

DC-Micromotors

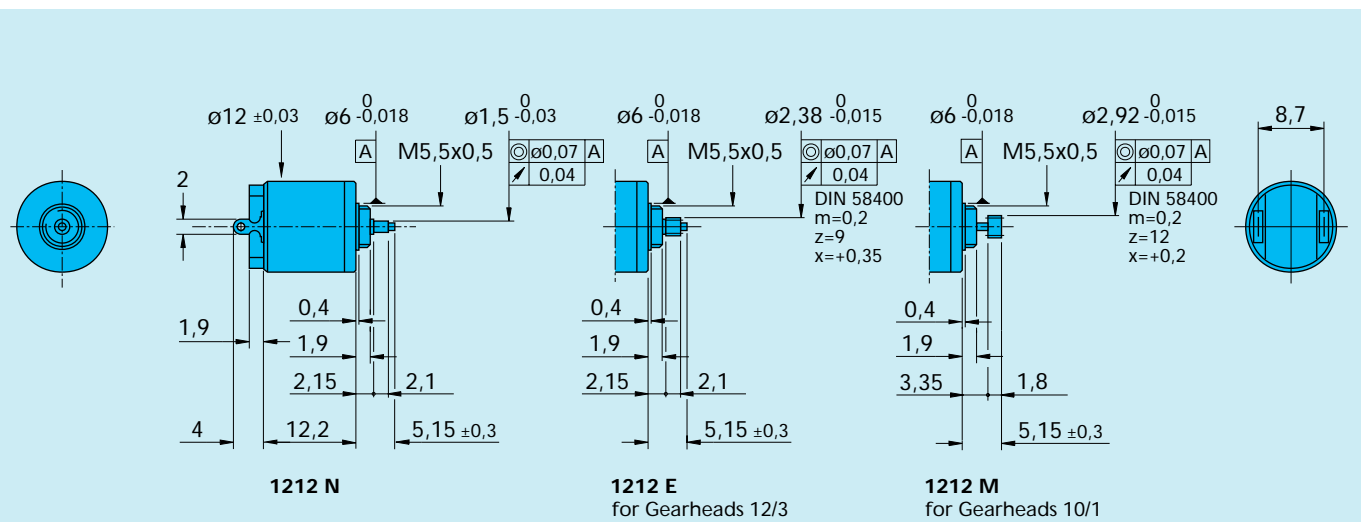
0,10 mNm

Precious Metal Commutation

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

Series 1212 ... G

	1212 N	1,8 G	2,7 G	004 G	006 G		
1 Nominal voltage	U_N	1,8	2,7	4,0	6,0	Volt	
2 Terminal resistance	R	6,0	11,5	21,5	88,5	Ω	
3 Output power	$P_{2 \max.}$	0,11	0,14	0,15	0,08	W	
4 Efficiency	$\eta_{\max.}$	51	53	50	43	%	
5 No-load speed	n_o	17 700	18 600	21 000	16 500	rpm	
6 No-load current (with shaft \varnothing 0,8 mm)	I_o	0,024	0,017	0,016	0,008	A	
7 Stall torque	M_H	0,24	0,28	0,28	0,18	mNm	
8 Friction torque	M_R	0,02	0,02	0,03	0,02	mNm	
9 Speed constant	k_n	10 730	7 403	5 753	3 121	rpm/V	
10 Back-EMF constant	k_E	0,093	0,135	0,174	0,320	mV/rpm	
11 Torque constant	k_M	0,89	1,29	1,66	3,06	mNm/A	
12 Current constant	k_I	1,124	0,775	0,602	0,327	A/mNm	
13 Slope of n-M curve	$\Delta n/\Delta M$	72 334	65 992	74 506	90 255	rpm/mNm	
14 Rotor inductance	L	30	100	180	1 600	μH	
15 Mechanical time constant	τ_m	136	111	86	95	ms	
16 Rotor inertia	J	0,18	0,16	0,11	0,10	gcm^2	
17 Angular acceleration	$\alpha_{\max.}$	14	18	26	18	$\cdot 10^3 rad/s^2$	
18 Thermal resistance	$R_{th 1} / R_{th 2}$	24 / 54				K/W	
19 Thermal time constant	τ_{w1} / τ_{w2}	3,0 / 290				s	
20 Operating temperature range:							
- motor		- 30 ... + 85 (optional - 30 ... + 125)				$^{\circ}C$	
- rotor, max. permissible		+ 85 (optional + 125)				$^{\circ}C$	
21 Shaft bearings		sintered bronze sleeves	ball bearings				
22 Shaft load max.:		(standard)	(optional)				
- with shaft diameter		0,8	1,0			mm	
- radial at 3000 rpm (1,5 mm from bearing)		0,5	5			N	
- axial at 3000 rpm		0,1	0,5			N	
- axial at standstill		20	5			N	
23 Shaft play:							
- radial	\leq	0,03	0,02			mm	
- axial	\leq	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							
27 Speed up to	$n_e \max.$		15 000	15 000	15 000	15 000	rpm
28 Torque up to	$M_e \max.$		0,10	0,10	0,10	0,10	mNm
29 Current up to (thermal limits)	$I_e \max.$		0,240	0,190	0,150	0,050	A



For notes on technical data refer to "Technical Information" in the main catalogue

Specifications subject to change without notice