

maxon drive unit

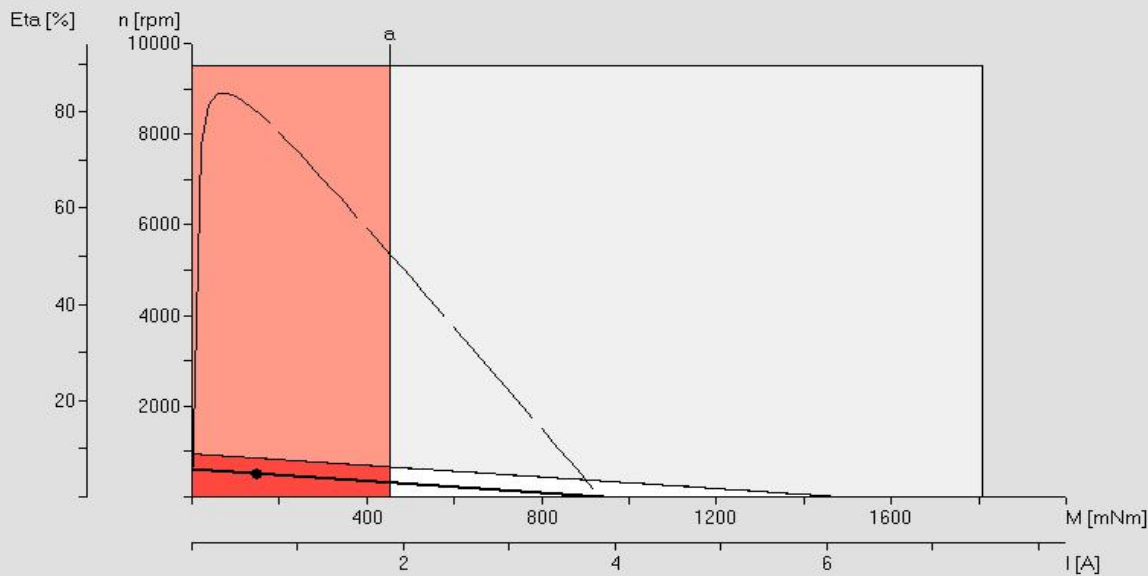
Gear

Motor	370357	RE 50	200W, Graphite brushes, 2 Shaft ends, Ball bearings
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Control

Key data of drive

(Needed) motor voltage (= U _{mot})	15.2	V
No-load speed (at U _{mot})	596	rpm
Load stall torque (theoretic, at U _{mot})	941	mNm
Starting current (theoretic, at U _{mot})	3.89	A
Max. load current	0.647	A
Motor load	34	%
Diameter	50	mm
Length	108	mm
Ambient temperature (=T _{amb})	25	°C
Average winding temperature	34	°C
Housing temperature	27	°C

☐ Scale motor☐ Output power (e)☒ Working points☒ Efficiency (f)☒ Max. contin. torque motor (a)☐ Winding temperature (g)☐ Contin. current (b)☒ Max. current (c)☒ Max. voltage (d)

Load input

Max. load speed	500	rpm
Load torque (RMS)	150	mNm
Max. load torque	150	mNm
Duration of max. load	86400	s

Power supply input

Min. supply voltage	0	V
Max. supply voltage	24	V
Max. continuous current	10	A
Max. current (peak)	10	A
Max. duration of peak current	1	s

Drive parameter

Motor order number

370357

RE 50, 200W, Graphite brushes, 2 Shaft ends, Ball bearings

Motor data	Min.	Nominal	Max.	
Nominal voltage		70		V
No-load speed	2539	2760	2981	rpm
No-load current		27.4	41.1	mA
Rated torque (max. continuous torque at Tmax)		452		mNm
Rated current (max. continuous current)		1.89		A
Stall torque	3690	4340	4990	mNm
Starting current	16.6	17.9	19.2	A
Max. efficiency		92.4		%
Terminal resistance	3.63	3.9	4.17	Ohm
Terminal inductance		3.37		mH
Torque constant	223	242	261	mNm/A
Speed constant	36.3	39.5	42.7	rpm/V
Speed-torque gradient	0.51	0.638	0.766	rpm/mNm
Mechanical time constant		3.74		ms
Rotor inertia	504	560	616	gcm ²
Therm. resistance housing-ambient		1.24		K/W
Therm. resistance winding-housing		3.81		K/W
Therm. time constant winding		71.7		s
Ambient temperature range	-30	25	100	°C
Max. winding temperature		125		°C
Max. speed		9500		rpm
Motorweight		1100		g

Motor data at actual motor voltage and ambient temperature	Nominal	
Ambient temperature (=Tamb)	25	°C
Motor voltage (=U _{mot})	15.2	V
No-load speed (at U _{mot} and Tamb)	596	rpm
Max. continuous torque (at Tamb)	457	mNm
Max. continuous current (at Tamb)	1.89	A
Stall torque (theoretic, at U _{mot} and Tamb)	941	mNm
Starting current (theoretic, U _{mot} and Tamb)	3.89	A

Gear order number

Controller order number

Sensors

Sensor type	Sensor No.	Counts/turn	Channels	Line Driver	Max.freq.(kHz)	Brake
Encoder HEDS 5540	110517	500	3	No	100	No
Encoder HEDL 5540	110518	500	3	Yes	100	No
Encoder HEDL 9140	137959	500	3	Yes	100	No