

DC-Micromotors

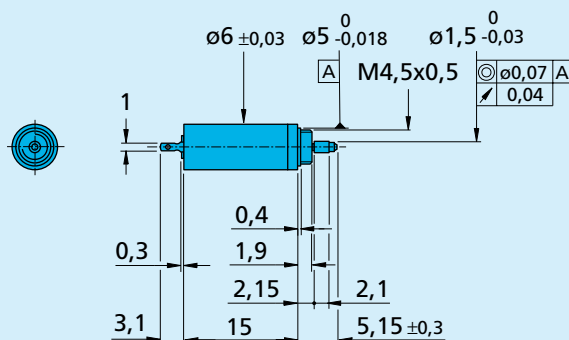
0,11 mNm

Precious Metal Commutation

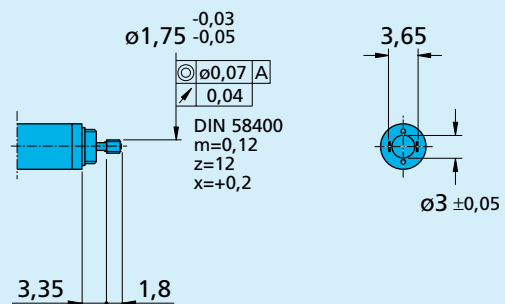
For combination with (overview on page 14-15)
Gearheads:
06/1

Series 0615 ... S

	0615 N	1,5 S	003 S	4,5 S		
1 Nominal voltage	U_N	1,5	3,0	4,5	Volt	
2 Terminal resistance	R	3,9	16,2	37,7	Ω	
3 Output power	$P_{2 \max}$	0,12	0,12	0,11	W	
4 Efficiency	η_{\max}	52	50	50	%	
5 No-load speed	n_0	19 100	20 200	19 500	rpm	
6 No-load current (with shaft $\varnothing 0,8$ mm)	I_0	0,030	0,016	0,010	A	
7 Stall torque	M_H	0,24	0,22	0,22	mNm	
8 Friction torque	M_R	0,02	0,02	0,02	mNm	
9 Speed constant	k_n	13 840	7 346	4 727	rpm/V	
10 Back-EMF constant	k_E	0,072	0,136	0,212	mV/rpm	
11 Torque constant	k_M	0,69	1,30	2,02	mNm/A	
12 Current constant	k_I	1,449	0,769	0,495	A/mNm	
13 Slope of n-M curve	$\Delta n / \Delta M$	78 224	91 538	88 229	rpm/mNm	
14 Rotor inductance	L	12	39	95	μH	
15 Mechanical time constant	τ_m	8	10	9	ms	
16 Rotor inertia	J	0,01	0,01	0,01	gcm ²	
17 Angular acceleration	α_{\max}	244	221	221	$\cdot 10^3 \text{rad/s}^2$	
18 Thermal resistance	$R_{th 1} / R_{th 2}$	35 / 76			K/W	
19 Thermal time constant	τ_{w1} / τ_{w2}	2,6 / 110			s	
20 Operating temperature range:						
- motor		- 30 ... + 85			$^{\circ}C$	
- rotor, max. permissible		+ 85			$^{\circ}C$	
21 Shaft bearings		sintered bronze sleeves				
22 Shaft load max.:						
- with shaft diameter		0,8			mm	
- radial at 3 000 rpm (1,5 mm from bearing)		0,5			N	
- axial at 3 000 rpm		0,1			N	
- axial at standstill		20			N	
23 Shaft play:						
- radial	\leq	0,03			mm	
- axial	\leq	0,15			mm	
24 Housing material		steel, black coated				
25 Weight		2			g	
26 Direction of rotation		clockwise, viewed from the front face				
Recommended values - mathematically independent of each other						
27 Speed up to	$n_{e \max}$		13 000	13 000	13 000	rpm
28 Torque up to	$M_{e \max}$		0,11	0,11	0,11	mNm
29 Current up to (thermal limits)	$I_{e \max}$		0,341	0,167	0,110	A



0615 N



0615 C
for Gearheads 06/1