

Brushless DC-Servomotors

2,6 mNm

Electronic Commutation

For combination with

Gearheads:
16/7

Encoders:
IE2 – 16 ... 512

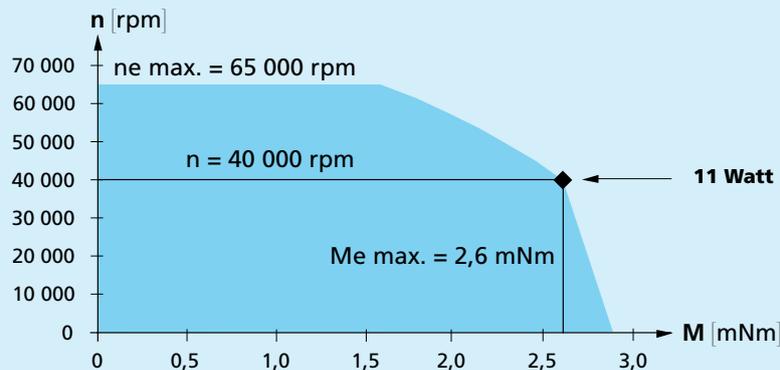
Drive Electronics:
refer to "Combination Chart", pages 14-15

Series 1628 ... B

	1628 T	012 B	024 B	
1 Nominal voltage	U_N	12	24	Volt
2 Terminal resistance, phase-phase	R	4,3	15,1	Ω
3 Output power ¹⁾	$P_{2 \max.}$	10	11	W
4 Efficiency	$\eta_{\max.}$	68	68	%
5 No-load speed	n_o	28 650	29 900	rpm
6 No-load current (with shaft \varnothing 1,5 mm)	I_o	0,098	0,052	A
7 Stall torque	M_H	11	12	mNm
8 Friction torque, static	C_o	0,15	0,15	mNm
9 Friction torque, dynamic	C_v	$8,0 \cdot 10^{-6}$	$8,0 \cdot 10^{-6}$	mNm/rpm
10 Speed constant	k_n	2 474	1 287	rpm/V
11 Back-EMF constant	k_E	0,404	0,777	mV/rpm
12 Torque constant	k_M	3,86	7,42	mNm/A
13 Current constant	k_i	0,259	0,135	A/mNm
14 Slope of n-M curve	$\Delta n / \Delta M$	2 737	2 610	rpm/mNm
15 Terminal inductance, phase-phase	L	141	525	μH
16 Mechanical time constant	τ_m	15	14	ms
17 Rotor inertia	J	0,54	0,54	gcm ²
18 Angular acceleration	$\alpha_{\max.}$	198	217	$\cdot 10^3 \text{rad/s}^2$
19 Thermal resistance	R_{th1} / R_{th2}	7,8 / 30,1		K/W
20 Thermal time constant	τ_{w1} / τ_{w2}	8 / 379		s
21 Operating temperature range		-30 ... +125		$^{\circ}C$
22 Shaft bearings		ball bearings, preloaded		
23 Shaft load max.:				
– radial at 3 000/20 000 rpm (4,5 mm from mounting flange)		17 / 10		N
– axial at 3 000/20 000 rpm (push-on only)		10 / 6		N
– axial at standstill (push-on only)		20		N
24 Shaft play:				
– radial	\leq	0,015		mm
– axial	$=$	0		mm
25 Housing material		aluminium, black anodized		
26 Weight		31		g
27 Direction of rotation		electronically reversible		
Recommended values - mathematically independent of each other				
28 Speed up to ²⁾	$n_{e \max.}$	65 000	65 000	rpm
29 Torque up to ^{1) 2)}	$M_{e \max.}$	2,5	2,6	mNm
30 Current up to ^{1) 2)}	$I_{e \max.}$	0,77	0,41	A

¹⁾ at 40 000 rpm

²⁾ thermal resistance R_{th2} by 55% reduced



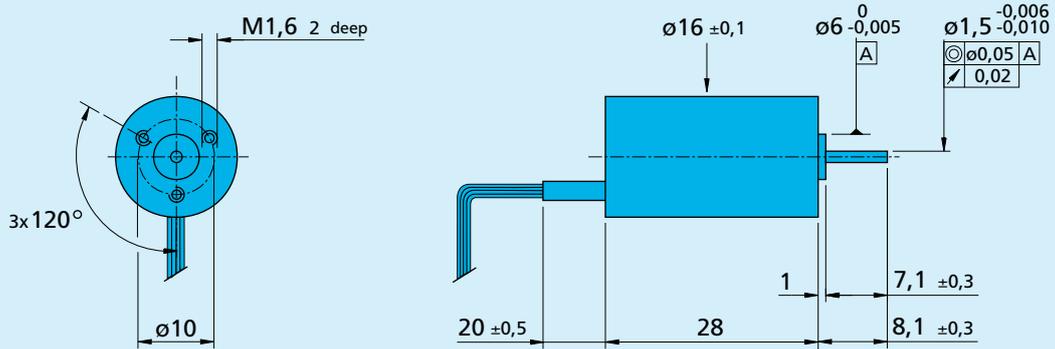
Recommended area for continuous operation

Options

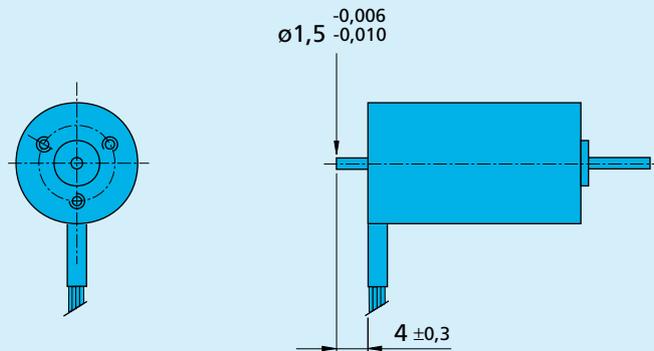
K1000:
Motors in autoclavable version.

K1155:
Motors for operation with Motion Controllers
MCBL 3003/06 S, MCBL 3003/06 C.

1628 T ... B



1628 T ... B - K312 with rear end shaft



Cable and connection information

