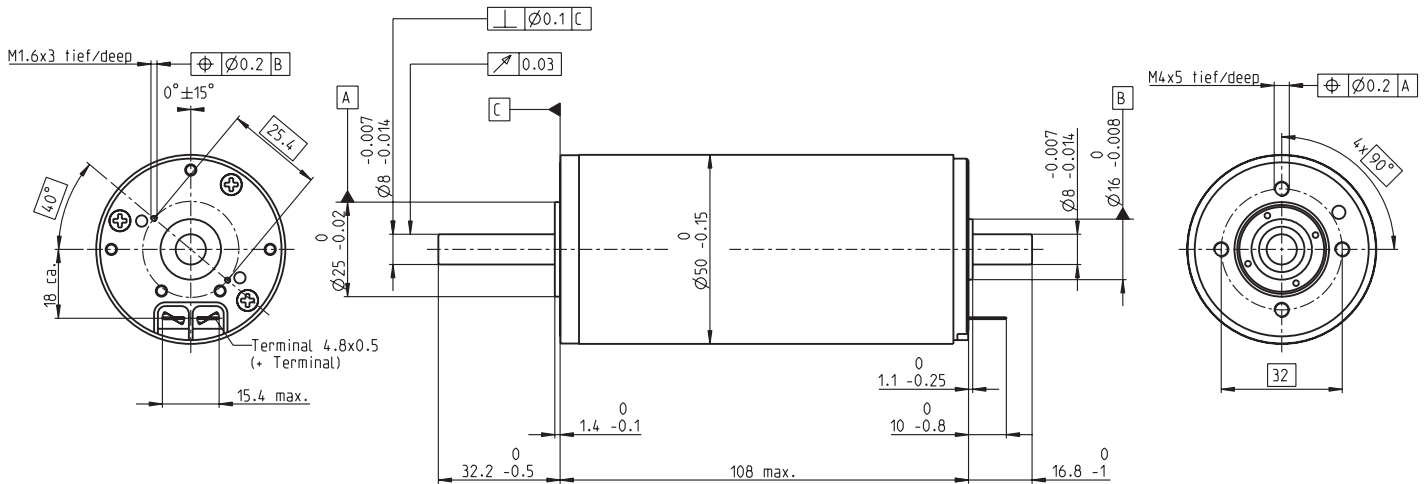


# RE 50 Ø50 mm, Graphite Brushes, 200 Watt

**NEW** Industrial Version

maxon DC motor



M 1:2

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

## Order Number

370354 370355 370356 370357

## Motor Data (provisional)

Values at nominal voltage						
1	Nominal voltage	V	24	36	48	70
2	No load speed	rpm	5780	5780	4870	2810
3	No load current	mA	225	150	87.4	28
4	Nominal speed	rpm	5540	5540	4610	2540
5	Nominal torque (max. continuous torque)	mNm	354	354	362	385
6	Nominal current (max. continuous current)	A	9.15	6.10	3.93	1.65
7	Stall torque	mNm	8420	8420	6960	4090
8	Starting current	A	212	142	73.9	17.2
9	Max. efficiency	%	94	94	93	92
Characteristics						
10	Terminal resistance	Ω	0.113	0.254	0.649	4.070
11	Terminal inductance	mH	0.0937	0.211	0.528	3.370
12	Torque constant	mNm / A	39.6	59.4	94.1	238
13	Speed constant	rpm / V	241	161	101	40.2
14	Speed / torque gradient	rpm / mNm	0.687	0.687	0.700	0.687
15	Mechanical time constant	ms	4.20	4.20	4.24	4.20
16	Rotor inertia	gcm <sup>2</sup>	584	584	578	584

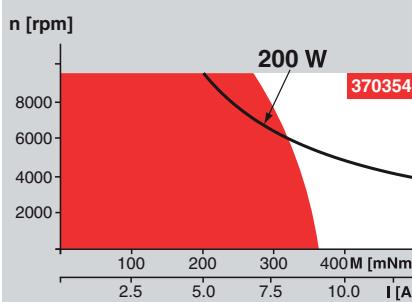
## Specifications

- Thermal data**
- 17 Thermal resistance housing-ambient 3.81 K / W
  - 18 Thermal resistance winding-housing 2.27 K / W
  - 19 Thermal time constant winding 137 s
  - 20 Thermal time constant motor 406 s
  - 21 Ambient temperature -30 ... +100°C
  - 22 Max. permissible winding temperature +125°C
- Mechanical data (preloaded ball bearings)**
- 23 Max. permissible speed 9500 rpm
  - 24 Axial play at axial load < 11.5 N 0 mm
  - 24 Axial play at axial load > 11.5 N 0.1 mm
  - 25 Radial play 0.03 mm
  - 26 Max. axial load (dynamic) 30 N
  - 27 Max. force for press fits (static) 150 N
  - 27 Max. force for press fits (static) (static, shaft supported) 6000 N
  - 28 Max. radial loading, 15 mm from flange 110 N
- Other specifications**
- 29 Number of pole pairs 1
  - 30 Number of commutator segments 15
  - 31 Weight of motor 1100 g

Values listed in the table are nominal.  
Explanation of the figures on page 49.

Industrial version with radial shaft seal ring  
(resulting in increased no-load current)

## 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.

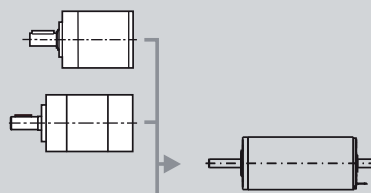
**Short term operation**  
The motor may be briefly overloaded (recurring).

— Assigned power rating

## maxon Modular System

Overview on page 16 - 21

- Planetary Gearhead**  
Ø52 mm  
4 - 30 Nm  
Page 241
- Planetary Gearhead**  
Ø62 mm  
8 - 50 Nm  
Page 243



- Recommended Electronics:**
- ADS 50/5 Page 282
  - ADS 50/10 283
  - ADS\_E 50/5 283
  - ADS\_E 50/10 283
  - EPOS2 50/5 305
  - EPOS2 70/10 305
  - Notes 18

- Encoder HEDS 5540**  
500 Imp.,  
3 channels  
Page 267
- Encoder HEDL 5540**  
500 Imp.,  
3 channels  
Page 269
- Industrial Version IP54**  
**Encoder HEDL 9140**  
Page 272
- Brake AB 44**  
Page 321
- End cap**  
Page 322