

TECHNICAL CHARACTERISTICS

Windings for 400V / 460Vac drives (See Application note)

			400STK1M		400STK2M		400STK3M		400STK4M		400STK6M		400STK8M	
NATURAL CONVECTION	Rated speed	rpm	200	800	200	800	200	800	200	800	200	800	200	-
	Continuous torque at stall	(1)(4) N.m	113		225		319		400		570		730	-
	Current at continuous torque	(1) A	8.7	23.5	14.5	46.8	18	52.2	24.5	77	34.9	103	41	-
	Peak torque	(2)(3) N.m	440		880		1320		1760		2640		3520	-
	Current at peak torque	(2) A	46.9	126	78.1	252.3	102.5	298	149.1	468.6	218.7	656	273.3	-
	Rated power	(1) kW	2.25	7.6	4.3	15.5	5.96	18.3	7.6	21	9.5	24	11.3	-
	Inertia	10 ⁻³ kg.m ²	82		163		244		325		488		650	-
	Weight	kg	23		35		46.5		58		81		104	-
	Thermal time constant	(1) s	990		1307		1530		1756		2218		2547	-
	Thermal resistance	(1) °C / W	0.117		0.098		0.094		0.078		0.071		0.063	-
	Phase resistance at 20°C	(2) Ω	2.23	0.31	0.981	0.094	0.69	0.081	0.39	0.04	0.236	0.026	0.187	-
	Phase inductance at I continuous	mH	11.8	1.62	8.7	0.83	7.3	0.86	4.8	0.49	3.4	0.37	2.9	-
	Electrical time constant	(2) ms	5.6		8.9		10.6		12.3		14.4		15.5	-
	Back emf constant (line to line)	(2) V/rad.s	7.96	2.96	9.54	2.95	10.9	3.7	10	3.18	10.2	3.41	10.9	-
	Power cable square section	(7) nxmm ²	4x1.5	4x4	4x1.5	4x10	4x2.5	4x10	4x4	4x16	4x6	4x25	4x10	-
	Power cable diameter	(7) mm	Ø8.6	Ø12.2	Ø8.6	Ø17.6	Ø10.8	Ø17.6	Ø12.2	4xØ11	Ø14	4xØ13	Ø17.6	-
Number of poles		24												

			400STK1M		400STK2M		400STK3M		400STK4M		400STK6M		400STK8M	
COMPLEMENTARY DATA FOR FLUID-COOLED MOTORS WINDING AT 60°C	Continuous torque at stall	(4) N.m	174		396		561		780		1133		1428	-
	Current at continuous torque	A	13.6	36.5	27	87.2	33.4	97.3	51	160	72.2	216	85	-
	Fluid input temperature	(5)(6) °C	20		20		20		20		20		20	-
	Fluid temperature rise	°C	8		8		10		10		10		10	-
	Housing temperature	°C	< 30		< 30		< 30		< 30		< 30		< 30	-
	Fluid flow	l / mn	4		7		5		7		8		9	-
	Losses	W	1645		2760		3027		3660		4420		4940	-
	Pressure drop	Bar	0.1		0.9		0.75		0.4		0.4		0.6	-
	Power cable square section	(7) nxmm ²	4x1.5	4x6	4x4	4x16	4x6	4x25	4x10	4x50	4x16	4x70	4x16	-
	Power cable diameter	(7) mm	Ø8.6	Ø14	Ø12.2	4xØ11	Ø14	4xØ13	Ø17.6	4xØ17	4xØ11	4xØ20	4xØ11	-

			400STK1M		400STK2M		400STK3M		400STK4M		400STK6M		400STK8M	
COMPLEMENTARY DATA FOR FLUID-COOLED MOTORS WINDING AT 140°C	Continuous torque at stall	(4) N.m	225		467		698		935		1384	-	1846	-
	Current at continuous torque	A	18.7	50.4	32.7	106	42.5	123.6	62.6	197	90	-	113	-
	Fluid input temperature	(5)(6) °C	20		20		20		20		20	-	20	-
	Fluid temperature rise	°C	8		8		10		10		10	-	10	-
	Housing temperature	°C	< 30		< 30		< 30		< 30		< 30	-	< 30	-
	Fluid flow	l / mn	8		11		10		12		15	-	18	-
	Losses	W	3740		4830		5833		6580		8180	-	10400	-
	Pressure drop	Bar	0.6		1.9		2.3		0.9		1.2	-	2.1	-
	Power cable square section	(7) nxmm ²	4x2.5	4x10	4x6	4x25	4x10	4x25	4x10	4x50	4x16	-	4x25	-
	Power cable diameter	(7) mm	Ø10.8	Ø17.6	Ø14	4xØ13	Ø17.6	4xØ13	4xØ9.5	4xØ17	4xØ11	-	4xØ13	-

- (1) Thermal conditions:
Ambient temperature 20°C
Winding temperature rise 120°C
Stator housing in contact with the ambient air or integral on all its peripheral area with a metallic armature in contact with the ambient air.
Stator housing secured on a metallic frame having an area equal to twice the cross section of the housing.
- (2) Cold motor at 20°C
- (3) See torque vs speed characteristics on :
<http://www.alxion.com/>
- (4) Torque at stall or low speed.
- (5) Fluid input temperature should not be lower for avoiding condensation inside the motor.
- (6) For cooling fluid, use softened glycol-added water or fluids approved for closed cooling circuits.
- (7) For currents lower than 53 Amps, one shielded cable
For currents over 53 Amps, four single shielded wires output (highlighted in the table)

Other speed characteristics are available, please contact us.