DC-Micromotors

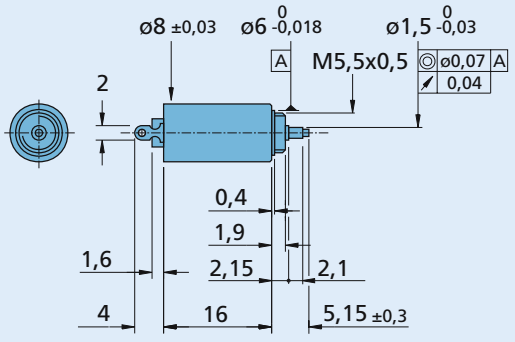
Precious Metal Commutation

0,15 mNm

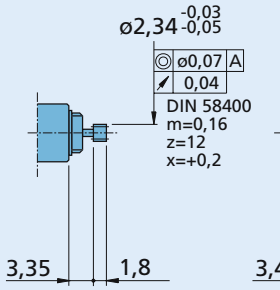
For combination with
Gearheads:
08/1, 08/2, 08/3
Encoders:
PA2-50, HEM3-256-W

Series 0816 ... S

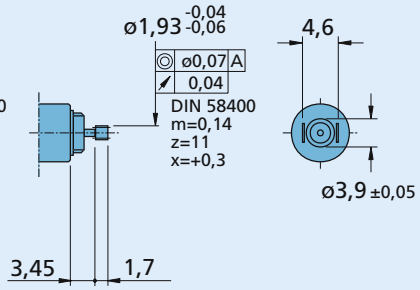
			0816 N		003 S	006 S	008 S	
1	Nominal voltage	U_N			3	6	8	Volt
2	Terminal resistance	R			11,5	47,0	75,7	Ω
3	Output power	$P_{2\ max.}$			0,17	0,16	0,18	W
4	Efficiency	$\eta_{max.}$			52	51	50	%
5	No-load speed	n_o			15 700	15 800	16 500	rpm
6	No-load current (with shaft ø 1,0 mm)	I_o			0,016	0,008	0,006	A
7	Stall torque	M_H			0,41	0,40	0,40	mNm
8	Friction torque	M_R			0,04	0,04	0,04	mNm
9	Speed constant	k_n			5 617	2 851	2 329	rpm/V
10	Back-EMF constant	k_E			0,178	0,351	0,429	mV/rpm
11	Torque constant	k_M			1,70	3,35	4,10	mNm/A
12	Current constant	k_I			0,588	0,299	0,244	A/mNm
13	Slope of n-M curve	Δn/ΔM			37 999	39 993	43 003	rpm/mNm
14	Rotor inductance	L			47	195	310	µH
15	Mechanical time constant	τ_m			12	13	14	ms
16	Rotor inertia	J			0,03	0,03	0,03	gcm²
17	Angular acceleration	$\alpha_{max.}$			138	132	133	$\cdot 10^3$rad/s²
18	Thermal resistance	$R_{th\,1}$ / $R_{th\,2}$	30 / 61					K/W
19	Thermal time constant	τ_{w1} / τ_{w2}	2,9 / 207					s
20	Operating temperature range:							
	– motor		– 30 ... + 85					°C
	– rotor, max. permissible		+ 85					°C
21	Shaft bearings		sintered bronze sleeves					
22	Shaft load max.:							
	– with shaft diameter		1,0					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	≤	0,03					mm
	– axial	≤	0,2					mm
24	Housing material		steel, nickel plated					
25	Weight		3,5					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	$M_{e\ max.}$			0,15	0,15	0,15	mNm
29	Current up to (thermal limits)	$I_{e\ max.}$			0,211	0,103	0,085	A



0816 N



0816 P
for Gearhead 08/1



0816 D
for Gearheads 08/2, 08/3