

NEW

Brushless DC-Servomotors

97 mNm

4 Pole Technology

For combination with
 Gearheads:
 32A
 Encoders:
 IE3 ...
 Drive Electronics:
 SC 2804

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.



