Brushless DC-Micromotors

sensorless
smoovy® Technology

0,2 mNm

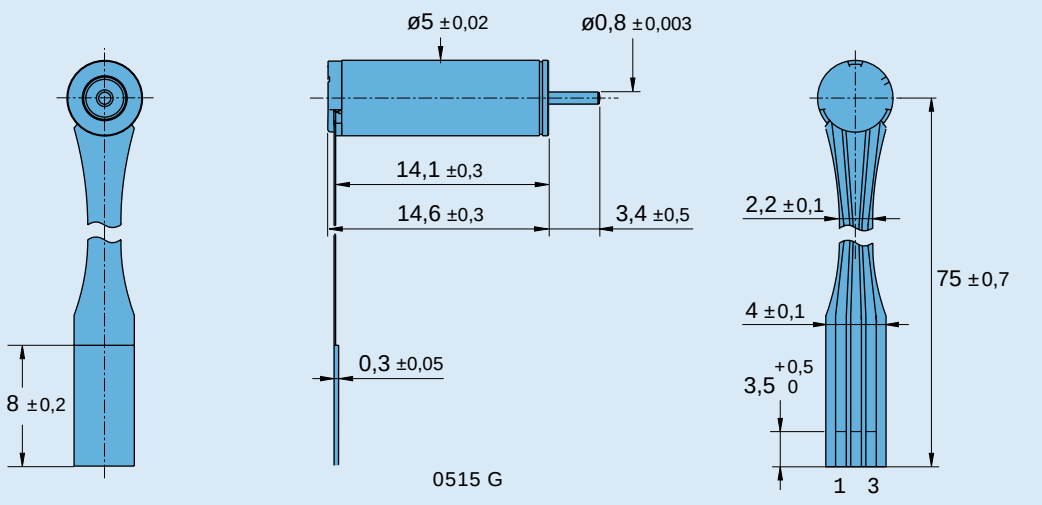
For combination with
Gearheads:
06A
Drive Electronics:
BLD 05002 S, SC 1801 F

Series 0515 ... B

			0515 G		006 B	
1	Nominal voltage	U_N			6	Volt
2	Terminal resistance, phase-phase	R			15,8	Ω
3	Output power [1]	$P_{2\ max.}$			0,43	W
4	Efficiency	$\eta_{max.}$			34,7	%
5	No-load speed	n_o			37 800	rpm
6	No-load current (with shaft ø 0,8 mm)	I_o			0,062	A
7	Stall torque	M_H			0,43	mNm
8	Friction torque, static	C_o			0,030	mNm
9	Friction torque, dynamic	C_v			$1{,}2 \cdot 10^{-6}$	mNm/rpm
10	Speed constant	k_n			7 847	rpm/V
11	Back-EMF constant	k_E			0,127	mV/rpm
12	Torque constant	k_M			1,217	mNm/A
13	Current constant	k_I			0,822	A/mNm
14	Slope of n-M curve	$\Delta n/\Delta M$			102 000	rpm/mNm
15	Terminal inductance, phase-phase	L			120	µH
16	Mechanical time constant	τ_m			2,2	ms
17	Rotor inertia	J			0,002	gcm^2
18	Angular acceleration	$\alpha_{max.}$			2 000	$\cdot 10^3 rad/s^2$
19	Thermal resistance	$R_{th\,1}$ / $R_{th\,2}$	15 / 110			K/W
20	Thermal time constant	τ_{w1} / τ_{w2}	1,4 / 75			s
21	Operating temperature range		– 30 ... + 80			°C
22	Shaft bearings		sintered bronze sleeves			
23	Shaft load max.:					
	– radial at 3 000 (1 mm from mounting flange)		0,2			N
	– axial at 3 000 rpm (push-on only)		0,2			N
	– axial at standstill (push-on only)		2			N
24	Shaft play:					
	– radial	≤	0,03			mm
	– axial	≤	0,15			mm
25	Housing material		Nickel alloy			
26	Weight		1,5			g
27	Direction of rotation		electronically reversible			
Recommended values - mathematically independent of each other						
28	Speed up to [2]	$n_{e\ max.}$			15 000	rpm
29	Torque up to [1] [2]	$M_{e\ max.}$			0,2	mNm
30	Current up to (thermal limits) [1] [2]	$I_{e\ max.}$			0,23	A

[1] at 15 000 rpm
[2] thermal resistance $R_{th\,2}$ by 55% reduced

Scale enlarged M 2:1



Connection

No.	Function
1	Phase A
2	Phase B
3	Phase C

Flex Print connector
3-pole, 1 mm pitch, e.g.:
Molex: 52207-0390

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Specifications subject to change without notice.
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