

EC Servo motors

The EC02-40 series servomotors are brushless EC servomotors. The compact construction and high performance density allows for positioning tasks in tight spaces.

For the wiring the LinMot one cable solution is used, which is well-proven for decades. Thereby significant cost savings for components and implementation can be realised.

The series EC02-40 motors are optimized for LinMot servo drives C1100 and C1200.

- » Compact 70W and 140W models
- » Standstill Torque 0,19Nm to 0,38Nm
- » Robust rotatable Push-Pull Connectors
- » Cost Effective Single-Cable Solution
- » 40 x 40mm Flange
- » Highest Performance Density
- » Optional Holding Brake
- » Single Turn Absolut Encoder
- » Absolute Motor Temperature Monitoring
- » Plug & Play (Electronic Data Sheet)

EC02-40/70



EC02-40/140



TECHNICAL DATA

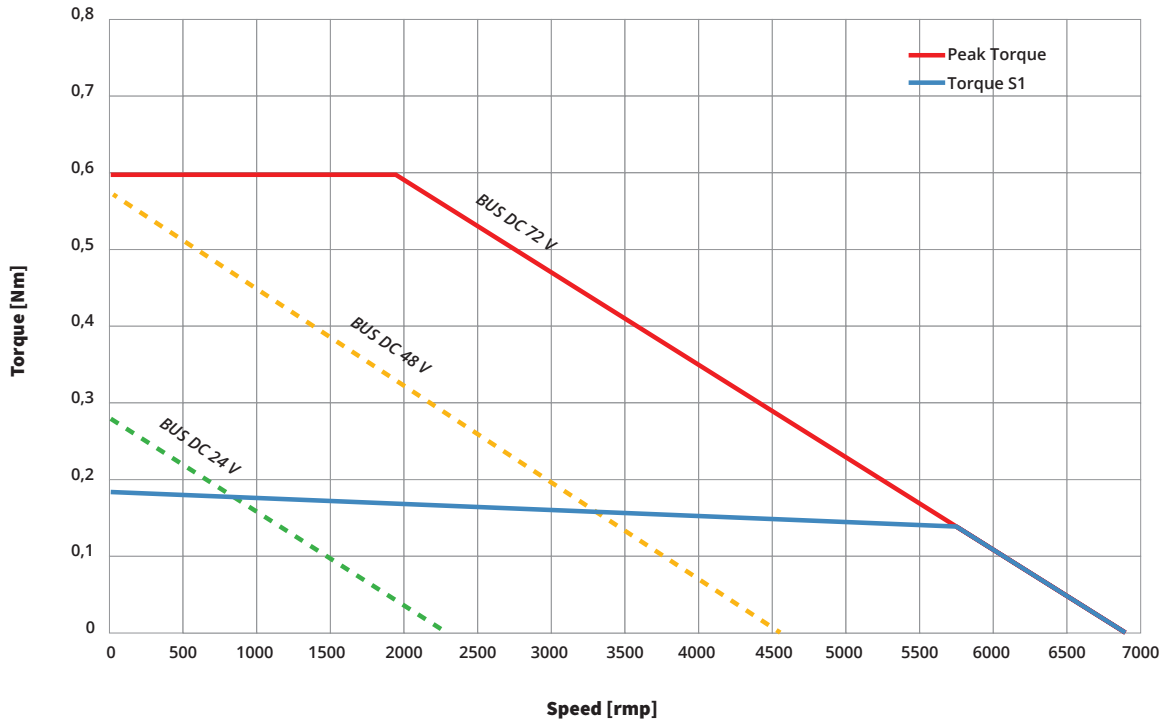
Motor Specifications			EC02-40/70	EC02-40/140
Nominal Power	P_N	W	70	140
Nominal Torque	M_N	Nm	0.16	0.32
Nominal speed	N_N	min ⁻¹	4'000	4'000
Nominal Current	I_N	A (rms)	1.4	2.8
Stall Torque	M_0	Nm	0.19	0.38
Stall Current	I_0	A (rms)	1.52	3.0
Max Torque	M_{MAX}	Nm	0.6	1.3
Max Speed	N_{MAX}	min ⁻¹	5'000	5'000
Max Current	I_{MAX}	A (rms)	6	12
Max Mechanical Speed	N_{PK}	min ⁻¹	8'500	8'500
Back EMF	K_E	10 ⁻³ V(rms)min ⁻¹	7.4	7.7
Torque Constant	K_T	Nm/A(rms)	0.122	0.13
Number of pole pairs			4	4
Moment of Inertia (without brake)	J_R	kg cm ²	0.037	0.061
Phase Resistance @ 20°C	R_{U-V}	Ohm	6.8	2.4
Phase Inductance	L_{U-V}	mH	2.6	1.3
Weight (without brake)	m	kg	0.53	0.68
Ambient Temperature		°C	0..40	
Max Temperature Increase		K	100	
Insulation Class		°C	155 (F)	
Protection Class			IP65 (except for shaft opening)	
Cooling Class			Totally enclosed, self-cooled	

Brake Specifications

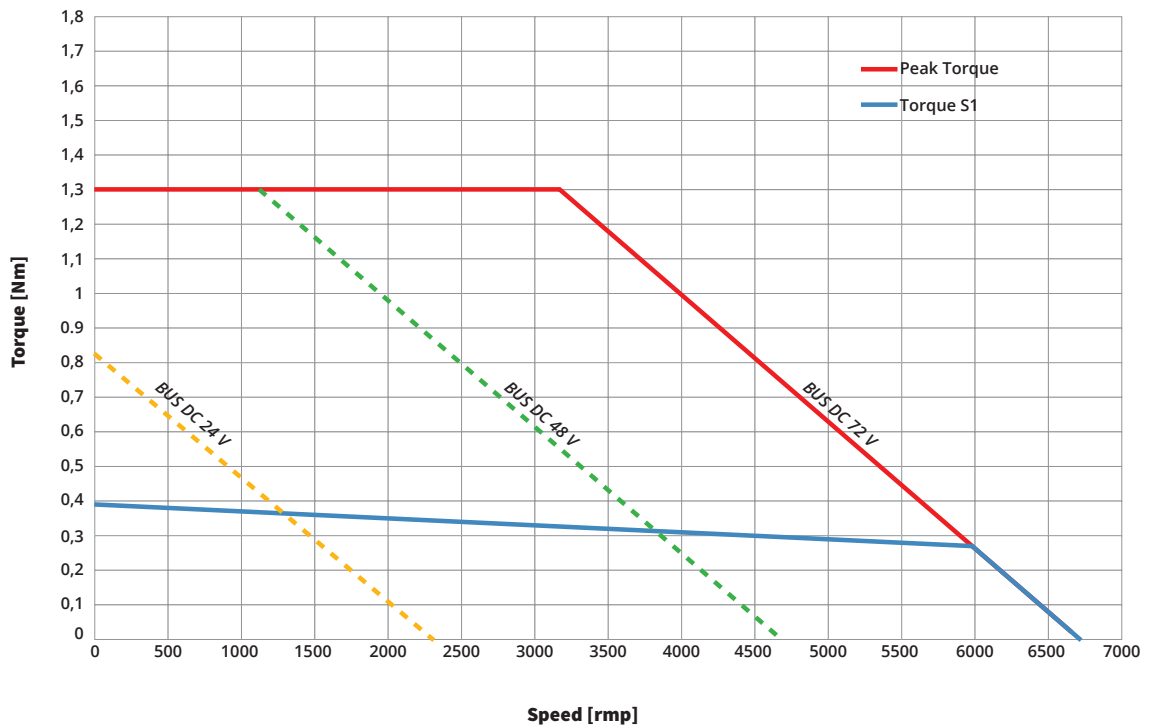
Nominal Voltage		VDC	24
Nominal Power		W	6
Brake Torque	M_{br}	Nm	0.4
Moment of Inertia	J	kg cm ²	0.019
Weight	m	kg	0.085

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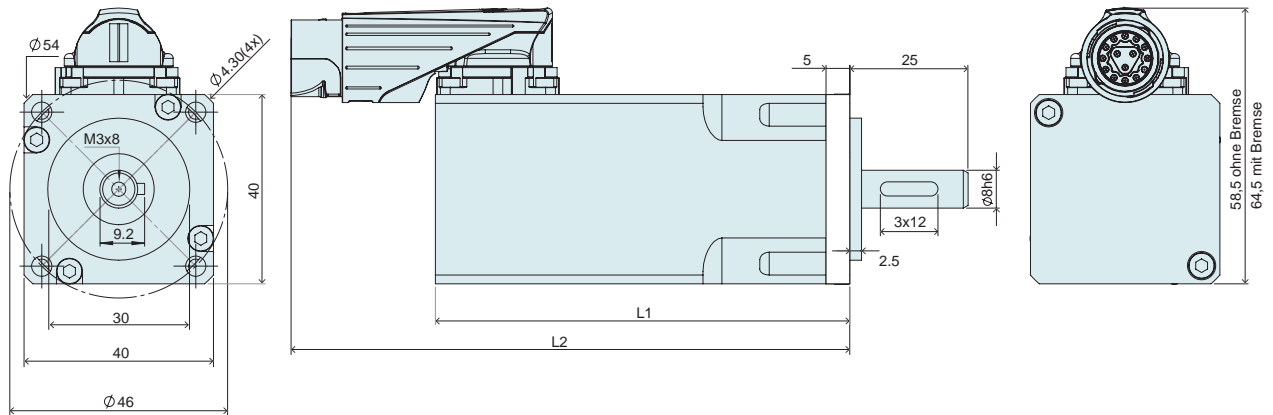
EC02-40/70



EC02-40/140

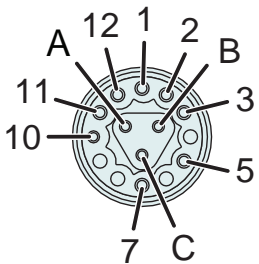


DIMENSIONS



Motor type	EC02-40/70		EC02-40/140	
	without brake	with brake	without brake	with brake
L1	mm	87.5	105.5	137.5
L2	mm	118.5	136.5	168.5
F _{radial} @ 4000 rpm	N		220	
F _{axial} @ 4000 rpm	N		80	

CONNECTOR WIRING



Pin	Funktion	Adernfarbe
A	Motor Phase U	
B	Motor Phase V	
C	Motor Phase W	
1	+5VDC	
2	GND	
3	Sin	
4	-	
5	Cos	

Pin	Funktion	Adernfarbe
6	-	
7	Comm.	
8	-	
9	-	
10	Earth	
11	Brake + (Option)	
12	Brake - (Option)	

Item	Description	Item-No.
EC02-40/70	EC-Servomotor 70W (0.19Nm, 4'000//min)	0150-3456
EC02-40/70-B	EC-Servomotor 70W (0.19Nm, 4'000//min) mit Brake	0150-3460
EC02-40/140	EC-Servomotor 140W (0.38Nm, 4'000//min)	0150-3457
EC02-40/140-B	EC-Servomotor 140W (0.38Nm, 4'000//min) mit Brake	0150-3461
Spezialkabel KS05-04/06-Y-Fe/UK-xx	Motor cable for EC02-Motors, custom length (m), C1100/C1200	0150-3639
Spezialkabel KS05-W/UK	Motor cable for EC02-Motors, custom length (m), E1200, (only without brake)	0150-3682

The values in the datasheet refer to a maximum level of operation 1000m over the sea level, tolerance ±10%.