SONCEBOZ

Slimline stepper motors

6407

- Nominal Torque ..... 1.6 mNm
- Weight ..... 11 g
- Steel output shafts.. Ø 1.5 $^{-0.003}/_{-0.013}$ mm
- Plastic output shaft. Ø 3.2$^{0}/_{-0.03}$ mm

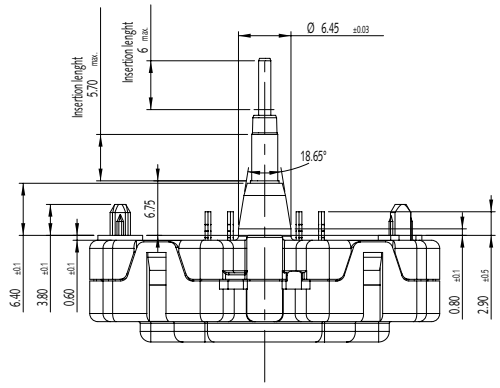
The 6407 Dual Stepper Motor permits independent movement of two concentric output shafts and is used in applications where combined indications are required.

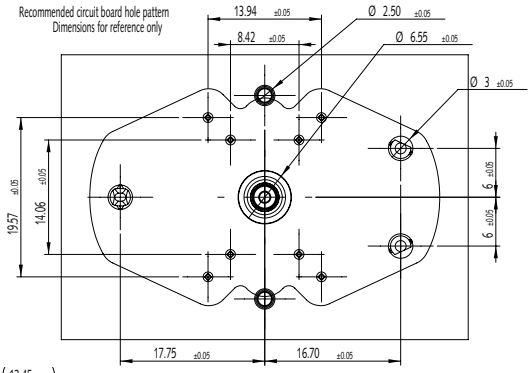
Technical data

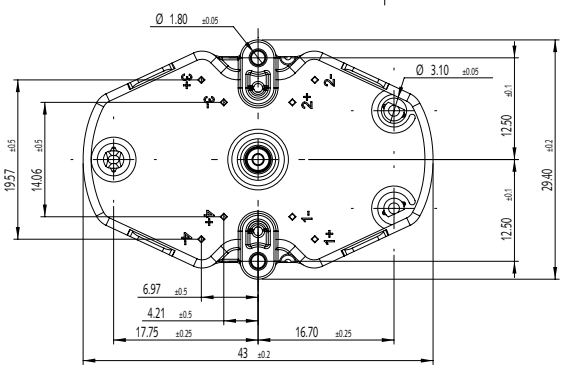
Part N°	Position on PCB	Output shaft material	Shaft Diameter	Shaft length	Internal stop
6407R009	Rear Mount	Plastic	Ø 3.2$^{0}/_{-0.03}$ mm	14.75 mm	yes
		Steel	Ø 1.5 $^{-0.003}/_{-0.013}$ mm	21.75 mm	yes

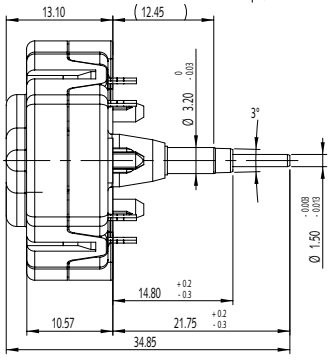
Dimensions

Drawing not to scale. All dimensions in mm.









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	–	–
Step size degree in full step mode	–	0.5	–	degree
Step size degree with 6µ steps mode	–	0.083	–	degree
Operating angle : • Plastic output shaft • Steel output shaft	 310 310	–	–	 degree 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	–
Coil inductance	45	55	65	mH
Dynamic torque @ 200°/s • Plastic output gear • Steel output shaft	 1.2 1.2	 1.6 1.6	 – –	 mNm mNm
Holding torque (with current, 5V) • Plastic output shaft • Steel output shaft	 2.5 2.5	 3.6 3.6	 – –	 mNm mNm
Noise Level @ 200 degree / sec @ 5cm from the reference face, pre-test (one output shaft running at a time)	–	30	35	dB (A)
Maximum speed	800	–	–	°/s
Equivalent motor inertia at output	–	5.1 E-06	–	kg m²
Permissible forces on output gear Axial force (with retention of the housing) Radial force at 10 mm from front face of motor	–	–	 100 15	 N N

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