

4" ENCAPSULATED SOLAR MOTOR - 3-PHASE

FEATURES & BENEFITS

- Suitable for operation in solar applications
- NEMA mounting design with metric studs [M8]
- Stainless steel splined shaft
- StatorShield™ - Franklin encapsulation system: Franklin Electric encapsulated motors are equipped with hermetically-sealed windings. The stator resin mechanically supports the winding and provides fast heat dissipation.
- Hydrodynamic liquid lubricated radial bearings and High capacity Kingsbury type thrust bearing for 100 % maintenance free operation
- Field replaceable round plug lead using Franklin's exclusive Water Bloc technology with extended jam nut in Stainless steel
- Pressure-equalizing diaphragm
- Stator shell in 316SS
(suitable for use in water with increased salinity) 
- Factory filled with FES Franklin's non-toxic water soluble fill solution
- Drinking water approvals

STANDARD SPECIFICATION

- Ratings: 0.75 - 1.1 kW
- Thrust load: 4 kN
- Standard voltage: 3- 100V / 200V (60 Hz)
- Voltage tolerance U_N : $\pm 10\%$ (60 Hz)
- Max. storage temperature: $-15\text{ }^{\circ}\text{C}$ - $+50\text{ }^{\circ}\text{C}$
- Nominal ambient temperature: $30\text{ }^{\circ}\text{C}$ with 0.08 m/s cooling flow
- Protection IP68
- insulation class B
- Frequency of starts: 20 starts/ hour (with min. 3 minutes resting time), equally distributed
- All motors with factory installed leads (1.50 m / 2.50 m)
- Vertical and horizontal operation, shaftend heightend
- Rotation counter clock wise facing shaft end (Rotation reversible for 3 phase motors)

OPTIONS

- Built in lightning arrestors
- Higher-graded material: 316SS
- Special voltages

STAINLESS STEEL
304

STAINLESS STEEL
316



StatorShield™ - Franklin encapsulation system

Franklin Electric encapsulated motors are equipped with hermetically-sealed windings. The stator resin mechanically supports the winding and provides fast heat dissipation.

Solar

Suitable for operation in solar applications

Hydrodynamic liquid lubricated radial bearings

100% maintenance free operation

Kingsbury type thrust bearing

High capacity 4 kN Kingsbury type thrust bearing for 100 % maintenance free operation.



4" encapsulated motors



Pressure-equalizing diaphragm

4" ENCAPSULATED SOLAR MOTOR - 3-PHASE

4CT SOLAR MOTOR - 3-PHASE - MOTOR MODEL NO. | 60 HZ

P_N [kW]	U_N [V]	Digit 1 - 6	Digit 7 - 10	
			Single pack with lead*	motors in 40 motors packing unit
0,75	100	234 802	6721L	6721
1,1	200	234 703	6721L	6721

*lead lengths motors „L“ : up to 1.5 kW with 1.50 m preassembled cable

4CT SOLAR MOTOR - 3-PHASE - MOTOR + DRIVE-TECH MINI - SYSTEM MODEL NO. | 60 HZ

P_N [kW]	U_N [V]	Set Motor with Drive-Tech MINI Solar*	Drive-Tech MINI*	
			model	model no.
0,75	100	308 752 670	FD Solar 0.55 kW N4	581 013 000 86C-62IS000
1,1	200	308 754 670	FD Solar 1.10 kW N4	581 014 200 86C-62IS002

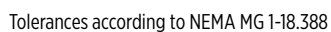
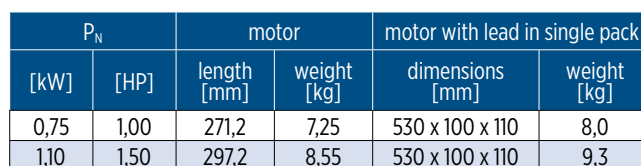
4CT SOLAR MOTOR - 3-PHASE - MOTOR PERFORMANCE DATA | 60 HZ

P_N [kW]	Thrust F [N]	U_N [V]	n_N [min ⁻¹]	I_N [A]	I_A [A]	η (Eff.) at % load			$\cos \phi$ (Pf.) at % load			T_N [Nm]	T_A [Nm]
						50	75	100	50	75	100		
0,75	4000	100	3370	6,9	34,0	68	73	74	0,71	0,79	0,85	2,1	5,0
1,1	4000	200	3400	5,0	26,0	72	76	76	0,70	0,78	0,83	3,1	7,0

4CT SOLAR MOTOR - 3-PHASE - WINDING RESISTANCE DATA | 60 HZ

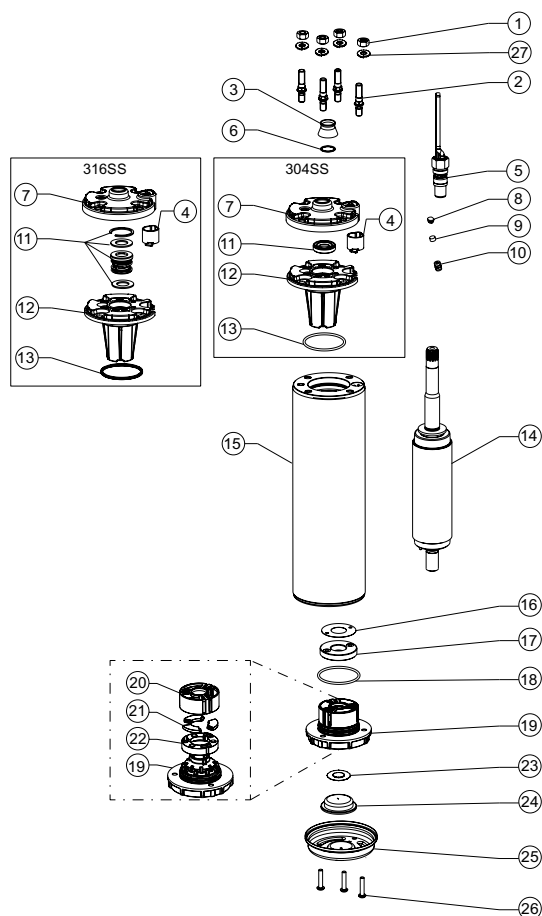
P_N [kW]	U_N [V]	stator reference no.	main phase [Ohm]
0,75	100	327 216 945	1,3 - 1,6
1,1	200	327 051 945	3,1 - 3,7

4CT SOLAR MOTOR - 3-PHASE - MOTOR DESIGN



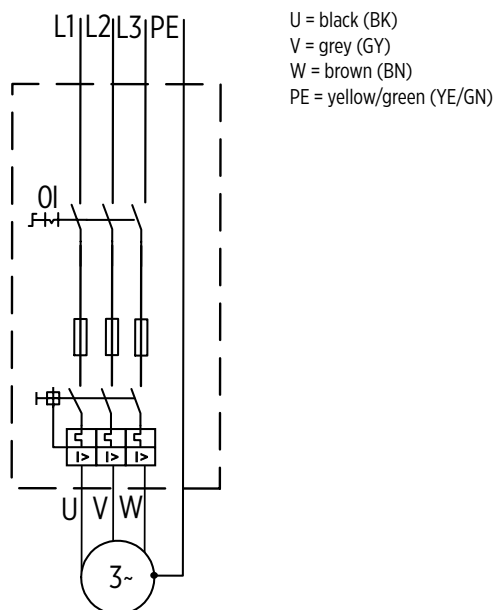
4" ENCAPSULATED SOLAR MOTOR - 3-PHASE

4CT SOLAR MOTOR - 3-PHASE - MOTOR PART DESCRIPTION



Pos.	part description	qty.	part no.
1	Nut	4	Kit C
2	Stud	4	Kit C
3	Protector, Spline	1	Kit B
4	Connector boss	1	151 820 103
5	Motor Lead	1	<i>cf. section</i>
6	Washer	1	Kit B
7	Top Endbell, Cover 304SS	1	150 262 151
	Top Endbell, Cover 316SS*	1	150 262 251
8	Filter plug	1	Kit
9	Filter	1	Kit
10	Valve	1	Kit
11	Shaft Seal	1	Kit B
12	Top Endbell	1	Kit
13	O-Ring	1	Kit B
14	Rotor	1	<i>cf. section</i>
15	Stator	1	<i>cf. section</i>
16	Level washer	1	Kit A2
17	Thrust disk assy	1	Kit A2
18	O-Ring	1	Kit B / Kit A2
19	Bottom Endbell	1	Kit A2
20	Bearing cage	1	Kit A2
21	Segments	3	Kit A2
22	Gasket	1	Kit A2
23	Diaphragm washer	1	151 314 101 / Kit A2
24	Diaphragm	1	Kit B / Kit A2
25	Bottom Endbell Cover 304SS	1	156 414 201 / Kit A2
	Bottom Endbell Cover 316SS*	1	156 414 301 / Kit A2
26	Screw, Cover	3	Kit C
27	Lock washer	4	Kit C

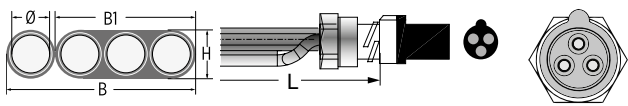
4CT SOLAR MOTOR - 3-PHASE - CONNECTIONS | DOL



4" ENCAPSULATED SOLAR MOTOR - 3-PHASE

4CT SOLAR MOTOR - 3-PHASE - MOTOR LEADS

Ø [mm²]	B [mm]	B1 [mm]	H [mm]
3x1,5 + 1G1,5	16,8	10,7	5,0



L [m]	model no.	
	304SS	316SS
1,5	310 113 401	310 113 501
2,5	310 113 402	310 113 502
5	310 113 405	310 113 505
10	310 113 410	310 113 510
15	310 113 415	310 113 515
20	310 113 420	310 113 520
30	310 113 430	310 113 530
40	310 113 440	310 113 540
50	310 113 450	310 113 550

Cables are designed for submerged operation. For air operation, please consult Franklin Electric.

4CT SOLAR MOTOR - 3-PHASE - MOTOR SPARE PARTS - KITS

Kit	description	included positions	part no.
Kit A1	Top Endbell 304SS	4, 7, 8, 9, 10, 11, 12, 13	308 462 902
	Top Endbell 316SS*		308 462 952
Kit A2	Bottom Endbell 304SS incl. Thrust Bearing Kit 4000N	16 - 22	308 464 911
	Bottom Endbell 316SS incl. Thrust Bearing Kit 4000N*		308 464 912
Kit B	Seal Kit Standard 304SS	3, 6, 8, 9, 11, 13, 18, 23, 24	308 650 201
	Seal Kit Standard 316SS*		308 650 251
	Seal Kit Pollution Recovery 304SS		308 650 202
	Seal Kit Pollution Recovery 316SS*		308 650 252
Kit C	Fastener Kit 304SS	1, 2, 26, 27	308 656 202
	Fastener Kit 316SS*		308 656 252

4CT SOLAR MOTOR - 3-PHASE - STATOR AND ROTOR

P _N [kW]	U _N [V]	motor model no. 304SS	motor model no. 316SS	model no. stator 304SS / 316SS	model no. rotor 304SS	model no. rotor 316SS
0,75	100	234 802 6721L	234 802 6821L	305 491 ***	178 164 903K	178 164 953K
1,1	200	234 703 6721L	234 703 6821L	305 491 ***	178 164 905K	178 164 955K

YOUTUBE TUTORIALS



Tutorial 4CT cable mounting



Tutorial 4CT cable installation



Tutorial 4" termination kit assembly