



► **Slimline stepper motors**

6405

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

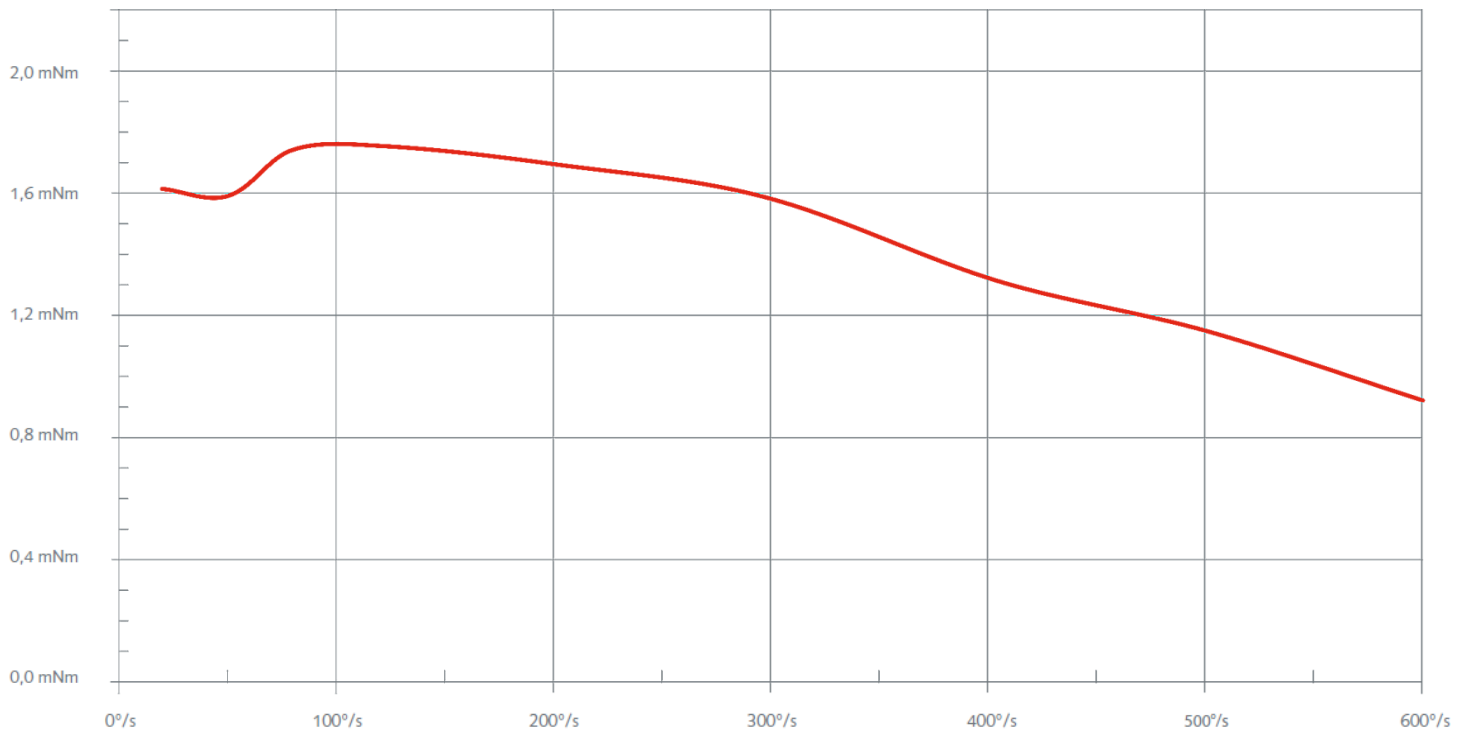
The 6405 Shafted stepper motor is a benchmark and the worldwide standard in instrument cluster applications.

► **Technical data**

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

► **Dynamic characteristics**

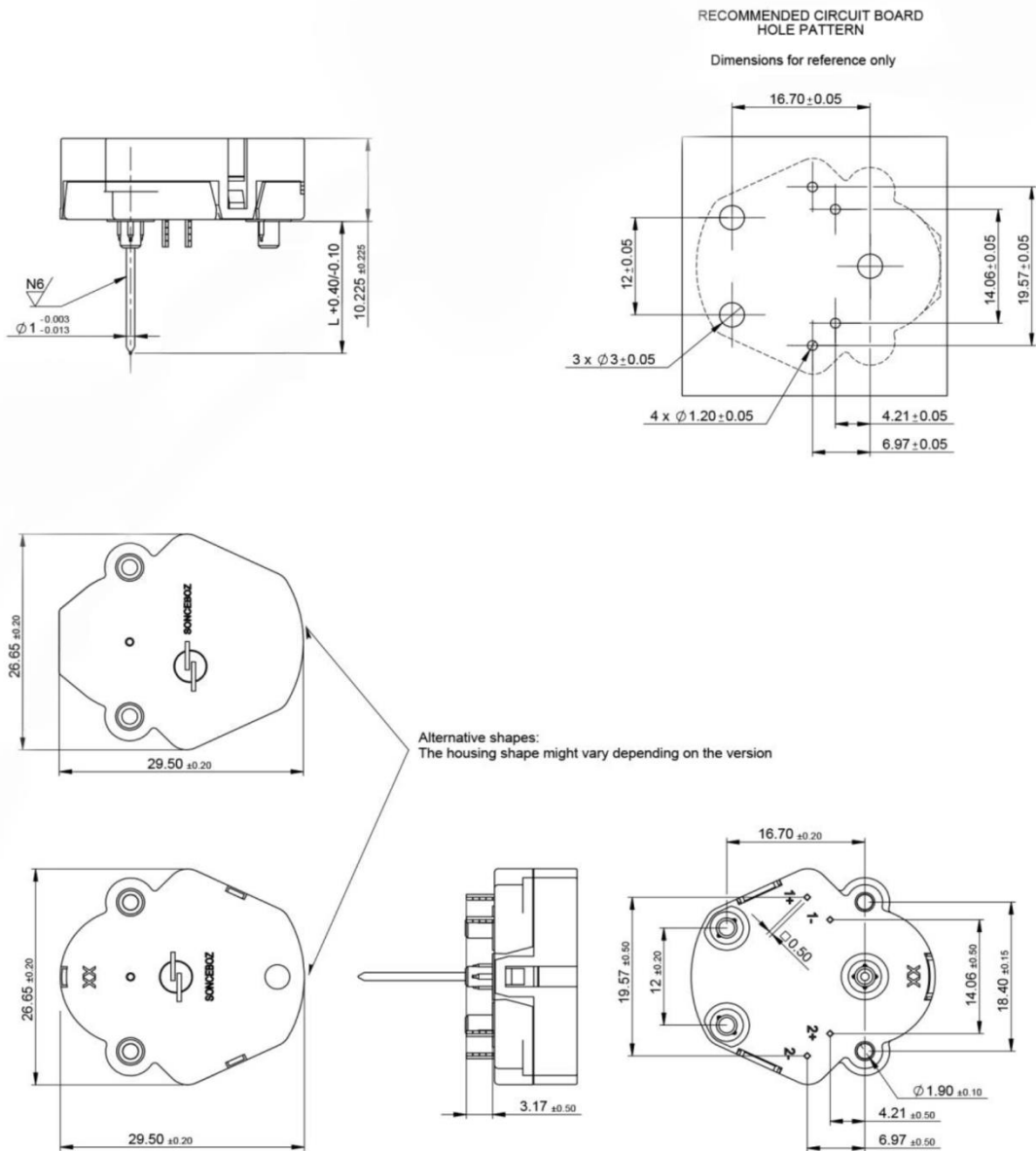
Dynamic torque at 22° C, coil voltage 5 V, for motors driven in 1/6 micro-steps



► Dimensions

Drawing not to scale. All dimensions in mm.

• Rear Mount



Special requirements upon customer specifications. Right to change reserved.

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▶ 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

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