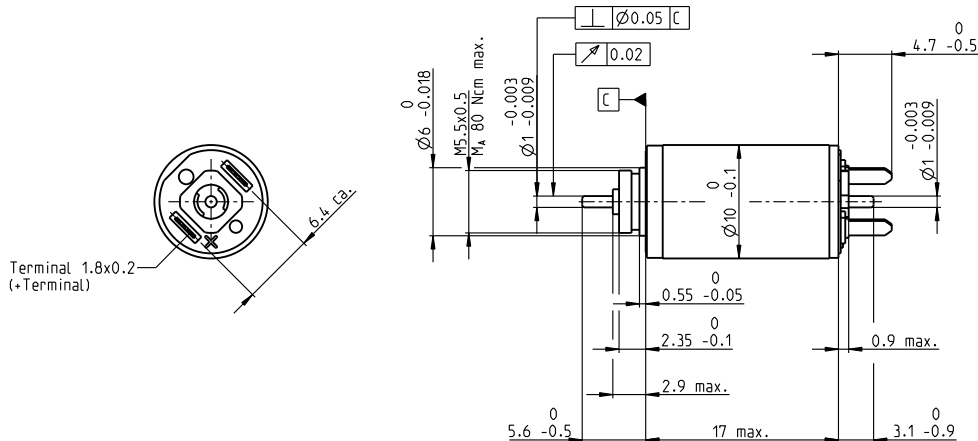


RE 10 Ø10 mm, precious metal brushes, 0.75 watt



M 3:2

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

Part numbers

|                                             |                  | 256085 | 256086 | 256087 | 256088 | 256089 | 256090 | 256091 | 256092 | 256093 | 256094 |
|---------------------------------------------|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Motor data                                  |                  |        |        |        |        |        |        |        |        |        |        |
| Values at nominal voltage                   |                  |        |        |        |        |        |        |        |        |        |        |
| 1 Nominal voltage                           | V                | 2.4    | 3      | 3.6    | 4.5    | 6      | 6      | 7.2    | 7.2    | 9      | 12     |
| 2 No load speed                             | rpm              | 10200  | 10300  | 9840   | 11200  | 12900  | 11300  | 11600  | 10500  | 10600  | 11500  |
| 3 No load current                           | mA               | 23.4   | 18.8   | 14.9   | 13.9   | 11.8   | 10.5   | 8.86   | 8.01   | 6.51   | 5.37   |
| 4 Nominal speed                             | rpm              | 1630   | 1990   | 1500   | 2950   | 4680   | 3160   | 3350   | 1860   | 2000   | 2790   |
| 5 Nominal torque                            | mNm              | 0.742  | 0.775  | 0.769  | 0.771  | 0.768  | 0.785  | 0.768  | 0.743  | 0.742  | 0.731  |
| 6 Nominal current (max. continuous current) | A                | 0.367  | 0.306  | 0.243  | 0.222  | 0.19   | 0.17   | 0.143  | 0.125  | 0.101  | 0.081  |
| 7 Stall torque                              | mNm              | 0.924  | 1      | 0.949  | 1.09   | 1.25   | 1.13   | 1.12   | 0.944  | 0.957  | 1.01   |
| 8 Stall current                             | A                | 0.432  | 0.375  | 0.284  | 0.297  | 0.292  | 0.232  | 0.198  | 0.15   | 0.123  | 0.106  |
| 9 Max. efficiency                           | %                | 59     | 61     | 60     | 62     | 64     | 62     | 62     | 60     | 60     | 60     |
| Characteristics                             |                  |        |        |        |        |        |        |        |        |        |        |
| 10 Terminal resistance                      | Ω                | 5.55   | 8      | 12.7   | 15.2   | 20.6   | 25.8   | 36.4   | 47.9   | 72.9   | 114    |
| 11 Terminal inductance                      | mH               | 0.046  | 0.072  | 0.112  | 0.136  | 0.184  | 0.24   | 0.325  | 0.398  | 0.605  | 0.92   |
| 12 Torque constant                          | mNm/A            | 2.14   | 2.67   | 3.34   | 3.67   | 4.27   | 4.87   | 5.68   | 6.28   | 7.75   | 9.55   |
| 13 Speed constant                           | rpm/V            | 4470   | 3570   | 2860   | 2600   | 2230   | 1960   | 1680   | 1520   | 1230   | 1000   |
| 14 Speed/torque gradient                    | rpm/mNm          | 11600  | 10700  | 10800  | 10700  | 10700  | 10400  | 10800  | 11600  | 11600  | 11900  |
| 15 Mechanical time constant                 | ms               | 7.97   | 7.92   | 7.95   | 7.9    | 7.9    | 7.85   | 7.93   | 8.04   | 8.04   | 8.11   |
| 16 Rotor inertia                            | gcm <sup>2</sup> | 0.066  | 0.0711 | 0.0704 | 0.0706 | 0.0706 | 0.0726 | 0.0706 | 0.0666 | 0.0666 | 0.0654 |

**Specifications**

**Thermal data**

17 Thermal resistance housing-ambient 45.5 K/W

18 Thermal resistance winding-housing 19.5 K/W

19 Thermal time constant winding 3.16 s

20 Thermal time constant motor 108 s

21 Ambient temperature -20...+65°C

22 Max. winding temperature +85°C

**Mechanical data (sleeve bearings)**

23 Max. speed 14 000 rpm

24 Axial play 0.05 - 0.15 mm

25 Radial play 0.012 mm

26 Max. axial load (dynamic) 0.15 N

27 Max. force for press fits (static) 15 N

28 Max. radial load, 4 mm from flange 0.4 N

**Other specifications**

29 Number of pole pairs 1

30 Number of commutator segments 7

31 Weight of motor 7 g

Values listed in the table are nominal.  
Explanation of the figures on page 94.

**Operating range**

n [rpm]

15000

10000

5000

0.25 0.5 0.75 1.0

0.05 0.10 0.15 0.20 0.25

M [mNm]

I [A]

0.75 W

256089

**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**

|   |                     |                       |                            |  |
|---|---------------------|-----------------------|----------------------------|--|
| 1 | Modular system      |                       | Details on catalog page 48 |  |
| 7 | Gear<br>414_GP 10 A | Sensor                | Motor Control              |  |
| 7 |                     | 497_ENX 10 GAMA       | 550_ESCON Module 24/2      |  |
| 9 |                     | 500_ENX 10 IMR        | 550_ESCON 36/2 DC          |  |
|   |                     | 532_Encoder MR 16 CPT | 557_ESCON2 Nano 24/2       |  |
|   |                     |                       | 564_EPOS4 Module 24/1.5    |  |
|   |                     |                       | 566_EPOS4 Compact 24/1.5   |  |