

Brushless DC-Servomotors

4 Pole Technology

97 mNm

For combination with

Gearheads:

30/1, 32A, 32/3, 32/3 S, 38/1, 38/1 S, 38/2, 38/2 S

Encoders:

3268...BX4 + Encoder

Drive Electronics:

Speed Controller

Series 3268 ... BX4

	3268 G		024 BX4		
1 Nominal voltage	U_N		24		Volt
2 Terminal resistance, phase-phase	R		1,45		Ω
3 Output power ¹⁾	$P_{2 \text{ max.}}$		35,8		W
4 Efficiency	$\eta_{\text{ max.}}$		79,5		%
5 No-load speed	n_0		5 500		rpm
6 No-load current	I_0		0,212		A
7 Stall torque	M_H		718		mNm
8 Friction torque, static	C_0		1,7		mNm
9 Friction torque, dynamic	C_v		$1,3 \cdot 10^{-3}$		mNm/rpm
10 Speed constant	k_n		220		rpm/V
11 Back-EMF constant	k_E		4,555		mV/rpm
12 Torque constant	k_M		43,5		mNm/A
13 Current constant	k_I		0,0230		A/mNm
14 Slope of n-M curve	$\Delta n / \Delta M$		7,3		rpm/mNm
15 Terminal inductance, phase-phase	L		110		μH
16 Mechanical time constant	τ_m		4,6		ms
17 Rotor inertia	J		60		gcm^2
18 Angular acceleration	$\alpha_{\text{ max.}}$		120		$\cdot 10^3 \text{ rad/s}^2$
19 Thermal resistance	$R_{\text{th} 1} / R_{\text{th} 2}$	1,9 / 8,6			K/W
20 Thermal time constant	τ_{w1} / τ_{w2}	17 / 950			s
21 Operating temperature range		- 40 ... + 100			$^{\circ}\text{C}$
22 Shaft bearings		ball bearings, preloaded			
23 Shaft load max.:					
– radial at 3 000 rpm (4,5 mm from mounting flange)		50			N
– axial at 3 000 rpm		5			N
– axial at standstill		50			N
24 Shaft play:					
– radial	\leq	0,015			mm
– axial	$=$	0			mm
25 Housing material		stainless steel			
26 Weight		290			g
27 Direction of rotation		electronically reversible			
28 Number of pole pairs		2			

Recommended values - mathematically independent of each other

29 Speed up to	$n_{e \text{ max.}}$		12 000		rpm
30 Torque up to ^{1) 2)}	$M_{e \text{ max.}}$		54 / 97		mNm
31 Current up to ^{1) 2)}	$I_{e \text{ max.}}$		1,57 / 2,72		A

¹⁾ at 5 000 rpm

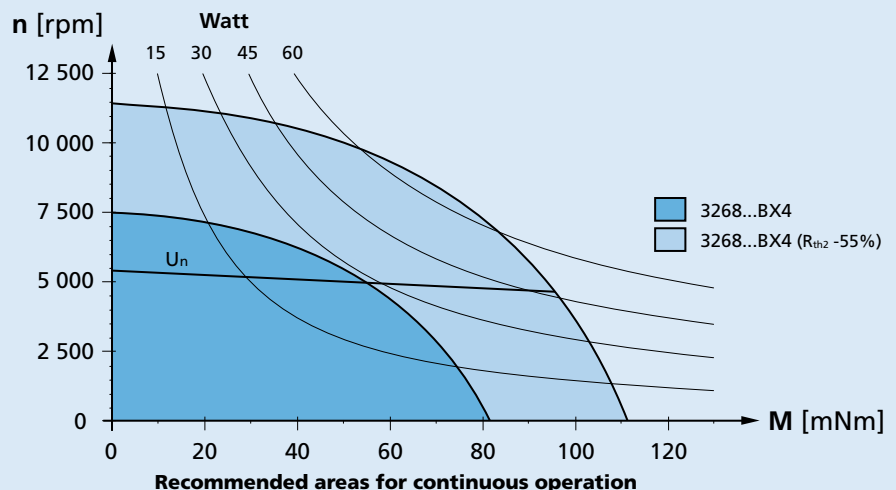
²⁾ thermal resistance $R_{\text{th} 2}$ not reduced / thermal resistance $R_{\text{th} 2}$ by 55% reduced

Note:

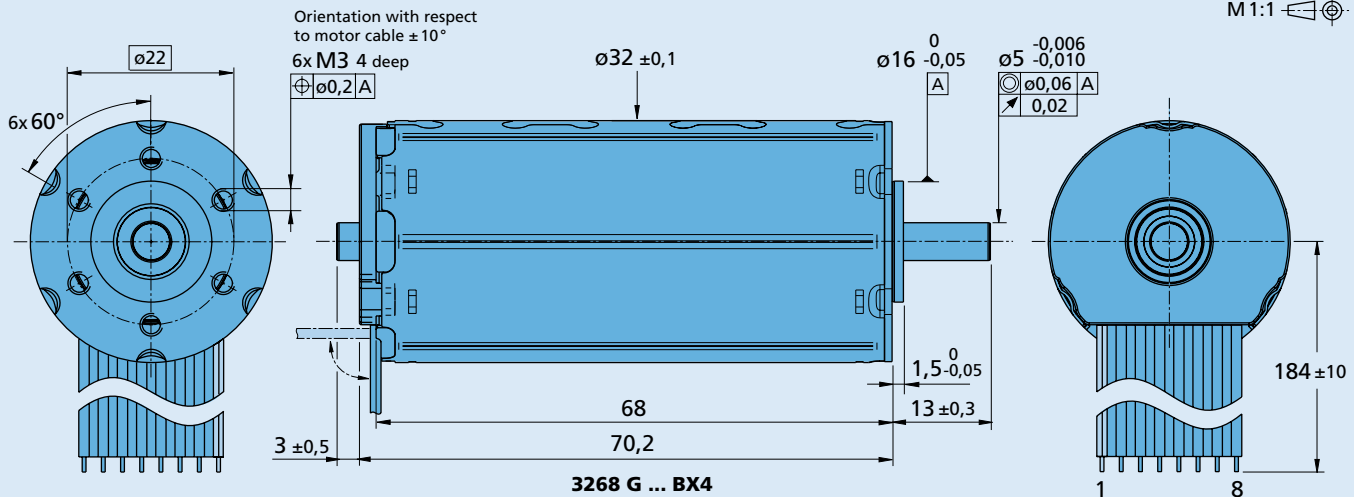
The diagram indicates the recommended speed in relation to the available torque at the output shaft for a given ambient temperature of 22°C.

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.



Dimensional drawing



Options

- Connector variant (Option no. 3830)

Motor:
 AWG 24 / PVC ribbon cable
 with connector Micro-Fit

- Analog Hall sensors (Option no. 3692)



Full product description

- Examples:
3268G024BX4

Cable and connection information

