

DC-Micromotors

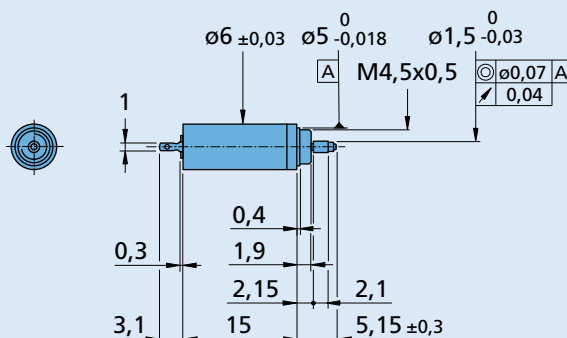
Precious Metal Commutation

0,11 mNm

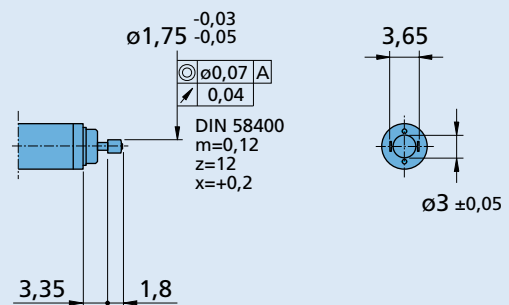
For combination with
Gearheads:
06/1
Encoders:
HXM3-64, PA2-50

Series 0615 ... S

	0615 N	1,5 S	003 S	4,5 S	
1 Nominal voltage	U_N	1,5	3	4,5	V
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, max.	η_{\max}	52	50	48	%
5 No-load speed	n_0	19 100	20 200	20 000	rpm
6 No-load current (with shaft \varnothing 0,8 mm)	I_0	0,03	0,016	0,012	A
7 Stall torque	M_H	0,24	0,22	0,21	mNm
8 Friction torque	M_R	0,02	0,02	0,02	mNm
9 Speed constant	k_n	13 840	7 346	4 872	rpm/V
10 Back-EMF constant	k_E	0,072	0,136	0,205	mV/rpm
11 Torque constant	k_M	0,69	1,3	1,96	mNm/A
12 Current constant	k_I	1,449	0,769	0,51	A/mNm
13 Slope of n-M curve	$\Delta n / \Delta M$	78 224	91 538	93 713	rpm/mNm
14 Rotor inductance	L	12	39	95	μ H
15 Mechanical time constant	τ_m	8	10	10	ms
16 Rotor inertia	J	0,01	0,01	0,01	gcm ²
17 Angular acceleration	α_{\max}	244	221	213	$\cdot 10^3$ 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 (optional version	-30 ... +125)		°C
– rotor, max. permissible		+85 (optional version	+125)		°C
21 Shaft bearings		sintered bearings			
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	0,11	A



0615 N ... S



0615 C ... S
for Gearhead 06/1