

NEW

Brushless DC-Servomotors

0,37 mNm

Electronic Commutation

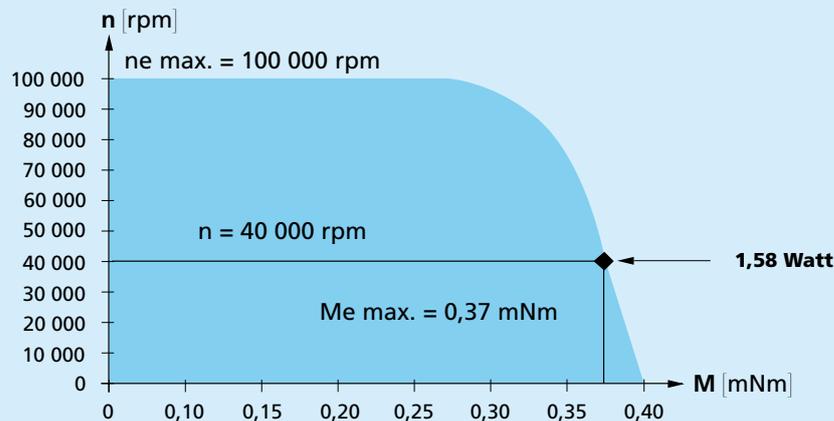
For combination with
Gearheads:
06/1
Drive Electronics:
BLD 2401

Series 0620 ... B

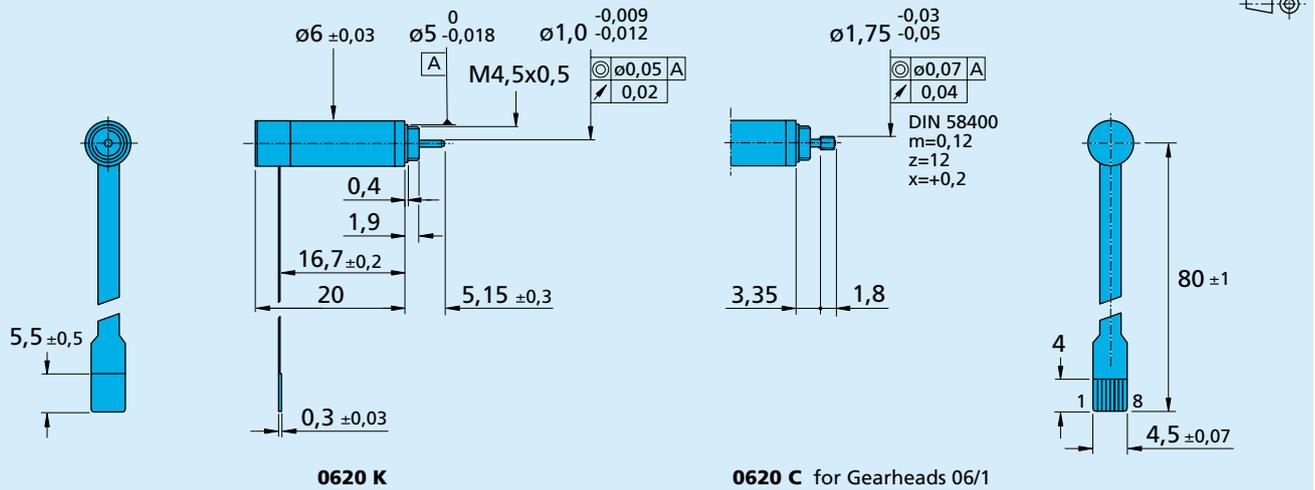
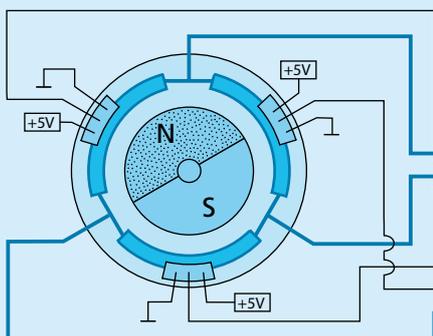
	0620 K		006 B	012 B	
1 Nominal voltage	U_N		6	12	Volt
2 Terminal resistance, phase-phase	R		9,1	59,0	Ω
3 Output power ¹⁾	$P_{2 \text{ max.}}$		1,56	1,58	W
4 Efficiency	$\eta \text{ max.}$		57	55	%
5 No-load speed	n_0		47 000	36 400	rpm
6 No-load current (with shaft \varnothing 1,0 mm)	I_0		0,047	0,016	A
7 Stall torque	M_H		0,73	0,58	mNm
8 Friction torque, static	C_0		0,016	0,016	mNm
9 Friction torque, dynamic	C_v		$8,0 \cdot 10^{-7}$	$8,0 \cdot 10^{-7}$	mNm/rpm
10 Speed constant	k_n		8 421	3 282	rpm/V
11 Back-EMF constant	k_E		0,119	0,305	mV/rpm
12 Torque constant	k_M		1,13	2,91	mNm/A
13 Current constant	k_I		0,882	0,344	A/mNm
14 Slope of n-M curve	$\Delta n / \Delta M$		67 575	66 533	rpm/mNm
15 Terminal inductance, phase-phase	L		550	250	μH
16 Mechanical time constant	τ_m		6	6	ms
17 Rotor inertia	J		0,0095	0,0095	gcm^2
18 Angular acceleration	$\alpha \text{ max.}$		772	607	$\cdot 10^3 \text{ rad/s}^2$
19 Thermal resistance	$R_{th 1} / R_{th 2}$	14 / 88,0			K/W
20 Thermal time constant	τ_{w1} / τ_{w2}	1 / 149			s
21 Operating temperature range:					
– motor		- 20 ... +100			$^{\circ}\text{C}$
– coil, max. permissible		+125			$^{\circ}\text{C}$
22 Shaft bearings		ball bearings, preloaded			
23 Shaft load max.:					
– radial at 10 000/50 000 rpm (3,7 mm from mounting flange)		2,0 / 1,5			N
– axial at 10 000/50 000 rpm (push-on only)		0,6 / 0,2			N
– axial at standstill (push-on only)		10			N
24 Shaft play:					
– radial	\leq	0,012			mm
– axial	$=$	0			mm
25 Housing material		aluminium, black anodized			
26 Weight		2,5			g
27 Direction of rotation		electronically reversible			
Recommended values					
28 Speed up to ²⁾	$n_e \text{ max.}$		100 000	100 000	rpm
29 Torque up to ^{1) 2)}	$M_e \text{ max.}$		0,373	0,377	mNm
30 Current up to ^{1) 2)}	$I_e \text{ max.}$		0,371	0,146	A

¹⁾ at 40 000 rpm

²⁾ thermal resistance $R_{th 2}$ by 55% reduced



Recommended area for continuous operation

0620 ... B

Cable and connection information


Δ Coil winding 3 x 120°

Flex Print connector

Molex 52745-0890
FPC, 8 circuits, 0,5 mm Pitch
Top contact style


Connection

Pin	Function
1	Phase C
2	Phase B
3	Hall sensor C
4	+5V
5	GND
6	Hall sensor A
7	Hall sensor B
8	Phase A