DC-Micromotors

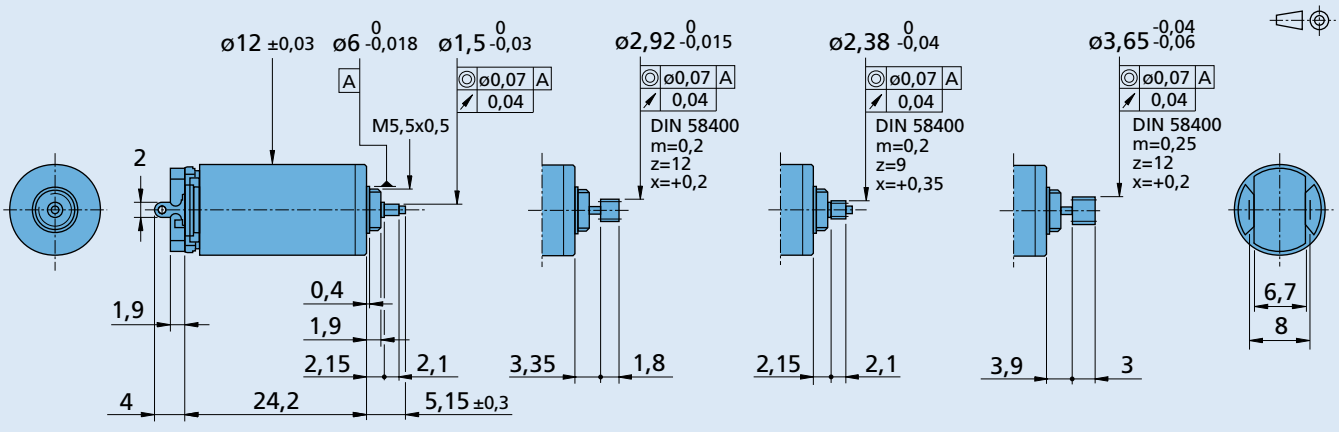
Precious Metal Commutation

1,8 mNm

For combination with
Gearheads:
10/1, 12/3, 12/4, 12/5
Encoders:
30B, HEM3-256-W, PA2-100

Series 1224 ... SR

		1224 N		006 SR	012 SR	015 SR	
1	Nominal voltage	U_N		6	12	15	V
2	Terminal resistance	R		4,6	18,2	29,4	Ω
3	Output power	$P_{2\ max.}$		1,92	1,95	1,88	W
4	Efficiency, max.	$\eta_{max.}$		82	83	83	%
5	No-load speed	n_0		13 800	13 700	13 400	rpm
6	No-load current (with shaft ø 1 mm)	I_0		0,011	0,005	0,004	A
7	Stall torque	M_H		5,31	5,43	5,36	mNm
8	Friction torque	M_R		0,05	0,05	0,05	mNm
9	Speed constant	k_n		2 323	1 151	901	rpm/V
10	Back-EMF constant	k_E		0,43	0,869	1,11	mV/rpm
11	Torque constant	k_M		4,11	8,3	10,6	mNm/A
12	Current constant	k_I		0,243	0,12	0,094	A/mNm
13	Slope of n-M curve	Δn/ΔM		2 600	2 523	2 499	rpm/mNm
14	Rotor inductance	L		55	220	350	µH
15	Mechanical time constant	τ_m		5	5	5	ms
16	Rotor inertia	J		0,18	0,18	0,18	gcm²
17	Angular acceleration	$\alpha_{max.}$		295	302	298	·10³rad/s²
18	Thermal resistance	$R_{th\,1}$ / $R_{th\,2}$	17 / 37				K/W
19	Thermal time constant	τ_{w1} / τ_{w2}	6,5 / 371				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, black coated				
25	Weight		13,5				g
26	Direction of rotation		clockwise, viewed from the front face				
Recommended values - mathematically independent of each other							
27	Speed up to	$n_{e\ max.}$		12 000	12 000	12 000	rpm
28	Torque up to	$M_{e\ max.}$		1,8	1,86	1,86	mNm



1224 N ... SR

1224 M ... SR
for Gearhead 10/1

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

1224 A ... SR
for Gearhead 12/4

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Specifications subject to change without notice.
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