DC-Motors

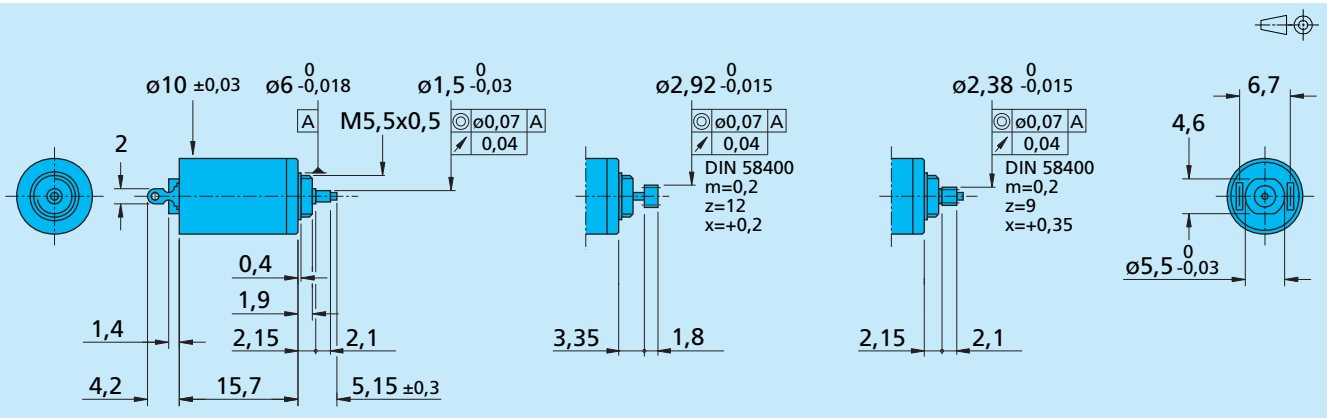
Precious Metal Commutation

0,48 mNm

For combination with
Gearheads: 10/1, 12/3
Encoders: HEM, HEM3-256, PA2-100

Series 1016 ... G

		1016 N		003 G	006 G	012 G	
1	Nominal voltage	U_N		3	6	12	Volt
2	Terminal resistance	R		8,7	20,1	95,0	Ω
3	Output power	$P_{2\ max.}$		0,24	0,42	0,36	W
4	Efficiency	$\eta_{max.}$		63	67	68	%
5	No-load speed	n_o		14 200	18 400	16 500	rpm
6	No-load current (with shaft ø 0,8 mm)	I_o		0,015	0,010	0,004	A
7	Stall torque	M_H		0,64	0,87	0,82	mNm
8	Friction torque	M_R		0,03	0,03	0,03	mNm
9	Speed constant	k_n		4 948	3 173	1 419	rpm/V
10	Back-EMF constant	k_E		0,202	0,315	0,705	mV/rpm
11	Torque constant	k_M		1,93	3,01	6,73	mNm/A
12	Current constant	k_I		0,518	0,332	0,149	A/mNm
13	Slope of n-M curve	$\Delta n/\Delta M$		22 304	21 185	20 029	rpm/mNm
14	Rotor inductance	L		15	60	310	µH
15	Mechanical time constant	τ_m		9	13	10	ms
16	Rotor inertia	J		0,04	0,06	0,05	gcm²
17	Angular acceleration	$\alpha_{max.}$		159	145	165	$\cdot 10^3$rad/s²
18	Thermal resistance	$R_{th\,1}$ / $R_{th\,2}$	26 / 56				K/W
19	Thermal time constant	τ_{w1} / τ_{w2}	3,1 / 260				s
20	Operating temperature range:						
	– motor		– 30 ... + 85 (optional – 30 ... + 125)				°C
	– rotor, max. permissible		+ 85 (optional + 125)				°C
21	Shaft bearings		sintered bronze sleeves (standard)	ball bearings (optional)			
22	Shaft load max.:						
	– with shaft diameter		0,8	1,0			mm
	– radial at 3 000 rpm (1,5 mm from bearing)		0,5	5			N
	– axial at 3 000 rpm		0,1	0,5			N
	– axial at standstill		20	5			N
23	Shaft play:						
	– radial	≤	0,03	0,02			mm
	– axial	≤	0,2	0,2			mm
24	Housing material		steel, nickel plated				
25	Weight		6,5				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	$M_{e\ max.}$		0,48	0,48	0,48	mNm
29	Current up to (thermal limits)	$I_{e\ max.}$		0,260	0,170	0,080	A



1016 N

1016 M
for Gearheads 10/1

1016 E
for Gearheads 12/3

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How to Order a 1016 ... G

Part number	Voltage	Description	Stocked items
1016N003G	3	Standard motor	no
1016N006G	6	Standard motor	no
1016N012G	12	Standard motor	no
1016M003G	3	Standard motor with pinion for 10/1 gearhead	yes
1016M006G	6	Standard motor with pinion for 10/1 gearhead	yes
1016M012G	12	Standard motor with pinion for 10/1 gearhead	yes
1016E003G	3	Standard motor with pinion for 12/3 gearhead	no
1016E006G	6	Standard motor with pinion for 12/3 gearhead	no
1016E012G	12	Standard motor with pinion for 12/3 gearhead	no

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