

DC-Micromotors

Graphite Commutation

28 mNm

For combination with

Gearheads:

26/1, 26/1 S, 26A, 30/1, 30/1 S, 32A

Encoders:

HEDL 5540, HEDM 5500, HEDS 5500, HEDS 5540, IE2-1024, IE2-16, IE3-1024, IE3-1024 L

Series 2642 ... CR

	2642 W	012 CR	024 CR	048 CR	
1 Nominal voltage	U_N	12	24	48	V
2 Terminal resistance	R	1,45	5,78	23,8	Ω
3 Output power	$P_{2 \text{ max.}}$	22,1	23,2	23	W
4 Efficiency, max.	$\eta_{\text{ max.}}$	78	79	79	%
5 No-load speed	n_0	6 400	6 400	6 400	rpm
6 No-load current (with shaft \varnothing 4 mm)	I_0	0,118	0,058	0,029	A
7 Stall torque	M_H	132	139	137	mNm
8 Friction torque	M_R	2	2	2	mNm
9 Speed constant	k_n	565	276	137	rpm/V
10 Back-EMF constant	k_E	1,77	3,62	7,31	mV/rpm
11 Torque constant	k_M	16,9	34,6	69,8	mNm/A
12 Current constant	k_i	0,059	0,029	0,014	A/mNm
13 Slope of n-M curve	$\Delta n / \Delta M$	48,5	46	46,7	rpm/mNm
14 Rotor inductance	L	130	550	2 200	μH
15 Mechanical time constant	τ_m	5,4	5,4	5,4	ms
16 Rotor inertia	J	11	11	11	gcm^2
17 Angular acceleration	$\alpha_{\text{ max.}}$	120	120	120	$\cdot 10^3 \text{ rad/s}^2$
18 Thermal resistance	$R_{\text{th} 1} / R_{\text{th} 2}$	2,1 / 11			K/W
19 Thermal time constant	τ_{w1} / τ_{w2}	10 / 510			s
20 Operating temperature range:					
– motor		-30 ... +125			$^{\circ}\text{C}$
– rotor, max. permissible		+155			$^{\circ}\text{C}$
21 Shaft bearings		ball bearings, preloaded			
22 Shaft load max.:					
– with shaft diameter		4			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	\leq	0,015			mm
– axial	\parallel	0			mm
24 Housing material		steel, black coated			
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	$M_{e \text{ max.}}$	28	28	28	mNm
29 Current up to (thermal limits)	$I_{e \text{ max.}}$	1,97	0,98	0,48	A

