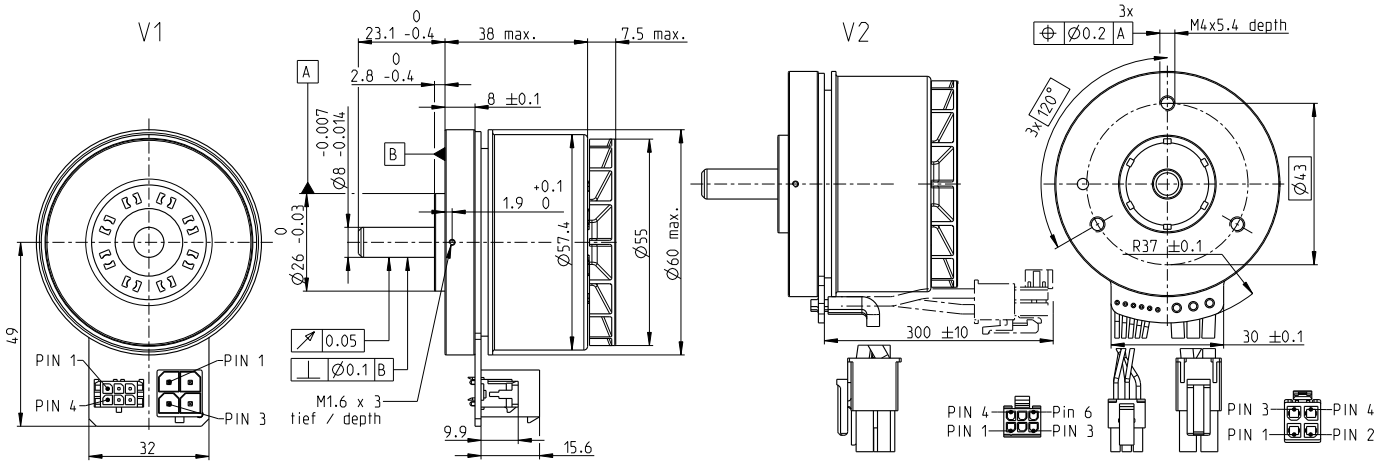


EC 60 flat $\varnothing 60$ mm, brushless, 200 watt

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 (max. continuous torque)	mNm	492	536	577
6 Nominal current (max. continuous current)	A	15.1*	9.28	4.6
7 Stall torque ¹	mNm	3340	4300	4870
8 Stall current	A	111	81.9	43.2
9 Max. efficiency	%	83.8	85.2	86.3
Characteristics				
10 Terminal resistance phase to phase	Ω	0.108	0.293	1.11
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	1.14	1.01	0.837
15 Mechanical time constant	ms	9.95	8.83	9.29
16 Rotor inertia	gcm ²	832	832	832

Specifications		Operating Range		Comments	
Thermal data		n [rpm]		<div style="display: flex; align-items: center;"> <div style="width: 100px; height: 100px; background-color: red; border-radius: 50%; margin-right: 10px;"></div> <div> <p>200 W</p> <p>614949</p> </div> </div>	
17 Thermal resistance housing-ambient	1.22 K/W	0	7000		
18 Thermal resistance winding-housing	0.843 K/W	6000	6000	<p> Continuous operation In observation of above listed thermal resistance (lines 17 and 18) the maximum permissible winding temperature will be reached during continuous operation at 25°C ambient. = Thermal limit.</p> <p> Short term operation The motor may be briefly overloaded (recurring).</p> <p> Assigned power rating</p>	
19 Thermal time constant winding	9.19 s	4000	4000		
20 Thermal time constant motor	44 s	3000	3000		
21 Ambient temperature	-40...+100°C	2000	2000		
22 Max. winding temperature	+125°C	1000	1000		
Mechanical data (preloaded ball bearings)		0	0		
23 Max. speed	6000 rpm	0.43	0.43		
24 Axial play at axial load < 12.0 N	0 mm	200	200		
24 Axial play at axial load > 12.0 N	0.14 mm	3.9	3.9		
25 Radial play	preloaded	7.3	7.3		
26 Max. axial load (dynamic)	12 N	11	11		
27 Max. force for press fits (static)	170 N	14	14		
27 Max. force for press fits (static) (static, shaft supported)	8000 N				
28 Max. radial load, 5 mm from flange	112 N				

Other specifications		maxon Modular System		Details on catalog page 46	
29 Number of pole pairs	7	<p>Planetary Gearhead $\varnothing 52$ mm 4-30 Nm Page 411</p>		<p>Encoder MILE 512-4096 CPT, 2 channels Page 462</p>	
30 Number of phases	3				
31 Weight of motor	360 g				

Connection V1		V2 (sensors, AWG 24)	
Pin 1	Hall sensor 1	Hall sensor 1	Hall sensor 1
Pin 2	Hall sensor 2	Hall sensor 2	Hall sensor 2
Pin 3	Hall sensor 3	Hall sensor 3	Hall sensor 3
Pin 4	GND	GND	GND
Pin 5	V _{Hall} 4.5...24 VDC	V _{Hall} 4.5...24 VDC	V _{Hall} 4.5...24 VDC
Pin 6	N.C.	N.C.	N.C.
Connection cable for V1		V2 (Motor, AWG 14)	
Pin 1	Motor winding 1	Motor winding 1	Motor winding 1
Pin 2	Motor winding 2	Motor winding 2	Motor winding 2
Pin 3	Motor winding 3	Motor winding 3	Motor winding 3
Pin 4	N.C.	N.C.	N.C.

Wiring diagram for Hall sensors see p. 59

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

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

¹Calculation does not include saturation effect (p. 71/178)

*625860 and 647696 cannot be combined with the MILE encoder, because the current limit of the connectors of the MILE circuit board is 13 A.