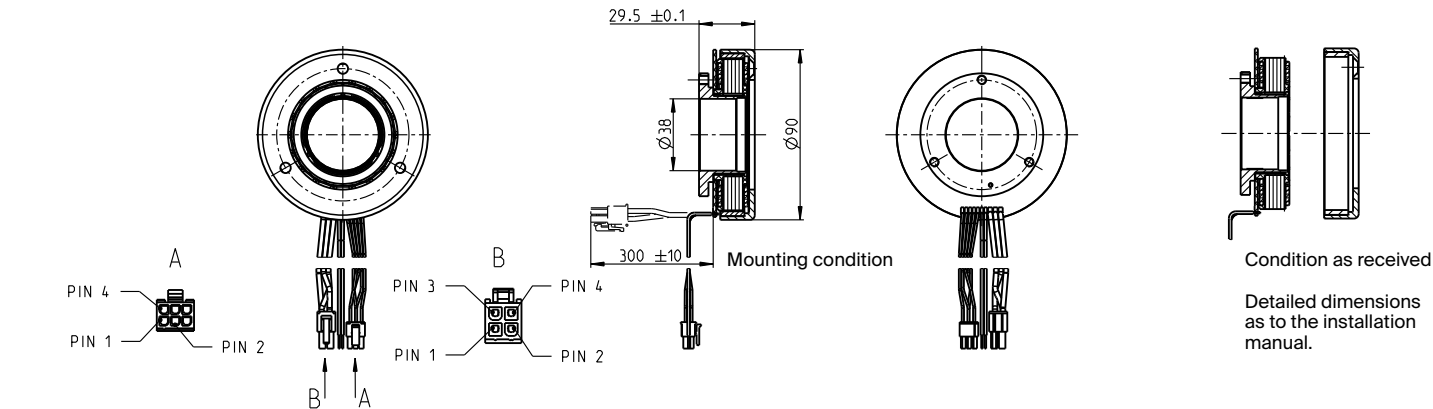


EC frameless 90 flat Ø90 mm, brushless, 160 watt



EC frameless flat

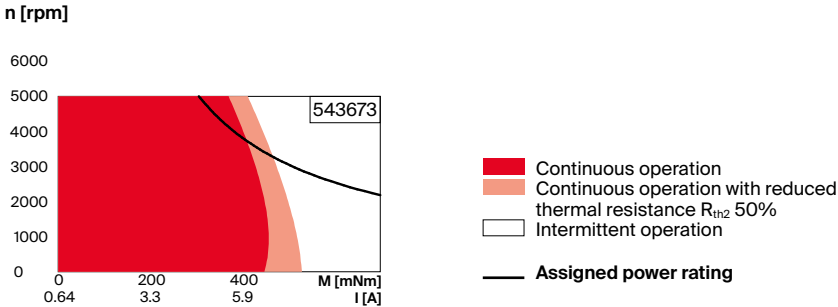
M 1:4

- Stock program
- Standard program
- Special program (on request)

Part numbers				
with Hall sensors	588847	543673	581301	581302

Motor data		588847	543673	581301	581302
Values at nominal voltage					
1 Nominal voltage	V	12	24	36	60
2 No load speed	rpm	3160	3170	3070	2600
3 No load current	mA	1320	658	420	197
4 Nominal speed	rpm	2670	2710	2630	2200
5 Nominal torque	mNm	458	458	453	460
6 Nominal current (max. continuous current)	A	12.8	6.39	4.09	2.1
7 Stall torque	mNm	6260	7540	7430	6380
8 Stall current	A	176	106	67.5	29.4
9 Max. efficiency	%	83	85	85	84
Characteristics					
10 Terminal resistance phase to phase	Ω	0.0682	0.226	0.533	2.04
11 Terminal inductance phase to phase	mH	0.058	0.232	0.554	2.15
12 Torque constant	mNm/A	35.6	71.2	110	217
13 Speed constant	rpm/V	268	134	86.8	44.1
14 Speed/torque gradient	rpm/mNm	0.514	0.427	0.421	0.414
15 Mechanical time constant	ms	17.1	14.2	14	13.8
16 Rotor inertia	gcm ²	3170	3170	3170	3170

Specifications	Operating range	Comments
Thermal data		
17 Thermal resistance housing-ambient	1.77 K/W	
18 Thermal resistance winding-housing	3.71 K/W	
19 Thermal time constant winding	69.6 s	
20 Thermal time constant motor	263 s	
21 Ambient temperature	-40...+100°C	
22 Max. winding temperature	+125°C	
Mechanical data		
23 Max. speed	5000 rpm	
Other specifications		
29 Number of pole pairs	11	
30 Number of phases	3	
31 Weight of motor	490 g	
Weight of rotor	195 g	
Weight of stator	295 g	



Values listed in the table are nominal.

Connection motor (Cable AWG 16)		Modular system		Details on catalog page 56	
red	Motor winding 1	Pin 1		Motor Control	
black	Motor winding 2	Pin 2		547_DEC Module 50/5	
white	Motor winding 3	Pin 3		551_ESCON Module 50/4 EC-S	
	N.C.	Pin 4		551_ESCON Module 50/5	
Connector		Part number		552_ESCON Module 50/8 HE	
Molex		39-01-2040		553_ESCON 50/5	
Connection sensors (Cable AWG 24)				553_ESCON 70/10	
yellow	Hall sensor 1	Pin 1		557_ESCON2 Micro 60/5	
brown	Hall sensor 2	Pin 2		558_ESCON2 Module 60/12	
grey	Hall sensor 3	Pin 3		559_ESCON2 Compact 60/12	
blue	GND	Pin 4		564_EPOS4 Module 50/5	
green	V _{Hall} 4.5...24 VDC	Pin 5		565_EPOS4 Module 50/8	
	N.C.	Pin 6		567_EPOS4 Compact 50/5	
Connector		Part number		567_EPOS4 Compact 50/8	
Molex		43025-0600		569_EPOS4 50/5	
Wiring diagram for Hall sensors see p. 69				569_EPOS4 70/15	
Connection NTC (Cable AWG 24)				571_EPOS4 Disk 60/12	
pink	NTC				
blue	NTC				
Resistance 25°C: 5 kΩ ±1%, beta (25–85°C): 3490 K					