

TECHNICAL CHARACTERISTICS

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

			190STK1M		190STK2M		190STK3M		190STK4M		190STK6M		190STK8M			
NATURAL CONVECTION	Rated speed	rpm	500	1500	500	1500	500	1500	500	1500	500	1000	500	1000		
	Continuous torque at stall (1)(4)	N.m	19		36		49		63		89		111			
	Current at continuous torque (1)	A	3	6.5	4.5	11.7	5.9	13.2	7.1	19.3	11.1	20	13.3	23.3		
	Peak torque (2)(3)	N.m	62		124		186		248		372		496			
	Current at peak torque (2)	A	11.8	25.6	18.6	48.9	27	60.3	34.2	93.2	56.9	102.5	73.2	128.1		
	Rated power (1)	W	910	2560	1730	4230	2360	5259	3024	6590	4250	7085	5250	8530		
	Inertia	10 ⁻³ kg.m ²	2.4		4.12		5.8		7.5		10.88		14.26			
	Weight	kg	8.5		13		17.5		22		31		40			
	Thermal time constant (1)	s	1200		1506		1850		2129		2559		2865			
	Thermal resistance (1)	°C / W	0.28		0.25		0.23		0.2		0.17		0.15			
	Phase resistance at 20°C (2)	Ω	9.45	2	4.76	0.69	2.76	0.56	2.12	0.28	1.02	0.31	0.77	0.25		
	Phase inductance at I continuous	mH	55.2	11.8	48.2	7	31.7	6.4	28.8	3.9	15.7	4.8	12.7	4.1		
	Electrical time constant (2)	ms	5.9		10.1		11.5		13.6		15.6		16.5			
	Back emf constant (line to line) (2)	V/rad.s	4.06	1.87	5.13	1.96	5.32	2.38	5.6	2.05	5.04	2.8	5.22	2.99		
	Power cable square section (7)	nxmm ²	4x1.5		4x1.5		4x1.5		4x1.5		4x2.5		4x1.5		4x4	
	Power cable diameter (7)	mm	Ø8.6		Ø8.6		Ø8.6		Ø8.6		Ø10.8		Ø8.6		Ø12.2	
Number of poles		12														

			190STK1M		190STK2M		190STK3M		190STK4M		190STK6M		190STK8M	
COMPLEMENTARY DATA FOR FLUID-COOLED MOTORS WINDING AT 60°C	Continuous torque at stall (4)	N.m	26.6		57		84		109		162		209	
	Current at continuous torque	A	4.3	9.4	7.5	19.6	10.4	23.2	13	35.5	21.3	38.4	26.6	46.2
	Fluid input temperature (5)(6)	°C	20		20		20		20		20		20	
	Fluid temperature rise	°C	5		6		7		7		8		10	
	Housing temperature	°C	< 30		< 30		< 30		< 30		< 30		< 30	
	Fluid flow	l / mn	2		3		3		4		4		4	
	Losses	W	650		995		1110		1330		1710		1980	
	Pressure drop	Bar	< 0.1		0.12		0.12		0.3		0.5		0.6	
	Power cable square section (7)	nxmm ²	4x1.5		4x1.5	4x2.5	4x1.5	4x4	4x1.5	4x6	4x2.5	4x10	4x4	4x10
	Power cable diameter (7)	mm	Ø8.6		Ø8.6	Ø10.8	Ø8.6	Ø12.2	Ø8.6	Ø14	Ø10.8	Ø17.6	Ø12.2	Ø17.6

			190STK1M		190STK2M		190STK3M		190STK4M		190STK6M		190STK8M	
COMPLEMENTARY DATA FOR FLUID-COOLED MOTORS WINDING AT 140°C	Continuous torque at stall (4)	N.m	36.3		71.4		106		141		210		274	
	Current at continuous torque	A	6.1	13.2	9.5	24.8	13.5	30.2	17.3	47.2	29.3	52.7	36	63
	Fluid input temperature (5)(6)	°C	20		20		20		20		20		20	
	Fluid temperature rise	°C	5		6		7		7		8		10	
	Housing temperature	°C	< 30		< 30		< 30		< 30		< 30		< 30	
	Fluid flow	l / mn	4		6		6		7		9		8	
	Losses	W	1533		1900		2290		2800		3850		4390	
	Pressure drop	Bar	0.1		0.4		0.6		0.85		1.8		1.9	
	Power cable square section (7)	nxmm ²	4x1.5		4x1.5	4x4	4x1.5	4x6	4x2.5	4x10	4x4	4x10	4x6	4x10
	Power cable diameter (7)	mm	Ø8.6		Ø8.6	Ø12.2	Ø8.6	Ø14	Ø10.8	Ø17.6	Ø12.2	Ø17.6	Ø14	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 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.