

Brushless Flat DC-Micromotors

3,8 mNm

For combination with
Drive Electronics:
Speed Controller

Series 2610 ... B

	2610 T	006 B	012 B	
1 Nominal voltage	U_N	6	12	Volt
2 Terminal resistance, phase-phase	R	7,0	28,2	Ω
3 Output power ¹⁾	$P_{2 \text{ max.}}$	1,92	1,91	W
4 Efficiency	$\eta \text{ max.}$	78	78	%
5 No-load speed	n_0	6 200	6 200	rpm
6 No-load current	I_0	0,012	0,006	A
7 Stall torque	M_H	7,73	7,68	mNm
8 Friction torque, static	C_0	0,025	0,025	mNm
9 Friction torque, dynamic	C_v	$1,35 \cdot 10^{-5}$	$1,35 \cdot 10^{-5}$	mNm/rpm
10 Speed constant	k_n	1 055	528	rpm/V
11 Back-EMF constant	k_E	0,948	1,895	mV/rpm
12 Torque constant	k_M	9,05	18,1	mNm/A
13 Current constant	k_I	0,111	0,055	A/mNm
14 Slope of n-M curve	$\Delta n / \Delta M$	816	822	rpm/mNm
15 Terminal inductance, phase-phase	L	480	1 940	μH
16 Mechanical time constant	τ_m	69	70	ms
17 Rotor inertia	J	8,1	8,1	gcm^2
18 Angular acceleration	$\alpha \text{ max.}$	9,5	9,5	$\cdot 10^3 \text{ rad/s}^2$
19 Thermal resistance	$R_{th 1} / R_{th 2}$	33 / 27		K/W
20 Thermal time constant	τ_{w1} / τ_{w2}	20 / 230		s
21 Operating temperature range		-25 ... +80		$^{\circ}C$
22 Shaft bearings		ball bearing, preloaded		
23 Shaft load max.:				
– radial at 3 000/7 000 rpm (3 mm from mounting flange)		4,0 / 3,5		N
– axial at 3 000/7 000 rpm (push-on only)		3,5 / 3,4		N
– axial at standstill (push-on only)		17,5		N
24 Shaft play:				
– radial	\leq	0,015		mm
– axial	$=$	0		mm
25 Housing material		plastic		
26 Weight		20,1		g
27 Direction of rotation		electronically reversible		
28 Number of pole pairs		2		

Recommended values - mathematically independent of each other

29 Speed up to	$n_{e \text{ max.}}$	7 000	7 000	rpm
30 Torque up to ^{1) 2)}	$M_{e \text{ max.}}$	3,24 / 3,77	3,23 / 3,75	mNm
31 Current up to ^{1) 2)}	$I_{e \text{ max.}}$	0,42 / 0,48	0,21 / 0,24	A

¹⁾ at 5 000 rpm

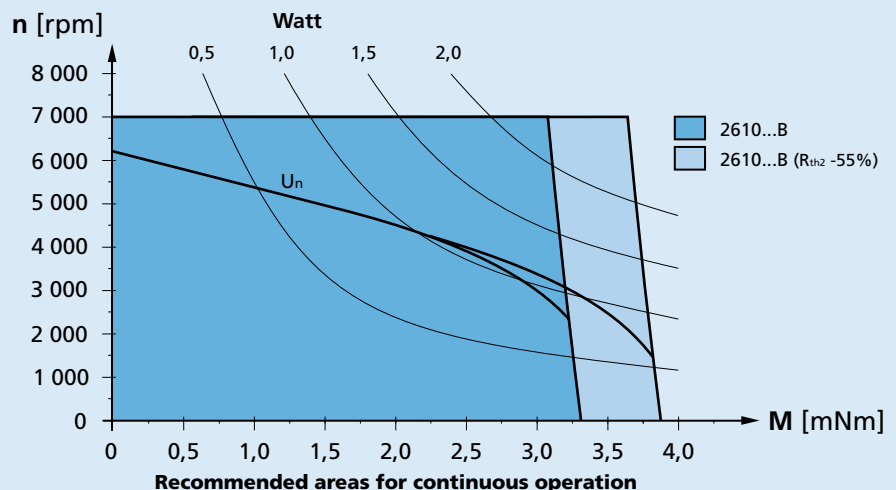
²⁾ thermal resistance $R_{th 2}$ not reduced / thermal resistance $R_{th 2}$ by 55% reduced

Note:

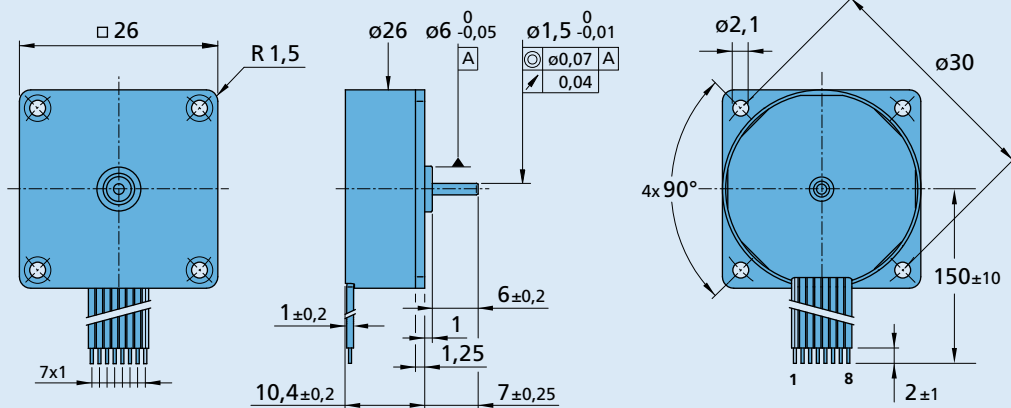
The diagram indicates the recommended speed in relation to the available torque at the output shaft for a given ambient temperature of 22°C.

The diagram shows the motor in a completely insulated as well as thermally coupled condition ($R_{th 2}$ 55% reduced).

The nominal voltage curve shows the operating point at nominal voltage in the insulated and thermally coupled condition. Any points of operation above the curve at nominal voltage will require a higher operating voltage. Any points below the nominal voltage curve will require less voltage.



2610 T ... B



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Cable

Jacket Material: PVC
8 conductors, AWG 28
grid 1,0 mm
wires tinned

Note:

Hallsensors digital

Connection

No. Function

- | | |
|---|---------------|
| 1 | Phase C |
| 2 | Phase B |
| 3 | Phase A |
| 4 | GND |
| 5 | + 5V |
| 6 | Hall sensor C |
| 6 | Hall sensor B |
| 6 | Hall sensor A |