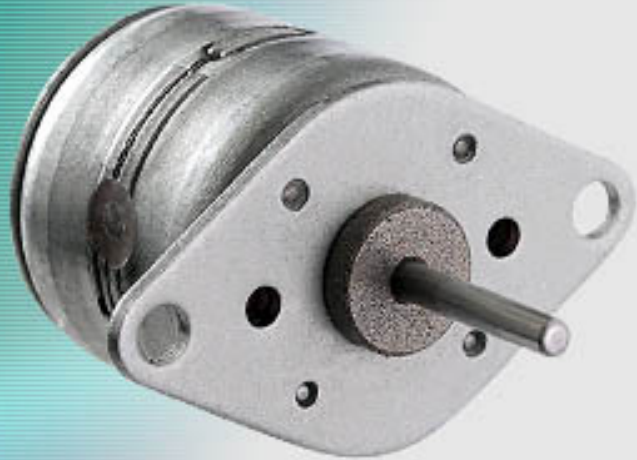


# 15M SERIES

LONGEST HISTORY & EXPERIENCE  
IN CAN STACK STEP MOTOR



#### GENERAL SPECIFICATIONS

Step Angle	18°
Step Accuracy	± 1.5°
Operating Temperature	100°C Max
Ambient Temperature Range	-20°C ~ +70°C
Insulation Resistance at 500Vdc	100MΩ
Dielectric Withstanding Voltage	450 ± 50 VRMS, 2 sec

 [CLICK HERE TO  
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OPENS PDF IN NEW WINDOW

The specifications in this publication are believed to be accurate and reliable. However, it is the responsibility of the product user to determine the suitability of Portescap products for a specific application. While defective products will be replaced without charge if promptly returned, no liability is assumed beyond such replacement.

Portescap Danaher Motion motors will not be CE marked where the Low Voltage Directive, the Electro-Magnetic Compatibility or other appropriate EU directives are not applicable - this is an EU legal requirement.

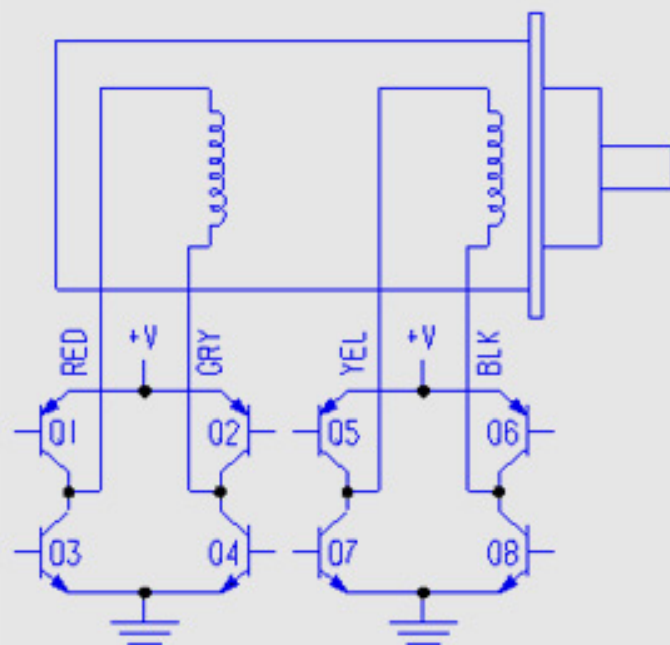
## TECHNICAL SPECIFICATIONS

	BIPOLAR
Part Number	15M020D1B-N
DC Operating Voltage	5
Resistance per Winding (ohms)	40 ± 10%
Inductance per Winding (mH)	14 ± 20%
Holding Torque* (mNm/oz-in)	3.87 / 0.55
Rotor Moment of Inertia (g.m <sup>-2</sup> )	1.15 x 10 <sup>-5</sup>
Detent Torque (mNm/oz-in)	1.62 / 0.23
Step Angle	18°
Step Angle Tolerance*	± 1.5°
Steps per Revolution*	20
Max. Operating Temperature	100°C
Ambient Temperature Range	
Operating	-20°C to 70°C
Storage	-40°C to 85°C
Bearing Type	Sintered bronze sleeve
Insulation Resistance at 500Vdc	100 megohms
Dielectric Withstanding Voltage	450 ± 50 VRMS, 2 sec
Weight (g/oz)	14 / 0.5
Leadwires	28 AWG, UL Style 1429

\* Measured with 2 phases energized



## WIRING DIAGRAM



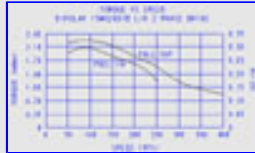
BIPOLAR

STEP	01-04	02-03	05-08	06-07
1	ON	OFF	ON	OFF
2	ON	OFF	OFF	ON
3	OFF	ON	OFF	ON
4	OFF	ON	ON	OFF
1	ON	OFF	ON	OFF

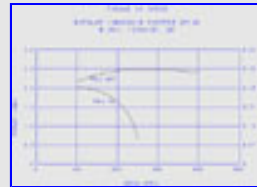
CCW ROTATION
CW ROTATION

# MOTOR DYNAMICS

CLICK ON A THUMBNAIL TO MAGNIFY



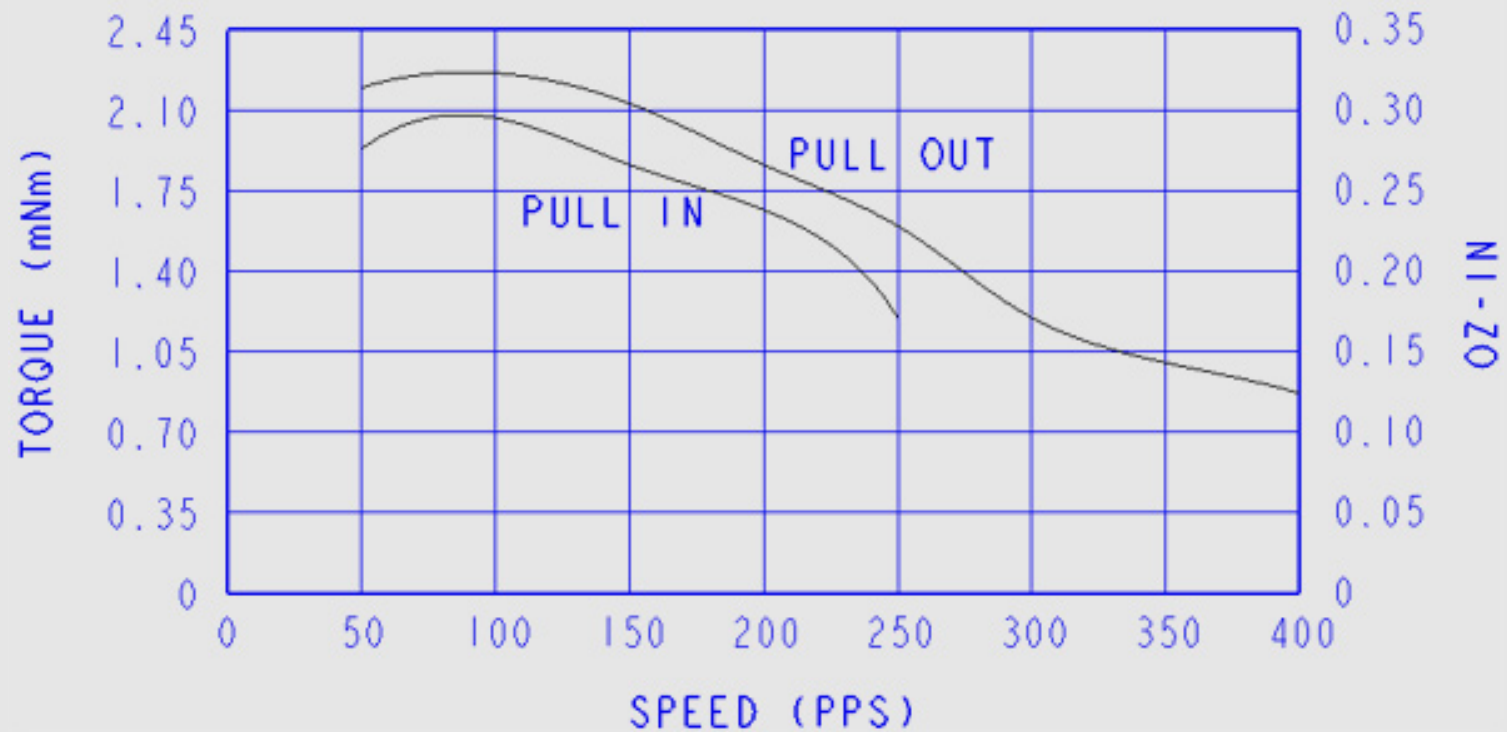
15M020D1B-N, Bipolar, L/R Drive



Chopper Drive



TORQUE VS SPEED  
BIPOLAR 15M020DIB-N L/R 2 PHASE DRIVE





## TORQUE VS SPEED

BIPOLAR 15M020D1B-N CHOPPER DRIVE  
@ 36V, 125mA/ϕ, 2ϕ

