

TECHNICAL CHARACTERISTICS 300 ST

Motors wound for 330 Vac phase to phase

		300ST1M		300ST2M		300ST3M		300ST4M		300ST5M		300ST6M	
		200	800	200	800	200	800	200	800	200	800	200	800
Rated speed	rpm	200	800	200	800	200	800	200	800	200	800	200	800
Continuous torque at stall	(4) N.m	54		98		135		170		203		235	
Current at continuous torque	(1) A	4.4	11.2	7.3	18.3	9	27	11.8	39.9	13.1	42.5	16.3	55.5
Peak torque	(2)(3) N.m	193		387		580		774		968		1161	
Current at peak torque	(2)(3) A	20.9	53.2	36.7	92.6	50.6	152	66.5	212.9	81.9	266.1	96.8	304.1
Rated power	(1) KW	1.06	3.65	1.89	7.06	2.45	8.9	3.05	10.92	3.63	12.43	4.2	13.86
Inertia without position feedback	(7) 10 ⁻³ kg.m ²	60.1		87		113.9		140.8		167.7		194.7	
Weight without position feedback	(6) kg	31.4		38		44.5		51		57.5		64.1	
Thermal time constant	(1)(5) s	495		669		907		1145		1381		1621	
Thermal resistance	(1)(5) °C/W	0.184		0.164		0.15		0.135		0.125		0.115	
Phase resistance at 20°C	(2) Ω	6.55	1.01	2.82	0.44	1.85	0.205	1.286	0.126	0.99	0.094	0.808	0.082
Phase inductance at I continuous	mH	27.4	4.2	17.7	2.8	13.9	1.53	11.1	1.1	8.9	0.83	7.8	0.8
Electrical time constant	(2) ms	4.2		6.3		7.5		8.6		9		9.7	
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	10.2	3.14	10.38	3.31
Number of poles		24											

(1) Ambient temperature: 20°C,
Winding temperature rise: 120°C
Motor in natural convection

(2) Cold motor at 20°C

(3) See torque vs speed characteristics on :
<http://www.alxion.com/CFN>

(4) Consider a 7% derating with position
feedback codes 2 and 7.

(5) Housing – ambient

(6) Position feedback options:

1 : +0.8 kg
2 3 7 : +1.1 kg

(7) Position feedback options:

1 : 2.03.10⁻³ kg.m²
2 7 : 0.55.10⁻³ kg.m²
3 : 0.32.10⁻³ kg.m²

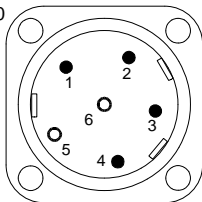
CONNECTORS DESCRIPTION

Power connector :

Current at continuous torque < 25 A :

Fixed male B-EG-A-127-MR23-00-0006-000
Mobile plug B-ST-A-107-FR23-08-0036-000

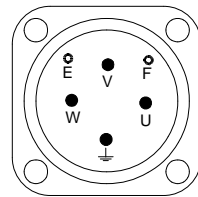
1 : Phase U
2 : Phase V
3 : Ground
4 : Phase W



Current at continuous torque >25 A :

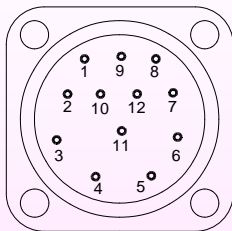
Fixed male C-EG-A-257-MR48-00-0004-000
Mobile plug C-ST-A-263-FR52-26-0001-000

U : Phase U
V : Phase V
W : Phase W
⊥ : Ground



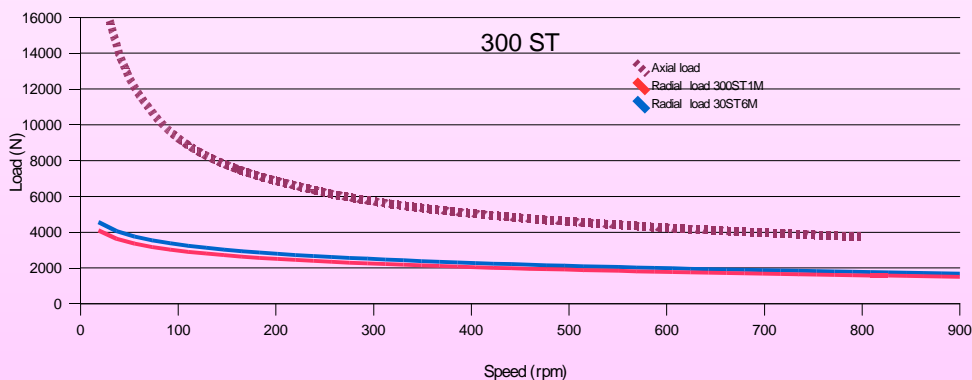
Signal connector :

Fixed male A-EG-A-052-MR04-00-0012-000
Mobile plug A-ST-A-020-FR01-10-0035-000



	Resolver	Encoder SICK® SCK KIT 101	Encoder Heidenhain® ERN180	Encoder Heidenhain® ECN113
A	Input Carrier +	Us	Up	Up
B	Input Carrier -	GND	0V	0V
C	Sin +	Sin +	A +	A +
D	Sin -	Sin -	A -	A -
E	Cos +	Cos +	B +	B +
F	Cos -	Cos -	B -	B -
G		DATA +	R+	DATA +
H		DATA -	R -	DATA -
I	KTY	KTY	KTY	CLOCK +
J	KTY	KTY	KTY	CLOCK -
K	PTC	PTC	PTC	THERMAL
L	PTC	PTC	PTC	THERMAL

Axial and radial load for a 20 000 hours life time



The values of load are given:
- For a smooth operation without shock.
- In rated conditions of motor operation.
For atypical conditions (shocks, vibrations, temperature, environment), please contact us.