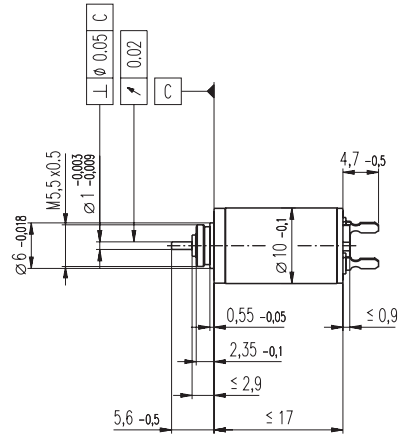
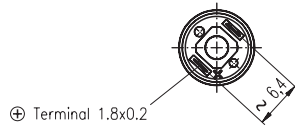


RE 10 \varnothing 10 mm, Precious Metal Brushes, 0.75 Watt, CE approved



M 1:1

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

Order Number

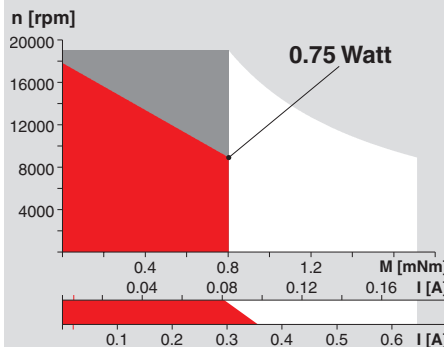
118382 118383 118384 118385 **118386** 118387 118388 118389 118390 118391

| Motor Data | | 118382 | 118383 | 118384 | 118385 | 118386 | 118387 | 118388 | 118389 | 118390 | 118391 |
|------------|--------------------------------------|------------------|--------|--------|--------|---------------|--------|--------|--------|--------|--------|
| 1 | Assigned power rating | W | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 |
| 2 | Nominal voltage | Volt | 2.4 | 3.0 | 3.6 | 4.5 | 6.0 | 6.0 | 7.2 | 7.2 | 9.0 |
| 3 | No load speed | rpm | 10300 | 10400 | 9930 | 11300 | 13000 | 11400 | 11700 | 10600 | 10700 |
| 4 | Stall torque | mNm | 0.924 | 1.00 | 0.949 | 1.09 | 1.25 | 1.13 | 1.12 | 0.944 | 0.957 |
| 5 | Speed / torque gradient | rpm / mNm | 11600 | 10700 | 10800 | 10700 | 10700 | 10400 | 10800 | 11600 | 11900 |
| 6 | No load current | mA | 16 | 13 | 10 | 10 | 9 | 7 | 6 | 5 | 4 |
| 7 | Starting current | mA | 432 | 375 | 284 | 297 | 292 | 232 | 198 | 150 | 123 |
| 8 | Terminal resistance | Ohm | 5.55 | 8.00 | 12.7 | 15.2 | 20.6 | 25.8 | 36.4 | 47.9 | 72.9 |
| 9 | Max. permissible speed | rpm | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 |
| 10 | Max. continuous current | mA | 366 | 305 | 242 | 221 | 190 | 169 | 143 | 124 | 101 |
| 11 | Max. continuous torque | mNm | 0.716 | 0.747 | 0.742 | 0.745 | 0.745 | 0.759 | 0.743 | 0.716 | 0.707 |
| 12 | Max. power output at nominal voltage | mW | 243 | 265 | 240 | 315 | 416 | 330 | 337 | 254 | 261 |
| 13 | Max. efficiency | % | 66 | 67 | 66 | 68 | 69 | 68 | 68 | 66 | 67 |
| 14 | Torque constant | mNm / A | 2.14 | 2.67 | 3.34 | 3.67 | 4.27 | 4.88 | 5.68 | 6.28 | 7.75 |
| 15 | Speed constant | rpm / V | 4470 | 3570 | 2860 | 2600 | 2230 | 1960 | 1680 | 1520 | 1230 |
| 16 | Mechanical time constant | ms | 8 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 17 | Rotor inertia | gcm ² | 0.062 | 0.067 | 0.066 | 0.066 | 0.066 | 0.068 | 0.066 | 0.062 | 0.062 |
| 18 | Terminal inductance | mH | 0.05 | 0.07 | 0.11 | 0.14 | 0.18 | 0.24 | 0.33 | 0.40 | 0.61 |
| 19 | Thermal resistance housing-ambient | K / W | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 |
| 20 | Thermal resistance rotor-housing | K / W | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| 21 | Thermal time constant winding | s | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |

Specifications

- Axial play 0.05 - 0.15 mm
- Max. **sleeve bearing** loads
 - axial (dynamic) 0.15 N
 - radial (4 mm from flange) 0.4 N
 - Force for press fits (static) 15 N
- Radial play **sleeve bearing** 0.012 mm
- Ambient temperature range -20 ... +65°C
- Max. rotor temperature +85°C
- Number of commutator segments 7
- Weight of motor 7 g
- 2 pole permanent magnet
- 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

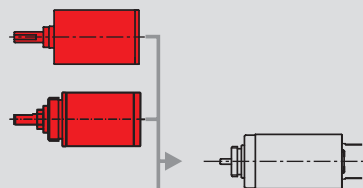
- Recommended operating range**
- Continuous operation**
In observation of above listed thermal resistances (lines 19 and 20) the maximum permissible rotor temperature will be reached during continuous operation at 25°C ambient.
= Thermal limit.
- Short term operation**
The motor may be briefly overloaded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

Details on page 49

maxon Modular System

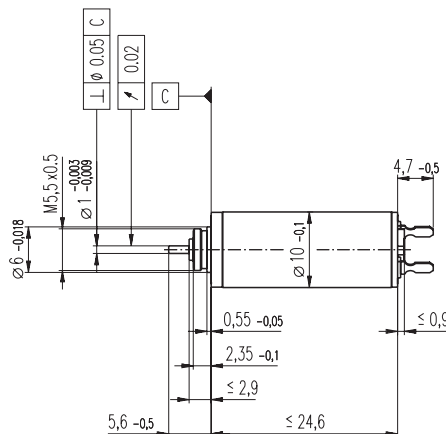
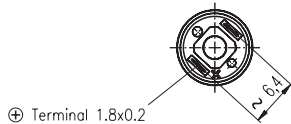
Overview on page 17 - 21

- Planetary Gearhead**
 \varnothing 10 mm
0.005 - 0.1 Nm
Details page 191
- Planetary Gearhead**
 \varnothing 10 mm
0.01 - 0.15 Nm
Details page 192



Recommended Electronics:
LSC 30/2 page 251
Notes 17

RE 10 \varnothing 10 mm, Precious Metal Brushes, 1.5 Watt, $\text{C}\epsilon$ approved



M 1:1

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

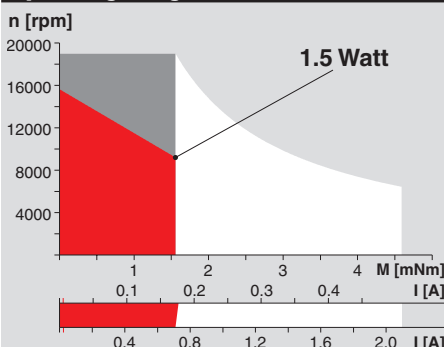
Order Number

| | | 118392 | 118393 | 118394 | 118395 | 118396 | 118397 | 118398 | 118399 | 118400 |
|------------|--------------------------------------|------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Motor Data | | | | | | | | | | |
| 1 | Assigned power rating | W | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 2 | Nominal voltage | Volt | 3.0 | 3.0 | 4.5 | 4.5 | 6.0 | 6.0 | 9.0 | 12.0 |
| 3 | No load speed | rpm | 13000 | 10700 | 12800 | 10600 | 12400 | 9880 | 12200 | 11100 |
| 4 | Stall torque | mNm | 3.12 | 2.52 | 3.03 | 2.47 | 3.01 | 2.61 | 3.08 | 2.83 |
| 5 | Speed / torque gradient | rpm / mNm | 4250 | 4340 | 4290 | 4370 | 4180 | 3860 | 4010 | 3980 |
| 6 | No load current | mA | 24 | 19 | 16 | 12 | 11 | 8 | 7 | 6 |
| 7 | Starting current | mA | 1440 | 963 | 919 | 619 | 660 | 458 | 444 | 371 |
| 8 | Terminal resistance | Ohm | 2.08 | 3.11 | 4.90 | 7.27 | 9.09 | 13.1 | 20.3 | 24.3 |
| 9 | Max. permissible speed | rpm | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 |
| 10 | Max. continuous current | mA | 710 | 580 | 462 | 379 | 339 | 282 | 227 | 208 |
| 11 | Max. continuous torque | mNm | 1.54 | 1.52 | 1.53 | 1.51 | 1.55 | 1.61 | 1.58 | 1.59 |
| 12 | Max. power output at nominal voltage | mW | 1050 | 699 | 1000 | 673 | 962 | 665 | 971 | 810 |
| 13 | Max. efficiency | % | 76 | 75 | 76 | 74 | 76 | 75 | 76 | 77 |
| 14 | Torque constant | mNm / A | 2.16 | 2.62 | 3.30 | 3.99 | 4.56 | 5.69 | 6.95 | 7.63 |
| 15 | Speed constant | rpm / V | 4410 | 3650 | 2890 | 2400 | 2100 | 1680 | 1370 | 1250 |
| 16 | Mechanical time constant | ms | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 17 | Rotor inertia | gcm ² | 0.098 | 0.096 | 0.096 | 0.094 | 0.098 | 0.105 | 0.101 | 0.102 |
| 18 | Terminal inductance | mH | 0.02 | 0.03 | 0.04 | 0.06 | 0.08 | 0.12 | 0.18 | 0.21 |
| 19 | Thermal resistance housing-ambient | K / W | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 |
| 20 | Thermal resistance rotor-housing | K / W | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 |
| 21 | Thermal time constant winding | s | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

Specifications

- Axial play 0.05 - 0.15 mm
- Max. **sleeve bearing** loads
 - axial (dynamic) 0.15 N
 - radial (4 mm from flange) 0.4 N
 - Force for press fits (static) 15 N
- Radial play **sleeve bearing** 0.012 mm
- Ambient temperature range -20 ... +65°C
- Max. rotor temperature +85°C
- Number of commutator segments 7
- Weight of motor 10 g
- 2 pole permanent magnet
- 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).
- 118400 Motor with high resistance winding
118392 Motor with low resistance winding

Details on page 49

maxon Modular System

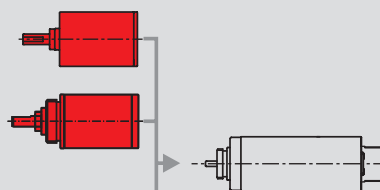
Overview on page 17 - 21

Planetary Gearhead

\varnothing 10 mm
0.005 - 0.1 Nm
Details page 191

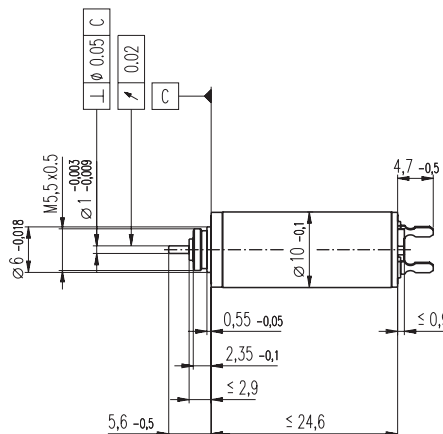
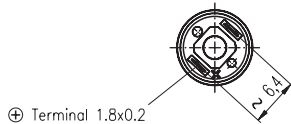
Planetary Gearhead

\varnothing 10 mm
0.01 - 0.15 Nm
Details page 192



Recommended Electronics:
LSC 30/2 page 251
Notes 17

RE 10 \varnothing 10 mm, Precious Metal Brushes, 1.5 Watt, $\text{C}\epsilon$ approved



M 1:1

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

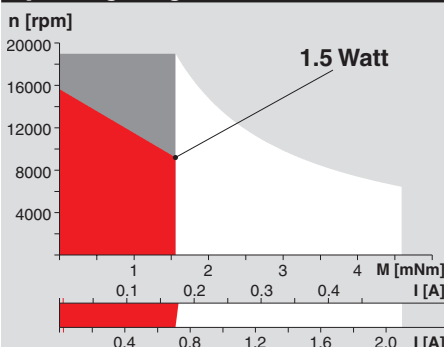
Order Number

| | | 118392 | 118393 | 118394 | 118395 | 118396 | 118397 | 118398 | 118399 | 118400 |
|------------|--------------------------------------|------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Motor Data | | | | | | | | | | |
| 1 | Assigned power rating | W | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 2 | Nominal voltage | Volt | 3.0 | 3.0 | 4.5 | 4.5 | 6.0 | 6.0 | 9.0 | 12.0 |
| 3 | No load speed | rpm | 13000 | 10700 | 12800 | 10600 | 12400 | 9880 | 12200 | 11100 |
| 4 | Stall torque | mNm | 3.12 | 2.52 | 3.03 | 2.47 | 3.01 | 2.61 | 3.08 | 2.83 |
| 5 | Speed / torque gradient | rpm / mNm | 4250 | 4340 | 4290 | 4370 | 4180 | 3860 | 4010 | 3980 |
| 6 | No load current | mA | 24 | 19 | 16 | 12 | 11 | 8 | 7 | 6 |
| 7 | Starting current | mA | 1440 | 963 | 919 | 619 | 660 | 458 | 444 | 371 |
| 8 | Terminal resistance | Ohm | 2.08 | 3.11 | 4.90 | 7.27 | 9.09 | 13.1 | 20.3 | 24.3 |
| 9 | Max. permissible speed | rpm | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 | 19000 |
| 10 | Max. continuous current | mA | 710 | 580 | 462 | 379 | 339 | 282 | 227 | 208 |
| 11 | Max. continuous torque | mNm | 1.54 | 1.52 | 1.53 | 1.51 | 1.55 | 1.61 | 1.58 | 1.59 |
| 12 | Max. power output at nominal voltage | mW | 1050 | 699 | 1000 | 673 | 962 | 665 | 971 | 810 |
| 13 | Max. efficiency | % | 76 | 75 | 76 | 74 | 76 | 75 | 76 | 77 |
| 14 | Torque constant | mNm / A | 2.16 | 2.62 | 3.30 | 3.99 | 4.56 | 5.69 | 6.95 | 7.63 |
| 15 | Speed constant | rpm / V | 4410 | 3650 | 2890 | 2400 | 2100 | 1680 | 1370 | 1250 |
| 16 | Mechanical time constant | ms | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 17 | Rotor inertia | gcm ² | 0.098 | 0.096 | 0.096 | 0.094 | 0.098 | 0.105 | 0.101 | 0.102 |
| 18 | Terminal inductance | mH | 0.02 | 0.03 | 0.04 | 0.06 | 0.08 | 0.12 | 0.18 | 0.21 |
| 19 | Thermal resistance housing-ambient | K / W | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 |
| 20 | Thermal resistance rotor-housing | K / W | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 |
| 21 | Thermal time constant winding | s | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

Specifications

- Axial play 0.05 - 0.15 mm
- Max. **sleeve bearing** loads
 - axial (dynamic) 0.15 N
 - radial (4 mm from flange) 0.4 N
 - Force for press fits (static) 15 N
- Radial play **sleeve bearing** 0.012 mm
- Ambient temperature range -20 ... +65°C
- Max. rotor temperature +85°C
- Number of commutator segments 7
- Weight of motor 10 g
- 2 pole permanent magnet
- 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).
- 118400 Motor with high resistance winding
118392 Motor with low resistance winding

Details on page 49

maxon Modular System

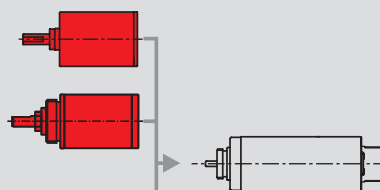
Overview on page 17 - 21

Planetary Gearhead

\varnothing 10 mm
0.005 - 0.1 Nm
Details page 191

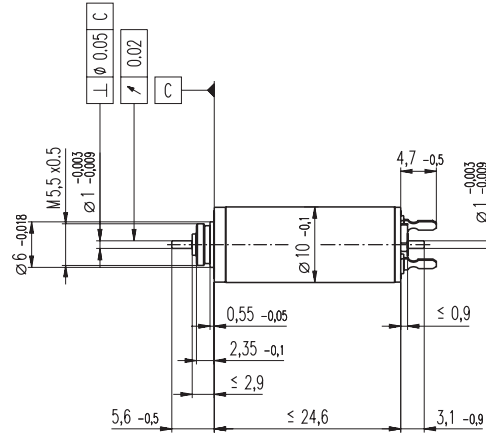
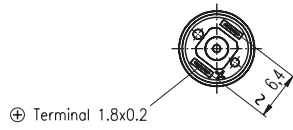
Planetary Gearhead

\varnothing 10 mm
0.01 - 0.15 Nm
Details page 192



Recommended Electronics:
LSC 30/2 page 251
Notes 17

RE 10 \varnothing 10 mm, Precious Metal Brushes, 1.5 Watt, CE approved



M 1:1

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

Order Number

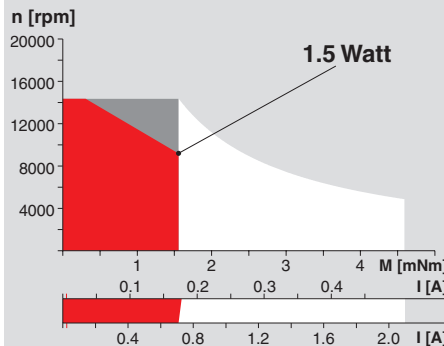
256096 256097 256099 256100 **256101** 256102 256103 256104 256105

| Motor Data | | 256096 | 256097 | 256099 | 256100 | 256101 | 256102 | 256103 | 256104 | 256105 |
|---|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 Assigned power rating | W | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 2 Nominal voltage | Volt | 2.4 | 3.0 | 4.5 | 4.5 | 6.0 | 7.2 | 9.0 | 10.0 | 12.0 |
| 3 No load speed | rpm | 10400 | 10700 | 12800 | 10600 | 12400 | 11900 | 12200 | 12300 | 12500 |
| 4 Stall torque | mNm | 2.49 | 2.52 | 3.03 | 2.47 | 3.01 | 3.13 | 3.08 | 3.14 | 3.24 |
| 5 Speed / torque gradient | rpm / mNm | 4250 | 4340 | 4290 | 4370 | 4180 | 3860 | 4010 | 3980 | 3930 |
| 6 No load current | mA | 22 | 19 | 16 | 12 | 11 | 9 | 7 | 7 | 6 |
| 7 Starting current | mA | 1150 | 963 | 919 | 619 | 660 | 549 | 444 | 412 | 360 |
| 8 Terminal resistance | Ohm | 2.08 | 3.11 | 4.90 | 7.27 | 9.09 | 13.1 | 20.3 | 24.3 | 33.3 |
| 9 Max. permissible speed | rpm | 14300 | 14300 | 14300 | 14900 | 14300 | 14300 | 14300 | 14300 | 14300 |
| 10 Max. continuous current | mA | 710 | 580 | 462 | 379 | 339 | 282 | 227 | 208 | 177 |
| 11 Max. continuous torque | mNm | 1.54 | 1.52 | 1.53 | 1.51 | 1.55 | 1.61 | 1.58 | 1.58 | 1.59 |
| 12 Max. power output at nominal voltage | mW | 669 | 699 | 1000 | 673 | 962 | 962 | 971 | 1000 | 1050 |
| 13 Max. efficiency | % | 75 | 75 | 76 | 74 | 76 | 77 | 76 | 77 | 77 |
| 14 Torque constant | mNm / A | 2.16 | 2.62 | 3.30 | 3.99 | 4.56 | 5.69 | 6.95 | 7.63 | 9.00 |
| 15 Speed constant | rpm / V | 4410 | 3650 | 2890 | 2400 | 2100 | 1680 | 1370 | 1250 | 1060 |
| 16 Mechanical time constant | ms | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 17 Rotor inertia | gcm ² | 0.098 | 0.096 | 0.096 | 0.094 | 0.098 | 0.105 | 0.101 | 0.102 | 0.103 |
| 18 Terminal inductance | mH | 0.02 | 0.03 | 0.04 | 0.06 | 0.08 | 0.12 | 0.18 | 0.21 | 0.30 |
| 19 Thermal resistance housing-ambient | K / W | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 |
| 20 Thermal resistance rotor-housing | K / W | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 |
| 21 Thermal time constant winding | s | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

Specifications

- Axial play 0.05 - 0.15 mm
- Max. **sleeve bearing** loads
 - axial (dynamic) 0.15 N
 - radial (4 mm from flange) 0.4 N
 - Force for press fits (static) 15 N
- Radial play **sleeve bearing** 0.012 mm
- Ambient temperature range -20 ... +65°C
- Max. rotor temperature +85°C
- Number of commutator segments 7
- Weight of motor 10 g
- 2 pole permanent magnet
- 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).

- 256105 Motor with high resistance winding
- 256096 Motor with low resistance winding

Details on page 49

maxon Modular System

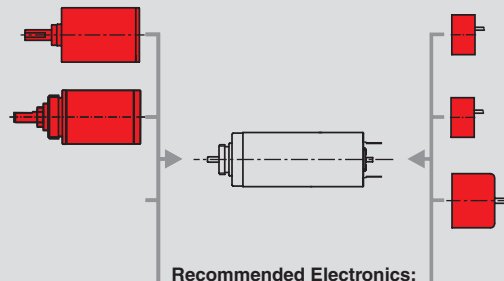
Overview on page 17 - 21

Planetary Gearhead

\varnothing 10 mm
0.005 - 0.1 Nm
Details page 191

Planetary Gearhead

\varnothing 10 mm
0.01 - 0.15 Nm
Details page 192



- Digital MR Encoder**
16 CPT,
2 channels
Details page 226
- Digital MR Encoder**
64 / 128 / 256 CPT,
2 channels
Details page 227
- Digital Magnetic Encoder**
 \varnothing 10 mm
12 CPT, 2 channels
Details page 244

Recommended Electronics:
LSC 30/2 page 251
EPOS 04/1 page 201