

DC-Micromotors

Graphite Commutation

23 mNm

For combination with
 Gearheads:
 26/1(S), 26A, 30/1(S), 32A
 Encoders:
 IE3-1024(L)

Series 2642 ... CXR

	2642 W	012 CXR	024 CXR	048 CXR	
1 Nominal voltage	U_N	12	24	48	V
2 Terminal resistance	R	1,46	5,84	24,06	Ω
3 Output power	$P_{2 \text{ max.}}$	22,1	23,1	22,9	W
4 Efficiency, max.	$\eta_{\text{ max.}}$	76	78	79	%
5 No-load speed	n_0	5 800	5 900	5 900	rpm
6 No-load current (with shaft \varnothing 4 mm)	I_0	0,092	0,045	0,022	A
7 Stall torque	M_H	144,6	150,5	149	mNm
8 Friction torque	M_R	1,7	1,7	1,7	mNm
9 Speed constant	k_n	514	252	125	rpm/V
10 Back-EMF constant	k_E	1,945	3,962	7,994	mV/rpm
11 Torque constant	k_M	18,57	37,83	76,34	mNm/A
12 Current constant	k_i	0,054	0,026	0,013	A/mNm
13 Slope of n-M curve	$\Delta n/\Delta M$	40,4	39	39,4	rpm/mNm
14 Rotor inductance	L	135	560	2 280	μH
15 Mechanical time constant	τ_m	5,1	4,9	5	ms
16 Rotor inertia	J	12	12	12	gcm ²
17 Angular acceleration	$\alpha_{\text{ max.}}$	121	125	124	$\cdot 10^3 \text{ rad/s}^2$
18 Thermal resistance	$R_{\text{th} 1} / R_{\text{th} 2}$	4,7 / 15,2			K/W
19 Thermal time constant	τ_{w1} / τ_{w2}	20 / 720			s
20 Operating temperature range:					
– motor		-30 ... +100			$^{\circ}\text{C}$
– rotor, max. permissible		+125			$^{\circ}\text{C}$
21 Shaft bearings		sintered bearings	ball bearings, preloaded		
22 Shaft load max.:		(standard)	(optional version)		
– with shaft diameter		4	4		mm
– radial at 3 000 rpm (3 mm from bearing)		10	20		N
– axial at 3 000 rpm		2	2		N
– axial at standstill		50	20		N
23 Shaft play					
– radial	\leq	0,03	0,015		mm
– axial	\leq	0,2	0		mm
24 Housing material		steel, zinc galvanized and passivated			
25 Weight		114			g
26 Direction of rotation		clockwise, viewed from the front face			
Recommended values - mathematically independent of each other					
27 Speed up to	$n_{e \text{ max.}}$	6 000	6 000	6 000	rpm
28 Torque up to	$M_{e \text{ max.}}$	21	22	23	mNm

