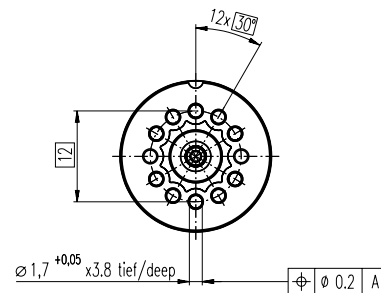
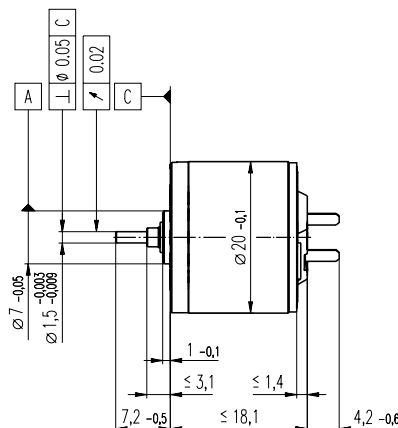
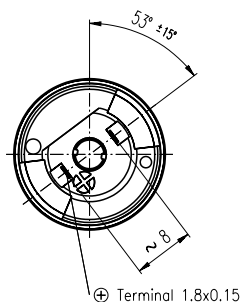


# A 2520 Ø20 mm, Precious Metal Brushes, 1.2 Watt



M 1:1

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

## Order Number

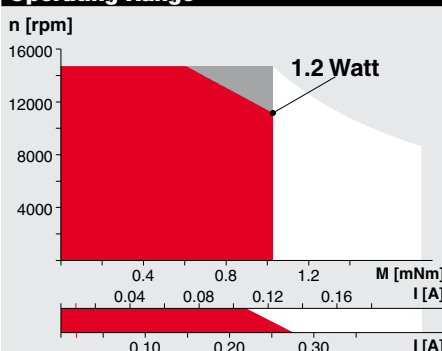
2520. ... -11.111-000 (Insert winding number)

| Winding number                          |                  | 854   | 852   | 853   |
|-----------------------------------------|------------------|-------|-------|-------|
| Motor Data                              |                  |       |       |       |
| 1 Assigned power rating                 | W                | 1.2   | 1.2   | 1.2   |
| 2 Nominal voltage                       | Volt             | 6     | 9     | 12    |
| 3 No load speed                         | rpm              | 13500 | 13300 | 12900 |
| 4 Stall torque                          | mNm              | 2.07  | 1.77  | 1.28  |
| 5 Speed / torque gradient               | rpm / mNm        | 6760  | 7830  | 10700 |
| 6 No load current                       | mA               | 18    | 12    | 9     |
| 7 Starting current                      | mA               | 504   | 287   | 152   |
| 8 Terminal resistance                   | Ohm              | 11.9  | 31.4  | 78.7  |
| 9 Max. permissible speed                | rpm              | 14700 | 14700 | 14700 |
| 10 Max. continuous current              | mA               | 276   | 170   | 107   |
| 11 Max. continuous torque               | mNm              | 1.13  | 1.05  | 0.9   |
| 12 Max. power output at nominal voltage | mW               | 722   | 613   | 426   |
| 13 Max. efficiency                      | %                | 67    | 65    | 61    |
| 14 Torque constant                      | mNm / A          | 4.1   | 6.18  | 8.4   |
| 15 Speed constant                       | rpm / V          | 2330  | 1540  | 1140  |
| 16 Mechanical time constant             | ms               | 56    | 58    | 62    |
| 17 Rotor inertia                        | gcm <sup>2</sup> | 0.797 | 0.704 | 0.551 |
| 18 Terminal inductance                  | mH               | 0.21  | 0.47  | 0.88  |
| 19 Thermal resistance housing-ambient   | K / W            | 26    | 26    | 26    |
| 20 Thermal resistance rotor-housing     | K / W            | 28    | 28    | 28    |
| 21 Thermal time constant winding        | s                | 10    | 9     | 7     |

## Specifications

- Axial play 0.05 - 0.15 mm
- Max. **sleeve bearing** loads
  - axial (dynamic) 0.5 N
  - radial (5 mm from flange) 1.4 N
  - Force for press fits (static) 40 N
- Radial play **sleeve bearing** 0.012 mm
- Ambient temperature range -20 ... +65°C
- Max. rotor temperature +85°C
- Number of commutator segments 5
- Weight of motor 20 g
- Values listed in the table are nominal.  
For applicable tolerances see page 43.  
For additional details please use the maxon selection program on the enclosed CD-Rom.

## Operating Range



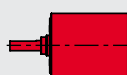
## Comments

- **Recommended operating range**
- **Continuous operation**  
In observation of above listed thermal resistances (lines 19 and 20) the maximum permissible rotor temperature will be reached during continuous operation at 25°C ambient.  
= Thermal limit
- **Short term operation**  
The motor may be briefly overloaded (recurring).

- **853** Motor with high resistance winding
- **854** Motor with low resistance winding

## maxon Modular System

**Planetary Gearhead**  
Ø19 mm  
0.1 - 0.3 Nm  
Details page 187



## Overview on page 17 - 21

**Digital Magnetic Encoder** Ø13 mm  
16 CPT, 2 channels  
Details page 223



**Recommended Electronics:**  
LSC 30/2 page 231  
MIP 10 245  
Notes 17