DC-Micromotors

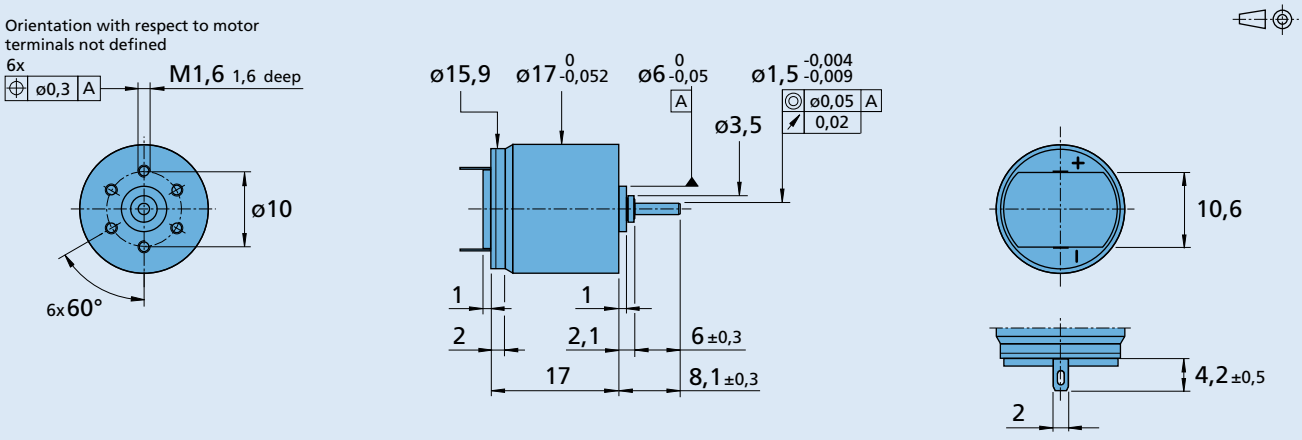
Precious Metal Commutation

2 mNm

For combination with
Gearheads:
15A, 16/7, 16A
Encoders:
IE2-1024, IE2-16

Series 1717 ... SR

		1717 T		003 SR	006 SR	012 SR	018 SR	024 SR	
1	Nominal voltage	U_N		3	6	12	18	24	V
2	Terminal resistance	R		1,07	4,3	17,1	50,1	68,8	Ω
3	Output power	$P_{2\ max.}$		1,97	1,96	1,97	1,5	1,96	W
4	Efficiency, max.	$\eta_{max.}$		69	69	70	68	70	%
5	No-load speed	n_0		14 000	14 000	14 000	12 300	14 000	rpm
6	No-load current (with shaft ø 1,5 mm)	I_0		0,091	0,046	0,023	0,013	0,011	A
7	Stall torque	M_H		5,37	5,34	5,38	4,66	5,36	mNm
8	Friction torque	M_R		0,18	0,18	0,18	0,18	0,17	mNm
9	Speed constant	k_n		4 820	2 410	1 210	709	602	rpm/V
10	Back-EMF constant	k_E		0,207	0,414	0,829	1,41	1,66	mV/rpm
11	Torque constant	k_M		1,98	3,96	7,92	13,5	15,9	mNm/A
12	Current constant	k_I		0,505	0,253	0,126	0,074	0,063	A/mNm
13	Slope of n-M curve	ΔnΔM		2 610	2 620	2 600	2 640	2 610	rpm/mNm
14	Rotor inductance	L		17	65	260	760	1 040	µH
15	Mechanical time constant	τ_m		16	16	16	16	16	ms
16	Rotor inertia	J		0,59	0,58	0,59	0,58	0,59	gcm²
17	Angular acceleration	$\alpha_{max.}$		92	92	92	80	92	·10³rad/s²
18	Thermal resistance	$R_{th\,1}$ / $R_{th\,2}$		4,5 / 27					K/W
19	Thermal time constant	τ_{w1} / τ_{w2}		2 / 210					s
20	Operating temperature range:								
	– motor			-30 ... +85 (optional version -55 ... +125)					°C
	– rotor, max. permissible			+125					°C
21	Shaft bearings			sintered bearings	ball bearings		ball bearings, preloaded		
22	Shaft load max.:			(standard)	(optional version)		(optional version)		
	– with shaft diameter			1,5	1,5		1,5		mm
	– radial at 3 000 rpm (3 mm from bearing)			1,2	5		5		N
	– axial at 3 000 rpm			0,2	0,5		0,5		N
	– axial at standstill			20	10		10		N
23	Shaft play								
	– radial		≤	0,03	0,015		0,015		mm
	– axial		≤	0,2	0,2		0		mm
24	Housing material			steel, black coated					
25	Weight			18					g
26	Direction of rotation			clockwise, viewed from the front face					
Recommended values - mathematically independent of each other									
27	Speed up to	$n_{e\ max.}$		10 000	10 000	10 000	10 000	10 000	rpm
28	Torque up to	$M_{e\ max.}$		2	2	2	2	2	mNm



1717 T ... SR

For notes on technical data and lifetime performance refer to "Technical Information".
Edition 2012 – 2013

www.faulhaber.com