

TECHNICAL CHARACTERISTICS

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

			300STK1M		300STK2M		300STK3M		300STK4M		300STK6M		300STK8M	
NATURAL CONVECTION	Rated speed	rpm	200	800	200	800	200	800	200	800	200	800	200	800
	Continuous torque at stall	(1)(4) N.m	54		98		145		184		261		319	
	Current at continuous torque	(1) A	4.2	10.7	7	17.6	9	27	11.2	36	15.5	48.5	20.3	65
	Peak torque	(2)(3) N.m	194		387		580		774		1161		1548	
	Current at peak torque	(2) A	20.9	50.7	36.7	92.6	50.6	152	66.5	212.9	96.8	304.1	133.1	425.8
	Rated power	(1) kW	1.06	3.65	2	7.06	2.89	8.9	3.65	10.92	4.7	13.86	5.8	15.12
	Inertia	10 ⁻³ kg.m ²	26.4		52.7		79.2		105.5		158.2		211	
	Weight	kg	11.5		18		24.5		31		44		57	
	Thermal time constant	(1) s	495		669		907		1145		1621		2097	
	Thermal resistance	(1) °C / W	0.184		0.164		0.15		0.135		0.115		0.1	
	Phase resistance at 20°C	(2) Ω	7.05	1.09	2.82	0.44	1.85	0.205	1.286	0.126	0.808	0.082	0.54	0.053
	Phase inductance at I continuous	mH	27.4	4.1	17.7	2.8	13.9	1.53	11.1	1.1	7.8	0.8	5.5	0.53
	Electrical time constant	(2) ms	3.88		6.3		7.5		8.6		9.7		10.2	
	Back emf constant (line to line)	(2) V/rad.s	8.02	3.15	9.13	3.62	9.93	3.31	10.07	3.15	10.38	3.31	10.04	3.14
	Power cable square section	(7) nxmm ²	4x1.5		4x1.5	4x2.5	4x1.5	4x4	4x1.5	4x6	4x1.5	4x6	4x2.5	4x10
	Power cable diameter	(7) mm	Ø8.6		Ø8.6	Ø10.8	Ø8.6	Ø12.2	Ø8.6	Ø14	Ø8.6	4x Ø7.7	Ø10.8	4x Ø9.5
Number of poles		24												

			300STK1M		300STK2M		300STK3M		300STK4M		300STK6M		300STK8M	
COMPLEMENTARY DATA FOR FLUID-COOLED MOTORS WINDING AT 60°C	Continuous torque at stall	(4) N.m	83		170		246		323		484		677	
	Current at continuous torque	A	6.5	16.5	12.2	30.8	16.2	48.7	21	67.4	34.2	116.5	44	140.8
	Fluid input temperature	(5)(6) °C	20		20		20		20		20		20	
	Fluid temperature rise	°C	5		8		8		7		7		10	
	Housing temperature	°C	< 25		< 30		< 30		< 30		< 30		< 30	
	Fluid flow	l / mn	4		4		4		5		7		7	
	Losses	W	1060		1540		1815		2075		2770		3760	
	Pressure drop	Bar	0.2		0.6		0.8		0.3		0.5		0.7	
	Power cable square section	(7) nxmm ²	4x1.5		4x1.5	4x6	4x1.5	4x6	4x2.5	4x10	4x6	4x25	4x6	4x35
	Power cable diameter	(7) mm	Ø8.6		Ø8.6	Ø14	Ø8.6	4x Ø7.7	Ø10.8	4x Ø9.5	Ø14	4x Ø13	4x Ø7.7	4x Ø15

			300STK1M		300STK2M		300STK3M		300STK4M		300STK6M		300STK8M	
COMPLEMENTARY DATA FOR FLUID-COOLED MOTORS WINDING AT 140°C	Continuous torque at stall	(4) N.m	106		219		325		436		651		871	-
	Current at continuous torque	A	9	22.8	16.3	41	22.1	66.4	29.5	94.5	42.7	133.6	58.7	-
	Fluid input temperature	(5)(6) °C	20		20		20		20		20		20	-
	Fluid temperature rise	°C	5		8		10		7		7		10	-
	Housing temperature	°C	< 25		< 30		< 30		< 30		< 30		< 30	-
	Fluid flow	l / mn	8		7		7		12		16		14	-
	Losses	W	2440		3275		4020		4972		6384		7956	-
	Pressure drop	Bar	1.1		1.5		2		1.6		2.2		2.2	-
	Power cable square section	(7) nxmm ²	4x1.5	4x4	4x1.5	4x6	4x4	4x10	4x4	4x25	4x6	4x35	4x10	-
	Power cable diameter	(7) mm	Ø8.6	Ø12.2	Ø8.6	4x Ø7.7	Ø12.2	4x Ø9.5	Ø12.2	4x Ø13	4x Ø7.7	4x Ø15	4x Ø9.5	-

- (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 38 Amps, one shielded cable
For currents over 38 Amps, four single shielded wires output (highlighted in the table)

Other speed characteristics are available, please contact us.