


42M TYPE 'Z' SERIESWIDEST RANGE
OF GEAR RATIOS AVAILABLE

GENERAL SPECIFICATIONS

DC Operating Voltage	5 / 12
Gear Train Rating:	
Static Running*	2.12 N•m / 300 oz-in 1.41 N•m / 200 oz-in
Max. Operating Temperature	100°C
Ambient Temperature Range	-20°C ~ +70°C
Insulation Resistance at 500Vdc	100MΩ

* Measured with 2 phases energized



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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

	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 Ratjng (N•m / oz-in)				
Static	2.12 / 300	2.12 / 300	2.12 / 300	2.12 / 300
Running*	1.41 / 200	1.41 / 200	1.41 / 200	1.41 / 200
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

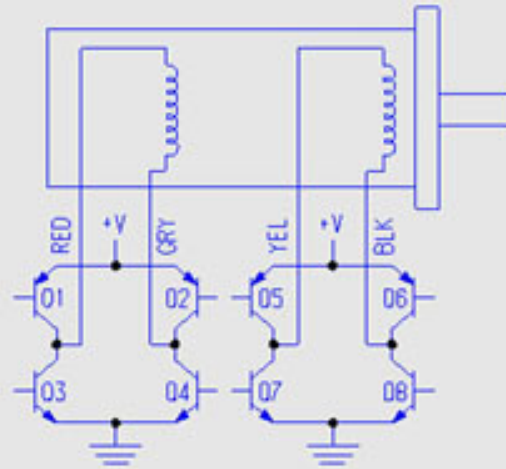
GEAR RATIO

Part Suffix	Gear Ratio	Output Step Angle*	Output Speed RPM @240 PPS*	Running Torque @ 240 PPS* N•m/oz-in
-Z16	5:1	1.50°	60	0.106 / 15.0
-Z21	10:1	.75°	30	0.211 / 29.9
-Z24	15:1	.50°	20	0.317 / 44.9
-Z27	20:1	.375°	15	0.423 / 59.9
-Z31	30:1	.25°	10	0.570 / 80.8
-Z36	50:1	.15°	6	0.854 / 121.0

* Measured with 2 phases energized

WIRING DIAGRAM

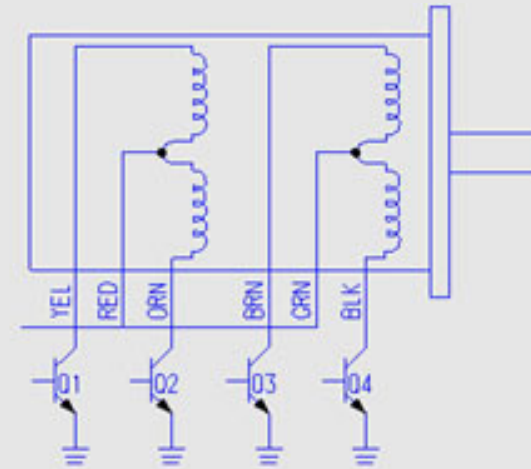
(FOR MOTOR ONLY)



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 on the sides of the table.



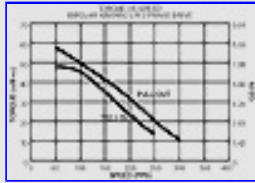
UNIPOLAR

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

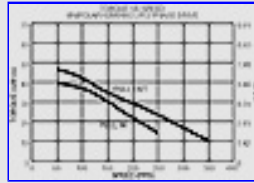
CW ROTATION (downward arrow) and CCW ROTATION (upward arrow) are indicated on the sides of the table.

MOTOR DYNAMICS

CLICK ON A THUMBNAIL TO MAGNIFY



42M048C Type 'Z', Bipolar



42M048C Type 'Z', Unipolar

