



Electronic Products

APPLICATION - SubDrive - MonoDrive

Circuit Breaker and Maximum Input Cable Lengths - Power supply to Controller(metres)

AWG Copper Wire Sizes, 167 °F/75°C Insulation Unless Otherwise Noted														
Model Series	Breaker Amps	Volts	mm ²	2.5	4	6	10	16	25	35	35	50	70	95
MonoDrive	15	208		20	35	60	95	150	240	295	390	495		
	15	230		25	45	75	115	185	295	365	480	610		
Subdrive75	15	208		20	30	55	85	165	215	265	350	445		
	15	230		25	40	65	105	165	260	325	430	545		
MonoDriveXT	20	208			25	40	65	105	165	205	270	345		
	20	230			30	50	80	125	200	250	330	420		
Subdrive100	25	208				35	55	85	135	165	220	280		
	20	230			25	40	65	105	165	205	270	340		
Subdrive150	30	208				25	40	70	110	140	180	230		
	25	230				35	55	85	135	170	225	285		
Subdrive300	40	208						45	70	90	115	145	185	220
	40	230					35	55	85	110	140	180	225	270
XXXX	Highlighted Numbers denote wire with 194 °F/90 °C insulation only.													

Maximum Motor Cable Length (Metres)

	HP	kW	14	12	10	8	6	4
			2.5	4	6	10	16	25
SubDrive 75	1.5	1.1	130	200	320	500		
SubDrive 150	3	2.2	70	115	185	300	465	
SubDrive 300	5	3.7		70	110	180	280	435
MonoDrive	0.5	0.37	120	195	310	490		
	0.75	0.55	90	145	230	365	565	
	1	0.75	75	120	190	300	465	
MonoDrive XT	1.5	1.1	55	90	145	230	365	565
	2	1.5	45	75	115	185	295	465

A - 3.3 metre (10 ft) section of cable is provided with the Subdrive/MonoDrive to connect the pressure sensor. (If additional cable is required a "0.3mm²" (22 AWG) x 30 metres Maximum allowable wire lengths are measured between the controller and motor

Aluminum wires should not be used with the SubDrive/MonoDrive.

Orange circular drop - electrical cable is not rated for submersible use. Warranty void if used.

All wiring to comply with AS/NSZ3000 and National Electrical Codes and /or local codes.

MonoDrive minimum breaker amps may be lower than 50 Hz AIM Manual specifications for the motors listed due to the soft-starting characteristic of the MonoDrive controller. SubDrive minimum breaker amps may appear to exceed 50 Hz AIM Manual specifications for the motors listed because SubDrive controllers are supplied from a single-phase service rather than three phase.

Three Phase SubDrive Motors Specifications (60Hz)

	kW	HP	Volts	S.F	Full Load		Max- S.F load		Line to Line Resistance Ohms	Locked Rotor Amps
					Amps	Watts	Amps	Watts		
SubDrive 75	1.1	1.5	230	1.3	5	1460	5.9	1890	3.2 - 4.0	33.2
SubDrive 150	2.2	3	230	1.15	9.5	2980	10.9	3420	1.8 - 2.2	61.9
SubDrive 300	3.7	5	230	1.15	15.9	5050	17.8	5810	1.0 - 1.2	106

SubDrive Motor Leads	
Series	Part No.
75	310 113 401
150 / 300	308 013 702

In addition to improved system protection, Franklin Electric's SubDrive and MonoDrive systems use electronic reduced voltage starting or "soft start" technology. This technology allows the use of smaller generators than those used on conventional systems.

Recommended minimum generator sizes:

MonoDrive

1/2 hp (0.37 kW) = 2000 Watts (2 kW)

3/4 hp (0.55 kW) = 3000 Watts (3 kW)

1 hp (0.75 kW) = 3500 Watts (3.5 kW)

SubDrive75 = 3500 Watts (3.5 kW)

SubDrive100 = 5700 Watts (6 kW)

SubDrive150 = 7000 Watts (7 kW)

SubDrive300 = 11000 Watts (11 kW)

SubDrive2W = 6000 Watts (6 kW)

Note: If using an externally regulated generator, verify that the voltage and Hertz are appropriate to supply the drive.

Basic generator sizing for the Franklin Electric SubDrive/MonoDrive system is 1.5 times maximum input Watts consumed by the drive, rounded up to the next normal sized generator.