

SONCEBOZ

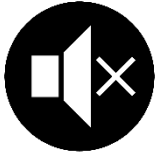


► Slimline stepper motors

6405



MINIATURIZATION



LOW NOISE



HIGH VIBRATION

- Nominal Torque 1.6 mNm
- Weight 7g
- Output shaft $\varnothing 1^{-0.003} /_{-0.013}$ mm

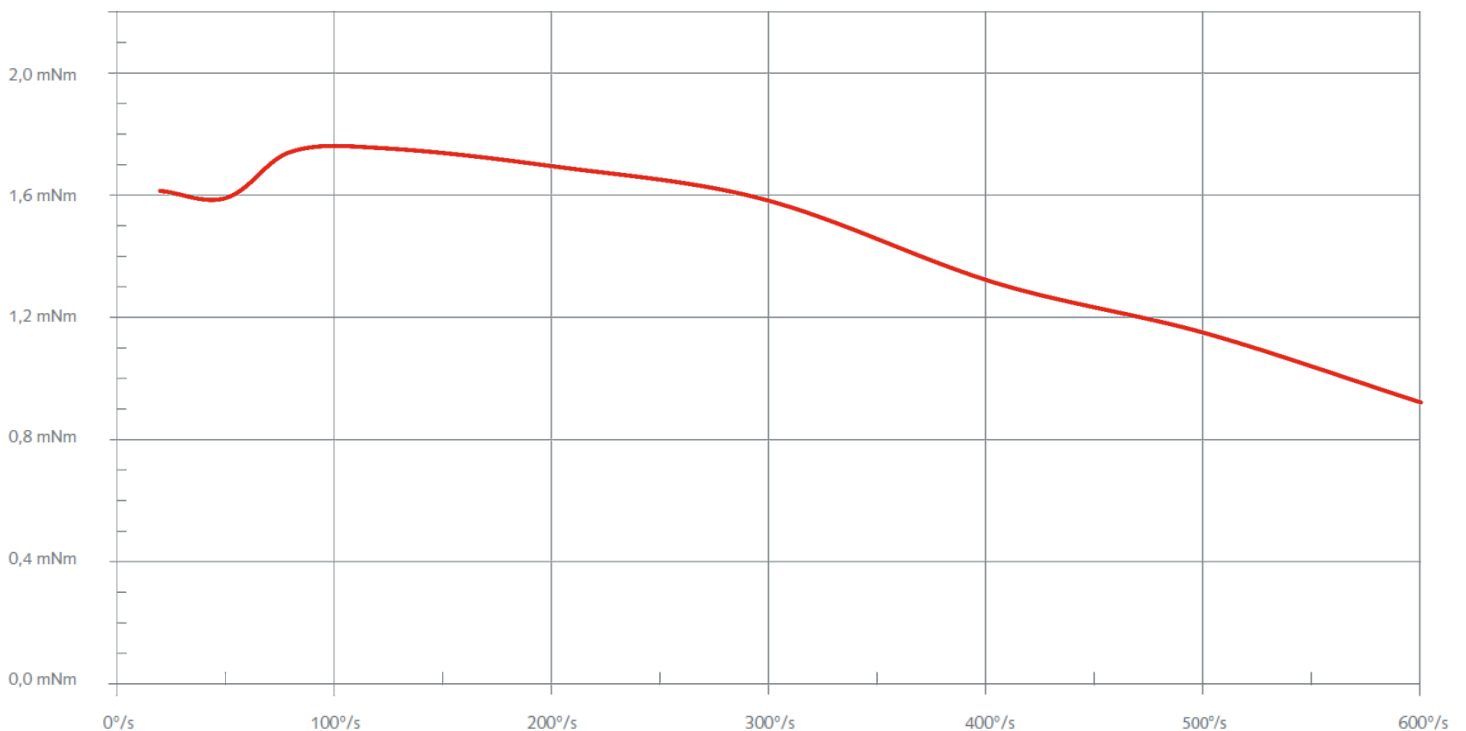
The 6405 Shafted stepper motor is a benchmark and the worldwide standard in instrument cluster applications.

► Technical data

| Part N° | Position on PCB | Shaft length "L" | Internal stop |
|----------|-----------------|------------------|---------------|
| 6405R407 | Rear Mount | 16.275 mm | Yes |

► Dynamic characteristics

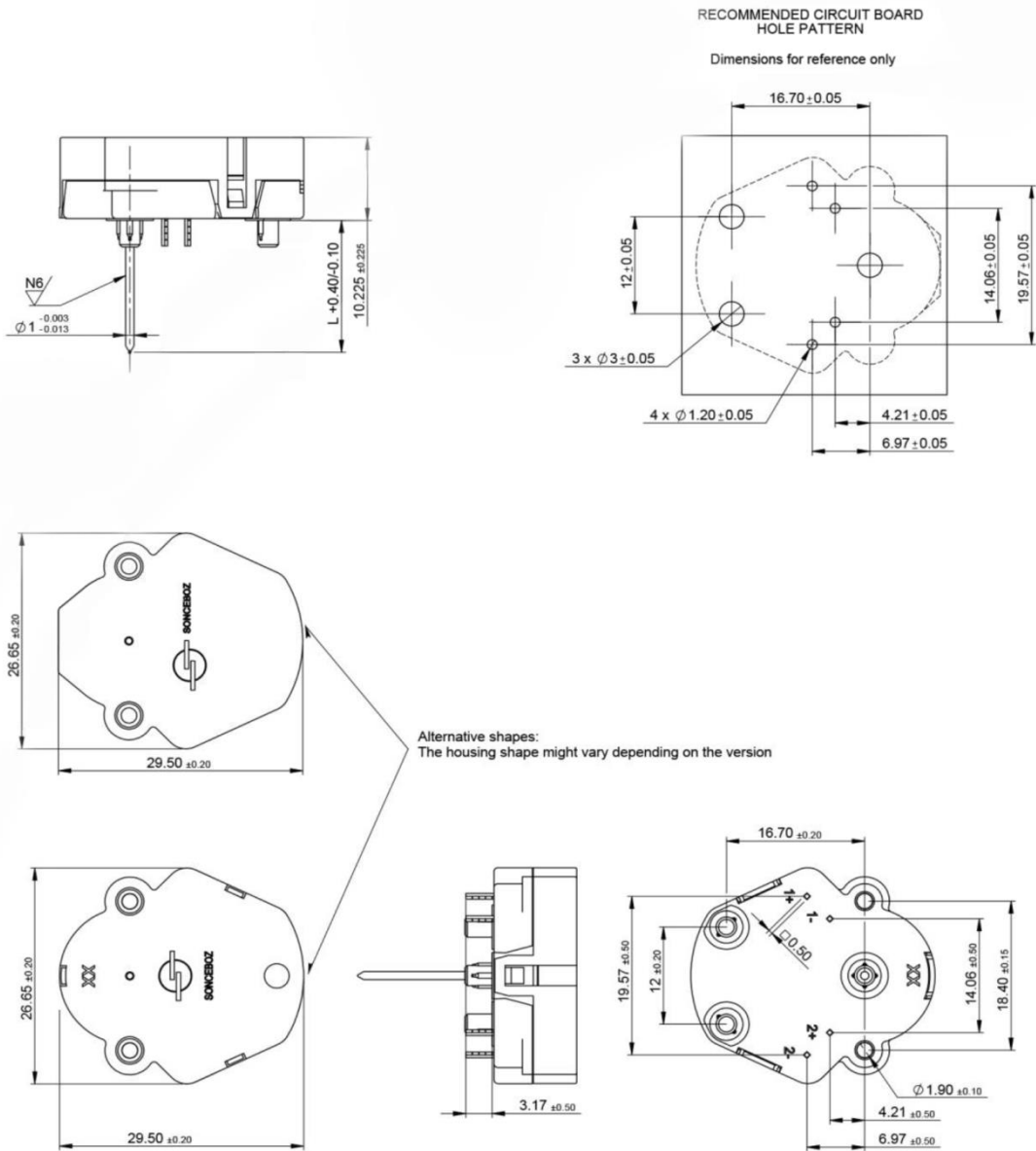
Dynamic torque at 22° C, coil voltage 5 V, for motors driven in 1/6 micro-steps



► Dimensions

Drawing not to scale. All dimensions in mm.

• Rear Mount



▶ Electrical / Mechanical Characteristics

| Variables : | | | | |
|---|-----|----------|-----|-------------------|
| • Ambient temperature Ta = 22° C | | | | |
| • Voltage at the coils U = 5 V±0.1 V | | | | |
| Parameter | Min | Typical | Max | Unit |
| Rotor step angle | – | 18 | – | degree |
| Gear ratio | – | 1:36 | – | – |
| Pole pairs rotor | – | 5 | – | degree |
| Step size degree in full step mode | – | 0.5 | – | degree |
| Step size degree with 6 micro steps | – | 0.083 | – | degree |
| Operating angle | 300 | 310 | – | degree |
| Operating temperature | -40 | – | 105 | °C |
| Storage temperature | -50 | – | 105 | °C |
| Soldering temperature (max 5 sec) | – | – | 290 | °C |
| Operating voltage | 4.5 | – | 7.5 | V |
| Operating current | – | 20 | 35 | mA |
| Coil resistance | 214 | 227 | 240 | Ω |
| Coil Inductance | 45 | 55 | 65 | mH |
| Dynamic torque @ 200 degree / sec | 1.2 | 1.6 | – | mNm |
| Static torque | 0.5 | 0.8 | – | mNm |
| Holding torque (with current, 5 V) | – | 3.6 | – | mNm |
| Noise level @ 200 degree / sec @ 5 cm from the reference face, pre-test | – | 26 | 35 | dB (A) |
| Maximum speed | 800 | – | – | degree/s |
| Equivalent motor inertia at output | – | 4.5 E-06 | – | kg m ² |
| Permissible forces on output shaft | | | | |
| Axial force (with retention of the housing) | – | – | 120 | N |
| Radial force at 8 mm from front face of motor | – | – | 12 | N |