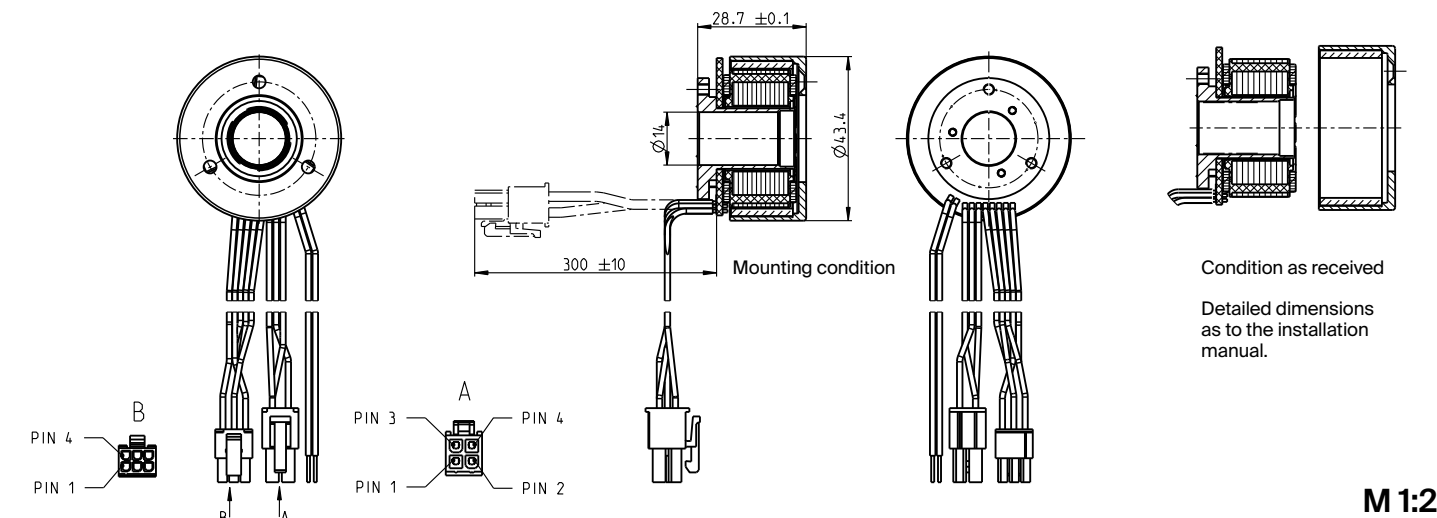


EC frameless 45 flat Ø43.4 mm, brushless, 70 watt



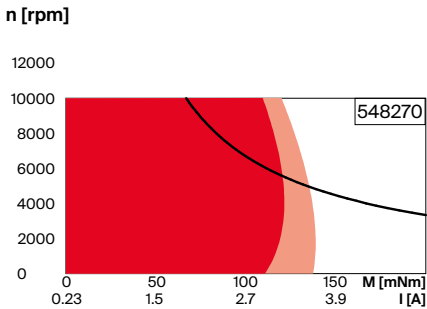
EC frameless flat

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

Part numbers				
with Hall sensors	548270	574035	574036	574037

Motor data		548270	574035	574036	574037
Values at nominal voltage					
1 Nominal voltage	V	24	30	36	48
2 No load speed	rpm	6110	6230	6330	3440
3 No load current	mA	234	194	166	48.1
4 Nominal speed	rpm	4860	4990	5080	2540
5 Nominal torque	mNm	128	112	108	134
6 Nominal current (max. continuous current)	A	3.21	2.36	1.93	0.936
7 Stall torque	mNm	1460	1170	1100	915
8 Stall current	A	39.5	25.8	20.7	6.97
9 Max. efficiency	%	85.4	83.7	83.2	84.3
Characteristics					
10 Terminal resistance phase to phase	Ω	0.608	1.16	1.74	6.89
11 Terminal inductance phase to phase	mH	0.463	0.691	0.966	5.85
12 Torque constant	mNm/A	36.9	45.1	53.3	131
13 Speed constant	rpm/V	259	212	179	72.7
14 Speed/torque gradient	rpm/mNm	4.26	5.44	5.85	3.82
15 Mechanical time constant	ms	10.7	13.7	14.7	9.6
16 Rotor inertia	gcm ²	240	240	240	240

Specifications	Operating range	Comments
Thermal data		
17 Thermal resistance housing-ambient	3.56 K/W	
18 Thermal resistance winding-housing	4.1 K/W	
19 Thermal time constant winding	29.6 s	
20 Thermal time constant motor	178 s	
21 Ambient temperature	-40...+100°C	
22 Max. winding temperature	+125°C	
Mechanical data		
23 Max. speed	10 000 rpm	
Other specifications		
29 Number of pole pairs	8	
30 Number of phases	3	
31 Weight of motor	143 g	
Weight of rotor	51 g	
Weight of stator	92 g	



Values listed in the table are nominal.

Connection motor (Cable AWG 24)
red Motor winding 1 Pin 1
black Motor winding 2 Pin 2
white Motor winding 3 Pin 3
N.C. Pin 4

Connector Part number
Molex 39-01-2040

Connection sensors (Cable AWG 24)
yellow Hall sensor 1* Pin 1
brown Hall sensor 2* Pin 2
grey Hall sensor 3* Pin 3
blue GND Pin 4
green V_{Hall} 4.5...24 VDC Pin 5
N.C. Pin 6

Connector Part number
Molex 43025-0600
Wiring diagram for Hall sensors see p. 69
*Internal pull-up (7...13 kΩ) on pin 5

Connection NTC (Cable AWG 24)
pink NTC
blue NTC

Resistance 25°C: 5 kΩ ±1%, beta (25–85°C): 3490 K

Modular system Details on catalog page 56

Motor Control
547_DEC Module 50/5
551_ESCON 36/3 EC
551_ESCON Module 50/4 EC-S
551_ESCON Module 50/5
553_ESCON 50/5
557_ESCON2 Micro 60/5
563_EPOS4 Micro 24/5
564_EPOS4 Module 50/5
565_EPOS4 Compact 24/5 3-axes
567_EPOS4 Compact 50/5
569_EPOS4 50/5
571_EPOS4 Disk 60/12