DC-Micromotors

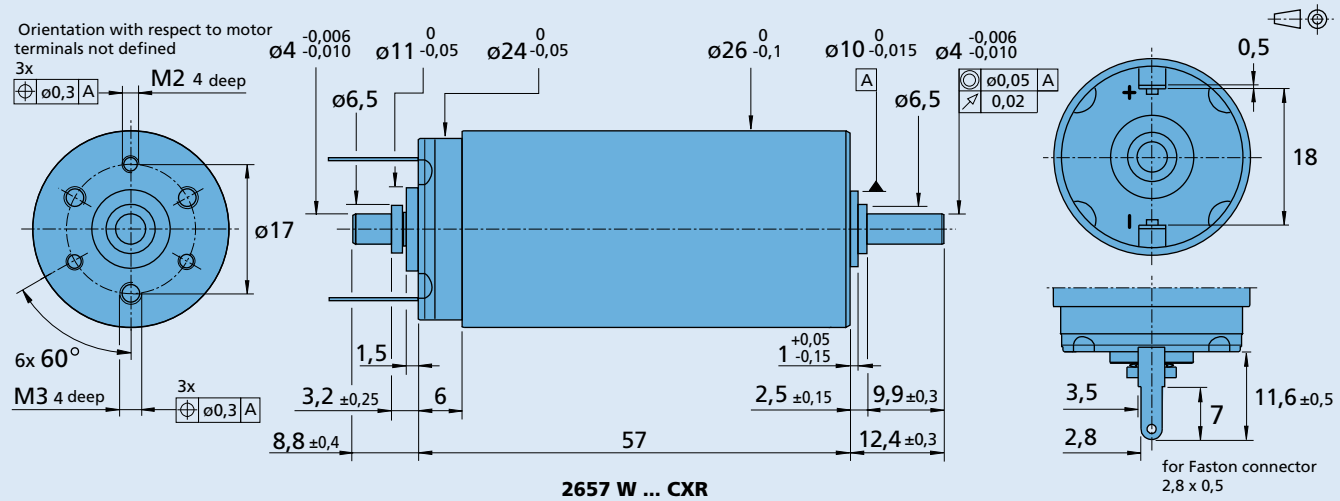
Graphite Commutation

35 mNm

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

Series 2657 ... CXR

		2657 W			012 CXR	024 CXR	048 CXR	
1	Nominal voltage	U_N			12	24	48	V
2	Terminal resistance	R			0,72	2,98	12,61	Ω
3	Output power	$P_{2\ max.}$			45,3	45,7	44,1	W
4	Efficiency, max.	$\eta_{max.}$			81	83	83	%
5	No-load speed	n_0			5 600	5 800	5 800	rpm
6	No-load current (with shaft ø 4 mm)	I_0			0,104	0,052	0,026	A
7	Stall torque	M_H			306,7	302,9	283,1	mNm
8	Friction torque	M_R			2	2	2	mNm
9	Speed constant	k_n			494	247	122	rpm/V
10	Back-EMF constant	k_E			2,024	4,05	8,205	mV/rpm
11	Torque constant	k_M			19,33	38,67	78,35	mNm/A
12	Current constant	k_I			0,052	0,026	0,013	A/mNm
13	Slope of n-M curve	Δn/ΔM			18,4	19	19,6	rpm/mNm
14	Rotor inductance	L			90	365	1 500	µH
15	Mechanical time constant	τ_m			3,3	3,4	3,5	ms
16	Rotor inertia	J			17	17	17	gcm²
17	Angular acceleration	$\alpha_{max.}$			180	178	172	·10³rad/s²
18	Thermal resistance	$R_{th\,1}$ / $R_{th\,2}$	4,4 / 12,6					K/W
19	Thermal time constant	τ_{w1} / τ_{w2}	28 / 810					s
20	Operating temperature range:							
	– motor		-30 ... +100					°C
	– rotor, max. permissible		+125					°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	≤	0,03	0,015				mm
	– axial	≤	0,2	0				mm
24	Housing material		steel, zinc galvanized and passivated					
25	Weight		156					g
26	Direction of rotation		clockwise, viewed from the front face					
Recommended values - mathematically independent of each other								
27	Speed up to	$n_{e\,max.}$			6 000	6 000	6 000	rpm
28	Torque up to	$M_{e\,max.}$			33	34	35	mNm
29	Current up to (thermal limits)	$I_{e\,max.}$			2,03	1,05	0,53	A



2657 W ... CXR

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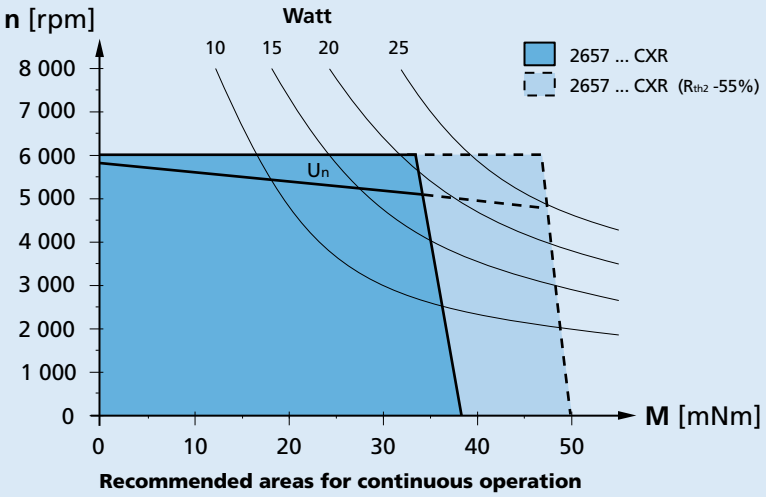
Note:

The left portion of the diagram indicates the recommended area of motor operation for continuous duty in a thermally insulated condition (not mounted) at room temperature 22°C.

The right portion of the diagram indicates the possible area of operation if the motor is cooled (ex. R_{th2} -55%) by mounting or ambient air flow conditions.

The diagram indicates the area of continuous operation for maximum lifetime performance of the motor. The motor can be driven intermittently outside of the recommended area of operation. Please consult your local product representative for more information.

The nominal voltage curve (U_n) shows the operating points at nominal voltage. Any points of operation above the curve will require a higher operating voltage, points below will require less voltage.



Recommended areas for continuous operation