DC-Micromotors

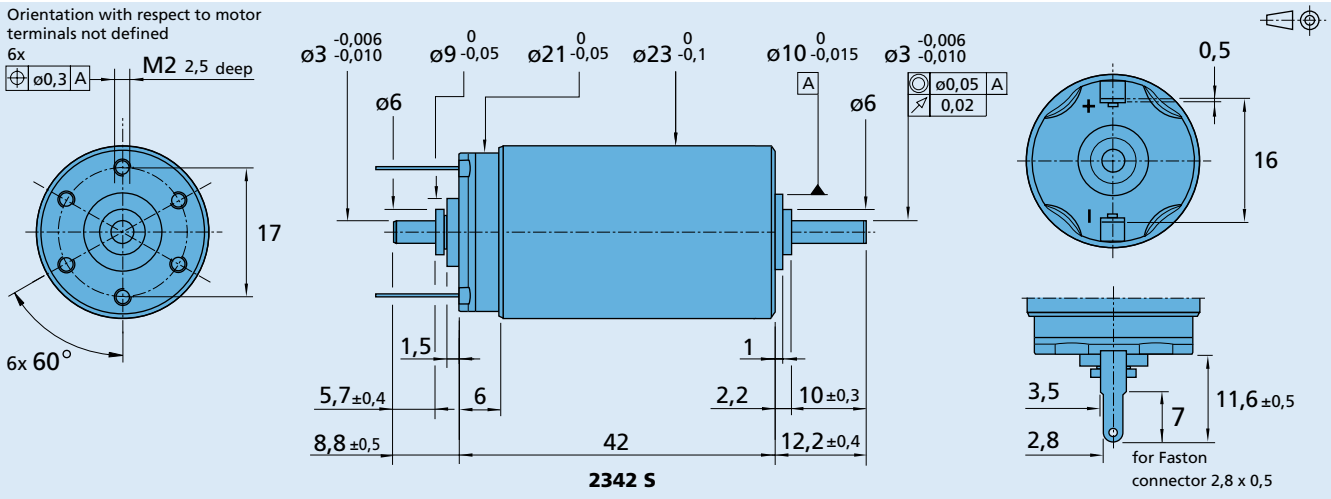
Graphite Commutation

16 mNm

For combination with
Gearheads:
22F, 23/1, 26A, 26/1, 22/7, 30/1, 38/3
Encoders:
IE2 – 16 ... 512, IE3 – 1024(L), 5500, 5540

Series 2342 ... CR

		2342 S	006 CR	012 CR	018 CR	024 CR	036 CR	048 CR	
1	Nominal voltage	U_N	6	12	18	24	36	48	Volt
2	Terminal resistance	R	0,40	1,90	4,10	7,10	15,9	31,20	Ω
3	Output power	$P_{2\ max.}$	20,50	17,00	18,10	19,00	19,40	17,70	W
4	Efficiency	$\eta_{max.}$	81	80	81	81	81	81	%
5	No-load speed	n_o	9 000	8 100	8 000	8 500	8 100	8 000	rpm
6	No-load current (with shaft ø 3,0 mm)	I_o	0,170	0,075	0,048	0,038	0,024	0,017	A
7	Stall torque	M_H	87,2	80,0	86,5	85,4	91,4	84,4	mNm
8	Friction torque	M_R	0,98	1,00	0,99	0,99	0,99	0,95	mNm
9	Speed constant	k_n	1 650	713	462	366	231	170	rpm/V
10	Back-EMF constant	k_E	0,604	1,400	2,160	2,730	4,340	5,870	mV/rpm
11	Torque constant	k_M	5,77	13,40	20,70	26,10	41,40	56,10	mNm/A
12	Current constant	k_I	0,173	0,075	0,048	0,038	0,024	0,018	A/mNm
13	Slope of n-M curve	Δn/ΔM	103	101	92,5	99,5	88,6	94,8	rpm/mNm
14	Rotor inductance	L	13,5	65	150	265	590	1 050	µH
15	Mechanical time constant	τ_{m}	6	6	6	6	6	6	ms
16	Rotor inertia	J	5,6	5,7	6,2	5,8	6,5	6,0	gcm²
17	Angular acceleration	$\alpha_{max.}$	160	140	140	150	140	140	$\cdot 10^3$rad/s²
18	Thermal resistance	$R_{th\,1}$ / $R_{th\,2}$	3 / 15						K/W
19	Thermal time constant	τ_{w1} / τ_{w2}	6,5 / 490						s
20	Operating temperature range:								
	– motor		– 30 ... +100						°C
	– rotor, max. permissible		+125						°C
21	Shaft bearings		ball bearings, preloaded						
22	Shaft load max.:								
	– with shaft diameter		3,0						mm
	– radial at 3 000 rpm (3 mm from bearing)		20						N
	– axial at 3 000 rpm		2						N
	– axial at standstill		20						N
23	Shaft play:								
	– radial	≤	0,015						mm
	– axial	=	0						mm
24	Housing material		steel, black coated						
25	Weight		88						g
26	Direction of rotation		clockwise, viewed from the front face						
Recommended values - mathematically independent of each other									
27	Speed up to	$n_{e\ max.}$	7 000	7 000	7 000	7 000	7 000	7 000	rpm
28	Torque up to	$M_{e\ max.}$	16	16	16	16	16	16	mNm
29	Current up to (thermal limits)	$I_{e\ max.}$	2,700	1,400	0,950	0,720	0,480	0,350	A



For notes on technical data and lifetime performance refer to "Technical Information".

Edition 2010 – 2011