

DC-Micromotor

Precious Metal Commutation

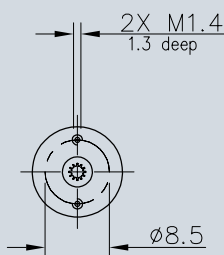
0.63 mNm

For combination with:
Gearheads:
MD12B

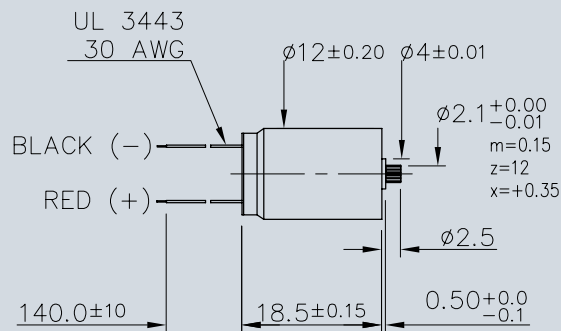
Series MD1219

		MD1219B	003V	012V	
1	Nominal voltage	U_N	3	12	Volt
2	Winding resistance	R	7.2	55.6	Ω
3	Output power	$P_{2 \text{ max.}}$	0.28	0.57	W
4	Efficiency	$\eta_{\text{ max.}}$	59	57	%
5	No-load speed	n_o	10,900	16,500	rpm
6	No-load current max. (shaft \varnothing 2.2 mm)	I_o	0.023	0.013	A
7	Stall torque	M_H	1.03	1.41	mNm
8	Friction torque	M_R	0.06	0.08	mNm
9	Speed constant	k_n	3,846	1,463	rpm/V
10	Back-EMF constant	k_E	0.26	0.68	mV/rpm
11	Torque constant	k_M	2.48	6.53	mNm/A
12	Current constant	k_I	0.403	0.153	A/mNm
13	Slope of n-M curve	$\Delta n / \Delta M$	10,535	11,714	rpm/mNm
14	Rotor inductance	L	11.4	366	μH
15	Mechanical time constant	τ_m	9	7	ms
16	Rotor inertia	J	0.08	0.05	gcm^2
17	Angular acceleration	$\alpha_{\text{ max.}}$	129	282	$\cdot 10^3 \text{ rad/s}^2$
18	Thermal resistance	$R_{\text{th } 1} / R_{\text{th } 2}$	32 / 69		$^{\circ}\text{C/W}$
19	Thermal time constant	τ_{w1}	310		s
20	Operating temperature range:				
	- motor		- 10 to + 60		$^{\circ}\text{C}$
	- rotor, max. permissible		+ 130		$^{\circ}\text{C}$
21	Shaft bearing		sintered bronze sleeves		
22	Shaft load max.:				
	- with shaft diameter		2.2		mm
	- radial at 3,000 rpm		1		N
	- axial at 3,000 rpm		0.5		N
	- axial at standstill (shaft supported)		11		N
23	Shaft play				
	- radial	\leq	0.3		mm
	- axial	\leq	0.3		mm
24	Housing material		steel, trivalent chromate		
25	Weight		15		g
26	Direction of rotation		clockwise, viewed from the front face		
Recommended values					
27	Speed up to	$n_{e \text{ max.}}$	16,000	16,000	rpm
28	Torque up to	$M_{e \text{ max.}}$	0.629	0.595	mNm
29	Current up to (thermal limits)	$I_{e \text{ max.}}$	0.323	0.116	A

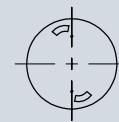
Orientation with respect to motor
terminals not defined



Front View



MD1219B



Rear View

