

EC 45 Ø45 mm, brushless, 250 Watt, with Hall sensors
Part number 136209



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Price scales		
Price per unit	1-4	€576.27
	5-19	€522.54
	20-49	€453.82
	from 50	On request
Prices excluding VAT and shipping costs		

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Description

The electronically commutated **EC motors** are characterized especially by their favorable torque characteristics, high power, extremely broad speed range and, of course, by their unsurpassed service life.

Specifications

Technical illustrations

Technical drawings of the EC 45 Ø45 mm brushless motor, including front, side, and rear views with dimensions.

[Dimension drawing](#)

Information: Drawings are not to scale.

Values at nominal voltage		
	Nominal voltage	48 V
	No load speed	6160 rpm
	No load current	244 mA
	Nominal speed	5490 rpm
	Nominal torque (max. continuous torque)	347 mNm
	Nominal current (max. continuous current)	4.86 A
	Stall torque	3530 mNm
	Stall current	47.7 A
	Max. efficiency	86 %
Characteristics		
	Terminal resistance	1.01 Ω
	Terminal inductance	0.448 mH
	Torque constant	73.9 mNm/A
	Speed constant	129 rpm/V
	Speed / torque gradient	1.76 rpm/mNm
	Mechanical time constant	3.85 ms

	Rotor inertia	209 gcm ²
Thermal data		
	Thermal resistance housing-ambient	1.7 K/W
	Thermal resistance winding-housing	1.1 K/W
	Thermal time constant winding	35.1 s
	Thermal time constant motor	1570 s
	Ambient temperature	-20...+125 °C
	Max. winding temperature	+125 °C
Mechanical data		
	Bearing type	ball bearings
	Max. speed	12000 rpm
	Axial play	0 - 0.15 mm
	Max. axial load (dynamic)	20 N
	Max. force for press fits (static)	170 N
	(static, shaft supported)	5000 N
	Max. radial load	180 N, 5 mm from flange
Other specifications		
	Number of pole pairs	1
	Number of phases	3
	Number of autoclave cycles	0
	Protection	IP54
Product		
	Weight	1100 g

Operating Range

Continuous operation range

Short term operation range

Downloads

	CAD-Files (STEP)	
	CAD drawing (STEP) (ZIP 968 KB)	Version 2017
	Catalog page	
	Katalogseiten (deutsch, PDF 94 KB)	Version 2019
	Catalog page (english, PDF 95 KB)	Version 2019
	カタログページ (日本語, PDF 121 KB)	Version 2017