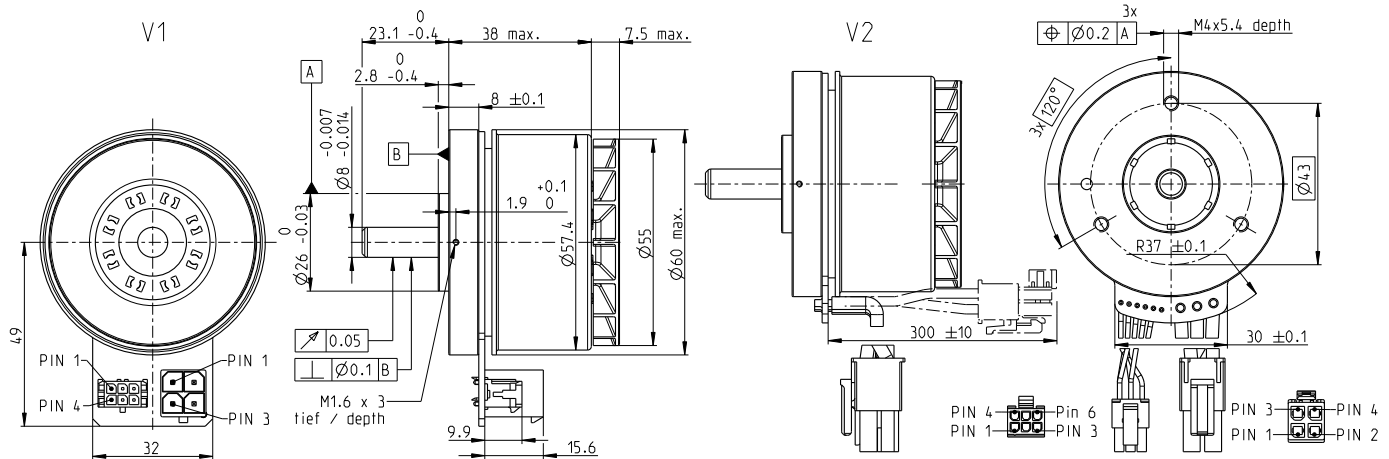


EC 60 flat Ø60 mm, brushless, 200 watt

Ventilated



EC flat

M 1:2

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

Part numbers

V1 with Hall sensors	625860	614949	625861
V2 with Hall sensors and cables	647696	642221	647697

Motor data

Values at nominal voltage					
1 Nominal voltage	V	12	24	48	
2 No load speed	rpm	3760	4300	4020	
3 No load current	mA	815	497	224	
4 Nominal speed	rpm	2790	3240	3020	
5 Nominal torque	mNm	496	540	581	
6 Nominal current (max. continuous current)	A	15.2*	9.34	4.63	
7 Stall torque	mNm	2210	2510	2650	
8 Stall current	A	113	83.2	43.9	
9 Max. efficiency	%	83.7	85.1	86.1	
Characteristics					
10 Terminal resistance phase to phase	Ω	0.106	0.288	1.09	
11 Terminal inductance phase to phase	mH	0.0911	0.279	1.28	
12 Torque constant	mNm/A	30	52.5	113	
13 Speed constant	rpm/V	318	182	84.8	
14 Speed/torque gradient	rpm/mNm	1.13	0.998	0.823	
15 Mechanical time constant	ms	9.8	8.69	7.17	
16 Rotor inertia	gcm ²	832	832	832	

Specifications

- Thermal data**
- 17 Thermal resistance housing-ambient 1.22 K/W
 - 18 Thermal resistance winding-housing 0.843 K/W
 - 19 Thermal time constant winding 9.19 s
 - 20 Thermal time constant motor 44 s
 - 21 Ambient temperature -40...+100°C
 - 22 Max. winding temperature +125°C
- Mechanical data (preloaded ball bearings)**
- 23 Max. speed 6000 rpm
 - 24 Axial play at axial load < 12.0 N 0 mm
 - > 12.0 N 0.14 mm
 - 25 Radial play preloaded 12 N
 - 26 Max. axial load (dynamic) 170 N
 - 27 Max. force for press fits (static) (static, shaft supported) 8000 N
 - 28 Max. radial load, 5 mm from flange 112 N

Other specifications

- 29 Number of pole pairs 7
- 30 Number of phases 3
- 31 Weight of motor 360 g

Values listed in the table are nominal.

Connection V1

- Pin 1 Hall sensor 1
- Pin 2 Hall sensor 2
- Pin 3 Hall sensor 3
- Pin 4 GND
- Pin 5 V_{Hall} 4.5...24 VDC
- Pin 6 N.C.

V2 (sensors, AWG 24)

- Hall sensor 1
- Hall sensor 2
- Hall sensor 3
- GND
- V_{Hall} 4.5...24 VDC
- N.C.

V2 (Motor, AWG 14)

- Pin 1 Motor winding 1
- Pin 2 Motor winding 2
- Pin 3 Motor winding 3
- Pin 4 N.C.

Wiring diagram for Hall sensors see p. 69

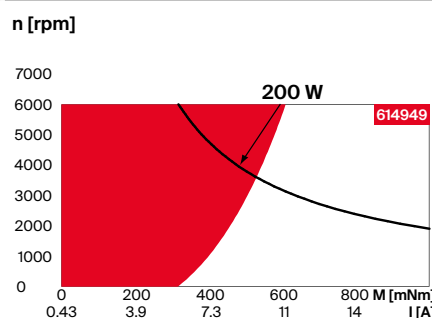
Connector

Part number		
Molex Micro-Fit	43045-0627	43025-0600
Molex	76829-0104	171692-0104

Connection cable for V1

- for windings, L = 3 m 520851
- for Hall sensors, L = 3 m 275878

Operating range



Comments

- Continuous operation**
In observation of above listed thermal resistance (lines 17 and 18) and an ambient temperature of 25°C, the maximum permissible winding temperature will be reached during continuous operation = thermal limit.
- Short term operation**
The motor may be briefly overloaded (recurring).
- Assigned power rating**

Modular system

Gear	Sensor
444_GP 52 C	530_Encoder MILE
458_GB 80'	
456_GSW 62 A	

Details on catalog page 56

Motor Control

- 547_DEC Module 50/5
- 551_ESCON Module 50/5
- 552_ESCON Module 50/8 HE
- 553_ESCON 70/10
- 557_ESCON2 Micro 60/5
- 558_ESCON2 Module 60/12
- 558_ESCON2 Module 60/30
- 559_ESCON2 Compact 60/12
- 559_ESCON2 Compact 60/30