


# 35DBM-L

 (Non-Captive)  
**SERIES****HIGHEST FORCE PER  
FRAME SIZE**Formerly  
**L922-S SERIES****GENERAL SPECIFICATIONS**

Max Pull-in Rate* (Steps/Sec)	425
Power Consumption	5 Watts
Insulation Resistance	20MΩ
Bearings	Radial Ball
Weight	3 oz (85.2gm)
Operating Temperature Range	-20°C ~ 70°C
Storage Temperature Range	-40°C ~ 85°C

\* Measured with 2 phases energized



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PRINT THIS SERIES**  
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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

Part Number	DC Operating Voltage	Linear Travel Per Step*	Maximum Travel	Maximum Force*	Minimum Holding Force (Unenergized)
35DBM10B1U-L	5	.001" (0.0254mm)	2.5" (63.5mm)	75 oz (20.9N)	40 oz (11.1N)
35DBM10B2U-L	12	.001" (0.0254mm)	2.5" (63.5mm)	75 oz (20.9N)	40 oz (11.1N)
35DBM20B1U-L	5	.002" (0.0508mm)	2.5" (63.5mm)	55 oz (15.3N)	10 oz (2.8N)
35DBM20B2U-L	12	.002" (0.0508mm)	2.5" (63.5mm)	55 oz (15.3N)	10 oz (2.8N)
35DBM30B1U-L	5	.003" (0.0762mm)	2.5" (63.5mm)	30 oz (8.3N)	5 oz (1.4N)
35DBM30B2U-L	12	.003" (0.0762mm)	2.5" (63.5mm)	30 oz (8.3N)	5 oz (1.4N)

\* Measured with 2 phases energized

Coil Type	Unipolar	
Coil Data	1U (5vdc)	2U (12vdc)
Resistance Per Phase	10 $\Omega$	58 $\Omega$
Inductance Per Phase	5.2mH Ref	30mH Ref

## TECHNICAL SPECIFICATIONS

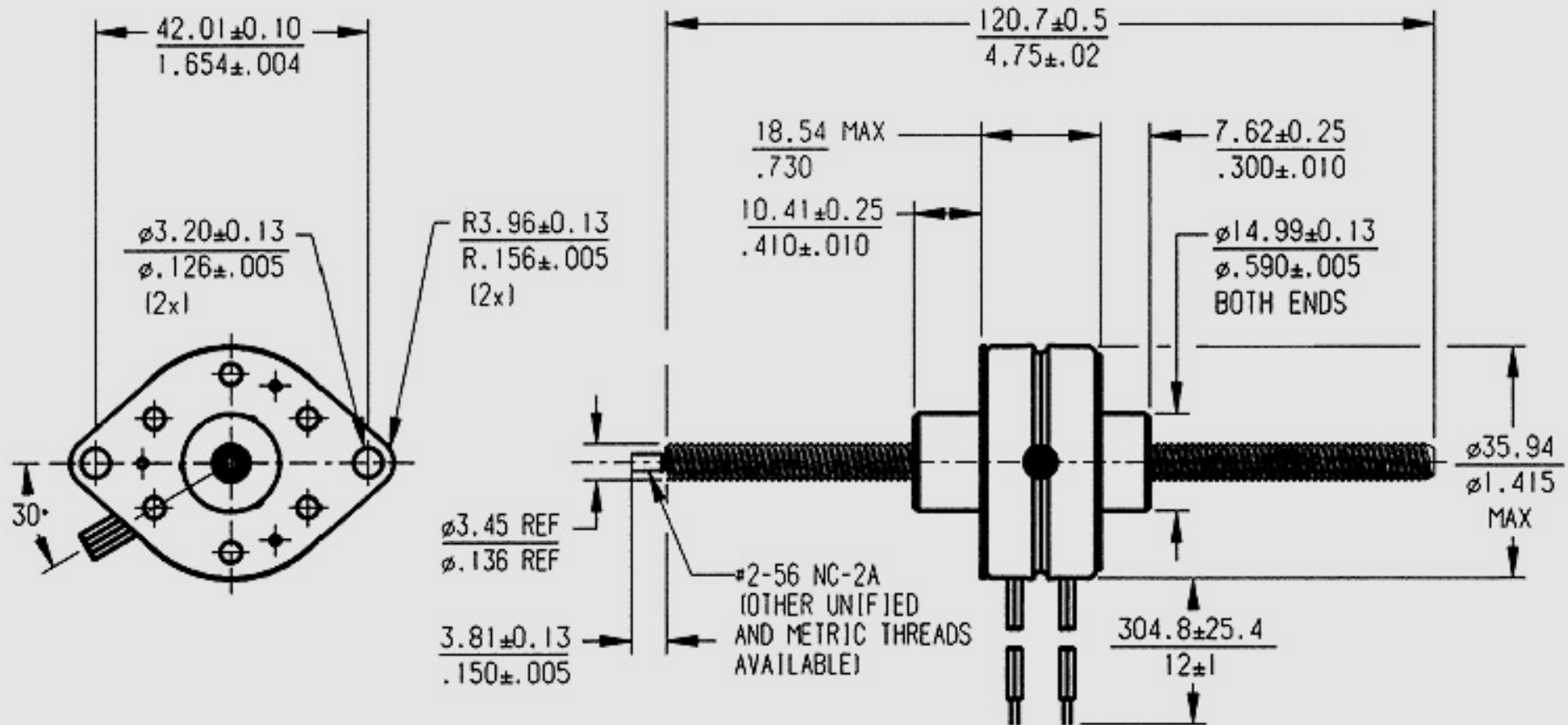
Part Number	DC Operating Voltage	Linear Travel Per Step*	Maximum Travel	Maximum Force*	Minimum Holding Force (Unenergized)
35DBM10B1B-L	5	.001" (0.0254mm)	2.5" (63.5mm)	103.9 oz (28.9N)	40 oz (11.1N)
35DBM10B2B-L	12	.001" (0.0254mm)	2.5" (63.5mm)	103.9 oz (28.9N)	40 oz (11.1N)
35DBM20B1B-L	5	.002" (0.0508mm)	2.5" (63.5mm)	84.9 oz (23.6N)	10 oz (2.8N)
35DBM20B2B-L	12	.002" (0.0508mm)	2.5" (63.5mm)	84.9 oz (23.6N)	10 oz (2.8N)
35DBM30B1B-L	5	.003" (0.0762mm)	2.5" (63.5mm)	47.8 oz (13.3N)	5 oz (1.4N)
35DBM30B2B-L	12	.003" (0.0762mm)	2.5" (63.5mm)	47.8 oz (13.3N)	5 oz (1.4N)

\* Measured with 2 phases energized

Coil Type	Bipolar	
	1B (5vdc)	2B (12vdc)
Coil Data	1B (5vdc)	2B (12vdc)
Resistance Per Phase	10 $\Omega$	58 $\Omega$
Inductance Per Phase	11.2mH Ref	60mH Ref

MECHANICAL DIMENSIONS

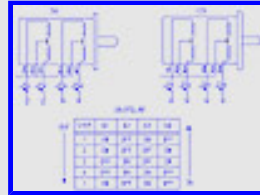
UNITS = MM / INCHES



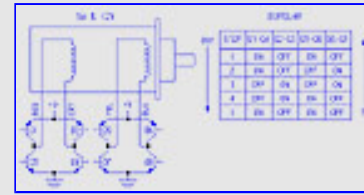
- Notes:
1. Not recommended to use at the fully retracted and extended positions.
  2. Shaft axial backlash: 0.15/0.006 MAX

WIRING DIAGRAM

CLICK ON A THUMBNAIL TO MAGNIFY



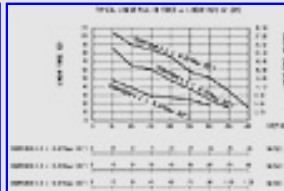
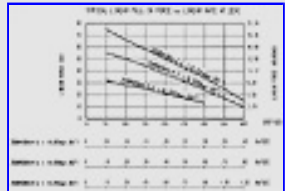
35DBM-L SERIES, Unipolar



35DBM-L SERIES, Bipolar

# MOTOR DYNAMICS

CLICK ON A THUMBNAIL TO MAGNIFY

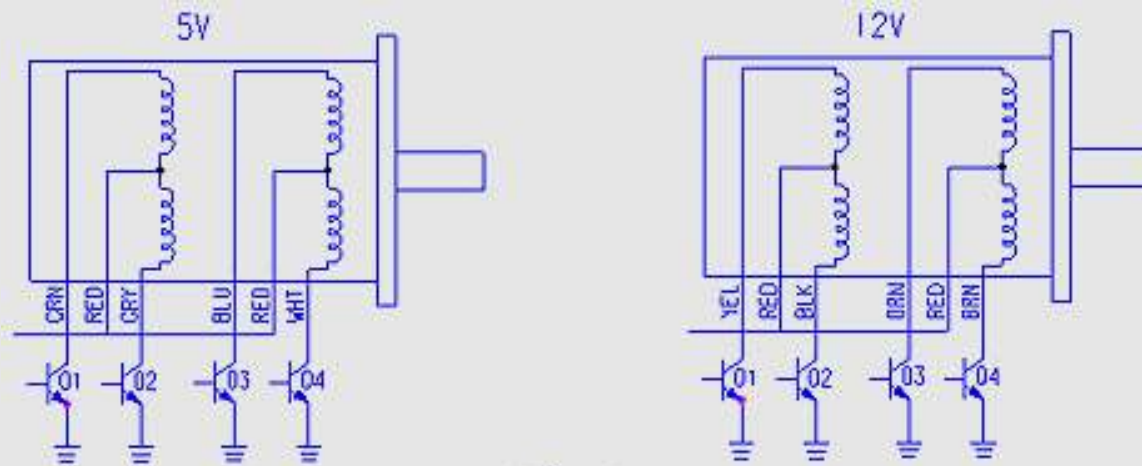


35DBM-L Unipolar      35DBM-L Bipolar

Note: Linear force is against opposite end of axial thrust spring

WIRING DIAGRAM

DIAGRAM INDEX

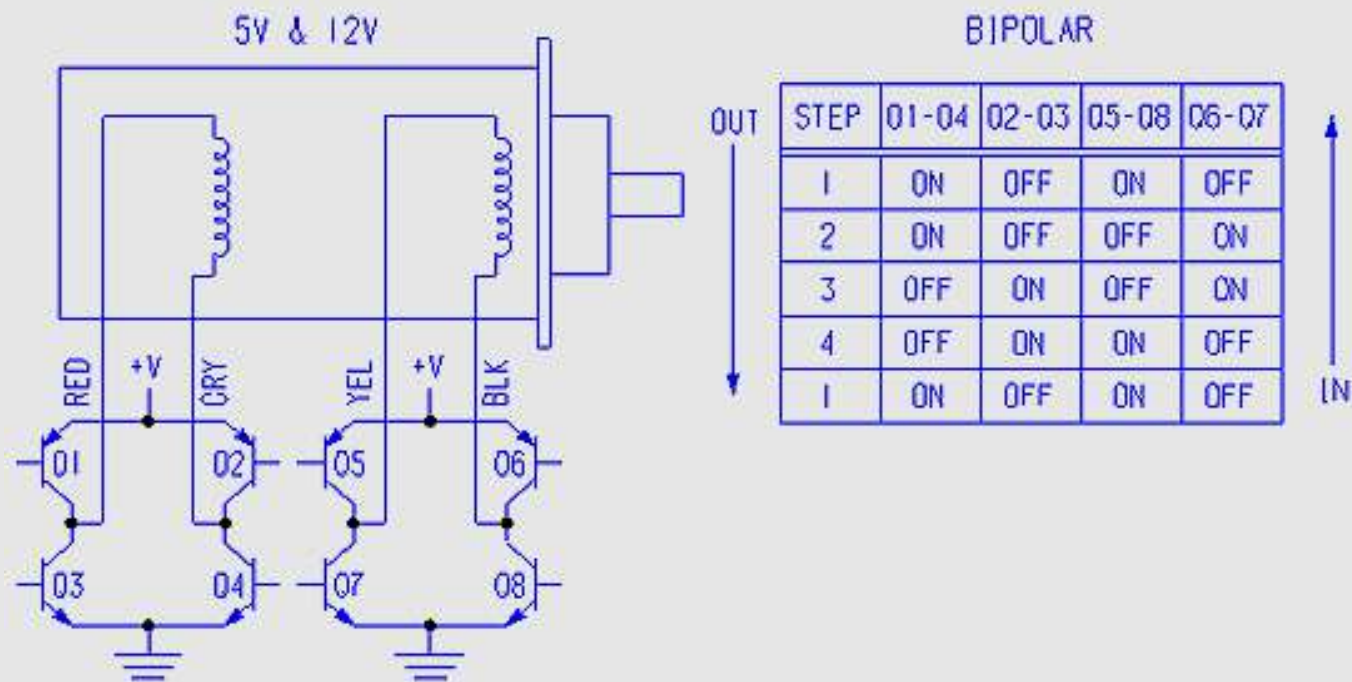


UNIPOLAR

OUT	STEP	Q1	Q2	Q3	Q4
	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

IN

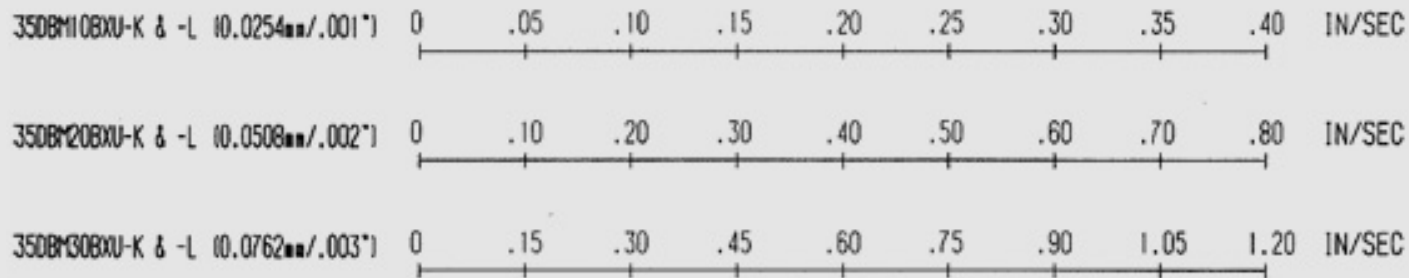
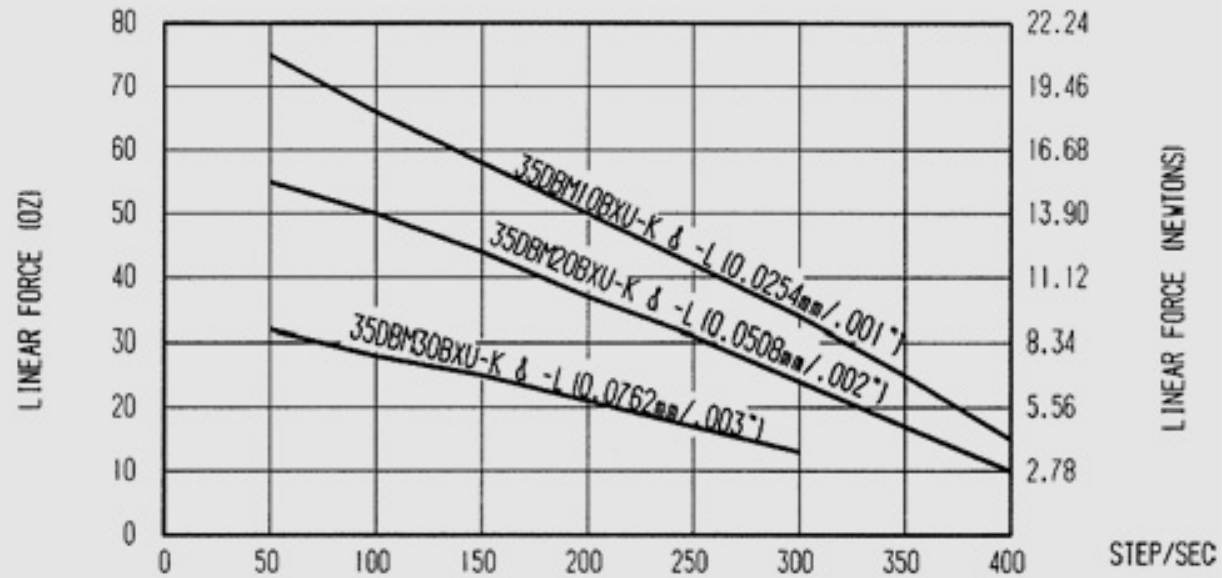
WIRING DIAGRAM







TYPICAL LINEAR PULL-IN FORCE vs LINEAR RATE AT 20°C



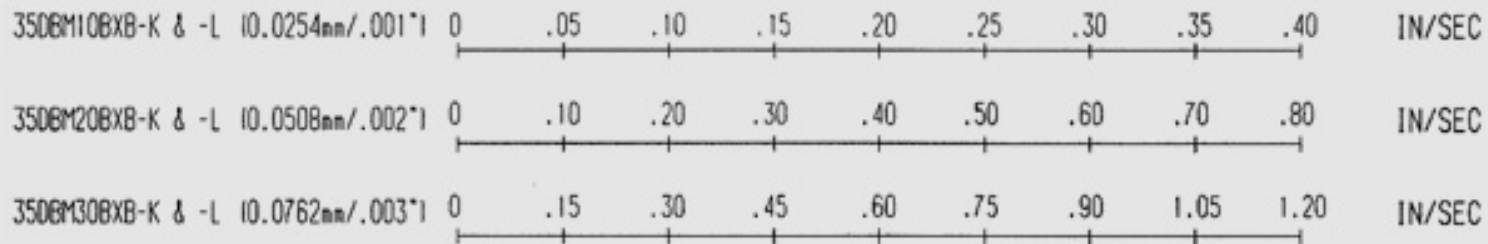
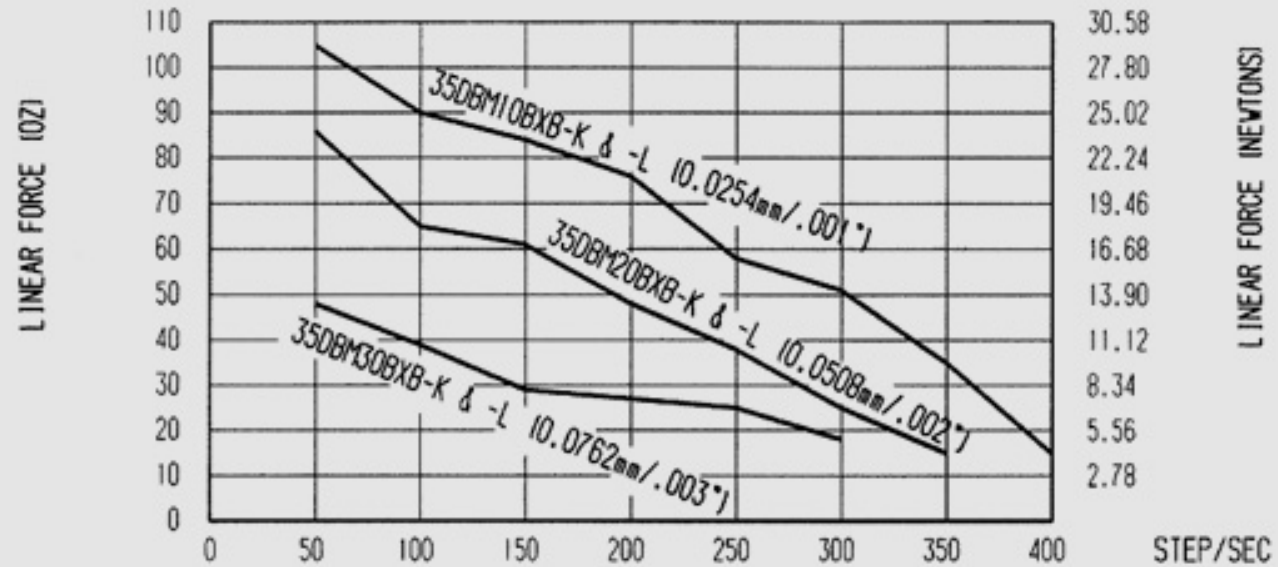
Note: Linear force is against opposite end of axial thrust spring

MOTOR DYNAMICS



CHART INDEX

TYPICAL LINEAR PULL-IN FORCE vs LINEAR RATE AT 20°C



Note: Linear force is against opposite end of axial thrust spring