

# M 1:2

Stock program Part Numbers Standard program Special program (on request) according to dimensional drawing 310005 310006 310007 310008 310009 shaft length 15.7 shortened to 8.7 mm 268193 268213 268214 268215 268216 **Motor Data** Values at nominal voltage Nominal voltage 12 18 24 36 48 2 No load speed 8170 8590 8810 8590 8490 rpm 3 No load current mΑ 301 213 165 106 78.6 4 Nominal speed 7630 7910 8050 7840 7760 rpm 5 Nominal torque (max. continuous torque) mNm 51.6 75.5 85.6 86.6 89.7 6 Nominal current (max. continuous current) 3.47 2.28 1.74 7 Stall torque 853 1000 1020 1000 1050 mNm 8 Stall current 61.1 50.3 39.3 25.2 19.6 9 Max. efficiency % 87 88 Characteristics 0.611 10 Terminal resistance Ω 0.196 0.358 1.43 2.45 11 Terminal inductance mΗ 0.034 0.07 0.119 0.281 0.513 12 Torque constant mNm/A 13.9 19.9 25.9 39.8 53.8 13 Speed constant 685 479 369 240 rpm/\ 178 14 Speed/torque gradient rpm/mNm 9.64 8.61 8.7 8.61 8.09 15 Mechanical time constant 3.24 3.05 2.98 2.94 3.4 ms

#### Specifications Operating Range Comments Thermal data n [rpm] Continuous operation 6.0 K/W 17 Thermal resistance housing-ambient In observation of above listed thermal resistance 18 Thermal resistance winding-housing 1.7 K/W 60 W (lines 17 and 18) the maximum permissible winding 19 Thermal time constant winding $16.3 \, s$ 12000 temperature will be reached during continuous 310007 593 s 100°C+.. 20 Thermal time constant motor operation at 25°C ambient. 21 Ambient temperature = Thermal limit. 22 Max. winding temperature +125°C 8000 Mechanical data (ball bearings) Short term operation 4000 23 Max. speed 12000 rpm The motor may be briefly overloaded (recurring). 24 Axial play 0.05 - 0.15 mm 25 Radial play 0.025 mm Assigned power rating 26 Max. axial load (dynamic) 5.6 N 50 75 25 100 M [mNm] 27 Max. force for press fits (static) 110 N 2.0 1.0 3.0 4.0 ΙΓΑΊ (static, shaft supported) 1200 N 28 Max. radial load, 5 mm from flange 28 N

33.5

33.1

34.7

35.9

## Other specifications

- 29 Number of pole pairs
- 30 Number of commutator segments
- 31 Weight of motor

16 Rotor inertia

Values listed in the table are nominal Explanation of the figures on page 82.

### Option

Preloaded ball bearings

#### maxon Modular System Planetary Gearhead 13 Ø32 mm 260 g 0.75-6.0 Nm Page 392-399 Koaxdrive Ø32 mm 1.0-4.5 Nm

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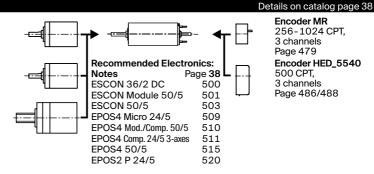
Ø32 mm

Screw Drive

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gcm<sup>2</sup>

33.7



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