

# ECI Motor

ECI-80.20-K1

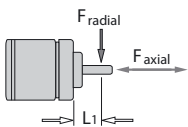


- Highly dynamic 3-phase internal rotor motor with EC technology
- Robust, noise-optimized ball bearing system for a long service life
- Mechanical design and interfaces designed for modular flexibility
- High efficiency and high power density realized in a compact design
- Basic motor with electronic module K1 for operation with external drive electronics
- Protection rating IP 40 / IP 54 and connection by connector system

Nominal data			
Type		ECI-80.20-K1 B00	ECI-80.20-K1 D00
Nominal voltage ( $U_n$ )	VDC	24	48
Nominal speed ( $n_n$ )	min <sup>-1</sup>	4000**	4000**
Nominal torque ( $M_n$ )	mNm	700**	700**
Nominal current ( $I_n$ )	A	13.5**	7.5**
Nominal output power ( $P_n$ )	W	293**	293**
Free-running speed ( $n_f$ )	min <sup>-1</sup>	4800	4800
Permanent holding torque ( $M_{HO}$ )	mNm	700	700
Permiss. peak current ( $I_{max}$ )	A	100	60
Motor constant ( $K_e$ )	mVs/rad	47.2	94.1
Terminal resistance ( $R_v$ )	Ω	0.07	0.3
Terminal inductance ( $L_v$ )	mH	0.3	1.3
Starting torque ( $M_{max}$ )	mNm	2400	2500
Ambient temperature range (TU)	°C	-30...+40	-30...+40
Rotor moment of inertia ( $J_B$ )	kgm <sup>2</sup> x10 <sup>-6</sup>	300	300
Motor mass (m)	kg	1.4	1.4
Order number (IP 40)	Wire interface	932 8020 103	932 8020 105
Order number (IP 54)*	Connector interface	on request	on request

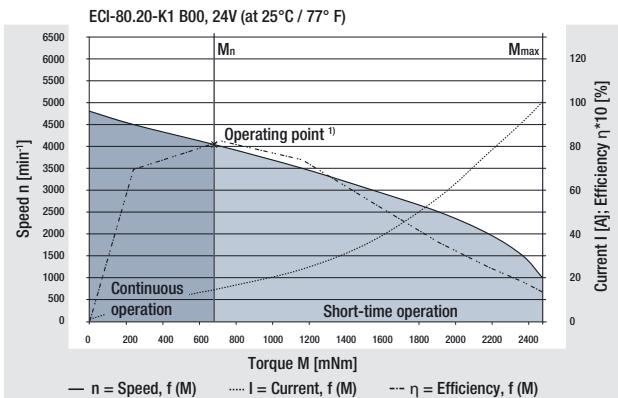
subject to alterations

\* Classification of protection class refers to installed state with sealing on the flange side  
 \*\* at  $T_U$  max. 40 °C / 104 °F

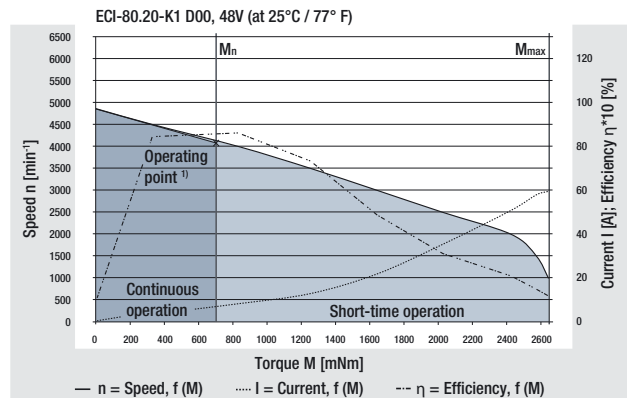


$F_{axial}$  280 N  
 $F_{radial}$  280 N  
 $L_1 = 20$  mm

Permissible shaft load at nominal speed and  
 life expectancy  $L_{10}$  of 20 000 h\*\*



<sup>1)</sup> Nominal data, see table above

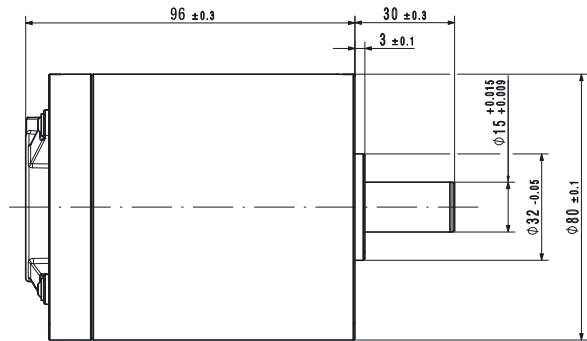
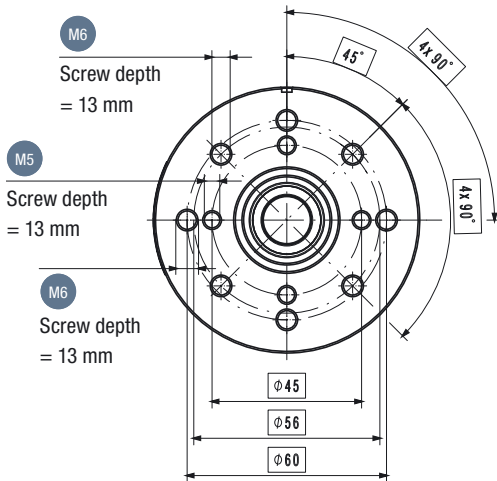


<sup>1)</sup> Nominal data, see table above

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## Technical drawing



Tapped blind holes for thread-forming screws in accordance to DIN 7500.

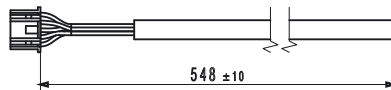
Tightening torque:  $M5$   $6 \pm 0.2$  Nm  
 $M6$   $10 \pm 0.2$  Nm

## Accessory (must be ordered separately)

### Sensor cable with wires and plug AWG 24 (0.22 mm<sup>2</sup>)

Type	Order number
Sensor cable	992 0800 001

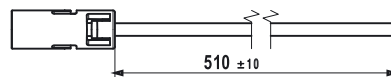
motor side



### Winding connector AWG 12 (4 mm<sup>2</sup>)

Type	Colour	Order number
Power wire L1	brown	992 0800 012
Power wire L2	purple	992 0800 011
Power wire L3	yellow	992 0800 010

motor side



## Possible gearbox variants

Type	
on request	

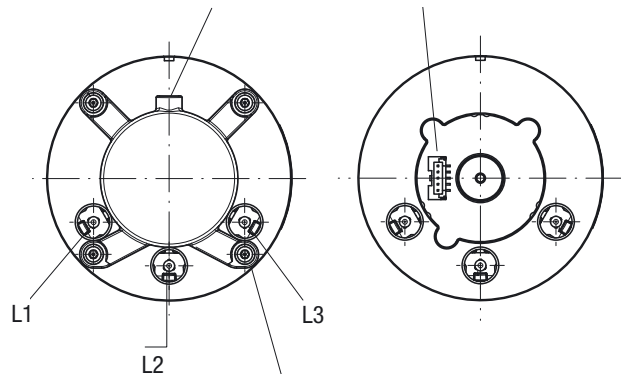
## Connection description Motor (IP 40 version)

Picture 1 = with cover (simplified design)

Picture 2 = cover removed (simplified design)

Cable outlet sensor cable

Socket for sensor cable



Tightening torque:  $M3$   $1.5 \pm 0.2$  Nm

## Recommended external control electronics

Type	Order number
VT-MI-35	992 0801 035