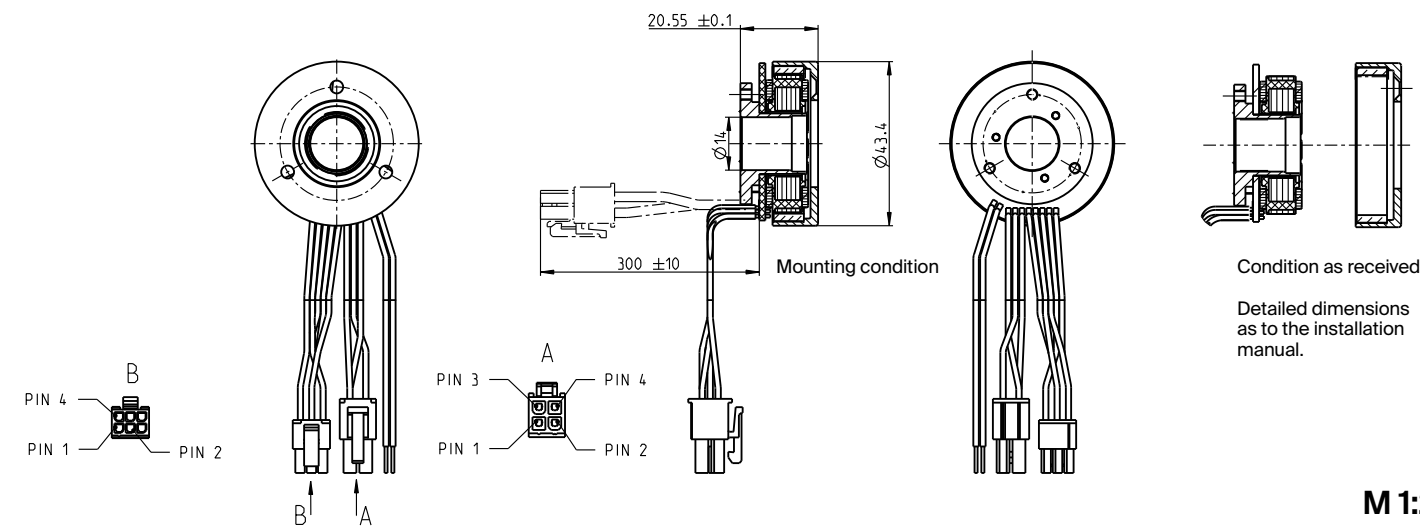


EC frameless 45 flat Ø43.4 mm, brushless, 30 watt



EC frameless flat

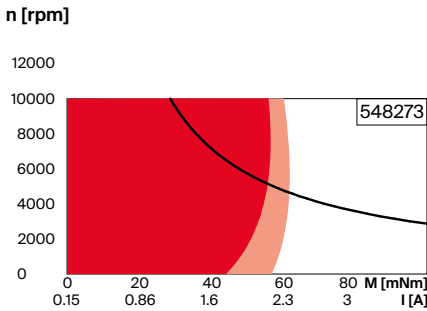
M 1:2

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

Part numbers				
with Hall sensors	548273	574536	574537	574538

Motor data		548273	574536	574537	574538
Values at nominal voltage					
1 Nominal voltage	V	12	18	24	36
2 No load speed	rpm	4360	4890	4360	4750
3 No load current	mA	163	129	81.4	61.6
4 Nominal speed	rpm	2910	3510	2930	3290
5 Nominal torque	mNm	54.9	57.8	54.7	66
6 Nominal current (max. continuous current)	A	2.02	1.63	1.01	0.847
7 Stall torque	mNm	247	295	251	378
8 Stall current	A	9.69	8.61	4.93	5.35
9 Max. efficiency	%	76.3	77.5	76.5	80.1
Characteristics					
10 Terminal resistance phase to phase	Ω	1.24	2.09	4.87	6.73
11 Terminal inductance phase to phase	mH	0.56	0.697	2.24	4.29
12 Torque constant	mNm/A	25.5	34.3	51	70.6
13 Speed constant	rpm/V	374	278	187	135
14 Speed/torque gradient	rpm/mNm	18.2	17	17.9	12.9
15 Mechanical time constant	ms	28.6	30.8	28.1	20.2
16 Rotor inertia	gcm ²	150	150	150	150

Specifications	Operating range	Comments
Thermal data		
17 Thermal resistance housing-ambient	6.73 K/W	
18 Thermal resistance winding-housing	3.92 K/W	
19 Thermal time constant winding	11.4 s	
20 Thermal time constant motor	296 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	89 g	
Weight of rotor	35 g	
Weight of stator	54 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 24/2
547_DEC Module 50/5
550_ESCON Module 24/2
551_ESCON 36/3 EC
551_ESCON Module 50/4 EC-S
553_ESCON 50/5
557_ESCON2 Nano 24/2
557_ESCON2 Micro 60/5
563_EPOS4 Micro 24/5
564_EPOS4 Module 24/1.5
564_EPOS4 Module 50/5
565_EPOS4 Compact 24/5 3-axes
566_EPOS4 Compact 24/1.5
567_EPOS4 Compact 50/5
569_EPOS4 50/5
571_EPOS4 Disk 60/12