

DC-Micromotors

35 mNm

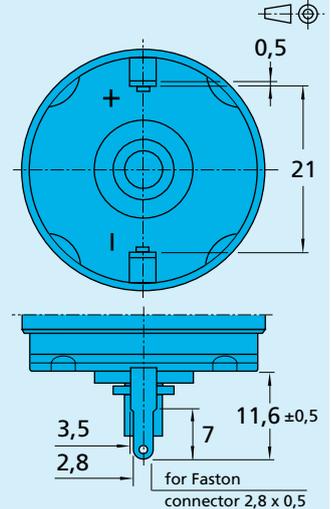
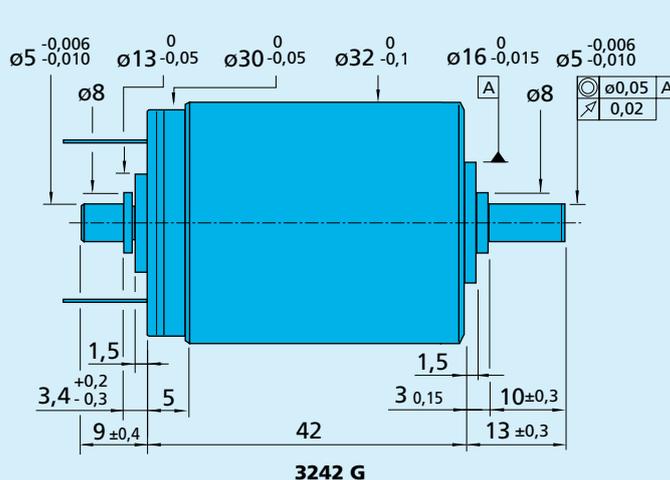
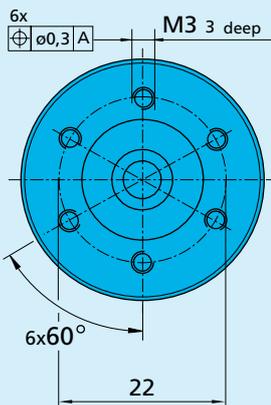
Graphite Commutation

For combination with (overview on page 14-15)
 Gearheads:
 32/3, 38/1, 38/2
 Encoders:
 IE2 – 16 ... 512, 5500, 5540

Series 3242 ... CR

	3242 G	012 CR	024 CR	048 CR	
1 Nominal voltage	U_N	12	24	48	Volt
2 Terminal resistance	R	1,27	5,00	19,70	Ω
3 Output power	$P_{2\max}$	24,7	26,3	27,3	W
4 Efficiency	η_{\max}	72	73	73	%
5 No-load speed	n_0	5 200	5 300	5 400	rpm
6 No-load current (with shaft \varnothing 5,0 mm)	I_0	0,234	0,117	0,058	A
7 Stall torque	M_H	181	189	193	mNm
8 Friction torque	M_R	4,8	4,8	4,8	mNm
9 Speed constant	k_n	464	231	116	rpm/V
10 Back-EMF constant	k_E	2,15	4,33	8,58	mV/rpm
11 Torque constant	k_M	20,6	41,3	82,0	mNm/A
12 Current constant	k_i	0,049	0,024	0,012	A/mNm
13 Slope of n-M curve	$\Delta n/\Delta M$	28,7	28,0	28,0	rpm/mNm
14 Rotor inductance	L	135	540	2 200	μ H
15 Mechanical time constant	τ_m	7,5	7,5	7,5	ms
16 Rotor inertia	J	25	26	26	gcm ²
17 Angular acceleration	α_{\max}	73	74	75	$\cdot 10^3$ rad/s ²
18 Thermal resistance	R_{th1} / R_{th2}	2,5 / 9			K/W
19 Thermal time constant	τ_{w1} / τ_{w2}	17 / 660			s
20 Operating temperature range:					
– motor		– 30 ... + 125			$^{\circ}$ C
– rotor, max. permissible		+ 155			$^{\circ}$ C
21 Shaft bearings		ball bearings, preloaded			
22 Shaft load max.:					
– with shaft diameter		5,0			mm
– radial at 3 000 rpm (3 mm from bearing)		50			N
– axial at 3 000 rpm		5			N
– axial at standstill		50			N
23 Shaft play:					
– radial	\leq	0,015			mm
– axial	$=$	0			mm
24 Housing material		steel, black coated			
25 Weight		175			g
26 Direction of rotation		clockwise, viewed from the front face			
Recommended values - mathematically independent of each other					
27 Speed up to	$n_{e\max}$	5 000	5 000	5 000	rpm
28 Torque up to	$M_{e\max}$	35	35	35	mNm
29 Current up to (thermal limits)	$I_{e\max}$	2,40	1,20	0,60	A

Orientation with respect to motor terminals not defined



For details on technical information and lifetime performance refer to pages 28-34.

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For options on DC-Micromotors refer to page 64. Specifications subject to change without notice.

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