-1/4"
	Weight	(25 x 50 x 13 cm) 26 lbs (11.8 kg)	(25 x 50 x 13 cm) 26 lbs (11.8 kg)
For Use With <sup>(C)</sup>	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 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) 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 0.75 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
	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 (1.0 hp, 0.75 kW) single-phase, 3-wire 234514-series (1.5 hp, 1.1 kW) three-phase	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 234514-series (1.5 hp, 1.1 kW) three-phase 234315-series (2.0 hp, 1.5 kW) 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.

(D) When operating a SubDrive as a MonoDrive, the MonoDrive NEMA 3R pump and motor specifications on Page 5 apply.

\* Refer to detailed Circuit Breaker and Wire Sizing charts.

## SPECIFICATIONS

		SubDrive30 (NEMA 3R) <sup>(D)</sup>	SubDrive75 (NEMA 4)
Model No.	Indoor/Outdoor	Model 5870205403	Model 5870203384
Input from Power Source	Voltage	208/230 VAC	190-260 VAC
	Phase In	Single-phase	Single-phase
	Frequency	60/50 Hz	60/50 Hz
	Current (max)	23 Amps	11 Amps (RMS)
	Power Factor	~ 0.95	1.0 (constant)
	Power (idle)	5 Watts	35 Watts
	Power (max)	4.2 kW	2400 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	Adjusts with Frequency	Adjusts with Frequency
	Phase Out	Single-phase (3-wire) OR Three-phase	Three-Phase (3-wire)
	Frequency Range	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)	30-80 Hz (3/4 hp, 0.55 kW) pump 30-70 Hz (1 hp, 0.75 kW) pump 30-60 Hz (1.5 hp, 1.1 kW) pump
	Current (max)	10.9 A / phase	5.9 Amps (RMS, each phase)
	Wire Gauge Size(s)	#6 - #14 * 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 and 5.5 bar)
Operating Conditions <sup>(A)</sup>	Temperature (at 230 VAC input)	-13 °F to 122 °F (-25 °C to 50 °C)	-13 °F to 125 °F (-25 °C to 50 °C)
	Relative Humidity	20-95%, non-condensing	0-100%, condensing
Controller Size <sup>(B)</sup> (approximate)	Outer Dimensions Weight	9-3/4" x 19-3/4" x 5-1/4" (25 x 50 x 13 cm) 26 lbs (11.8 kg)	17-1/2" x 16-3/8" x 11-3/8" (44.45 x 41.59 x 28.89 cm) 24.14 lbs (10.95 kg)
For Use With <sup>(C)</sup>	Pump (60 Hz)	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 0.75 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	3/4 hp (0.55 kW) [default] 1 hp (0.75 kW) 1.5 hp (1.1 kW)
	FE Motor	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 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	234514 - series (1.5 hp, 1.1 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.

(D) When operating a SubDrive as a MonoDrive, the MonoDrive NEMA 3R pump and motor specifications on Page 5 apply.

\* Refer to detailed Circuit Breaker and Wire Sizing charts.



## SPECIFICATIONS

		SubDrive100 (NEMA 4)	SubDrive150 (NEMA 4)
Model No.	Indoor/Outdoor	Model 5870204104	Model 5870204154
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)	23 Amps (RMS)
	Power Factor	1.0 (constant)	1.0 (constant)
	Power (idle)	65 Watts	65 Watts
	Power (max)	3800 Watts	4600 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	Adjusts with Frequency	Adjusts with Frequency
	Phase Out	Three-phase (3-wire)	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 (1.5 hp, 1.1 kW) pump 30-70 Hz (2 hp, 1.5 kW) pump 30-60 Hz (3 hp, 2.2 kW) pump
	Current (max)	8.1 Amps (RMS, each phase)	10.9 Amps (RMS, each phase)
	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 <sup>(A)</sup>	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 <sup>(B)</sup> (approximate)	Outer Dimensions Weight	17-1/2" x 16-3/8" x 11-3/8" (44.45 x 41.59 x 28.89 cm) 28.32 lbs (12.84 kg)	17-1/2" x 16-3/8" x 11-3/8" (44.45 x 41.59 x 28.89 cm) 28.32 lbs (12.84 kg)
For Use With <sup>(C)</sup>	Pump (60 Hz)	1 hp (0.75 kW) [default] 1.5 hp (1.1 kW) 2 hp (1.5 kW)	1.5 hp (1.1 kW) [default] 2 hp (1.5 kW) 3 hp (2.2 kW)
	FE Motor	234315 - series (2 hp, 1.5 kW)	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.

## SPECIFICATIONS

		SubDrive300 (NEMA 4)	SubDrive2W (NEMA 3R)
Model No.	Indoor/Outdoor	Model 5870206300	Model 5870203223
Input from Power Source	Voltage	220-260 VAC	207-260 VAC
	Phase In	Single-phase	Single-phase
	Frequency	60/50 Hz	60/50 Hz
	Current (max)	36 Amps (RMS)	14 Amps (RMS) (For circuit breaker sizing)
	Power Factor	1.0 (constant)	0.7 (approximate)
	Power (idle)	65 Watts	20 Watts
	Power (max)	7200 Watts	1900 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	Adjusts with Frequency	Adjusts with Frequency
	Phase Out	Three-phase (3-wire)	Single-phase (2-wire)
	Frequency Range	30-80 Hz (3 hp, 2.2 kW) pump 30-70 Hz (5 hp, 3.7 kW) pump	30-60 Hz
	Current (max)	17.8 Amps (RMS, each phase)	6 Amps (RMS) 1/2 hp, 0.37 kW system 8 Amps (RMS) 3/4 hp, 0.55 kW system 10.4 Amps (RMS) 1 hp, 0.75 kW system
	Wire Gauge Size(s)	#2 - #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 <sup>(A)</sup>	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	10-95%, non-condensing
Controller Size <sup>(B)</sup> (approximate)	Outer Dimensions Weight	19-7/8" x 17-1/2" x 14-1/4" (50.48 x 44.45 x 36.20 cm) 35.15 lbs (15.94 kg)	12-1/4" x 16-1/2" x 9" (31.1 x 41.9 x 22.9 cm) 15.0 lbs (6.80 kg)
For Use With <sup>(C)</sup>	Pump (60 Hz)	3 hp (2.2 kW) [default] 5 hp (3.7 kW)	1/2 hp pump/motor with 244505-series 3/4 hp pump/motor with 244507-series [default] 1 hp pump/motor with 244508-series
	FE Motor	234317-series (5 hp, 3.7 kW)	Not Available

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.

## ACCESSORIES

Accessories	Detail	Used with	Part Number
Air Screen Kit	Assists in preventing insects from entering and damaging the internal components of the drive	SD2W	225 835 901
Air Screen Kit	Assists in preventing insects from entering and damaging the internal components of the drive	All SubDrives and MonoDrives (excluding SD2W and SD300)	226 550 901
Duplex Alternator	Allows a water system to alternate between two parallel pumps controlled by separate SubDrives	All Models	585 001 2000
Filter (Input)	Filter used on the input side of drive to help eliminate interference	All Models	225 198 901
Filter (Output)	Filter used on the output side of the drive to help eliminate interference	All Models (excluding SD300)	225 300 901
Filter (System)	Filter used as a system filter on input and output of the drive to help eliminate interference	SD300	225 650 901
Filter (Surge Capacitors)	Capacitor used on the service panel to help eliminate power interference	All SubDrives and MonoDrives (excluding SD2W and SD300)	225 199 901
Heatsink Cover Kit	Assists in preventing critters from entering and blocking fan area	All NEMA 4 models (excluding SD300)	225 805 901
Lightning Arrestor	Single-phase (Input Power)	Single-phase (Input Power)	150 814 902
Low Voltage Kit	Used to make adjustments to the voltage of the SubDrive	SD300	225 950 901
NEMA 1 Fan Replacement Kit	Replacement fan (with Date Code prior to 08L)	SD75 and MD	225 635 905
NEMA 1 Fan Replacement Kit	Replacement fan (with Date Code 08L and after)	SD75 and MD	225 635 908
NEMA 1 Fan Replacement Kit	Replacement fan (with Date Code prior to 08K)	SD100, SD150, and MDXT	225 635 907
NEMA 1 Fan Replacement Kit	Replacement fan (with Date Code 08K and after)	SD100, SD150, and MDXT	225 635 909
NEMA 3R Fan Replacement Kit	Replacement fan (with Date Code prior to 08K)	SD75 and MD	225 635 907
NEMA 3R Fan Replacement Kit	Replacement fan	SD2W	225 635 910
NEMA 3R Fan Replacement Kit	Replacement fan (with Date Code 14L and after)	SD15 and MD	226 545 901
NEMA 3R Fan Replacement Kit	Replacement fan (with Date Code 14L and after)	SD20, SD30, and MDXT	226 545 902
NEMA 4 External Cooling Fan Replacement Kit	Replacement External fan (with Date Code prior to 14L)	SD75 and MD	225 635 901
NEMA 4 External Cooling Fan Replacement Kit	Replacement External fan (with Date Code prior to 14L)	SD100, SD150, and MDXT	225 635 902
NEMA 4 External Cooling Fan Replacement Kit	Replacement External fan (include 2 fans)	SD300	225 635 903
NEMA 4 Internal Stirring Fan Replacement Kit	Replacement Internal Stirring fan (with Date Code prior to 14L)	SD75, SD100, SD150, SD300, MD, MDXT	225 635 904
NEMA 4 Auxiliary Relay Board	Offers Run-Indication Relay (for Date Codes 09J through 14K)	All NEMA 4 models (excluding SD300)	225 755 901
NEMA 4 Option Card	Offers Run-Indication Relay and Underload Extended Off-Time (for Date Codes 09J through 14K)	All NEMA 4 models (excluding SD300)	225 880 901
Pressure Sensor (High: 75-150 psi, NSF 61 rated)	Adjusts pressure in the water system from 75-150 psi (2-leaded cable)	All Models	225 970 901
Pressure Sensor (Standard Replacement: 25-80 psi, NSF 61 rated)	Adjusts pressure in the water system from 25-80 psi (2-leaded cable)	All Models	223 995 901
Pressure Sensor / Pressure Shut-Off Switch Kit	Kit includes pressure sensor (25-80 psi, NSF 61 rated), pressure shut-off switch (100 psi) and 10 foot cable (4-leaded cable)	SD300	225 495 901
Pressure Sensor Input Board Replacement	Replacement board for drives that have experienced a surge on the pressure sensor input (with Date Codes 14L and after)	All Models	226 540 901
Sensor Cable Kit (indoor)	100 feet of 22 AWG cable (2-leaded cable)	All models excluding SD2W and SD300	223 995 902
Sensor Cable Kit (indoor)	100 feet of 22 AWG cable (4-leaded cable)	SD300	225 495 902
Sensor Direct Burial Cable	Designed to be run in a trench underground without the use of conduit to surround it (4-leaded cable)	All Models - 10 ft (3 m) All Models - 30 ft (9 m) All Models - 100 ft (30.5 m)	225 800 901 225 800 902 225 800 903
Tank Drawdown Kit	Allows the use of water stored in the tank during low flow demands	MDN3R, MDXTN3R, SD15, SD20, SD30, SD2W, and SD300	225 770 901
Tank Drawdown Kit	Allows the use of water stored in the tank during low flow demands (with Date Codes prior to 14L)	SD75N4, SD100N4, SD150N4, MDN4, and MDXTN4 (requires Auxiliary Relay Board or NEMA 4 Option Card)	225 770 901

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

