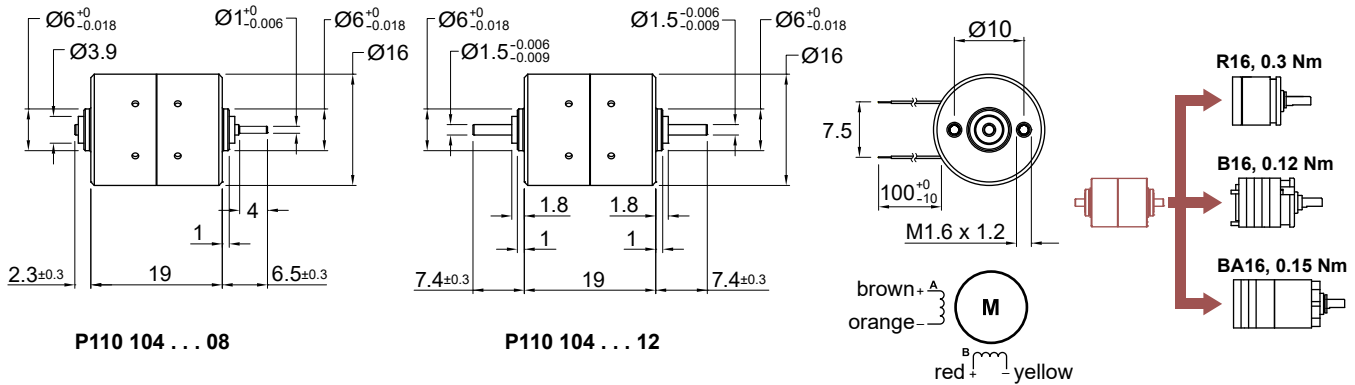


## P110 104

Ø 16 mm • 6.2 mNm



Dimensions in mm.

Electrical Data	P110 104			Unit
	068 08/12	015 08/12	2.5 08/12	
1 Resistance per Phase, typ	62.0	15.0	2.5	Ohms
2 Inductance per Phase, typ	46.0	12.0	2.2	mH
3 Nominal Phase Current (2 ph. On)	0.12	0.25	0.63	A
4 Nominal Phase Current (1 ph. On)	0.17	0.35	0.90	A
5 Back EMF Amplitude	5.70	2.80	1.10	V/kstep/s
General Data				
6 Holding Torque, nominal current	6.2 (0.88)			mNm (oz-in)
7 Holding Torque, 1.5x nominal current (1)	8.7 (1.23)			mNm (oz-in)
8 Detent Torque	1.65 (0.24)			mNm (oz-in)
9 Rotor Inertia	0.400			kgm <sup>2</sup> x 10 <sup>-7</sup>
10 Step Angle	9			Degree
11 Absolute Accuracy 2 ph. On, Full step mode	+/- 5%			% Full Step
12 Steps Per Revolution	40			
13 Ambient Temperature Range (operating)	-20 to 50 (-4 to 122)			°C (°F)
14 Maximum Coil Temperature	130 (266)			°C (°F)
15 Thermal Resistance Coil-ambient (2)	45			°C/W
16 Natural Resonance Frequency (nominal current)	200			Hz
17 Electrical Time Constant	0.80			ms
18 Angular Acceleration (nominal current)	155,000			rad/s <sup>2</sup>
19 Bearing Type	Ball			
20 Dielectric Withstanding Voltage	500 VRMS for 5 seconds			VAC
21 Radial Shaft Play	30@2N			µm
22 Axial Shaft Play	40@2N			µm
23 Maximum Radial Shaft Load	2.5 (9)			N (oz)
24 Maximum Axial Shaft Load (3)	2.5 (9)			N (oz)
25 Weight	23 (0.81)			g (oz)
26 Power Rate (nominal current)	1.2			kW/s

**Notes:**

1. Measured with 1 phase ON. The max coil temperature must be respected
2. Motor unmounted
3. Shaft must be supported when press-fitting a pulley or pinion

