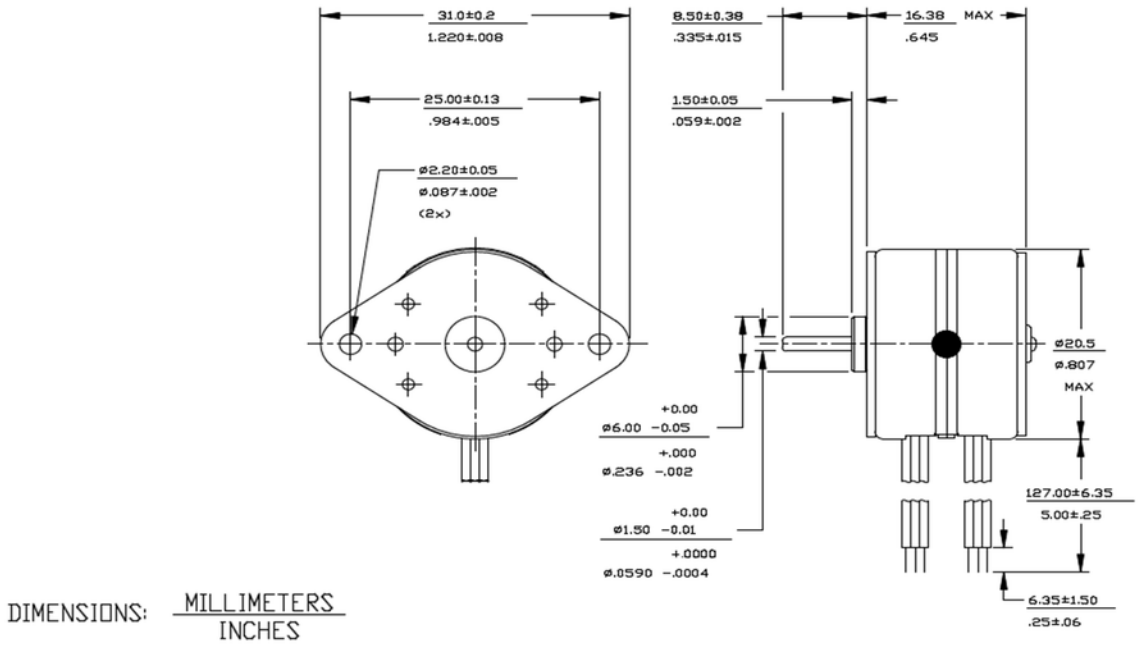
20M020D RoHS Compliant Ø20mm 1.55 mNm

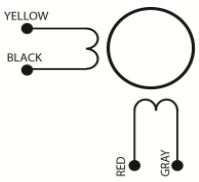


20M020D

Electrical Data		20M020D1U Unipolar	20M020D2U Unipolar	20M020D1B Bipolar	20M020D2B Bipolar	
1 Operating Voltage		5	12	5	12	VDC
2 Resistance per Phase, ± 10%		20.0	115.2	20.0	115.2	Ohms
3 Inductance per Phase, typ		3.9	20.3	7.8	52.8	mH
4 Rated Current per Phase *		0.25	0.10	0.25	0.10	A
Coil independent parameters						
5 Holding Torque, MIN *		7.77 (1.1)	7.77 (1.1)	10.95 (1.55)	10.95 (1.55)	mNm (oz-in)
6 Detent Torque, Max		3.53 (0.5)	3.53 (0.5)	3.53 (0.5)	3.53 (0.5)	mNm (oz-in)
7 Rotor inertia		0.41 (0.00224)	0.41 (0.00224)	0.41 (0.00224)	0.41 (0.00224)	(gcm^2) (oz-in-s^2)
8 Step Angle		18.0	18.0	18.0	18.0	Degree
9 Absolute accuracy 2 ph. On, Full step		± 1.5	± 1.5	± 1.5	± 1.5	Degree
10 Steps per Revolution		20	20	20	20	
11 Ambient Temp Range (operating)		-20 to +70 (-4 to +158)	-20 to +70 (-4 to +158)	-20 to +70 (-4 to +158)	-20 to +70 (-4 to +158)	°C (°F)
12 Maximum Coil Temperature		130 (266)	130 (266)	130 (266)	130 (266)	°C (°F)
13 Bearing Type		Sintered Bronze Sleeve	Sintered Bronze Sleeve	Sintered Bronze Sleeve	Sintered Bronze Sleeve	
14 Insulation Resistance at 500 VDC		100	100	100	100	Mohms
15 Dielectric Withstanding Voltage		450 for 2 seconds	450 for 2 seconds	450 for 2 seconds	450 for 2 seconds	VAC
16 Weight		23.5 (0.832)	23.5 (0.832)	23.5 (0.832)	23.5 (0.832)	g (oz)
17 Leadwire		AWG 28, UL 1429	AWG 28, UL 1429	AWG 28, UL 1429	AWG 28, UL 1429	

All Motor Data Values at 20°C Unless Otherwise Specified

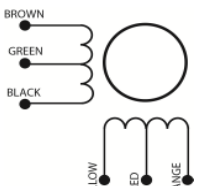
* Energize at Rated Current, 2 Phase On



BIPOLAR COIL			
RED	GRAY	YELLOW	BLACK
+	-	+	-
+	-	-	+
-	+	-	+
-	+	+	-
+	-	+	-

CW CCW

VIEWED FROM OUTPUT SHAFT



UNIPOLAR COIL				
YELLOW	ORANGE	BROWN	BLACK	RED/GREEN
+	-	+	-	+
+	-	-	+	+
-	+	-	+	+
-	+	+	-	+
+	-	+	-	+

CW CCW

VIEWED FROM OUTPUT SHAFT

(C) 2013. Portescap. Specifications subject to change without notice.