NEW

DC-Micromotors

Precious Metal Commutation

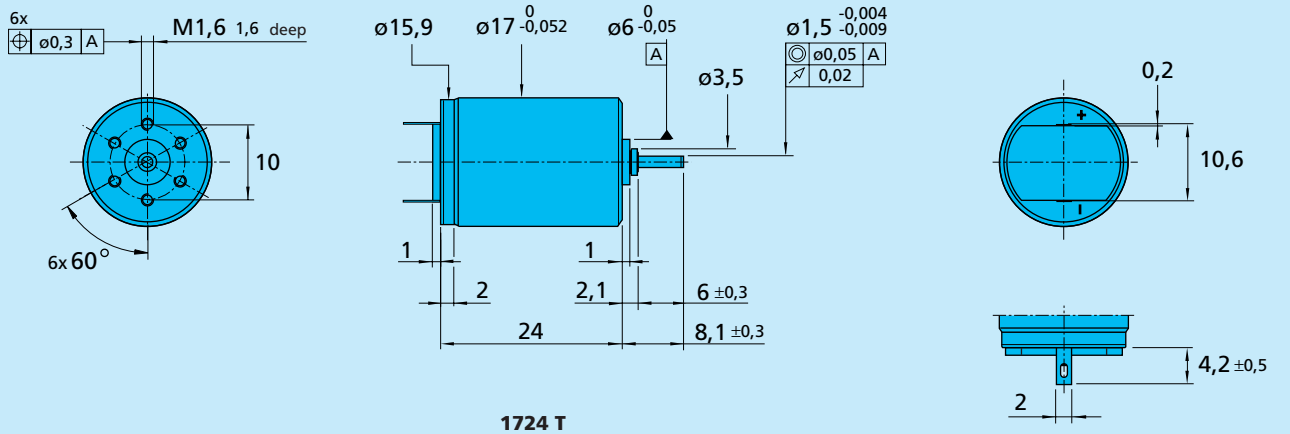
4 Watt

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

Series 1724 ... SR

		1724 T		003 SR	006 SR	012 SR	018 SR	024 SR	
1	Nominal voltage	U_N		3	6	12	18	24	Volt
2	Terminal resistance	R		0,78	3,41	16,20	32,10	54,60	Ω
3	Output power	$P_{2\ max.}$		2,89	2,64	2,23	2,53	2,64	W
4	Efficiency	$\eta_{max.}$		81	80	79	79	80	%
5	No-load speed	n_o		8 200	8 600	7 800	8 400	8 600	rpm
6	No-load current (with shaft ø 1,5 mm)	I_o		0,043	0,023	0,010	0,007	0,006	A
7	Stall torque	M_H		13,2	11,5	10,5	11,2	11,5	mNm
8	Friction torque	M_R		0,15	0,15	0,15	0,15	0,15	mNm
9	Speed constant	k_n		2 763	1 445	662	471	361	rpm/V
10	Back-EMF constant	k_E		0,362	0,692	0,510	2,124	2,769	mV/rpm
11	Torque constant	k_M		3,46	6,61	14,42	20,28	26,44	mNm/A
12	Current constant	k_I		0,289	0,151	0,069	0,049	0,038	A/mNm
13	Slope of n-M curve	$\Delta n/\Delta M$		622	745	744	745	746	rpm/mNm
14	Rotor inductance	L		21	75	355	700	1 190	µH
15	Mechanical time constant	τ_m		8	8	8	8	8	ms
16	Rotor inertia	J		1,23	1,03	1,03	1,02	1,02	gcm^2
17	Angular acceleration	$\alpha_{max.}$		107	112	102	110	113	$\cdot 10^3 rad/s^2$
18	Thermal resistance	$R_{th\,1}$ / $R_{th\,2}$		4 / 24,5					K/W
19	Thermal time constant	τ_{w1} / τ_{w2}		2,7 / 280					s
20	Operating temperature range:								
	– motor			– 30 ... + 85 (optional – 30 ... + 125)					°C
	– rotor, max. permissible			+ 125					°C
21	Shaft bearings			sintered bronze sleeves (standard)	ball bearings (optional)		ball bearings, preloaded (optional)		
22	Shaft load max.:								
	– with shaft diameter			1,5	1,5		1,5		mm
	– radial at 3000 rpm (3 mm from bearing)			1,2	5		5		N
	– axial at 3000 rpm			0,2	0,5		0,5		N
	– axial at standstill			20	10		10		N
23	Shaft play:								
	– radial	≤		0,015	0,015		0,015		mm
	– axial	≤		0,2	0,2		0		mm
24	Housing material			steel, black coated					
25	Weight			27					g
26	Direction of rotation			clockwise, viewed from the front face					
Recommended values									
27	Speed up to	$n_{e\ max.}$		8 000	8 000	8 000	8 000	8 000	rpm
28	Torque up to	$M_{e\ max.}$		4	4	4	4	4	mNm
29	Current up to (thermal limits)	$I_{e\ max.}$		1,70	0,80	0,37	0,26	0,20	A

Orientation with respect to motor terminals not defined



1724 T