

Brushless DC-Servomotors

2,2 mNm

For combination with
 Gearheads:
 10/1, 12/3, 12/4, 12/5
 Drive electronics:
 Speed Controller, Motion Controller

Series 1226 ... B

	1226 S	006 B	012 B	
1 Nominal voltage	U_N	6	12	Volt
2 Terminal resistance, phase-phase	R	2,30	5,30	Ω
3 Output power ¹⁾	$P_{2 \text{ max.}}$	9,6	9,3	W
4 Efficiency	$\eta_{\text{ max.}}$	68	69	%
5 No-load speed	n_o	20 100	27 200	rpm
6 No-load current (with shaft \varnothing 1,2 mm)	I_o	0,088	0,074	A
7 Stall torque	M_H	7,19	9,21	mNm
8 Friction torque, static	C_o	0,079	0,079	mNm
9 Friction torque, dynamic	C_v	$8,2 \cdot 10^{-6}$	$8,2 \cdot 10^{-6}$	mNm/rpm
10 Speed constant	k_n	3 447	2 335	rpm/V
11 Back-EMF constant	k_E	0,290	0,428	mV/rpm
12 Torque constant	k_M	2,77	4,09	mNm/A
13 Current constant	k_i	0,361	0,244	A/mNm
14 Slope of n-M curve	$\Delta n / \Delta M$	2 862	3 026	rpm/mNm
15 Terminal inductance, phase-phase	L	35	80	μH
16 Mechanical time constant	τ_m	4	4	ms
17 Rotor inertia	J	0,145	0,145	gcm^2
18 Angular acceleration	$\alpha_{\text{ max.}}$	496	635	$\cdot 10^3 \text{ rad/s}^2$
19 Thermal resistance	$R_{\text{th} 1} / R_{\text{th} 2}$	7 / 38,0		K/W
20 Thermal time constant	τ_{w1} / τ_{w2}	3 / 186		s
21 Operating temperature range:				
– motor		– 20 ... +100		$^{\circ}\text{C}$
– coil, max. permissible		+125		$^{\circ}\text{C}$
22 Shaft bearings		ball bearings, preloaded		
23 Shaft load max.:				
– radial at 10 000/30 000 rpm (3,7 mm from mounting flange)		4,9 / 4,0		N
– axial at 10 000/30 000 rpm (push-on only)		2,6 / 1,1		N
– axial at standstill (push-on only)		11		N
24 Shaft play:				
– radial	\leq	0,012		mm
– axial	$=$	0		mm
25 Housing material		aluminium, black anodized		
26 Weight		13		g
27 Direction of rotation		electronically reversible		
Recommended values - mathematically independent of each other				
28 Speed up to ²⁾	$n_{e \text{ max.}}$	60 000	60 000	rpm
29 Torque up to ^{1) 2)}	$M_{e \text{ max.}}$	2,28	2,21	mNm
30 Current up to ^{1) 2)}	$I_{e \text{ max.}}$	0,97	0,64	A

¹⁾ at 40 000 rpm

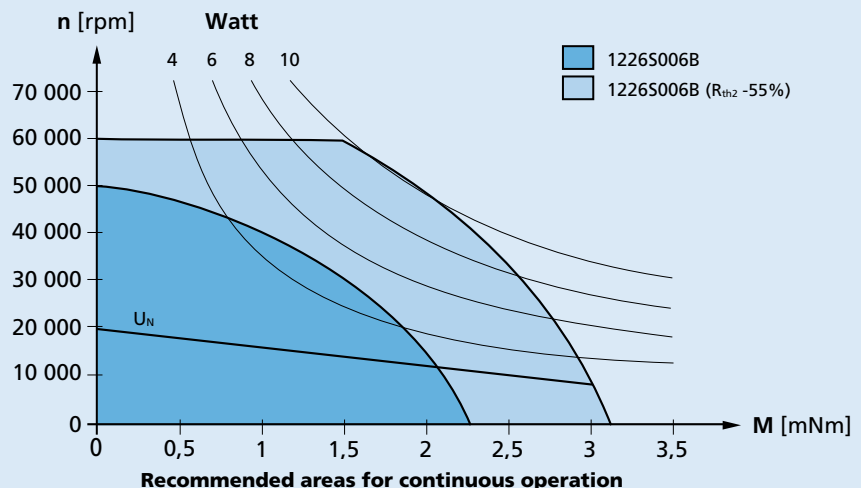
²⁾ thermal resistance $R_{\text{th} 2}$ by 55% reduced

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.

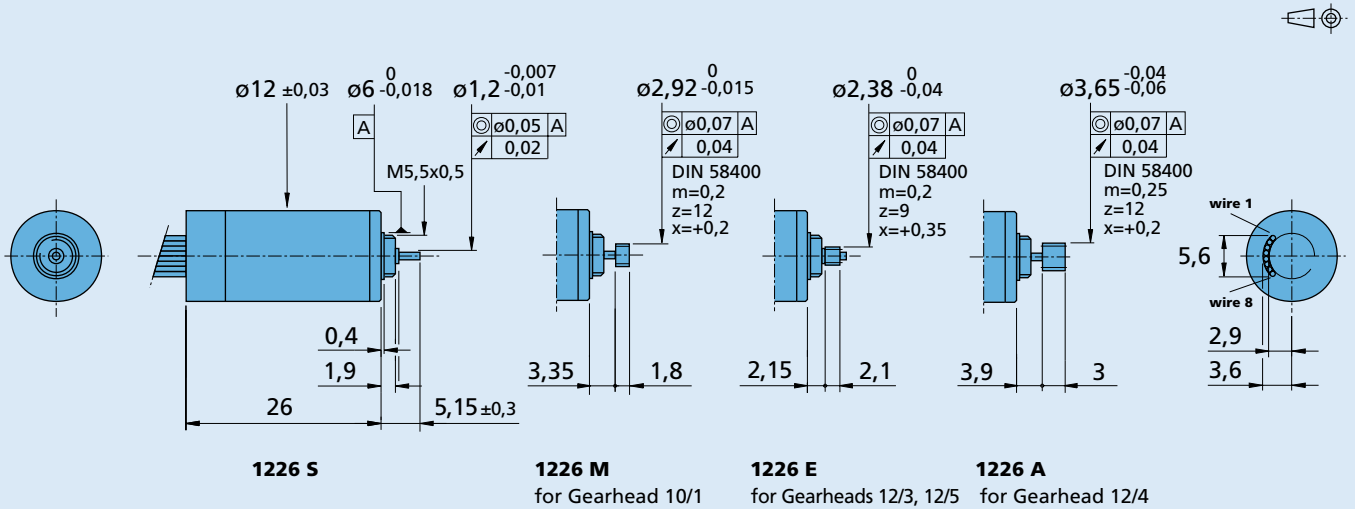
The diagram shows the motor in a completely insulated as well as thermally coupled condition ($R_{\text{th} 2}$ 55% reduced).

The nominal voltage (U_N) 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.



Options
K1855:
 Motors for operation with Motion Controllers

1226 ... B



Cable and connection information

