NEW

FAULHABER

DC-Micromotors

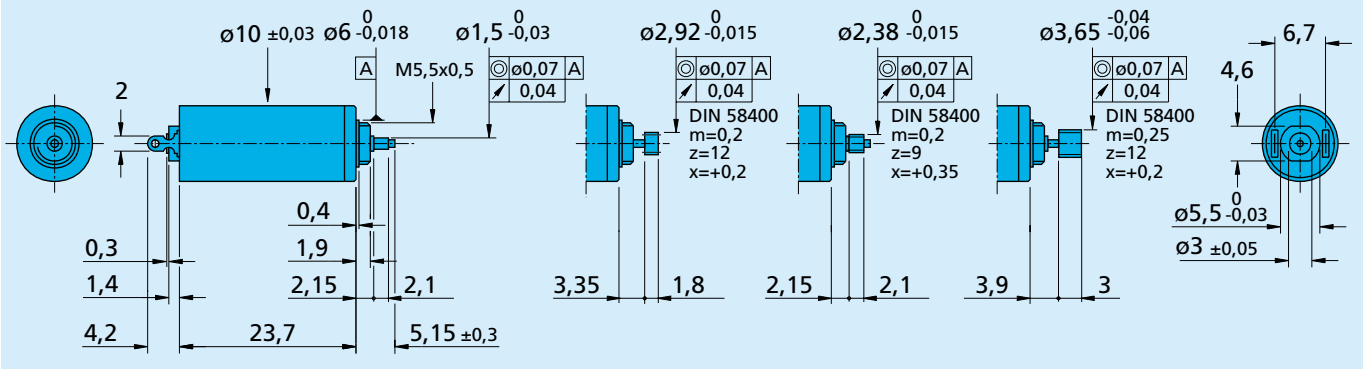
Precious Metal Commutation

1,28 mNm

For combination with (overview on page 14-15)
Gearheads:
10/1, 12/3, 12/4, 12/5
Encoders:
30B

Series 1024 ... S

		1024 N		003 S	006 S	012 S	
1	Nominal voltage	U_N		3	6	12	Volt
2	Terminal resistance	R		2,3	10,8	31,6	Ω
3	Output power	$P_{2\ max.}$		0,97	0,81	1,11	W
4	Efficiency	$\eta_{max.}$		79	78	79	%
5	No-load speed	n_o		13 800	13 200	14 700	rpm
6	No-load current (with shaft ø 1,0 mm)	I_o		0,016	0,008	0,004	A
7	Stall torque	M_H		2,69	2,34	2,89	mNm
8	Friction torque	M_R		0,03	0,03	0,03	mNm
9	Speed constant	k_n		4 658	2 231	1 240	rpm/V
10	Back-EMF constant	k_E		0,215	0,448	0,806	mV/rpm
11	Torque constant	k_M		2,05	4,28	7,70	mNm/A
12	Current constant	k_I		0,488	0,234	0,130	A/mNm
13	Slope of n-M curve	Δn/ΔM		5 135	5 630	5 090	rpm/mNm
14	Rotor inductance	L		26	100	344	µH
15	Mechanical time constant	τ_{m}		6	7	6	ms
16	Rotor inertia	J		0,12	0,12	0,12	gcm²
17	Angular acceleration	$\alpha_{max.}$		224	195	241	$\cdot 10^3$rad/s²
18	Thermal resistance	$R_{th\,1}$ / $R_{th\,2}$	14 / 41				K/W
19	Thermal time constant	τ_{w1} / τ_{w2}	5,0 / 289				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, black coated				
25	Weight		8,8				g
26	Direction of rotation		clockwise, viewed from the front face				
Recommended values - mathematically independent of each other							
27	Speed up to	$n_{e\ max.}$		12 000	12 000	12 000	rpm
28	Torque up to	$M_{e\ max.}$		1,27	1,21	1,28	mNm
29	Current up to (thermal limits)	$I_{e\ max.}$		0,636	0,291	0,170	A



1024 N

1024 M
for Gearheads 10/1

1024 E
for Gearheads 12/3, 12/5

1024 A
for Gearheads 12/4

For details on technical information and lifetime performance refer to pages 28-34.

For options on DC-Micromotors refer to page 64.
Specifications subject to change without notice.