

DC-Micromotors

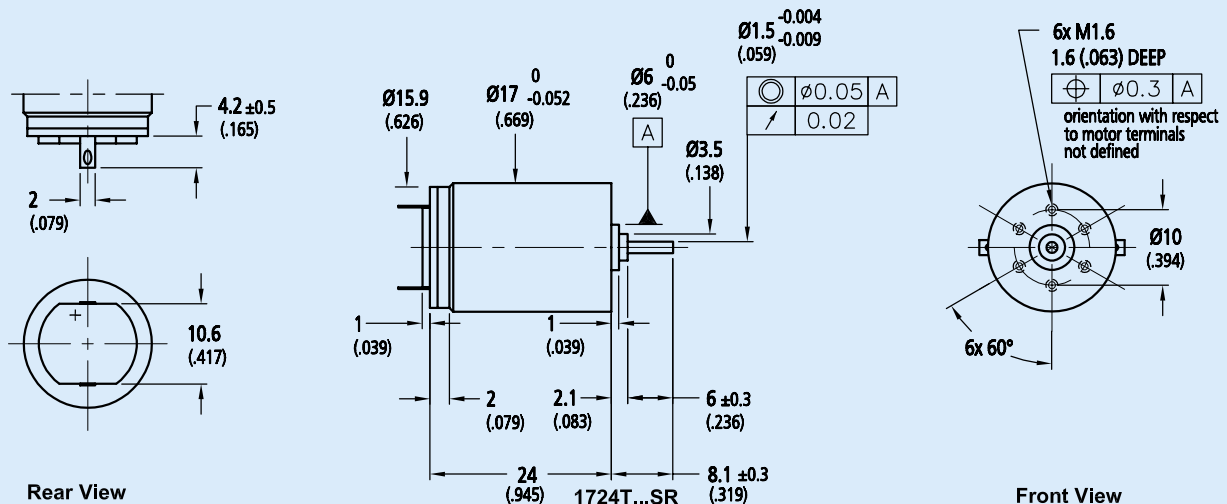
Precious Metal Commutation

0.595 oz-in

For combination with:
Gearheads: 15A, 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	± 12%	0.78	3.41	16.20	32.10	54.60	Ω
3 Output power	P _{2 max.}		2.83	2.58	2.17	2.47	2.58	W
4 Efficiency	η _{max.}		82	81	80	81	81	%
5 No-load speed	n _o	± 12%	8,200	8,600	7,900	8,400	8,600	rpm
6 No-load current (with shaft ø 0.03 in)	I _o	± 50%	0.038	0.020	0.009	0.006	0.005	A
7 Stall torque	M _H		1.869	1.629	1.487	1.586	1.629	oz-in
8 Friction torque	M _R		0.018	0.018	0.018	0.017	0.018	oz-in
9 Speed constant	k _n		2,760	1,450	666	472	362	rpm/V
10 Back-EMF constant	k _E		0.362	0.690	1.500	2.120	2.760	mV/rpm
11 Torque constant	k _M		0.490	0.933	2.025	2.860	3.724	oz-in/A
12 Current constant	k _I		2.041	1.072	0.494	0.350	0.269	A/oz-in
13 Slope of n-M curve	Δn/ΔM		4,387	5,279	5,313	5,296	5,279	rpm/oz-in
14 Rotor inductance	L		21	75	360	710	1,200	μH
15 Mechanical time constant	τ _m		8	8	8	8	8	ms
16 Rotor inertia	J		1.699 · 10 ⁻⁵	1.416 · 10 ⁻⁵	1.416 · 10 ⁻⁵	1.416 · 10 ⁻⁵	1.416 · 10 ⁻⁵	oz-in-sec ²
17 Angular acceleration	α _{max.}		110	110	100	110	110	·10 ³ rad/s ²
18 Thermal resistance	R _{th 1} / R _{th 2}	4 / 24.5						°C/W
19 Thermal time constant	τ _{w1} / τ _{w2}	2.6 / 270						s
20 Operating temperature range:								
– motor			– 30 to +85 (– 22 to +185)					°C (°F)
– rotor, max. permissible			+125 (+257)					°C (°F)
21 Shaft bearings			sintered bronze sleeves	ball bearings		ball bearings, preloaded		
22 Shaft load max.:			(standard)	(optional)		(optional)		
– with shaft diameter			0.0591	0.0591		0.0591		in
– radial at 3,000 rpm (0.12 in from bearing)			4.32	18		18		oz
– axial at 3,000 rpm			0.72	1.8		1.8		oz
– axial at standstill			72	36		36		oz
23 Shaft play:								
– radial	≤	0.0012		0.0006		0.0006		in
– axial	≤	0.0079		0.0079		0		in
24 Housing material			steel, black coated					
25 Weight			0.95					oz
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.}		0.595	0.595	0.595	0.595	0.595	oz-in
29 Current up to (thermal limits)	I _{e max.}		1.60	0.76	0.35	0.25	0.19	A



For notes on technical data refer to "Technical Information". Specifications subject to change without notice. MIM0104