

Brushless DC-Micromotors

0,2 mNm

sensorless
smoovy® Technology

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	η _{max.}	34,7	%
5 No-load speed	n ₀	37 800	rpm
6 No-load current (with shaft ø 0,8 mm)	I ₀	0,062	A
7 Stall torque	M _H	0,43	mNm
8 Friction torque, static	C ₀	0,030	mNm
9 Friction torque, dynamic	C _v	1,2 · 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	Δn/ΔM	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	α _{max.}	2 000	· 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

