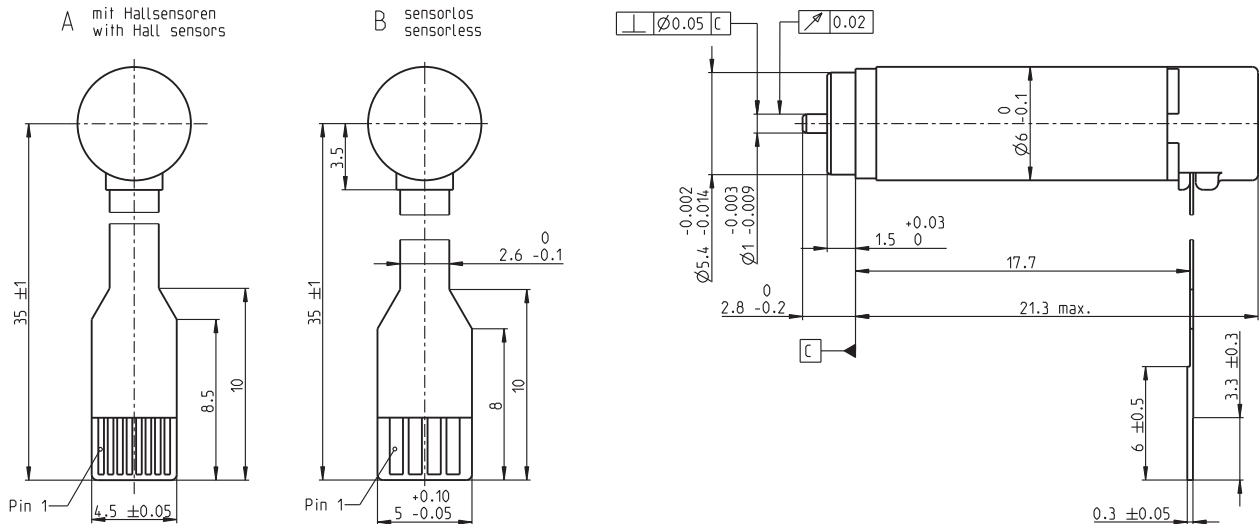


# EC 6 Ø6 mm, brushless, 1.5 Watt

**NEW**



**M 2.5:1**

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

**Part Numbers**

A with Hall sensors	455020	468897
B sensorless	455019	468896

**Motor Data** (provisional)

Values at nominal voltage			
1	Nominal voltage	V	6
2	No load speed	rpm	44600
3	No load current	mA	38.6
4	Nominal speed	rpm	24300
5	Nominal torque (max. continuous torque)	mNm	0.354
6	Nominal current (max. continuous current)	A	0.324
7	Stall torque	mNm	0.813
8	Starting current	A	0.673
9	Max. efficiency	%	59
Characteristics			
10	Terminal resistance phase to phase	Ω	8.92
11	Terminal inductance phase to phase	mH	0.065
12	Torque constant	mNm/A	1.21
13	Speed constant	rpm/V	7900
14	Speed/torque gradient	rpm/mNm	58300
15	Mechanical time constant	ms	4.29
16	Rotor inertia	gcm <sup>2</sup>	0.00703

**Specifications**

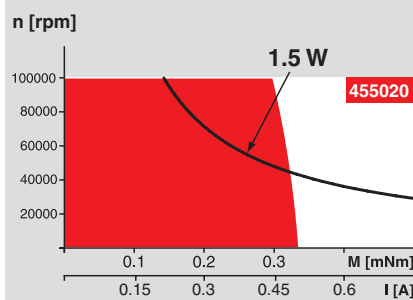
Thermal data	
17	Thermal resistance housing-ambient
18	Thermal resistance winding-housing
19	Thermal time constant winding
20	Thermal time constant motor
21	Ambient temperature
22	Max. permissible winding temperature
Mechanical data (preloaded ball bearings)	
23	Max. permissible speed
24	Axial play at axial load
25	Radial play
26	Max. axial load (dynamic)
27	Max. force for press fits (static)
28	Max. radial load, 2 mm from flange

Other specifications	
29	Number of pole pairs
30	Number of phases
31	Weight of motor

Values listed in the table are nominal.

Connection	with hall sensors	sensorless
Pin 1	Motor winding 1	Motor winding 1
Pin 2	Motor winding 2	Motor winding 2
Pin 3	Motor winding 3	Motor winding 3
Pin 4	V <sub>Hall</sub> 3.8...24 VDC	N.C.
Pin 5	GND	
Pin 6	Hall sensor 1	
Pin 7	Hall sensor 2	
Pin 8	Hall sensor 3	
Connector	Part number	Part number
Molex	52745-0897	52207-0433
Molex		52089-0419
Tyco		84953-4
FCI	SFV8R-2STE1LF	
Pin for design with Hall sensors: FPC, 8 pole, pitch 0.5 mm, top contact style Wiring diagram for Hall sensors see page 33		

**Operating Range**



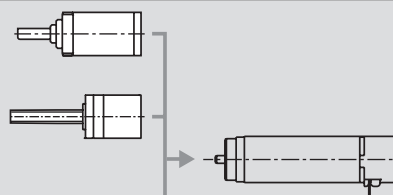
**Comments**

- 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.
- Short term operation**  
The motor may be briefly overloaded (recurring).
- Assigned power rating**

**maxon Modular System**

Overview on page 20–25

- Planetary Gearhead**  
Ø6 mm  
0.002 - 0.03 Nm  
Page 242
- Spindle Drive**  
Ø6 mm  
Page 293



- Recommended Electronics:**
- ESCON 36/3 EC Page 342
  - ESCON Mod. 50/4 EC-S 343
  - DEC Module 24/2 346
  - Notes 24