

GEAR MOTORS

42M TYPE 'R' SERIES


WIDEST RANGE
OF GEAR RATIOS AVAILABLE



GENERAL SPECIFICATIONS

DC Operating Voltage	5 / 12
Gear Train Rating:	
Static	1.06 N•m / 150 oz-in
Running*	.706 N•m / 100 oz-in
Max. Operating Temperature	100°C
Insulation Resistance at 500Vdc	100MΩ

* Measured with 2 phases energized

 [CLICK HERE TO PRINT THIS SERIES](#)
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		UNIPOLAR	
Part Number	42M048C1B	42M048C2B	42M048C1U	42M048C2U
DC Operating Voltage	5	12	5	12
Resistance per Winding (ohms)	9.1	52.4	9.1	52.4
Inductance per Winding (mH)	16.7	85.7	8.1	51.7
Holding Torque* (mN•m/oz-in) (motor only)	84.0 / 11.9	84.0 / 11.9	66.2 / 9.4	66.2 / 9.4
Rotor Moment of Inertia (g.m ²)	12.5 x 10 ⁻⁴	12.5 x 10 ⁻⁴	12.5 x 10 ⁻⁴	12.5 x 10 ⁻⁴
Step Angle* (motor only)	7.5°	7.5°	7.5°	7.5°
Steps per Revolution* (motor only)	48	48	48	48
Gear Train Rating (N•m / oz-in)				
Static	1.06 / 150	1.06 / 150	1.06 / 150	1.06 / 150
Running*	.706 / 100	.706 / 100	.706 / 100	.706 / 100
Max. Operating Temperature	100°C	100°C	100°C	100°C
Ambient Temperature Range				
Operating	-20°C to 70°C	-20°C to 70°C	-20°C to 70°C	-20°C to 70°C
Storage	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C
Bearing Type	Bronze sleeve	Bronze sleeve	Bronze sleeve	Bronze sleeve
Insulation Resistance at 500Vdc	100 megohms	100 megohms	100 megohms	100 megohms
Weight (g/oz)	312 / 11.0	312 / 11.0	312 / 11.0	312 / 11.0
Leadwires	26 AWG	26 AWG	26 AWG	26 AWG

* Measured with 2 phases energized

GEAR RATIO

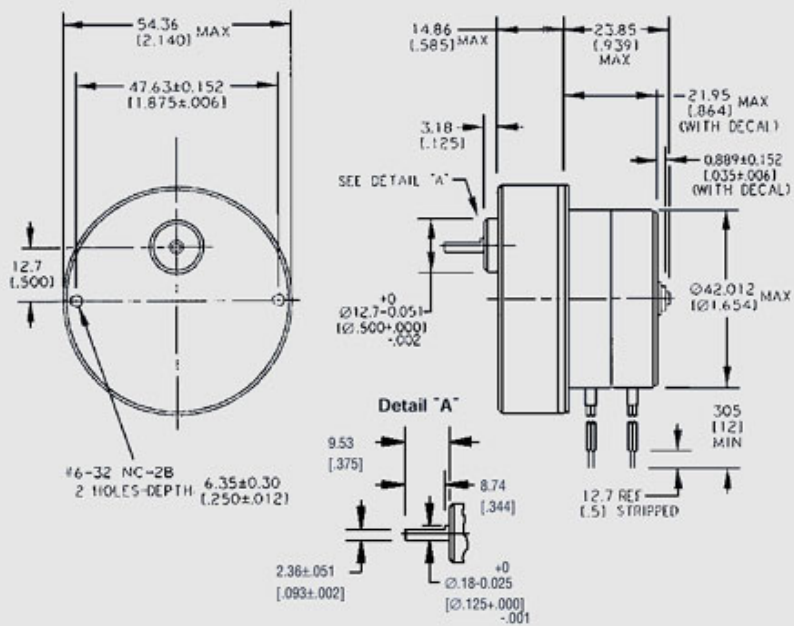
Part Suffix	Gear Ratio	Output Step Angle*	Output Speed RPM @240 PPS*	Running Torque @ 240 PPS* N•m/oz-in
-R12	2.5:1	3.00°	120	0.058 / 8.3
-R16	5:1	1.50°	60	0.117 / 16.6
-R21	10:1	.75°	30	0.211 / 29.9
-R24	15:1	.50°	20	0.317 / 44.9
-R27	20:1	.375°	15	0.423 / 59.9
-R31	30:1	.25°	10	0.634 / 89.8
-R36	50:1	.15°	6	0.706 / 100 MAX
-R39	75:1	.10°	4	0.706 / 100 MAX

* Measured with 2 phases energized

Note: Running torque is rated at 0.706 N.m/100 oz-in max

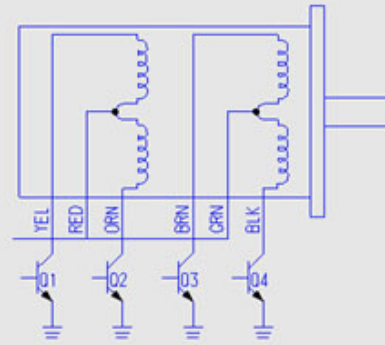
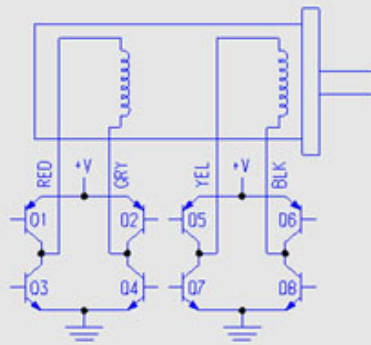
MECHANICAL DIMENSIONS

UNITS = MM / INCHES



WIRING DIAGRAM

(FOR MOTOR ONLY)



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

CW ROTATION (downward arrow) and CCW ROTATION (upward arrow) are indicated.

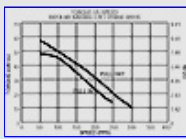
UNIPOLAR

STEP	01	02	03	04
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

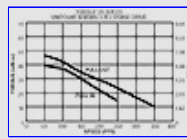
CW ROTATION (downward arrow) and CCW ROTATION (upward arrow) are indicated.

MOTOR DYNAMICS

CLICK ON A THUMBNAIL TO MAGNIFY



42M048B Type 'R', Bipolar



42M048B Type 'R', Unipolar

