DC-Micromotors

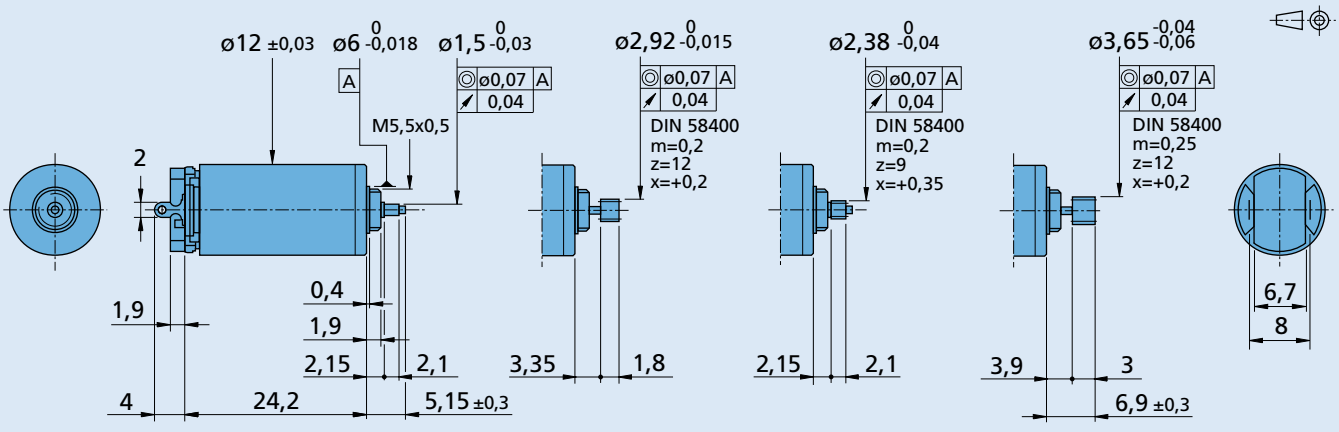
Precious Metal Commutation

1 mNm

For combination with
Gearheads:
10/1, 12/3, 12/4, 12/5
Encoders:
30B

Series 1224 ... S

			1224 N		006 S	012 S	015 S	
1	Nominal voltage	U_N			6	12	15	V
2	Terminal resistance	R			6,6	26,8	42,3	Ω
3	Output power	$P_{2\ max.}$			1,3	1,3	1,3	W
4	Efficiency, max.	$\eta_{max.}$			78	78	78	%
5	No-load speed	n_0			12 700	13 100	12 400	rpm
6	No-load current (with shaft ø 1 mm)	I_0			0,013	0,006	0,005	A
7	Stall torque	M_H			3,69	3,6	3,62	mNm
8	Friction torque	M_R			0,05	0,05	0,05	mNm
9	Speed constant	k_n			2 318	1 173	923	rpm/V
10	Back-EMF constant	k_E			0,431	0,852	1,084	mV/rpm
11	Torque constant	k_M			4,12	8,14	10,35	mNm/A
12	Current constant	k_I			0,243	0,123	0,097	A/mNm
13	Slope of n-M curve	Δn/ΔM			3 713	3 862	3 771	rpm/mNm
14	Rotor inductance	L			65	250	450	µH
15	Mechanical time constant	τ_m			7	7	7	ms
16	Rotor inertia	J			0,18	0,18	0,18	gcm²
17	Angular acceleration	$\alpha_{max.}$			205	200	201	·10³rad/s²
18	Thermal resistance	$R_{th\,1}$ / $R_{th\,2}$	22 / 45					K/W
19	Thermal time constant	τ_{w1} / τ_{w2}	6,5 / 392					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		1					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		13					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	1	1	mNm



1224 N ... S

1224 M ... S
for Gearhead 10/1

1224 E ... S
for Gearheads 12/3, 12/5

1224 A ... S
for Gearhead 12/4

For notes on technical data and lifetime performance refer to "Technical Information".

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