

Constant Pressure Controllers



Applications

Franklin Electric's constant pressure controllers use state-of-the-art technology to provide constant water pressure through variable speed control of submersible water well pumps.

Features—All Controllers

- Constant water pressure with a wide range of settings (25 to 80 psi)
- NEMA 4 (Outdoor) and NEMA 1 (Indoor) Enclosures
- Easy installation
- Soft start feature prevents water hammer and increases motor life
- Works with small pressure tanks or existing larger tanks
- Smart Reset® technology allows well recovery before restarting the pump
- Single-phase input power with three-phase motor performance (SubDrive models)
- Excellent radio frequency interference shielding
- UL and cUL listed
- Built-in Diagnostics and Protection
 - Surge protection
 - Underload
 - Undervoltage
 - Locked pump
 - Open circuit
 - Short circuit
 - Overheated controller

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Features — MonoDrive & MonoDriveXT

- Selectable hp rating: MonoDrive (½, ¾, and 1 hp), MonoDriveXT (1.5 and 2 hp)
- Easy installation – remove the 3-wire control box and install the MonoDrive
- Can retrofit existing systems – no need to pull the pump
- NEMA 4 & NEMA 1 enclosure
- Single-phase, 3-wire

Features — SubDrive75, SubDrive100, SubDrive150 & SubDrive300

- Works with a standard three-phase Franklin Electric submersible motor
- NEMA 4 & NEMA 1 enclosure
- Three-phase performance with single-phase input
 - High starting torque
 - More efficient
 - Smooth running

Constant Pressure Controls Specifications

		MonoDrive	MonoDriveXT	SubDrive75	SubDrive100	SubDrive150	SubDrive300
Model No. (Enclosure*)	(N1)	587 020 3110	587 020 4110	587 020 3380	587 020 4100	587 020 4150	N/A
	(N4)	587 020 3114	587 020 4114	587 020 3384	587 020 4104	587 020 4154	587 020 6300

Input (From Power Source)

Voltage	190-260 V 1-Phase	190-260 V 1-Phase	190-260 V 1-Phase	190-260 V 1-Phase	190-260 V 1-Phase	190-260 V 1-Phase
Frequency	60/50 Hz	60/50 Hz	60/50 Hz	60/50 Hz	60/50 Hz	60/50 Hz
Max Amps (RMS)	5.7 A (½ hp), 8.7 A (¾ hp), 11 A (1 hp)	13 A (1.5 hp), 16 A (2 hp)	11 A	19 A	23 A	36 A
Power Factor	1 (Constant)	1 (Constant)	1 (Constant)	1 (Constant)	1 (Constant)	1 (Constant)

Output (To Motor)

Voltage	Variable/1-Phase	Variable/1-Phase	Variable/3-Phase	Variable/3-Phase	Variable/3-Phase	Variable/3-Phase
Frequency	Variable (30-60 Hz)	Variable (30-60 Hz)	Variable (30-80 Hz)	Variable (30-80 Hz)	Variable (30-80 Hz)	Variable (30-80 Hz)
Max Amps (RMS)	4.0 A (½ hp), 6.6 A (¾ hp), 9.0 A (1 hp)	10 A (1.5 hp), 12 A (2 hp)	5.9 A	8.1 A	10.9 A	17.8 A

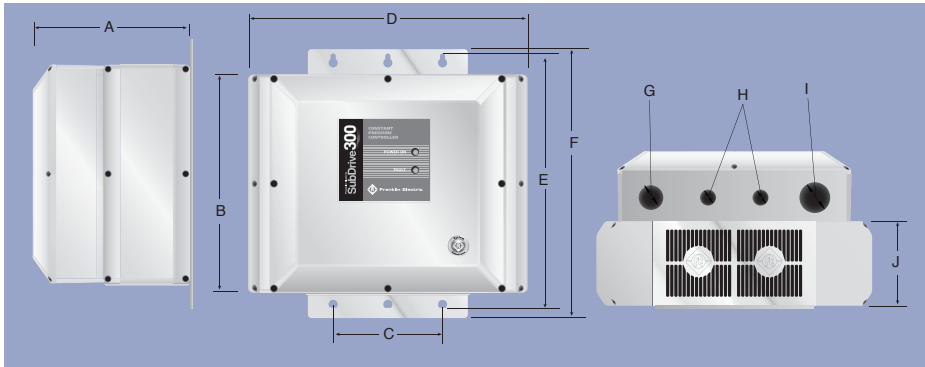
For Use With:

Pump Rating	½, ¾ or 1 hp (Selectable)	1.5 or 2 hp (Selectable)	¾, 1 or 1.5 hp (Selectable)	1, 1.5 or 2 hp (Selectable)	1.5, 2 or 3 hp (Selectable)	3 or 5 hp (Selectable)
Motor Rating	½, ¾ or 1 hp, 230 VAC (1-Phase)	1.5 or 2 hp, 230 VAC (1-Phase)	1.5 hp, 230 VAC (3-Phase)	2 hp, 230 VAC (3-Phase)	3 hp, 230 VAC (3-Phase)	5 hp, 230 VAC (3-Phase)
Pressure Sensor (Included)	External	External	External	External	External	External
Controller Weight	(N1)	15.00 lbs (6.80 kg)	17.50 lbs (7.94 kg)	15.00 lbs (6.80 kg)	17.50 lbs (7.94 kg)	17.50 lbs (7.94 kg)
	(N4)	24.14 lbs (10.95 kg)	28.32 lbs (12.84 kg)	24.14 lbs (10.95 kg)	28.32 lbs (12.84 kg)	28.32 lbs (12.84 kg)
Carton Size (H x W x D)	(N1)	16½ x 12¾ x 9" 41.9 x 31.4 x 22.9 cm	16½ x 12¾ x 9" 41.9 x 31.4 x 22.9 cm	16½ x 12¾ x 9" 41.9 x 31.4 x 22.9 cm	16½ x 12¾ x 9" 41.9 x 31.4 x 22.9 cm	16½ x 12¾ x 9" 41.9 x 31.4 x 22.9 cm
	(N4)	17½ x 16¾ x 11¾" 44.5 x 41.6 x 28.9 cm	17½ x 16¾ x 11¾" 44.5 x 41.6 x 28.9 cm	17½ x 16¾ x 11¾" 44.5 x 41.6 x 28.9 cm	17½ x 16¾ x 11¾" 44.5 x 41.6 x 28.9 cm	17½ x 16¾ x 11¾" 44.5 x 41.6 x 28.9 cm
Shipping Weight	(N1)	19.23 lbs (8.72 kg)	21.28 lbs (9.65 kg)	19.23 lbs (8.72 kg)	21.28 lbs (9.65 kg)	21.28 lbs (9.65 kg)
	(N4)	30.91 lbs (14.02 kg)	35.09 lbs (15.92 kg)	30.91 lbs (14.02 kg)	35.09 lbs (15.92 kg)	35.09 lbs (15.92 kg)

*N1 = NEMA 1 (Indoors), N4 = NEMA 4 (Outdoors)

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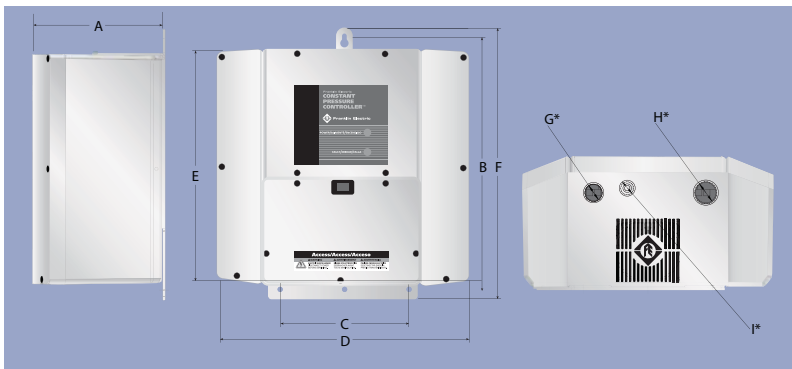
SubDrive300



NEMA 4 Dimensions in Inches (approximate)

NEMA 4	A	B	C	D	E	F	G	H	I	J
Dimension	8.75	12	6	15.34	14	14.75	1.37	0.885	1.71	4.75
Conduit Size	-	-	-	-	-	-	1	½	1¼	-

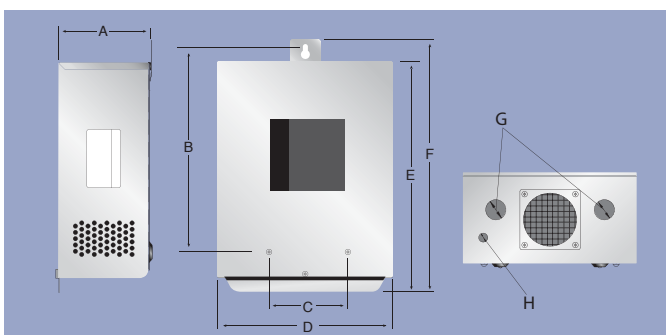
SubDrive75/100/150/MonoDrive/MonoDriveXT



NEMA 4 Dimensions in Inches (approximate)

NEMA 4	A	B	C	D	E	F	G	H	I
Dimension	7.25	12.6	7	13.6	12.5	14.8	0.875/ 1.100	1.100/ 1.375	closed/ 0.473/ 0.875
Conduit Size	-	-	-	-	-	-	½ / ¾	¾ / 1	½

SubDrive75/100/150/MonoDrive/MonoDriveXT



NEMA 1 Dimensions in Inches (approximate)

NEMA 4	A	B	C	D	E	F	G	H
Dimension	5.25	11.5	5.5	9.75	12.8	14	1.12	0.5
Conduit Size	-	-	-	-	-	-	¾	-

* Use knock-outs as required.

SubDrive Accessories



SubDrive Duplex Alternator

The SubDrive Alternator allows a water system to alternate between two parallel pumps controlled by separate SubDrives or MonoDrives. The user-selected switching interval balances the run time of each pump system to evenly disperse the workload. In addition, when demand exceeds the capacity of one pumping system, the other system comes online to supplement production. The SubDrive Alternator can be used with any SubDrive or MonoDrive controller.

585 001 2000

Input (From Power Source)	Voltage	115 VAC
	Frequency	60 Hz
Pressure Setting*	Factory Preset	50 psi
	Adjustment Range	25-80 psi
Approximate Controller Size (NEMA 4)	Outer Dimensions	5.8 x 5.8 x 3.6" (14.7 x 14.7 x 9.1 cm)
	Weight	1.3 lbs (0.59 kg)

* Pressure sensors must be set at least 3 psi apart.



SubDrive/MonoDrive Fan Kits

Installers can remove the fan and make an attempt to clean the fan by removing any particles that may restrict movement. In applications where the fan cannot be cleaned or freed from particles, or is damaged or malfunctioning, the fan replacement kit is an easy and inexpensive fix.

NEMA 4

CONTROLLER	KIT PART NUMBER
MonoDrive SubDrive75	225 635 901
MonoDriveXT SubDrive100 SubDrive150	225 635 902
SubDrive300	External cooling fans 225 635 903
	Internal stirring fan 225 635 904

NEMA 1

CONTROLLER	DATE CODE	KIT PART NUMBER
SubDrive75 and MonoDrive	08L45 or prior	225 635 905
SubDrive75 and MonoDrive	After 08L45	225 635 908
SubDrive100/150 and MonoDriveXT	08K45 or prior	225 635 907
SubDrive100/150 and MonoDriveXT	After 08K45	225 635 909