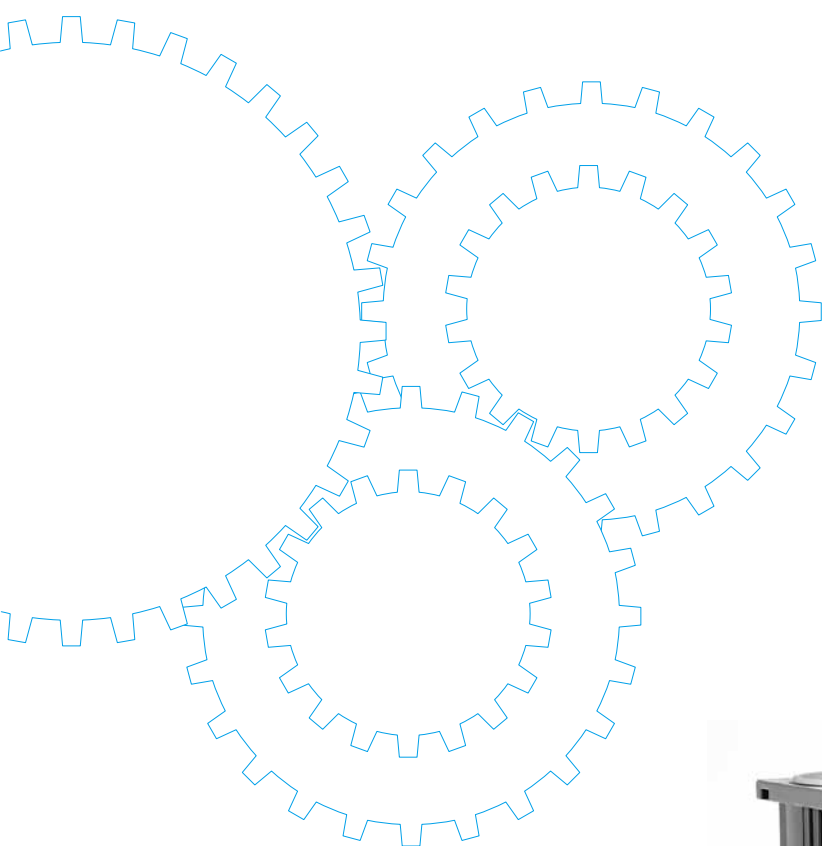


Discontinued

Reversible Motor



Contents

- Motor Overview B-64
- Model list B-68
- Product information for each model B-72
- Gear head combination dimensions B-120
- Round shaft motor dimensions B-123

Outline of reversible motor

Features

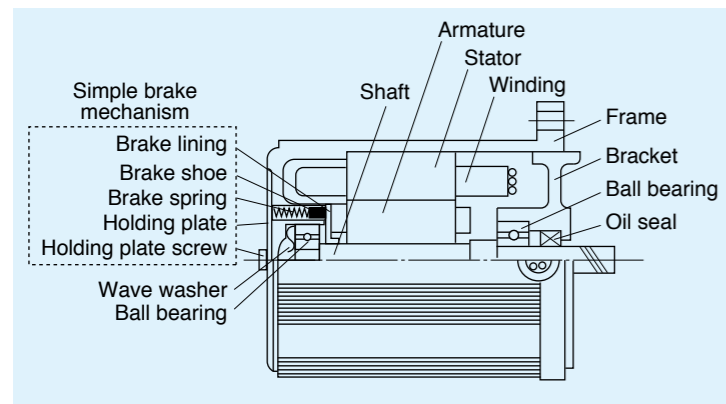
- A quick-reversal run is possible. <Single-phase motor>
- Because of balanced winding, it offers the same performance at both normal and reverse runs.
- The built-in simple brake mechanism makes the overrun small as compared with the induction motor, enabling a quick-reversal run.
- The time rating is 30 minutes.

Difference between induction motor and reversible motor: The reversible motor can make a quick-reversal run. In the case of the induction motor, even if the wire connections are changed for a reverse run, it is not possible to reverse the load instantaneously because the torque (shaded area in the figure below) acting in a direction opposite to the rotating magnetic field is produced. Therefore you need to stop the induction motor once, change the wire connections and make a reverse run.

(Note) • Limit the frequency of reversal operation to 6 cycles per minute.

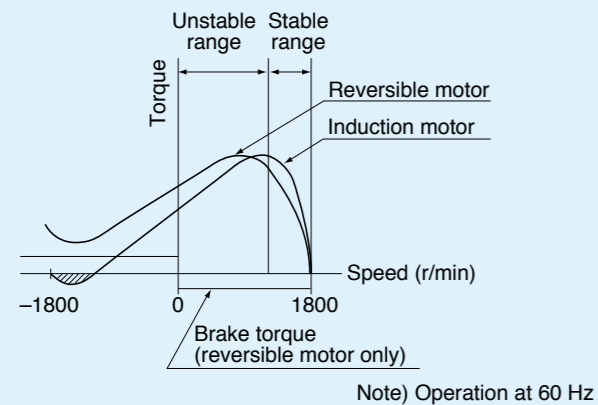
- If it is necessary that the frequency of reversal operation be 7 to 100 cycles per minute, use the C&B motor. (For running in one direction only)
- For applications that need holding, use the electromagnetic brake motor.

Construction

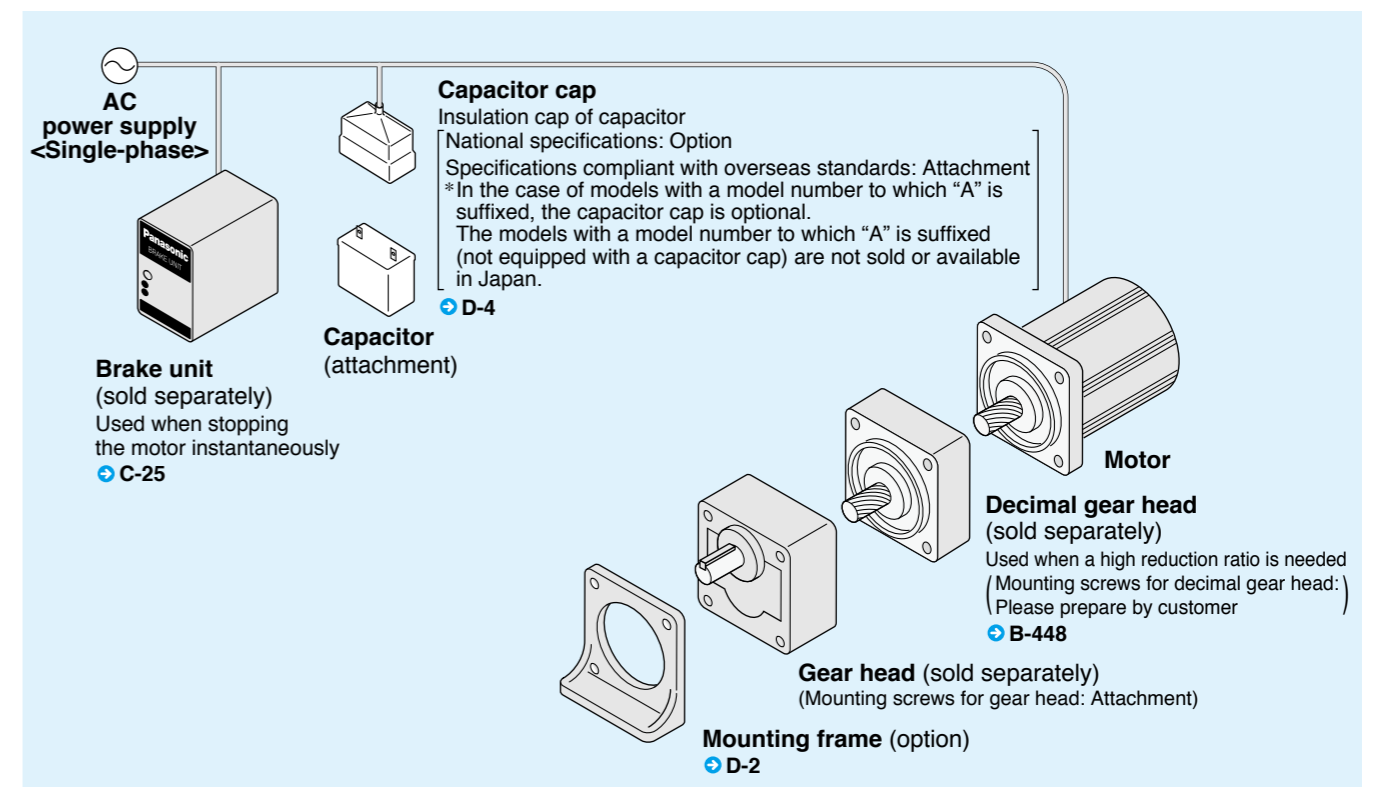


Characteristics

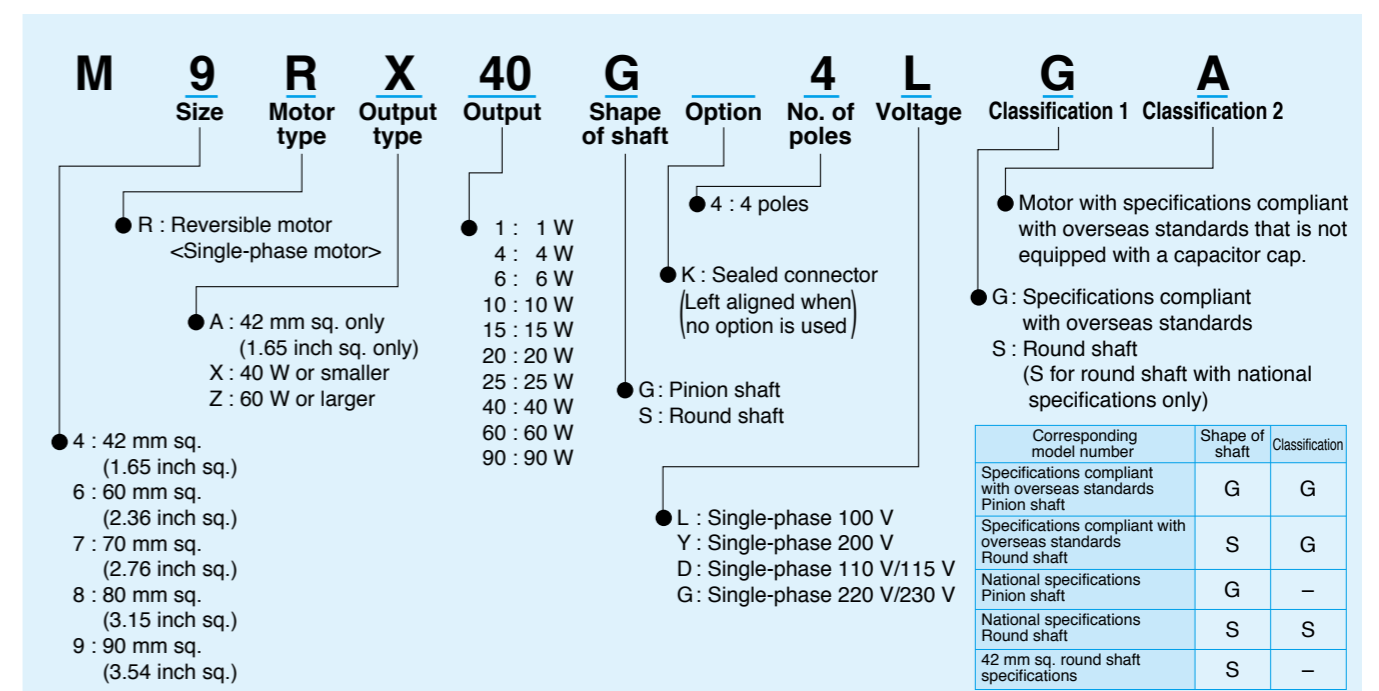
Speed-torque characteristics



System configuration diagram



Coding system



Fit tolerance

Fit tolerance symbol is used in the outside dimension diagram of motor and gear head. For further information, see "Fit tolerance" on page A-33.

Outline of reversible motor

Overrun

In the case of the reversible motor, braking power is applied by the simple brake mechanism when the power is turned off. An overrun is defined as a revolution which the motor makes when the power is turned off. The overrun and brake torque (motor not loaded, reference value) of the reversible motor are shown in the table below.

List of overruns of reversible motor

Size	42 mm sq. (1.65 inch sq.)		60 mm sq. (2.36 inch sq.)		70 mm sq. (2.76 inch sq.)		80 mm sq. (3.15 inch sq.)		90 mm sq. (3.54 inch sq.)																																
Output	1 W		4 W		6 W		10 W		15 W		20 W		25 W		40 W		60 W		90 W																						
Motor model	M4RA1G4L	M6RX4G4L	M6RX6G4L	M6RX6G4Y	M6RX6G4LG(A)	M6RX6G4DG(A)	M6RX6G4YG(A)	M6RX6G4GG(A)	M7RX10G4L	M7RX10G4Y	M7RX10G4L(A)	M7RX10G4DG(A)	M7RX10G4YG(A)	M7RX10G4GG(A)	M8RX20G4L	M8RX20G4Y	M8RX20G4L(A)	M8RX20G4DG(A)	M8RX20G4YG(A)	M8RX20G4GG(A)	M9RX40G4L	M9RX40G4Y	M9RX40G4L(A)	M9RX40G4DG(A)	M9RX40G4YG(A)	M9RX40G4GG(A)	M9RZ60G4L	M9RZ60G4Y	M9RZ60G4L(A)	M9RZ60G4DG(A)	M9RZ60G4YG(A)	M9RZ60G4GG(A)	M9RZ90G4L	M9RZ90G4Y	M9RZ90G4L(A)	M9RZ90G4DG(A)	M9RZ90G4YG(A)	M9RZ90G4GG(A)			
Brake torque x 10 ⁻² N·m (oz·in)	0.196 (0.28)	0.588 (0.83)	0.588 (0.83)	1.27 (1.8)	1.27 (1.8)	1.47 (2.08)	1.47 (2.08)	3.92 (5.5)	3.92 (5.5)	3.92 (5.5)	3.92 (5.5)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Overrun (revolution)	5.0	5.0	5.0	4.5	4.5	5.5	5.5	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0

(Note) The simple brake mechanism of the reversible motor cannot be used for positioning.

The simple brake mechanism of the reversible motor cannot be used for holding.

The brake torque of the reversible motor varies and changes over time.

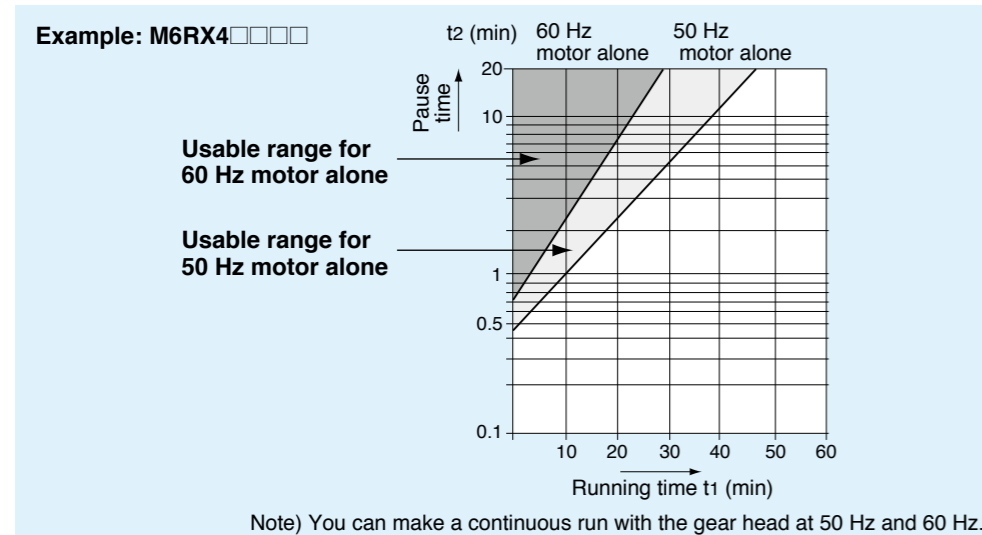
When selecting a motor, do so allowing for such variations and changes.

Temperature rise of reversible motor

The reversible motor is of 30-minute rating when you run the motor alone, however, when you run it with the gear head or equipment, the continuous running time will be extended thanks to heat radiation effect. When you run the motor intermittently, the temperature rise will be saturated at a certain value depending on the cycle of intermittent running.

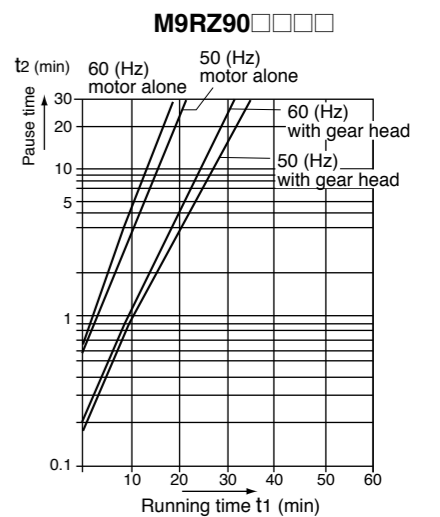
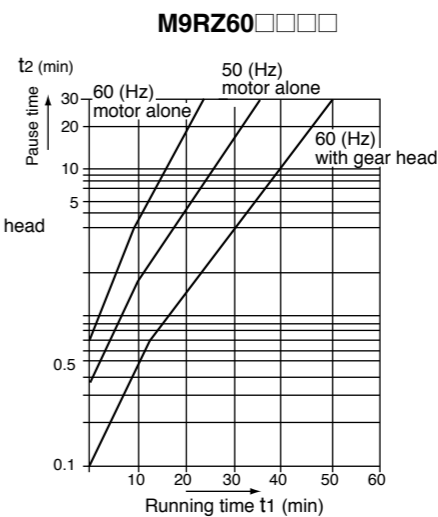
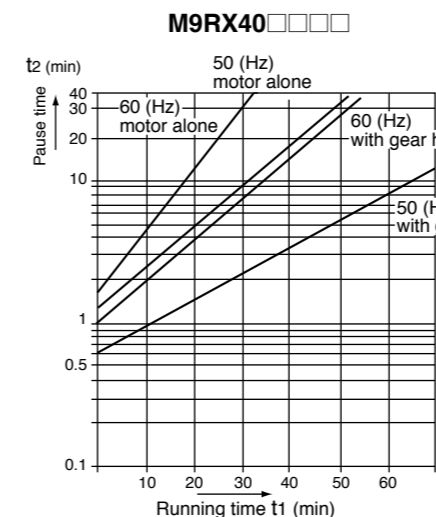
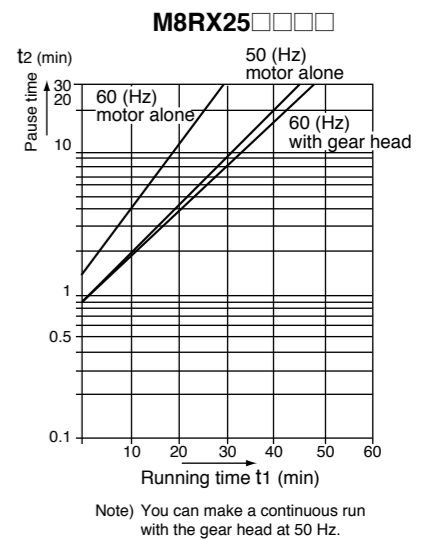
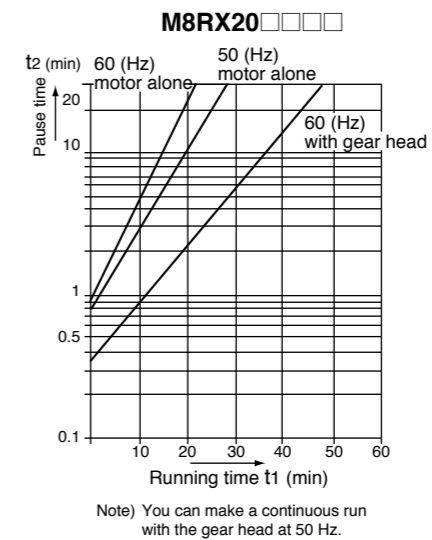
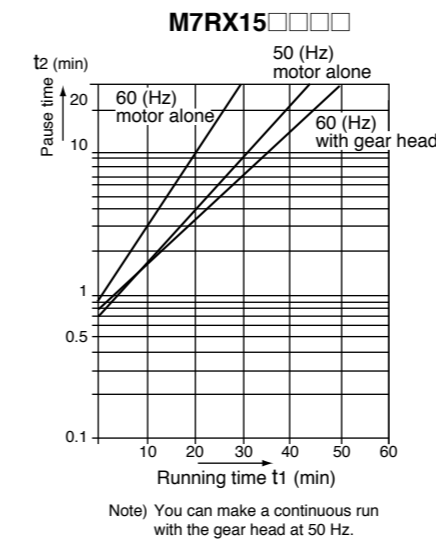
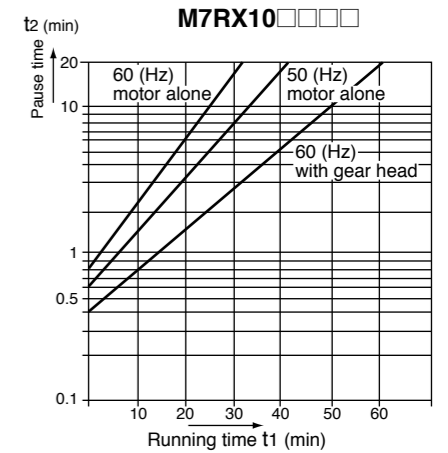
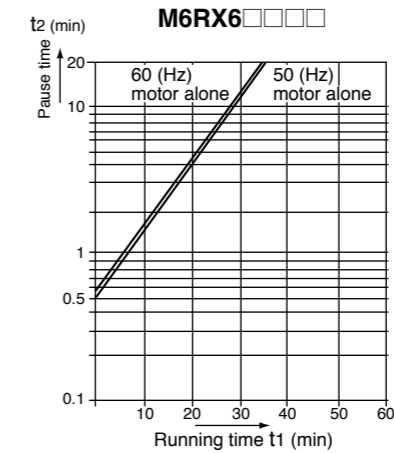
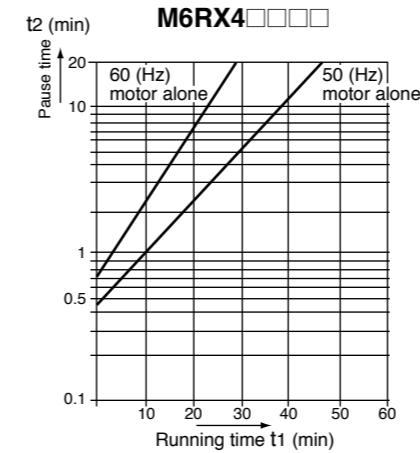
The limit of intermittent run of the reversible motor is shown in the table below.

How to read the limit of intermittent run of reversible motor



* You can run the motor in the range above the running limit line.




Limit of intermittent run of reversible motor



Model list of reversible motor

Pinion shaft motor

Applicable gear head

★ Motor compliant with overseas standards   

 Hinge attached

Size	Output (W)	Leadwire type			Sealed connector type			
		Model number	Specifications	Page	Model number	Specifications	Page	
42 mm sq. (1.65 inch sq.)	1	M4RA1G4L	100 V	B-72				
60 mm sq. (2.36 inch sq.)	4	M6RX4G4L	100 V	B-74				
		6	M6RX6G4L	100 V	B-76			
	M6RX6G4Y	200 V	B-76					
	M6RX6G4LG(A)	100 V	★ B-78					
	M6RX6G4DG(A)	110 V/115 V	★ B-78					
	M6RX6G4YG(A)	200 V	★ B-78					
M6RX6G4GG(A)	220 V/230 V	★ B-78						
70 mm sq. (2.76 inch sq.)	10	M7RX10G4L	100 V	B-80				
		M7RX10G4Y	200 V	B-80				
	15	M7RX15G4L	100 V	B-82				
		M7RX15G4Y	200 V	B-82				
		M7RX15G4LG(A)	100 V	★ B-84				
		M7RX15G4DG(A)	110 V/115 V	★ B-84				
		M7RX15G4YG(A)	200 V	★ B-84				
M7RX15G4GG(A)	220 V/230 V	★ B-84						
80 mm sq. (3.15 inch sq.)	20	M8RX20G4L	100 V	B-86				
		M8RX20G4Y	200 V	B-86				
	25	M8RX25G4L	100 V	B-88	M8RX25GK4L	100 V	B-104	
		M8RX25G4Y	200 V	B-88	M8RX25GK4Y	200 V	B-104	
		M8RX25G4LG(A)	100 V	★ B-90	M8RX25GK4LG(A)	100 V	★ B-106	
		M8RX25G4DG(A)	110 V/115 V	★ B-90	M8RX25GK4DG(A)	110 V/115 V	★ B-106	
		M8RX25G4YG(A)	200 V	★ B-90	M8RX25GK4YG(A)	200 V	★ B-106	
		M8RX25G4GG(A)	220 V/230 V	★ B-90	M8RX25GK4GG(A)	220 V/230 V	★ B-106	
90 mm sq. (3.54 inch sq.)	40	M9RX40G4L	100 V	B-92	M9RX40GK4L	100 V	B-108	
		M9RX40G4Y	200 V	B-92	M9RX40GK4Y	200 V	B-108	
		M9RX40G4LG(A)	100 V	★ B-94	M9RX40GK4LG(A)	100 V	★ B-110	
		M9RX40G4DG(A)	110 V/115 V	★ B-94	M9RX40GK4DG(A)	110 V/115 V	★ B-110	
		M9RX40G4YG(A)	200 V	★ B-94	M9RX40GK4YG(A)	200 V	★ B-110	
		M9RX40G4GG(A)	220 V/230 V	★ B-94	M9RX40GK4GG(A)	220 V/230 V	★ B-110	
	60	M9RZ60G4L	100 V	B-96	M9RZ60GK4L	100 V	B-112	
		M9RZ60G4Y	200 V	B-96	M9RZ60GK4Y	200 V	B-112	
		M9RZ60G4LG(A)	100 V	★ B-98	M9RZ60GK4LG(A)	100 V	★ B-114	
		M9RZ60G4DG(A)	110 V/115 V	★ B-98	M9RZ60GK4DG(A)	110 V/115 V	★ B-114	
		M9RZ60G4YG(A)	200 V	★ B-98	M9RZ60GK4YG(A)	200 V	★ B-114	
		M9RZ60G4GG(A)	220 V/230 V	★ B-98	M9RZ60GK4GG(A)	220 V/230 V	★ B-114	
		90	M9RZ90G4L	100 V	B-100	M9RZ90GK4L	100 V	B-116
			M9RZ90G4Y	200 V	B-100	M9RZ90GK4Y	200 V	B-116
M9RZ90G4LG(A)	100 V		★ B-102	M9RZ90GK4LG(A)	100 V	★ B-118		
M9RZ90G4DG(A)	110 V/115 V		★ B-102	M9RZ90GK4DG(A)	110 V/115 V	★ B-118		
M9RZ90G4YG(A)	200 V		★ B-102	M9RZ90GK4YG(A)	200 V	★ B-118		
M9RZ90G4GG(A)	220 V/230 V		★ B-102	M9RZ90GK4GG(A)	220 V/230 V	★ B-118		

Standard gear head			High torque gear head	Right-angle gear head	Gear head -Inch (U.S.A.)	Decimal gear head
Ball bearing	Metal bearing	Ball and metal bearing				
—	—	M4G□F	—	—	—	—
MX6G□BA MX6G□B	MX6G□MA MX6G□M	—	—	—	MX6G□BU	MX6G10XB
MX7G□BA MX7G□B	MX7G□MA MX7G□M	—	—	—	MX7G□BU	MX7G10XB
MX8G□B	MX8G□M	—	—	—	MX8G□BU	MX8G10XB
MX9G□B	MX9G□M	—	—	MX9G□R	MX9G□BU	MX9G10XB
MZ9G□B	—	—	MR9G□B	—	—	—
MY9G□B	—	—	—	MP9G□B	MZ9G□BU	MZ9G10XB

* The models with a motor model number to which "A" is suffixed are not equipped with a capacitor cap.
The models with a motor model number to which "A" is suffixed are not sold or available in Japan.

* Refer to page B-444 for dimensions and permissible torque of high torque gear head.
Refer to page B-446 for dimensions and permissible torque of right-angle gear head.
Refer to page B-451 for dimensions and permissible torque of gear head -Inch (U.S.A.).
Refer to page B-448 for dimensions of decimal gear head.

Model list of reversible motor

Round shaft motor

★ Motor compliant with overseas standards cULus CE UK CA
 Ⓟ Electrical Appliance and Material Safety Law

Size	Output (W)	Leadwire type		Sealed connector type				
		Model number	Specifications	Model number	Specifications			
42 mm sq. (1.65 inch sq.)	1	M4RA1S4L	100 V					
60 mm sq. (2.36 inch sq.)	4	M6RX4S4LS	100 V					
		M6RX6S4LS	100 V					
	6	M6RX6S4YS	200 V					
		M6RX6S4LG(A)	100 V	★				
		M6RX6S4DG(A)	110 V/115 V	★				
		M6RX6S4YG(A)	200 V	★				
M6RX6S4GG(A)	220 V/230 V	★						
70 mm sq. (2.76 inch sq.)	10	M7RX10S4LS	100 V					
		M7RX10S4YS	200 V					
	15	M7RX15S4LS	100 V					
		M7RX15S4YS	200 V					
		M7RX15S4LG(A)	100 V	★				
		M7RX15S4DG(A)	110 V/115 V	★				
		M7RX15S4YG(A)	200 V	★				
M7RX15S4GG(A)	220 V/230 V	★						
80 mm sq. (3.15 inch sq.)	20	M8RX20S4LS	100 V					
		M8RX20S4YS	200 V					
	25	M8RX25S4LS	100 V		M8RX25SK4LS	100 V Ⓟ		
		M8RX25S4YS	200 V		M8RX25SK4YS	200 V Ⓟ		
		M8RX25S4LG(A)	100 V	★	M8RX25SK4LG(A)	100 V ★ Ⓟ		
		M8RX25S4DG(A)	110 V/115 V	★	M8RX25SK4DG(A)	110 V/115 V ★		
		M8RX25S4YG(A)	200 V	★	M8RX25SK4YG(A)	200 V ★ Ⓟ		
		M8RX25S4GG(A)	220 V/230 V	★	M8RX25SK4GG(A)	220 V/230 V ★		
		90 mm sq. (3.54 inch sq.)	40	M9RX40S4LS	100 V		M9RX40SK4LS	100 V Ⓟ
				M9RX40S4YS	200 V		M9RX40SK4YS	200 V Ⓟ
M9RX40S4LG(A)	100 V			★	M9RX40SK4LG(A)	100 V ★ Ⓟ		
M9RX40S4DG(A)	110 V/115 V			★	M9RX40SK4DG(A)	110 V/115 V ★		
M9RX40S4YG(A)	200 V			★	M9RX40SK4YG(A)	200 V ★ Ⓟ		
M9RX40S4GG(A)	220 V/230 V			★	M9RX40SK4GG(A)	220 V/230 V ★		
60	M9RZ60S4LS		100 V		M9RZ60SK4LS	100 V Ⓟ		
	M9RZ60S4YS		200 V		M9RZ60SK4YS	200 V Ⓟ		
	M9RZ60S4LG(A)		100 V	★	M9RZ60SK4LG(A)	100 V ★ Ⓟ		
	M9RZ60S4DG(A)		110 V/115 V	★	M9RZ60SK4DG(A)	110 V/115 V ★		
	M9RZ60S4YG(A)		200 V	★	M9RZ60SK4YG(A)	200 V ★ Ⓟ		
	M9RZ60S4GG(A)		220 V/230 V	★	M9RZ60SK4GG(A)	220 V/230 V ★		
90	M9RZ90S4LS	100 V		M9RZ90SK4LS	100 V Ⓟ			
	M9RZ90S4YS	200 V		M9RZ90SK4YS	200 V Ⓟ			
	M9RZ90S4LG(A)	100 V	★	M9RZ90SK4LG(A)	100 V ★ Ⓟ			
	M9RZ90S4DG(A)	110 V/115 V	★	M9RZ90SK4DG(A)	110 V/115 V ★			
	M9RZ90S4YG(A)	200 V	★	M9RZ90SK4YG(A)	200 V ★ Ⓟ			
	M9RZ90S4GG(A)	220 V/230 V	★	M9RZ90SK4GG(A)	220 V/230 V ★			

* The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft motor. Dimensional outline drawing → Page B-123.

* The models with a motor model number to which "A" is suffixed are not equipped with a capacitor cap. The models with a motor model number to which "A" is suffixed are not sold or available in Japan.

Reversible motor (leadwire)

42 mm (1.65 inch) sq. 1 W

Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating			Starting current (A)	Starting torque N-m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)			
42 mm sq.	M4RA1G4L	4	1	100	50	30	11	0.12	1125	0.0083 (1.18)	0.12	1.5 (200 V)
					60		12	0.12	1550	0.0062 (0.88)	0.12	

The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-123. For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.

Unit of permissible torque: upper (mN·m) / lower (lb-in)

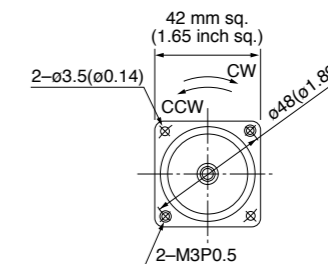
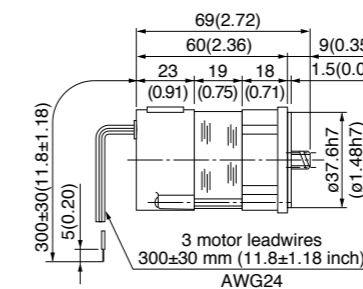
Reduction ratio	Unit of permissible torque: upper (mN·m) / lower (lb-in)																				
	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	
Speed (r/min)	50 Hz	500	416.7	300	250	200	166.7	120	100	83.3	60	50	41.7	30	25	20	16.7	15	12.5	10	8.3
	60 Hz	600	500	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10
Applicable gear head	M4GA3F to M4GA180F (metal+ball bearing)	50 Hz	23 (0.20)	27 (0.24)	37 (0.33)	45 (0.40)	56 (0.50)	67 (0.59)	84 (0.74)	98 (0.87)	118 (1.04)	147 (1.30)	176 (1.56)	216 (1.91)	303 (2.68)	363 (3.21)	411 (3.64)	490 (4.34)			
		60 Hz	19 (0.17)	23 (0.20)	31 (0.27)	37 (0.33)	47 (0.42)	56 (0.50)	77 (0.68)	84 (0.74)	98 (0.87)	137 (1.21)	147 (1.30)	176 (1.56)	245 (2.17)	303 (2.68)	382 (3.39)	411 (3.64)	490 (4.34)		
Rotational direction	Same as motor rotational direction						Reverse to motor rotational direction			Same as motor rotational direction						Reverse to motor rotational direction					

Motor (dimensions)

M4RA1G4L 4P 1 W 100 V

Scale: 1/3, Unit: mm (inch)

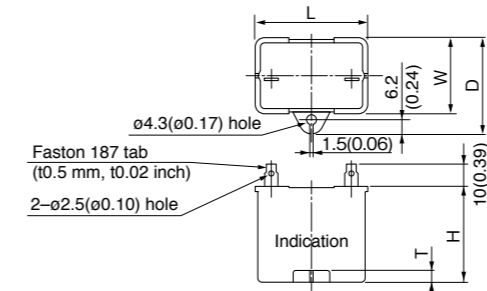
Mass 0.3 kg (0.66 lb)
Spur gear
Module 0.4
Number of teeth 10



Use the M3x55 (2 mounting screws) motor accessories and M3x38 (2 pan head machine screws) gearhead accessories to fix the motor and gearhead in four places. Please refer to page B-438 for the mounting method.

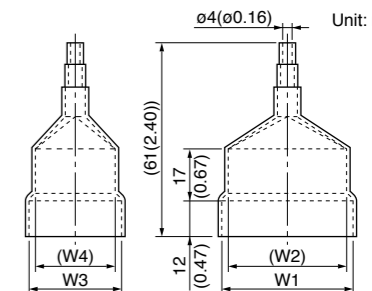
Capacitor (dimensions) [attachment]

Unit: mm (inch)



Capacitor cap (dimensions) [option]

Unit: mm (inch)



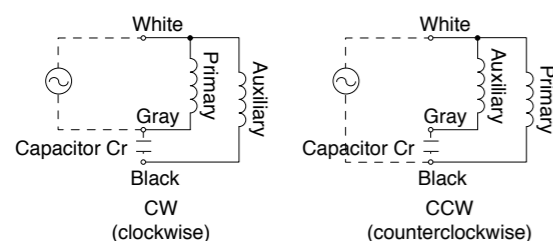
Capacitor dimension list

Unit: upper (mm) / lower (inch)

Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	Capacitor cap (option)	W1	W2	W3	W4
M4RA1G4L	M0PC1.5M20	39.5 (1.56)	16 (0.63)	26.5 (1.04)	30.5 (1.20)	4 (0.16)	M0PC3917	39.5 (1.56)	37.5 (1.48)	17 (0.67)	15 (0.59)

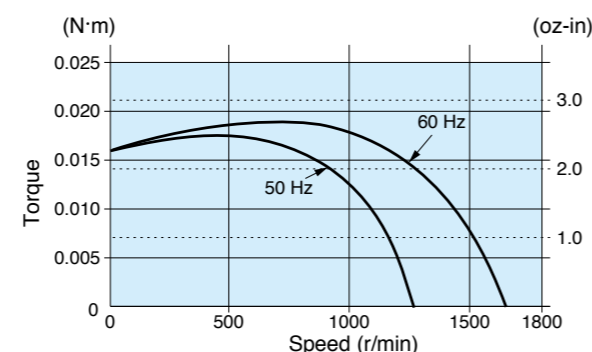
* Capacitors (single item) can also be purchased.

Connection diagram



Speed-torque characteristics

M4RA1G4L



* Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

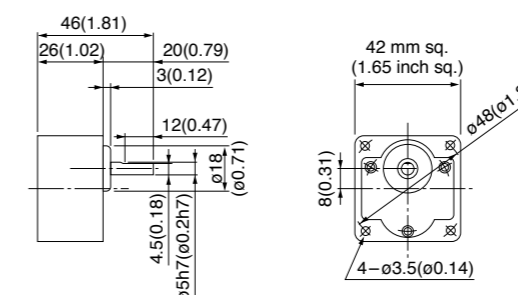
Features B-64 System configuration B-65 Coding system B-65 Model list B-68

Gear head (dimensions)

Scale: 1/3, Unit: mm (inch)

M4GA□F (ball + metal bearing) Mass 0.2 kg (0.44 lb): Output shaft D cut

* In the case of 42 mm sq. (1.65 inch sq.), a ball bearing is used for the output shaft only.



(Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

Gear head combination B-120 Round shaft motor B-123 Decimal gear head B-448 Gear head -inch (U.S.A.) B-449 Controls C-4 Option D-2

Reversible motor (leadwire)

60 mm (2.36 inch) sq. 4 W

Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting current (A)	Starting torque N·m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)	Torque N·m (oz-in)			
60 mm sq.	M6RX4G4L	4	4	100	50	30	18	0.19	1200	0.030 (4.25)	0.23	0.039 (5.52)	3.0 (200 V)
					60		19	0.20	1550	0.023 (3.26)	0.24	0.040 (5.66)	

* The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-123.
 * For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.
 * The part number of reduction gear ratio less than 1/25 is MX6G□BA (MA).

Unit of permissible torque: upper (N·m) / lower (lb-in)

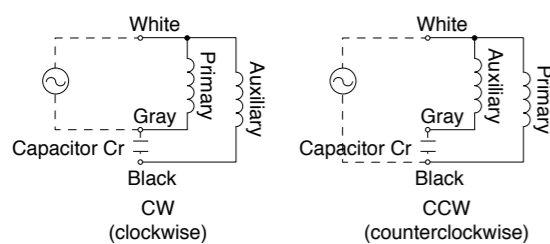
Reduction ratio	Unit of permissible torque: upper (N·m) / lower (lb-in)																						
	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180	
Speed (r/min)	50 Hz	500	416.7	300	250	200	166.7	150	120	100	83.3	75	60	50	41.7	30	25	20	16.7	15	12.5	10	8.3
	60 Hz	600	500	360	300	240	200	180	144	120	100	90	72	60	50	36	30	24	20	18	15	12	10
Applicable gear head	MX6G3BA to MX6G180B (ball bearing)	50 Hz	0.059 (0.52)	0.071 (0.63)	0.11 (0.97)	0.13 (1.15)	0.16 (1.42)	0.19 (1.68)	0.23 (2.04)	0.27 (2.39)	0.32 (2.83)	0.39 (3.45)	0.44 (3.89)	0.53 (4.69)	0.64 (5.66)	0.76 (6.73)	0.98 (8.67)	1.18 (10.4)	1.47 (13.0)	1.76 (15.6)	2.06 (18.2)	2.45 (21.7)	
		60 Hz	0.049 (0.43)	0.059 (0.52)	0.090 (0.80)	0.11 (0.97)	0.13 (1.15)	0.16 (1.42)	0.18 (1.60)	0.23 (2.04)	0.27 (2.39)	0.3 (2.66)	0.35 (3.10)	0.44 (3.89)	0.53 (4.69)	0.64 (5.66)	0.81 (7.17)	0.98 (8.67)	1.27 (11.2)	1.47 (13.0)	1.76 (15.6)	2.06 (18.2)	2.45 (21.7)
Rotational direction	MX6G3MA to MX6G180M (metal bearing)	50 Hz	0.059 (0.52)	0.071 (0.63)	0.11 (0.97)	0.13 (1.15)	0.16 (1.42)	0.19 (1.68)	0.23 (2.04)	0.27 (2.39)	0.32 (2.83)	0.39 (3.45)	0.44 (3.89)	0.53 (4.69)	0.64 (5.66)	0.76 (6.73)	0.98 (8.67)	1.18 (10.4)	1.47 (13.0)	1.76 (15.6)	2.06 (18.2)	2.45 (21.7)	
		60 Hz	0.049 (0.43)	0.059 (0.52)	0.090 (0.80)	0.11 (0.97)	0.13 (1.15)	0.16 (1.42)	0.18 (1.60)	0.23 (2.04)	0.27 (2.39)	0.3 (2.66)	0.35 (3.10)	0.44 (3.89)	0.53 (4.69)	0.64 (5.66)	0.81 (7.17)	0.98 (8.67)	1.27 (11.2)	1.47 (13.0)	1.76 (15.6)	2.06 (18.2)	2.45 (21.7)

Permissible torque at output shaft of gear head using decimal gear head

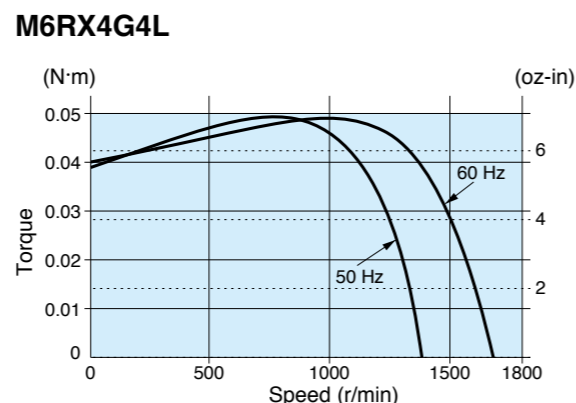
* For external dimensions of the decimal gear head, refer to page B-448.

Applicable gear head		Reduction ratio	Unit of permissible torque: upper (N·m) / lower (lb-in)												
Bearing	Decimal gear head		Speed (r/min)	200	250	300	360	500	600	750	900	1000	1200	1500	1800
		MX6G□BA (ball bearing)	MX6G□B (bearing)	50 Hz	7.5	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1
60 Hz	9			7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1	
MX6G□MA (metal bearing)	MX6G□M (bearing)	50 Hz	7.5	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8	
		60 Hz	9	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1	
Rotational direction		Permissible torque	Same as motor rotational direction	Reverse to motor rotational direction											

Connection diagram



Speed-torque characteristics



* Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

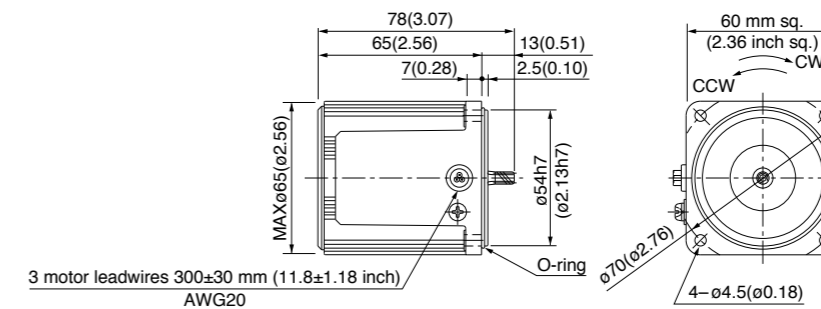
Features B-64 System configuration B-65 Coding system B-65 Model list B-68

Motor (dimensions)

Scale: 1/3, Unit: mm (inch)

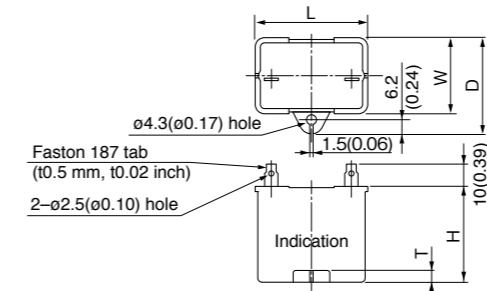
M6RX4G4L 4P 4 W 100 V

Mass 0.56 kg (1.23 lb)
 Helical gear
 Module 0.5
 Number of teeth 6



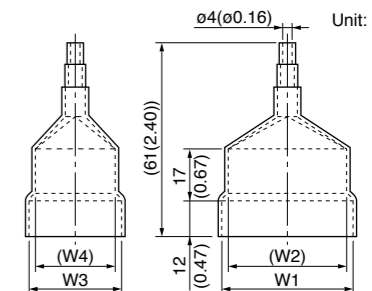
Capacitor (dimensions) [attachment]

Unit: mm (inch)



Capacitor cap (dimensions) [option]

Unit: mm (inch)



Capacitor dimension list

Unit: upper (mm) / lower (inch)

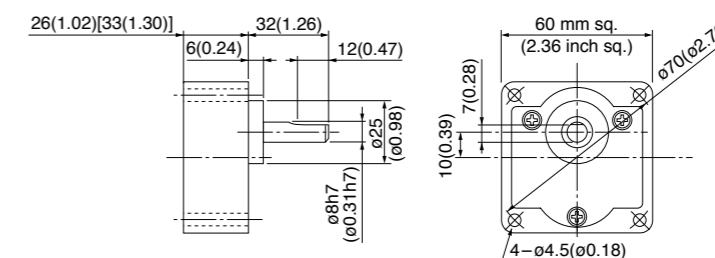
Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	Capacitor cap (option)	W1	W2	W3	W4
M6RX4G4L	M0PC3M20	39.5 (1.56)	16 (0.63)	26.5 (1.04)	30.5 (1.20)	4 (0.16)	M0PC3917	39.5 (1.56)	37.5 (1.48)	17 (0.67)	15 (0.59)

* Capacitors (single item) can also be purchased.

Gear head (dimensions)

Scale: 1/3, Unit: mm (inch)

< □ is 25 or less >
 MX6G□BA (ball bearing) Mass 0.24 kg(0.53 lb): Output shaft D cut
 MX6G□MA (metal bearing) Mass 0.24 kg(0.53 lb): Output shaft D cut
 < □ is 30 or more >
 MX6G□B (ball bearing) Mass 0.3 kg(0.66 lb): Output shaft D cut
 MX6G□M (metal bearing) Mass 0.3 kg(0.66 lb): Output shaft D cut



* Figures in [] represent the dimensions of MX6G□B (M) (1/30 or larger reduction ratio).

(Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

Gear head combination B-120 Round shaft motor B-123 Decimal gear head B-448 Gear head -inch (U.S.A.) B-449 Controls C-4 Option D-2

Reversible motor (leadwire)

60 mm (2.36 inch) sq. 6 W

Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting current (A)	Starting torque N-m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)	Torque N-m (oz-in)			
60 mm sq.	M6RX6G4L	4	6	100	50	30	22	0.23	1250	0.047 (6.66)	0.30	0.050 (7.08)	3.5 (200 V)
							22	0.22	1575	0.037 (5.24)	0.31	0.052 (7.36)	
	M6RX6G4Y	4	6	200	50	30	22	0.11	1275	0.045 (6.37)	0.16	0.053 (7.50)	0.9 (400 V)
							22	0.12	1600	0.036 (5.10)	0.16	0.053 (7.50)	

* The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-123.
 * For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.
 * The part number of reduction gear ratio less than 1/25 is MX6G□BA (MA).

Unit of permissible torque: upper (N·m) / lower (lb-in)

Reduction ratio	Speed (r/min)																								
	50 Hz	60 Hz	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180	
MX6G□BA to MX6G180B (ball bearing)	0.098 (0.87)	0.12 (1.06)	0.16 (1.42)	0.19 (1.68)	0.25 (2.21)	0.29 (2.57)	0.33 (2.92)	0.40 (3.54)	0.49 (4.34)	0.59 (5.22)	0.66 (5.84)	0.79 (6.99)	0.95 (8.41)	1.18 (10.4)	1.57 (13.9)	1.86 (16.5)	2.25 (19.9)	2.45 (21.7)							
MX6G□MA to MX6G180M (metal bearing)	0.081 (0.72)	0.098 (0.87)	0.13 (1.15)	0.16 (1.42)	0.21 (1.86)	0.25 (2.21)	0.26 (2.30)	0.33 (2.92)	0.40 (3.54)	0.49 (4.34)	0.53 (4.69)	0.66 (5.84)	0.79 (6.99)	0.95 (8.41)	1.27 (11.2)	1.57 (13.9)	1.86 (16.5)	2.25 (19.9)							
Rotational direction	Same as motor rotational direction												Reverse to motor rotational direction												

Permissible torque at output shaft of gear head using decimal gear head

* For external dimensions of the decimal gear head, refer to page B-448.

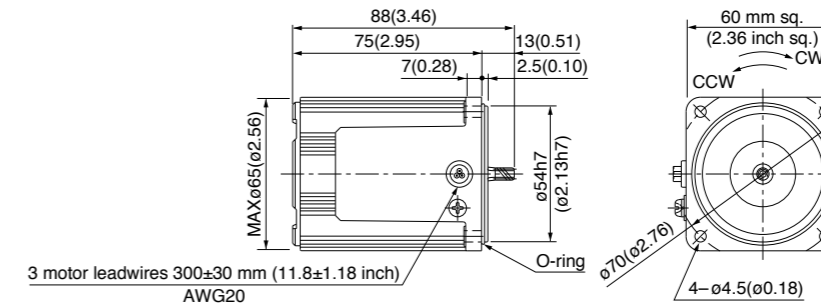
Applicable gear head		Reduction ratio	Speed (r/min)																							
Bearing	Decimal gear head		50 Hz	60 Hz	200	250	300	360	500	600	750	900	1000	1200	1500	1800										
MX6G□BA (ball bearing)	MX6G10XB	Permissible torque	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)										
MX6G□B (bearing)			2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)									
MX6G□MA (metal bearing)		2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)	2.45 (21.7)										
MX6G□M (bearing)	Rotational direction		Same as motor rotational direction												Reverse to motor rotational direction											

Motor (dimensions)

Scale: 1/3, Unit: mm (inch)

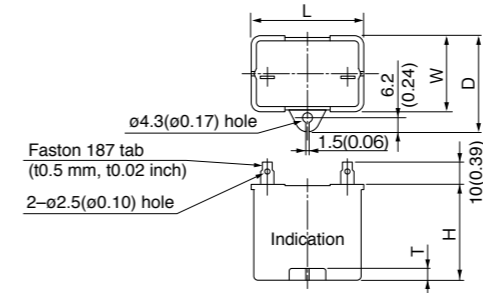
M6RX6G4L	4P 6 W 100 V
M6RX6G4Y	4P 6 W 200 V

Mass	Helical gear	Module	Number of teeth
0.67 kg (1.48 lb)		0.5	6



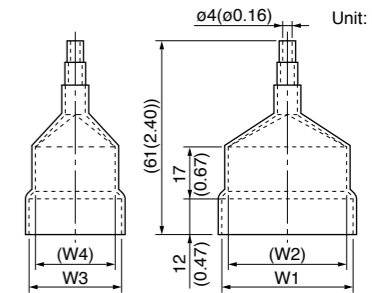
Capacitor (dimensions) [attachment]

Unit: mm (inch)



Capacitor cap (dimensions) [option]

Unit: mm (inch)



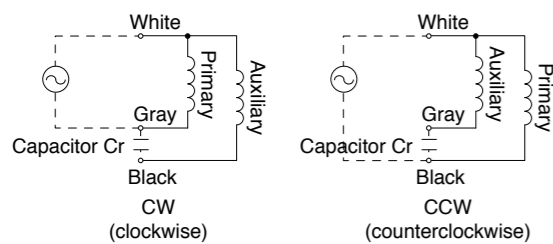
Capacitor dimension list

Unit: upper (mm) / lower (inch)

Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	Capacitor cap (option)	W1	W2	W3	W4
M6RX6G4L	M0PC3.5M20	39.5 (1.56)	16 (0.63)	26.5 (1.04)	30.5 (1.20)	4 (0.16)	M0PC3917	39.5 (1.56)	37.5 (1.48)	17 (0.67)	15 (0.59)
M6RX6G4Y	M0PC0.9M40	39.5 (1.56)	16.2 (0.64)	27 (1.06)	27 (1.06)	4 (0.16)	M0PC3917	39.5 (1.56)	37.5 (1.48)	17 (0.67)	15 (0.59)

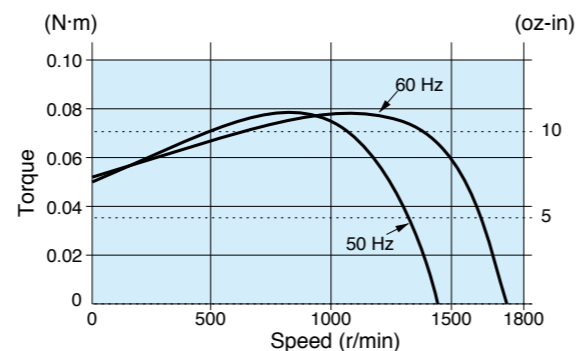
* Capacitors (single item) can also be purchased.

Connection diagram



Speed-torque characteristics

M6RX6G4L



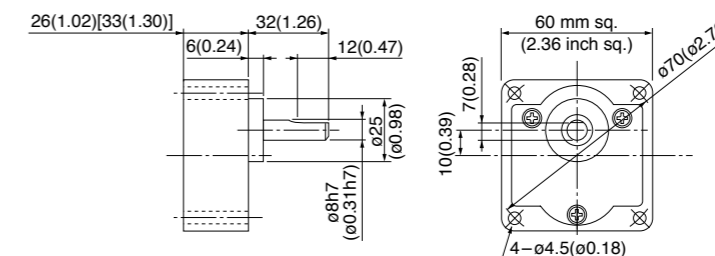
* Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

Features B-64 System configuration B-65 Coding system B-65 Model list B-68

Gear head (dimensions)

Scale: 1/3, Unit: mm (inch)

< □ is 25 or less >
MX6G□BA (ball bearing) Mass 0.24 kg(0.53 lb): Output shaft D cut
MX6G□MA (metal bearing) Mass 0.24 kg(0.53 lb): Output shaft D cut
 < □ is 30 or more >
MX6G□B (ball bearing) Mass 0.3 kg(0.66 lb): Output shaft D cut
MX6G□M (metal bearing) Mass 0.3 kg(0.66 lb): Output shaft D cut



* Figures in [] represent the dimensions of MX6G□B (M) (1/30 or larger reduction ratio).

(Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

Gear head combination B-120 Round shaft motor B-123 Decimal gear head B-448 Gear head -inch (U.S.A.) B-449 Controls C-4 Option D-2

Reversible motor (leadwire)

60 mm (2.36 inch) sq. **6 W**

Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting current (A)	Starting torque N-m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)	Torque N-m (oz-in)			
60 mm sq.	M6RX6G4LG(A) M6RX6G4LGA	4	6	100	50	30	24	0.24	1300	0.044 (6.23)	0.33	0.060 (8.50)	4 (250 V)
					60		26	0.26	1600	0.036 (5.10)	0.35	0.060 (8.50)	
	M6RX6G4DG(A) M6RX6G4DGA	4	6	110	60	30	24	0.22	1600	0.036 (5.10)	0.34	0.056 (7.93)	3 (250 V)
					60		26	0.23	1625	0.035 (4.96)	0.35	0.060 (8.50)	
	M6RX6G4YG(A) M6RX6G4YGA	4	6	200	50	30	24	0.12	1250	0.046 (6.51)	0.15	0.060 (8.50)	1 (450 V)
					60		28	0.14	1550	0.037 (5.24)	0.16	0.060 (8.50)	
	M6RX6G4GG(A) M6RX6G4GGA	4	6	220	50	30	24	0.11	1275	0.045 (6.37)	0.15	0.056 (7.93)	0.8 (450 V)
					60		26	0.12	1575	0.036 (5.10)	0.15	0.056 (7.93)	
					50		26	0.12	1300	0.044 (6.23)	0.15	0.060 (8.50)	
					60		28	0.12	1600	0.036 (5.10)	0.16	0.060 (8.50)	

- The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-123.
- The models with a motor model number to which "A" is suffixed are not equipped with a capacitor cap. The models with a motor model number to which "A" is suffixed are not sold or available in Japan.
- For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

- The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.
- The part number of reduction gear ratio less than 1/25 is MX6G□BA (MA).

Unit of permissible torque: upper (N·m) / lower (lb-in)

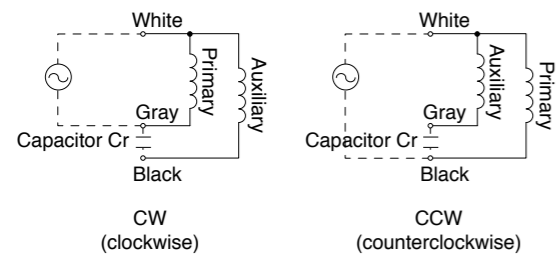
Reduction ratio	Unit of permissible torque: upper (N·m) / lower (lb-in)																						
	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180	
Speed (r/min)	50 Hz	500	416.7	300	250	200	166.7	150	120	100	83.3	75	60	50	41.7	30	25	20	16.7	15	12.5	10	8.3
Applicable gear head	60 Hz	600	500	360	300	240	200	180	144	120	100	90	72	60	50	36	30	24	20	18	15	12	10
	MX6G3BA to MX6G180B (ball bearing)	50 Hz	0.098 (0.87)	0.12 (1.06)	0.16 (1.42)	0.19 (1.68)	0.25 (2.21)	0.29 (2.57)	0.33 (2.92)	0.40 (3.54)	0.49 (4.34)	0.59 (5.22)	0.66 (5.84)	0.79 (6.99)	0.95 (8.41)	1.18 (10.4)	1.57 (13.9)	1.86 (16.5)	2.25 (19.9)	2.45 (21.7)			
MX6G3MA to MX6G180M (metal bearing)	60 Hz	0.081 (0.72)	0.098 (0.87)	0.13 (1.15)	0.16 (1.42)	0.21 (1.86)	0.25 (2.21)	0.26 (2.30)	0.33 (2.92)	0.40 (3.54)	0.49 (4.34)	0.53 (4.69)	0.66 (5.84)	0.79 (6.99)	0.95 (8.41)	1.27 (11.2)	1.57 (13.9)	1.86 (16.5)	2.25 (19.9)				
	Rotational direction	Same as motor rotational direction											Reverse to motor rotational direction										

Permissible torque at output shaft of gear head using decimal gear head

- For external dimensions of the decimal gear head, refer to page B-448.

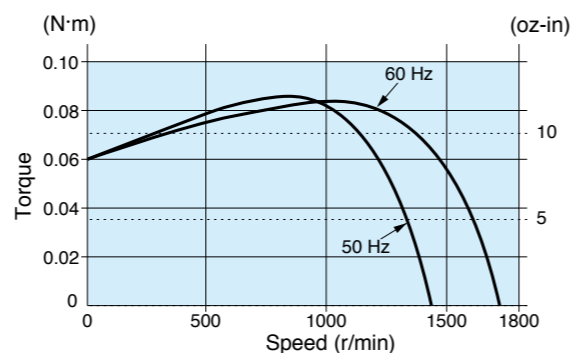
Applicable gear head		Reduction ratio		200	250	300	360	500	600	750	900	1000	1200	1500	1800
Bearing	Decimal gear head	Speed (r/min)	50 Hz	7.5	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8
			60 Hz	9	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1
MX6G□BA (ball bearing)	MX6G10XB	Permissible torque	N·m	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45
(lb-in)			(21.7)	(21.7)	(21.7)	(21.7)	(21.7)	(21.7)	(21.7)	(21.7)	(21.7)	(21.7)	(21.7)	(21.7)	(21.7)
MX6G□B (ball bearing)		Rotational direction	Same as motor rotational direction			Reverse to motor rotational direction									
MX6G□MA (metal bearing)															
MX6G□M (metal bearing)															

Connection diagram



Speed-torque characteristics

M6RX6G4LG(A)



* Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

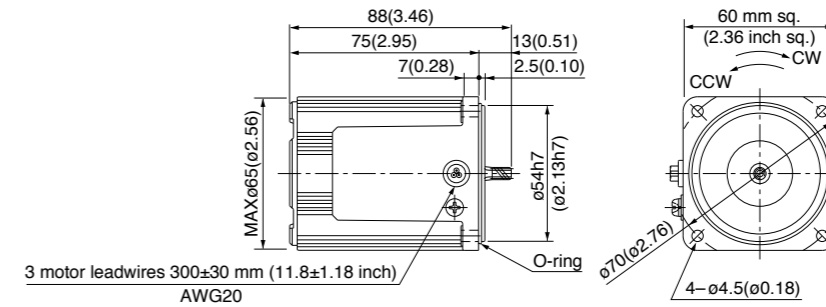
[Features B-64](#)
[System configuration B-65](#)
[Coding system B-65](#)
[Model list B-68](#)

Motor (dimensions)

Scale: 1/3, Unit: mm (inch)

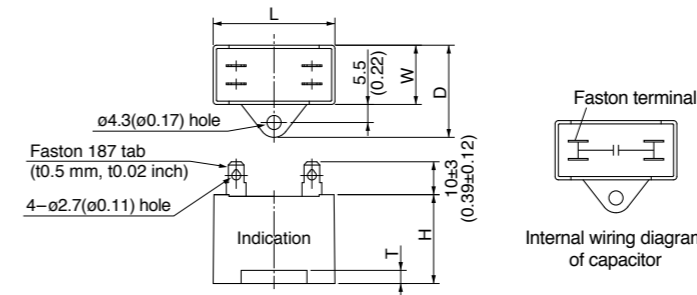
M6RX6G4LG(A)	4P 6 W 100 V
M6RX6G4DG(A)	4P 6 W 110 V / 115 V
M6RX6G4YG(A)	4P 6 W 200 V
M6RX6G4GG(A)	4P 6 W 220 V / 230 V

Mass	Helical gear	Module	Number of teeth
0.67 kg 1.48 lb		0.5	6



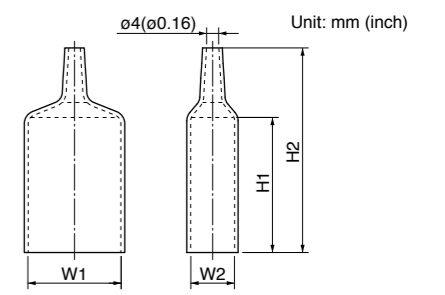
Capacitor (dimensions) [attachment]

Unit: mm (inch)



Capacitor cap (dimensions) [attachment]

Unit: mm (inch)



Capacitor dimension list

Unit: upper (mm) / lower (inch)

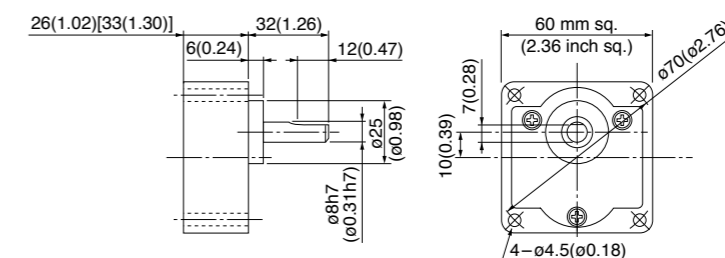
Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	Capacitor cap (attachment)	W1	W2	H1	H2
M6RX6G4LG(A)	M0PC4M25G	37 (1.46)	18 (0.71)	28 (1.10)	27 (1.06)	4 (0.16)	M0PC3718G	37 (1.46)	18 (0.71)	50 (1.97)	73 (2.87)
M6RX6G4DG(A)	M0PC3M25G	31 (1.22)	17 (0.67)	27 (1.06)	27 (1.06)	4 (0.16)	M0PC3117G	31 (1.22)	17 (0.67)	50 (1.97)	73 (2.87)
M6RX6G4YG(A)	M0PC1M45G	37 (1.46)	18 (0.71)	28 (1.10)	27 (1.06)	4 (0.16)	M0PC3718G	37 (1.46)	18 (0.71)	50 (1.97)	73 (2.87)
M6RX6G4GG(A)	M0PC0.8M45G	31 (1.22)	17 (0.67)	27 (1.06)	27 (1.06)	4 (0.16)	M0PC3117G	31 (1.22)	17 (0.67)	50 (1.97)	73 (2.87)

- The models with a motor model number to which "A" is suffixed are not equipped with a capacitor cap.
- Capacitors (single item), capacitors cap (single item) can also be purchased.

Gear head (dimensions)

Scale: 1/3, Unit: mm (inch)

- < □ is 25 or less >
 - MX6G□BA (ball bearing) Mass 0.24 kg(0.53 lb): Output shaft D cut
 - MX6G□MA (metal bearing) Mass 0.24 kg(0.53 lb): Output shaft D cut
- < □ is 30 or more >
 - MX6G□B (ball bearing) Mass 0.3 kg(0.66 lb): Output shaft D cut
 - MX6G□M (metal bearing) Mass 0.3 kg(0.66 lb): Output shaft D cut



* Figures in [] represent the dimensions of MX6G□B (M) (1/30 or larger reduction ratio).

(Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

[Gear head combination B-120](#)
[Round shaft motor B-123](#)
[Decimal gear head B-448](#)
[Gear head -inch \(U.S.A.\) B-449](#)
[Controls C-4](#)
[Option D-2](#)

Reversible motor (leadwire)

70 mm (2.76 inch) sq. 10 W

Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting current (A)	Starting torque N-m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)	Torque N-m (oz-in)			
70 mm sq.	M7RX10G4L	4	10	100	50	30	30	0.30	1150	0.084 (11.9)	0.41	0.061 (8.64)	4.5 (200 V)
							30	0.30	1525	0.063 (8.92)	0.40	0.063 (8.92)	
	M7RX10G4Y	4	10	200	50	30	30	0.15	1200	0.082 (11.6)	0.20	0.061 (8.64)	1.2 (400 V)
							32	0.16	1550	0.063 (8.92)	0.21	0.063 (8.92)	

* The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-123.
 * For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.
 * The part number of reduction gear ratio less than 1/25 is MX7G□BA (MA).

Unit of permissible torque: upper (N·m) / lower (lb-in)

Reduction ratio	Speed (r/min)																							
	50 Hz	60 Hz	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180
MX7G3BA to MX7G180B (ball bearing)	0.16 (1.42)	0.19 (1.68)	0.25 (2.21)	0.30 (2.66)	0.38 (3.36)	0.46 (4.07)	0.51 (4.51)	0.64 (5.66)	0.77 (6.82)	0.93 (8.23)	0.98 (8.67)	1.27 (11.2)	1.47 (13.0)	1.76 (15.6)	2.55 (22.6)	3.04 (26.9)	3.63 (32.1)	4.31 (38.1)	4.80 (42.5)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)
MX7G3MA to MX7G180M (metal bearing)	0.13 (1.15)	0.16 (1.42)	0.22 (1.95)	0.25 (2.21)	0.32 (2.83)	0.38 (3.36)	0.44 (3.89)	0.53 (4.69)	0.64 (5.66)	0.77 (6.82)	0.85 (7.52)	1.08 (9.56)	1.27 (11.2)	1.47 (13.0)	2.16 (19.1)	2.55 (22.6)	3.04 (26.9)	3.63 (32.1)	4.03 (35.7)	4.80 (42.5)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)

Rotational direction: Same as motor rotational direction / Reverse to motor rotational direction

Permissible torque at output shaft of gear head using decimal gear head

* For external dimensions of the decimal gear head, refer to page B-448.

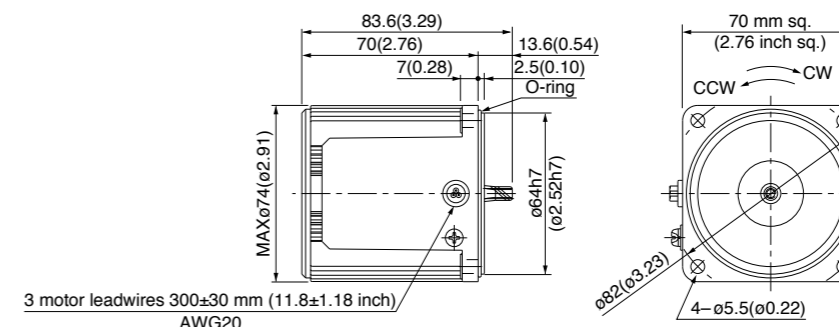
Applicable gear head	Reduction ratio	Speed (r/min)												
		200	250	300	360	500	600	750	900	1000	1200	1500	1800	
MX7G□BA (ball bearing)	MX7G10XB	50 Hz	7.5	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8
		60 Hz	9	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1
MX7G□B (bearing)	MX7G10XB	Permissible torque	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)
MX7G□MA (metal bearing)		Rotational direction	Same as motor rotational direction	Reverse to motor rotational direction										

Motor (dimensions)

M7RX10G4L 4P 10 W 100 V
 M7RX10G4Y 4P 10 W 200 V

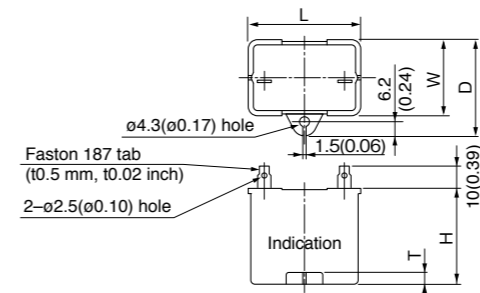
Scale: 1/3, Unit: mm (inch)

Mass 0.84 kg (1.85 lb)
 Helical gear
 Module 0.5
 Number of teeth 7



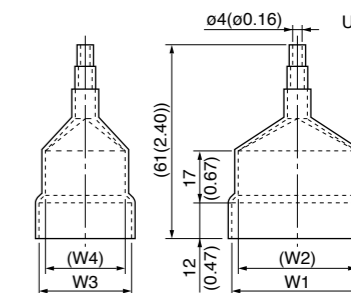
Capacitor (dimensions) [attachment]

Unit: mm (inch)



Capacitor cap (dimensions) [option]

Unit: mm (inch)



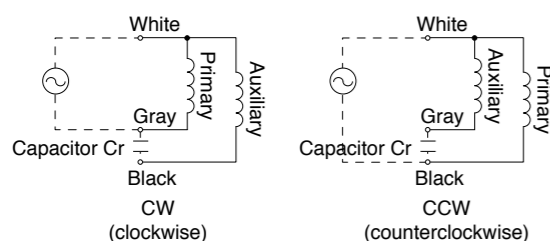
Capacitor dimension list

Unit: upper (mm) / lower (inch)

Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	Capacitor cap (option)	W1	W2	W3	W4
M7RX10G4L	M0PC4.5M20	39.5 (1.56)	16 (0.63)	26.5 (1.04)	30.5 (1.20)	4 (0.16)	M0PC3917	39.5 (1.56)	37.5 (1.48)	17 (0.67)	15 (0.59)
M7RX10G4Y	M0PC1.2M40	39.5 (1.56)	18.3 (0.72)	29 (1.14)	29 (1.14)	4 (0.16)	M0PC3922	39.5 (1.56)	37.5 (1.48)	22 (0.87)	20 (0.79)

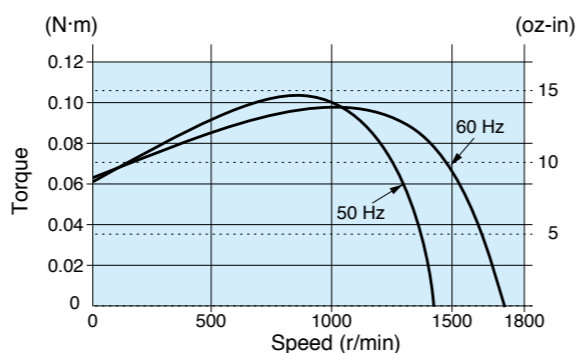
* Capacitors (single item) can also be purchased.

Connection diagram



Speed-torque characteristics

M7RX10G4L



* Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

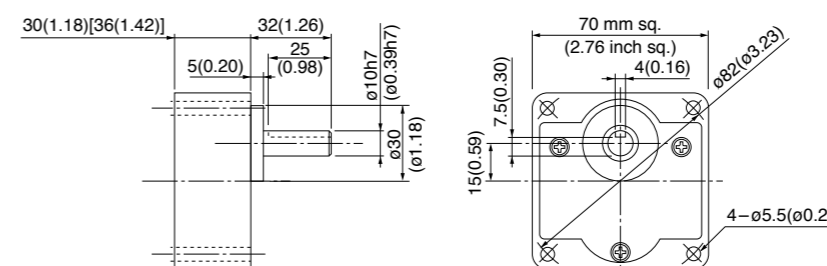
Features B-64 System configuration B-65 Coding system B-65 Model list B-68

Gear head (dimensions)

Scale: 1/3, Unit: mm (inch)

< □ is 25 or less >
 MX7G□BA (ball bearing) Mass 0.38 kg(0.84 lb)
 MX7G□MA (metal bearing) Mass 0.38 kg(0.84 lb)

< □ is 30 or more >
 MX7G□B (ball bearing) Mass 0.45 kg(0.99 lb)
 MX7G□M (metal bearing) Mass 0.45 kg(0.99 lb)



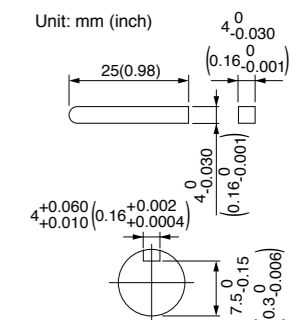
* Figures in [] represent the dimensions of MX7G□B (M) (1/30 or larger reduction ratio).

(Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

Gear head combination B-120 Round shaft motor B-123 Decimal gear head B-448 Gear head -inch (U.S.A.) B-449 Controls C-4 Option D-2

Key and keyway (dimensions) [attachment]

MX7G□BA(B)
 MX7G□MA(M)



Reversible motor (leadwire)

70 mm (2.76 inch) sq. 15 W

Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting current (A)	Starting torque N-m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)	Torque N-m (oz-in)			
70 mm sq.	M7RX15G4L	4	15	100	50	30	36	0.37	1275	0.110 (15.6)	0.59	0.085 (12.0)	6 (200 V)
							37	0.38	1575	0.088 (12.5)	0.57	0.085 (12.0)	
	M7RX15G4Y	4	15	200	60	30	36	0.19	1275	0.110 (15.6)	0.30	0.078 (11.0)	1.5 (400 V)
							37	0.19	1575	0.088 (12.5)	0.29	0.078 (11.0)	

* The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-123.
 * For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.
 * The part number of reduction gear ratio less than 1/25 is MX7G□BA (MA).

Unit of permissible torque: upper (N·m) / lower (lb-in)

Reduction ratio	Speed (r/min)																							
	50 Hz	60 Hz	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180
MX7G3BA to MX7G180B (ball bearing)	0.24 (2.12)	0.28 (2.48)	0.39 (3.45)	0.47 (4.16)	0.59 (5.22)	0.71 (6.28)	0.80 (7.08)	0.98 (8.67)	1.18 (10.4)	1.37 (12.1)	1.57 (13.9)	1.86 (16.5)	2.25 (19.9)	2.74 (24.3)	3.82 (33.8)	4.61 (40.8)	4.90 (43.4)							
MX7G3MA to MX7G180M (metal bearing)	0.20 (1.77)	0.24 (2.12)	0.32 (2.83)	0.39 (3.45)	0.49 (4.34)	0.59 (5.22)	0.66 (5.84)	0.81 (7.17)	0.98 (8.67)	1.18 (10.4)	1.27 (11.2)	1.57 (13.9)	1.86 (16.5)	2.25 (19.9)	3.23 (28.6)	3.82 (33.8)	4.80 (42.5)							
Rotational direction	Same as motor rotational direction												Reverse to motor rotational direction											

Permissible torque at output shaft of gear head using decimal gear head

* For external dimensions of the decimal gear head, refer to page B-448.

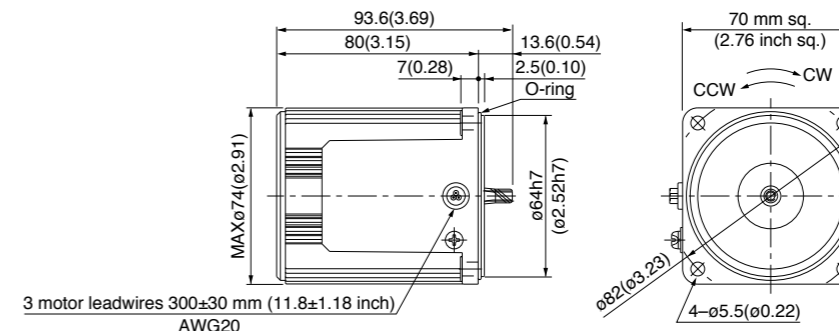
Applicable gear head	Reduction ratio	Speed (r/min)															
		200	250	300	360	500	600	750	900	1000	1200	1500	1800				
MX7G□BA (ball bearing) MX7G□B (bearing) MX7G□MA (metal bearing) MX7G□M (bearing)	MX7G10XB	Permissible torque	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)
		Rotational direction	Same as motor rotational direction / Reverse to motor rotational direction														

Motor (dimensions)

Scale: 1/3, Unit: mm (inch)

M7RX15G4L 4P 15 W 100 V
 M7RX15G4Y 4P 15 W 200 V

Mass 1.1 kg (2.43 lb)
 Helical gear
 Module 0.5
 Number of teeth 7

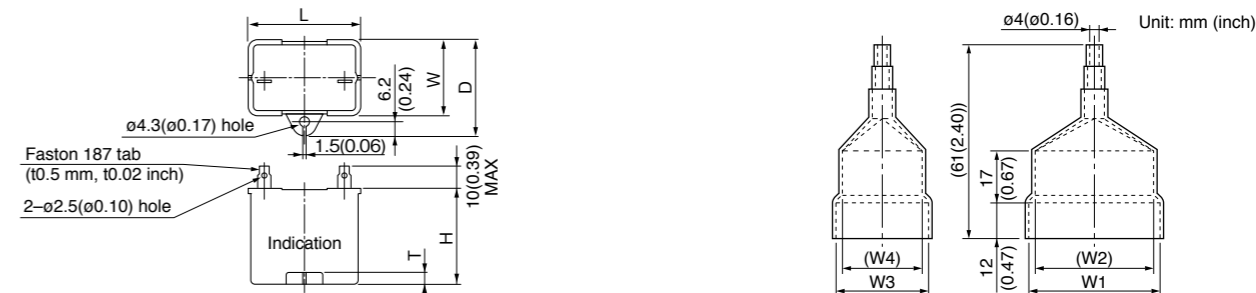


Capacitor (dimensions) [attachment]

Unit: mm (inch)

Capacitor cap (dimensions) [option]

Unit: mm (inch)



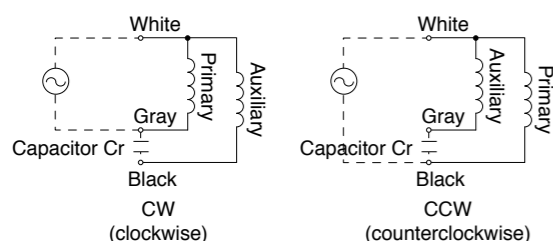
Capacitor dimension list

Unit: upper (mm) / lower (inch)

Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	Capacitor cap (option)	W1	W2	W3	W4
M7RX15G4L	M0PC6M20	39.5 (1.56)	17.5 (0.69)	28 (1.10)	30.5 (1.20)	4 (0.16)	M0PC3917	39.5 (1.56)	37.5 (1.48)	17 (0.67)	15 (0.59)
M7RX15G4Y	M0PC1.5M40	39.5 (1.56)	22 (0.87)	32.5 (1.28)	32.5 (1.28)	4 (0.16)	M0PC3922	39.5 (1.56)	37.5 (1.48)	22 (0.87)	20 (0.79)

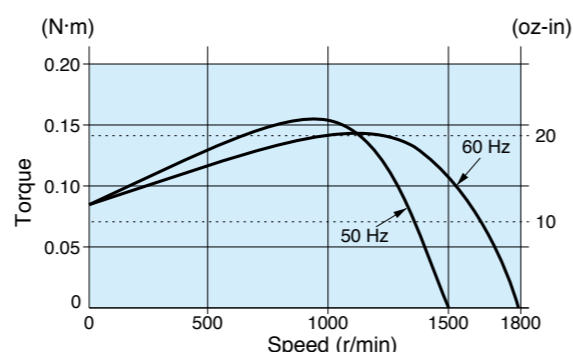
* Capacitors (single item) can also be purchased.

Connection diagram



Speed-torque characteristics

M7RX15G4L



* Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

Features B-64 System configuration B-65 Coding system B-65 Model list B-68

Gear head (dimensions)

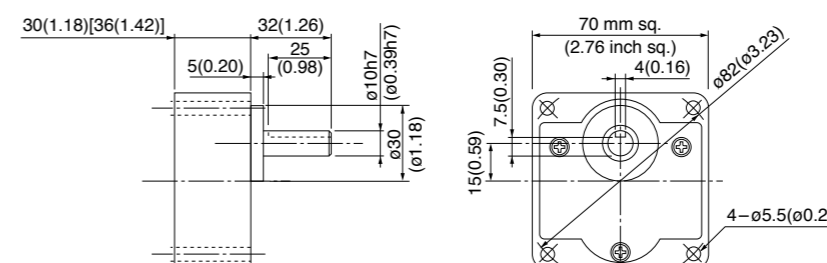
Scale: 1/3, Unit: mm (inch)

< □ is 25 or less >

MX7G□BA (ball bearing) Mass 0.38 kg(0.84 lb)
 MX7G□MA (metal bearing) Mass 0.38 kg(0.84 lb)

< □ is 30 or more >

MX7G□B (ball bearing) Mass 0.45 kg(0.99 lb)
 MX7G□M (metal bearing) Mass 0.45 kg(0.99 lb)



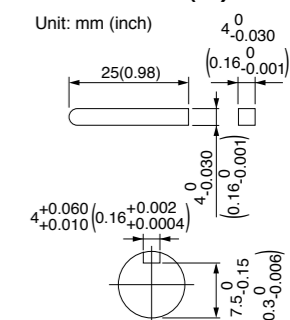
* Figures in [] represent the dimensions of MX7G□B (M) (1/30 or larger reduction ratio).

(Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

Gear head combination B-120 Round shaft motor B-123 Decimal gear head B-448 Gear head -inch (U.S.A.) B-449 Controls C-4 Option D-2

Key and keyway (dimensions) [attachment]

MX7G□BA(B)
 MX7G□MA(M)



Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting current (A)	Starting torque N-m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)	Torque N-m (oz-in)			
70 mm sq.	M7RX15G4LG M7RX15G4LGA	4	15	100	50	30	39	0.39	1250	0.12 (17.0)	0.58	0.10 (14.2)	6.5 (250 V)
					60		43	0.44	1575	0.092 (13.0)	0.58	0.10 (14.2)	
	M7RX15G4DG M7RX15G4DGA	4	15	110	60	30	42	0.38	1600	0.090 (12.7)	0.60	0.10 (14.2)	5.5 (250 V)
					60		44	0.38	1625	0.088 (12.5)	0.63	0.11 (15.6)	
	M7RX15G4YG M7RX15G4YGA	4	15	200	50	30	40	0.20	1225	0.12 (17.0)	0.27	0.10 (14.2)	1.7 (450 V)
					60		50	0.25	1525	0.094 (13.3)	0.28	0.10 (14.2)	
	M7RX15G4GG M7RX15G4GGA	4	15	220	50	30	39	0.18	1225	0.12 (17.0)	0.27	0.086 (12.2)	1.3 (450 V)
					60		41	0.19	1550	0.092 (13.0)	0.26	0.086 (12.2)	
					50		40	0.18	1275	0.11 (15.6)	0.28	0.094 (13.3)	
					60		43	0.19	1575	0.091 (12.9)	0.28	0.094 (13.3)	

* The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-123.
 * The models with a motor model number to which "A" is suffixed are not equipped with a capacitor cap.
 * The models with a motor model number to which "A" is suffixed are not sold or available in Japan.
 * For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.
 * The part number of reduction gear ratio less than 1/25 is MX7G□BA (MA).

Unit of permissible torque: upper (N·m) / lower (lb-in)

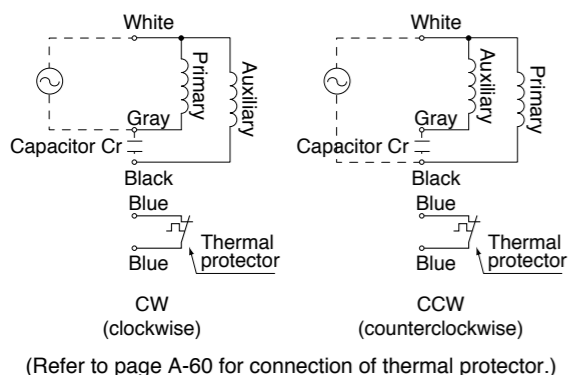
Reduction ratio	3 3.6 5 6 7.5 9 10 12.5 15 18 20 25 30 36 50 60 75 90 100 120 150 180																	
	Speed (r/min)																	
Applicable gear head	50 Hz																	
	60 Hz																	
MX7G3BA to MX7G180B (ball bearing)	0.24 (2.12) 0.28 (2.48) 0.39 (3.45) 0.47 (4.16) 0.59 (5.22) 0.71 (6.28) 0.80 (7.08) 0.98 (8.67) 1.18 (10.4) 1.37 (12.1) 1.57 (13.9) 1.86 (16.5) 2.25 (19.9) 2.74 (24.3) 3.82 (33.8) 4.61 (40.8) 4.90 (43.4)																	
	0.20 (1.77) 0.24 (2.12) 0.32 (2.83) 0.39 (3.45) 0.49 (4.34) 0.59 (5.22) 0.66 (5.84) 0.81 (7.17) 0.98 (8.67) 1.18 (10.4) 1.27 (11.2) 1.57 (13.9) 1.86 (16.5) 2.25 (19.9) 3.23 (28.6) 3.82 (33.8) 4.80 (42.5)																	
Rotational direction	Same as motor rotational direction									Reverse to motor rotational direction								

Permissible torque at output shaft of gear head using decimal gear head

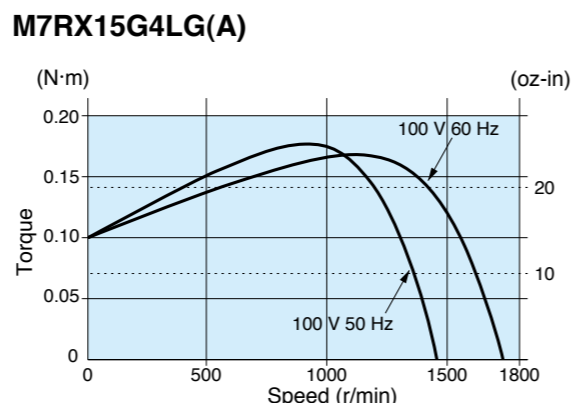
* For external dimensions of the decimal gear head, refer to page B-448.

Applicable gear head		Reduction ratio														
Bearing	Decimal gear head	Speed (r/min)														
		60 Hz														
MX7G□BA (ball bearing) MX7G□B (ball bearing) MX7G□MA (metal bearing) MX7G□M (metal bearing)	MX7G10XB	Permissible torque	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)	4.90 (43.4)
		Rotational direction	Same as motor rotational direction / Reverse to motor rotational direction													

Connection diagram



Speed-torque characteristics



* Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

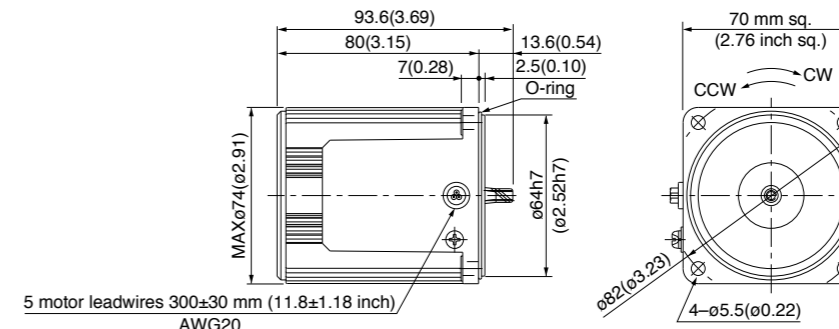
[Features B-64](#)
[System configuration B-65](#)
[Coding system B-65](#)
[Model list B-68](#)

Motor (dimensions)

Scale: 1/3, Unit: mm (inch)

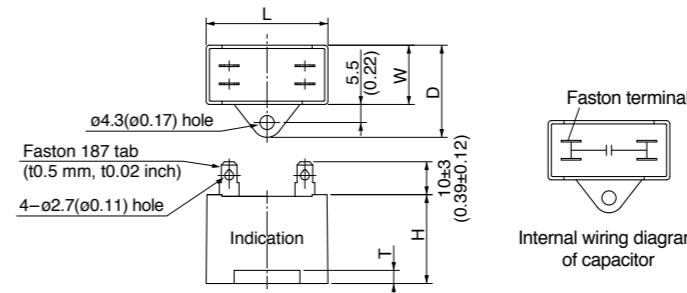
M7RX15G4LG(A)	4P 15 W 100 V
M7RX15G4DG(A)	4P 15 W 110 V / 115 V
M7RX15G4YG(A)	4P 15 W 200 V
M7RX15G4GG(A)	4P 15 W 220 V / 230 V

Mass	1.1 kg / 2.43 lb
Helical gear	Module 0.5
Number of teeth	7



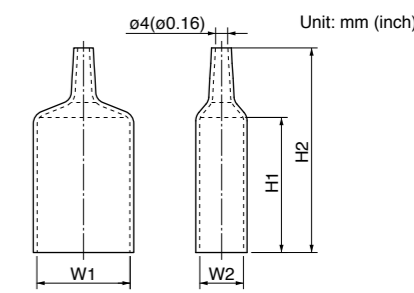
Capacitor (dimensions) [attachment]

Unit: mm (inch)



Capacitor cap (dimensions) [attachment]

Unit: mm (inch)



Capacitor dimension list

Unit: upper (mm) / lower (inch)

Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	Capacitor cap (attachment)	W1	W2	H1	H2
M7RX15G4LG(A)	M0PC6.5M25G	48 (1.89)	19 (0.75)	29 (1.14)	29 (1.14)	4 (0.16)	M0PC4819G	48 (1.89)	19 (0.75)	55 (2.17)	78 (3.07)
M7RX15G4DG(A)	M0PC5.5M25G	38 (1.50)	21 (0.83)	31 (1.22)	31 (1.22)	4 (0.16)	M0PC3821G	38 (1.50)	21 (0.83)	55 (2.17)	78 (3.07)
M7RX15G4YG(A)	M0PC1.7M45G	38 (1.50)	21 (0.83)	31 (1.22)	31 (1.22)	4 (0.16)	M0PC3821G	38 (1.50)	21 (0.83)	55 (2.17)	78 (3.07)
M7RX15G4GG(A)	M0PC1.3M45G	38 (1.50)	19 (0.75)	29 (1.14)	29 (1.14)	4 (0.16)	M0PC3819G	38 (1.50)	19 (0.75)	50 (1.97)	73 (2.87)

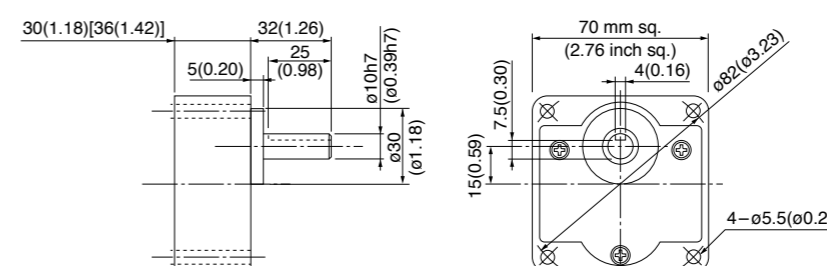
* The models with a motor model number to which "A" is suffixed are not equipped with a capacitor cap.
 * Capacitors (single item), capacitor caps (single item) can also be purchased.

Gear head (dimensions)

Scale: 1/3, Unit: mm (inch)

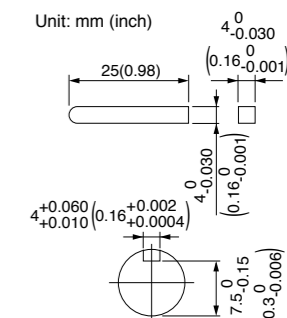
< □ is 25 or less >
MX7G□BA (ball bearing) Mass 0.38 kg(0.84 lb)
MX7G□MA (metal bearing) Mass 0.38 kg(0.84 lb)

< □ is 30 or more >
MX7G□B (ball bearing) Mass 0.45 kg(0.99 lb)
MX7G□M (metal bearing) Mass 0.45 kg(0.99 lb)



Key and keyway (dimensions) [attachment]

MX7G□BA(B)
MX7G□MA(M)



* Figures in [] represent the dimensions of MX7G□B (M) (1/30 or larger reduction ratio).

(Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

[Gear head combination B-120](#)
[Round shaft motor B-123](#)
[Decimal gear head B-448](#)
[Gear head -inch \(U.S.A.\) B-449](#)
[Controls C-4](#)
[Option D-2](#)

Reversible motor (leadwire)

80 mm (3.15 inch) sq. 20 W

Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting current (A)	Starting torque N-m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)	Torque N-m (oz-in)			
80 mm sq.	M8RX20G4L	4	20	100	50	30	51	0.52	1100	0.17 (24.1)	0.73	0.12 (17.0)	7 (200 V)
							48	0.47	1475	0.13 (18.4)	0.71	0.12 (17.0)	
	M8RX20G4Y	4	20	200	50	30	52	0.26	1100	0.17 (24.1)	0.37	0.13 (18.4)	1.8 (400 V)
							48	0.24	1475	0.13 (18.4)	0.36	0.13 (18.4)	

* The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-123.
* For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.

Unit of permissible torque: upper (N·m) / lower (lb-in)

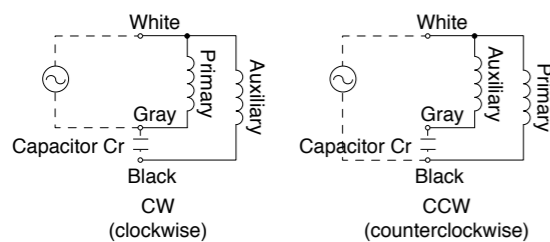
Reduction ratio	Unit of permissible torque: upper (N·m) / lower (lb-in)																						
	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180	
Speed (r/min)	50 Hz	500	416.7	300	250	200	166.7	150	120	100	83.3	75	60	50	41.7	30	25	20	16.7	15	12.5	10	8.3
	60 Hz	600	500	360	300	240	200	180	144	120	100	90	72	60	50	36	30	24	20	18	15	12	10
Applicable gear head	MX8G3B to MX8G180B (ball bearing)	50 Hz	0.34 (3.01)	0.41 (3.63)	0.57 (5.04)	0.69 (6.11)	0.85 (7.52)	0.98 (8.67)	1.18 (10.4)	1.37 (12.1)	1.67 (14.8)	1.96 (17.3)	2.25 (19.9)	2.74 (24.3)	3.33 (29.5)	4.02 (35.6)	5.49 (48.6)	6.57 (58.1)	7.84 (69.4)				
		60 Hz	0.28 (2.48)	0.34 (3.01)	0.47 (4.16)	0.57 (5.04)	0.72 (6.37)	0.85 (7.52)	0.95 (8.41)	1.18 (10.4)	1.37 (12.1)	1.67 (14.8)	1.86 (16.5)	2.25 (19.9)	2.74 (24.3)	3.33 (29.5)	4.61 (40.8)	5.49 (48.6)	6.86 (60.7)	7.84 (69.4)			
Rotational direction	Same as motor rotational direction											Reverse to motor rotational direction											

Permissible torque at output shaft of gear head using decimal gear head

* For external dimensions of the decimal gear head, refer to page B-448.

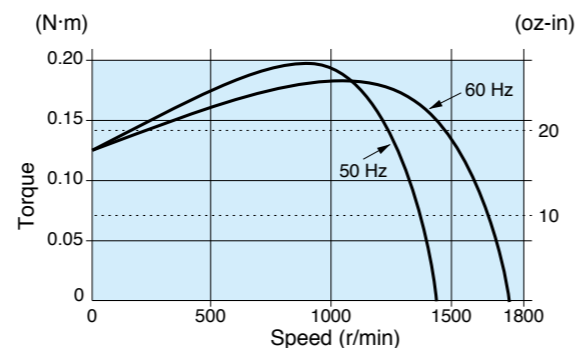
Applicable gear head		Reduction ratio	Permissible torque													
Bearing	Decimal gear head		Speed (r/min)	50 Hz	200	250	300	360	500	600	750	900	1000	1200	1500	1800
MX8G□B (ball bearing) MX8G□M (metal bearing)	MX8G10XB	Permissible torque	N-m (lb-in)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)
		Rotational direction	Same as motor rotational direction			Reverse to motor rotational direction										

Connection diagram



Speed-torque characteristics

M8RX20G4L



* Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

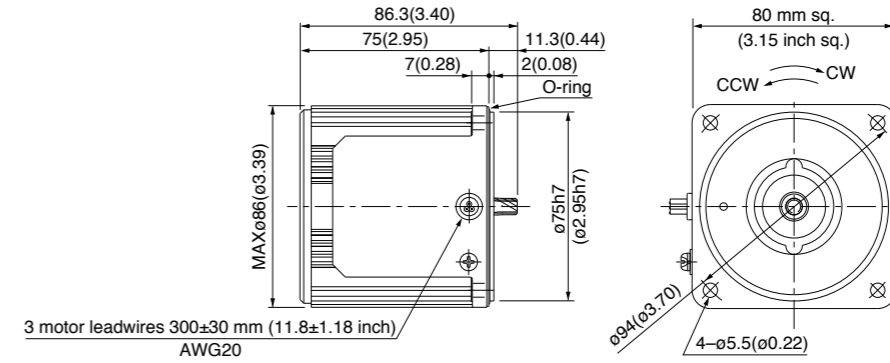
Features B-64 System configuration B-65 Coding system B-65 Model list B-68

Motor (dimensions)

Scale: 1/3, Unit: mm (inch)

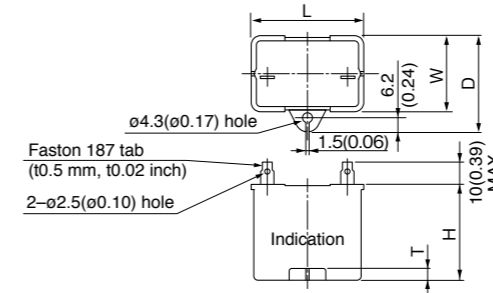
M8RX20G4L	4P 20 W 100 V
M8RX20G4Y	4P 20 W 200 V

Mass	Helical gear	Module	Number of teeth
1.2 kg 2.65 lb		0.5	9



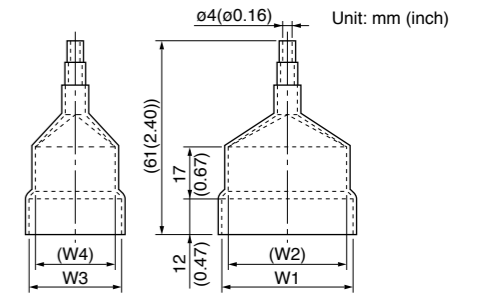
Capacitor (dimensions) [attachment]

Unit: mm (inch)



Capacitor cap (dimensions) [option]

Unit: mm (inch)



Capacitor dimension list

Unit: upper (mm) / lower (inch)

Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	Capacitor cap (option)	W1	W2	W3	W4
M8RX20G4L	M0PC7M20	39.5 (1.56)	22 (0.87)	32.5 (1.28)	30.5 (1.20)	4 (0.16)	M0PC3922	39.5 (1.56)	37.5 (1.48)	22 (0.87)	20 (0.79)
M8RX20G4Y	M0PC1.8M40	39.5 (1.56)	22 (0.87)	32.5 (1.28)	30.5 (1.20)	4 (0.16)	M0PC3922	39.5 (1.56)	37.5 (1.48)	22 (0.87)	20 (0.79)

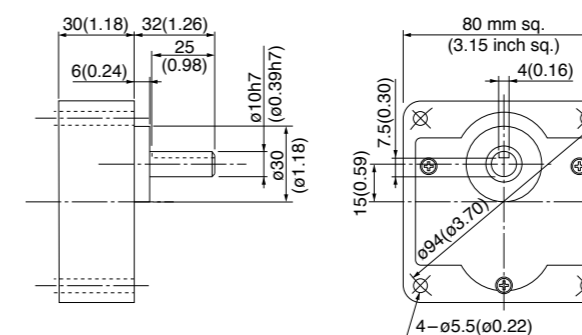
* Capacitors (single item) can also be purchased.

Gear head (dimensions)

Scale: 1/3, Unit: mm (inch)

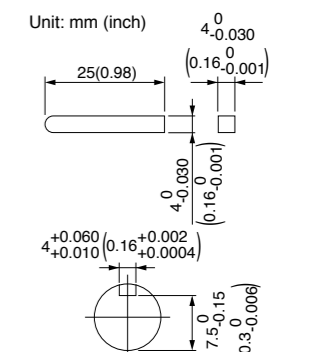
MX8G□B (ball bearing) Mass 0.6 kg(1.32 lb)

MX8G□M (metal bearing) Mass 0.6 kg(1.32 lb)



Key and keyway (dimensions) [attachment]

MX8G□B(M)



(Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

Gear head combination B-120 Round shaft motor B-123 Decimal gear head B-448 Gear head -inch (U.S.A.) B-449 Controls C-4 Option D-2

Reversible motor (leadwire)

80 mm (3.15 inch) sq. 25 W

Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting current (A)	Starting torque N-m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)	Torque N-m (oz-in)			
80 mm sq.	M8RX25G4L	4	25	100	50	30	58	0.59	1275	0.19 (26.9)	1.0	0.17 (24.1)	9.5 (200 V)
							57	0.59	1575	0.16 (22.7)	1.0	0.17 (24.1)	
	M8RX25G4Y	4	25	200	50	30	57	0.29	1275	0.19 (26.9)	0.52	0.19 (26.9)	2.4 (400 V)
							57	0.29	1575	0.16 (22.7)	0.50	0.19 (26.9)	

* The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-123.
* For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.

Unit of permissible torque: upper (N·m) / lower (lb·in)

Reduction ratio	Unit of permissible torque: upper (N·m) / lower (lb·in)																							
	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180		
Speed (r/min)	50 Hz	500	416.7	300	250	200	166.7	150	120	100	83.3	75	60	50	41.7	30	25	20	16.7	15	12.5	10	8.3	
	60 Hz	600	500	360	300	240	200	180	144	120	100	90	72	60	50	36	30	24	20	18	15	12	10	
Applicable gear head	MX8G3B to MX8G180B (ball bearing)	50 Hz	0.39 (3.45)	0.47 (4.16)	0.66 (5.84)	0.78 (6.90)	0.98 (8.67)	1.18 (10.4)	1.27 (11.2)	1.57 (13.9)	1.96 (17.3)	2.35 (20.8)	2.55 (22.6)	3.14 (27.8)	3.82 (33.8)	4.61 (40.8)	6.37 (56.4)	7.64 (67.6)						7.84 (69.4)
		60 Hz	0.32 (2.83)	0.39 (3.45)	0.55 (4.87)	0.66 (5.84)	0.81 (7.17)	0.98 (8.67)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.96 (17.3)	2.06 (18.2)	2.65 (23.5)	3.14 (27.8)	3.82 (33.8)	5.29 (46.8)	6.37 (56.4)						7.84 (69.4)
Rotational direction	Same as motor rotational direction											Reverse to motor rotational direction												

Permissible torque at output shaft of gear head using decimal gear head

* For external dimensions of the decimal gear head, refer to page B-448.

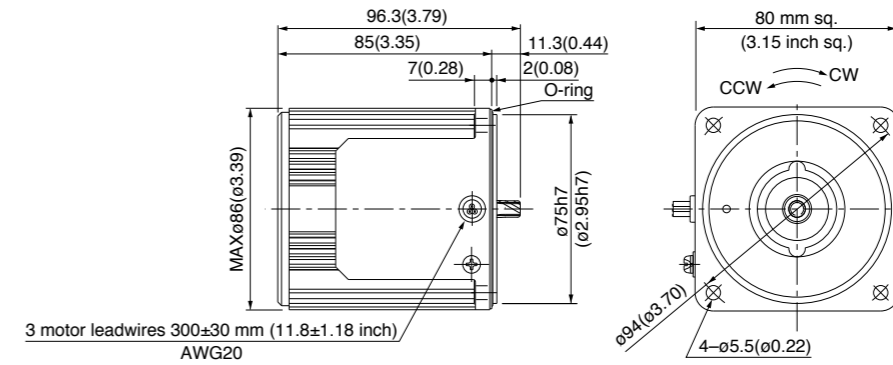
Applicable gear head		Reduction ratio	Permissible torque													
Bearing	Decimal gear head		Speed (r/min)	50 Hz	200	250	300	360	500	600	750	900	1000	1200	1500	1800
MX8G□B (ball bearing) MX8G□M (metal bearing)	MX8G10XB	Permissible torque	N-m (lb-in)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)
		Rotational direction	Same as motor rotational direction			Reverse to motor rotational direction										

Motor (dimensions)

Scale: 1/3, Unit: mm (inch)

M8RX25G4L 4P 25 W 100 V
M8RX25G4Y 4P 25 W 200 V

Mass 1.5 kg 3.31 lb
Helical gear
Module 0.5
Number of teeth 9

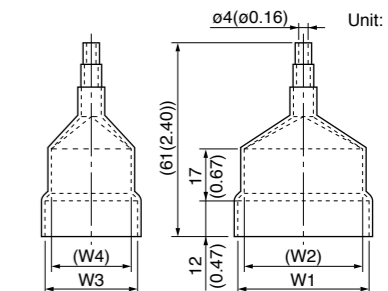
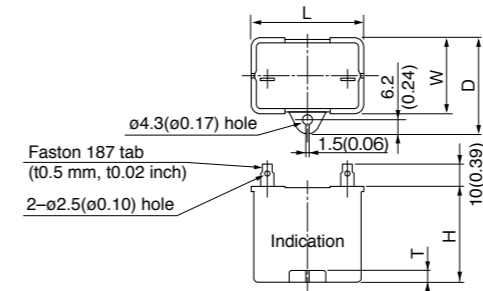


Capacitor (dimensions) [attachment]

Unit: mm (inch)

Capacitor cap (dimensions) [option]

Unit: mm (inch)



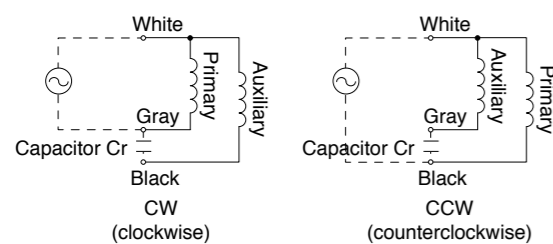
Capacitor dimension list

Unit: upper (mm) / lower (inch)

Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	Capacitor cap (option)	W1	W2	W3	W4
M8RX25G4L	M0PC9.5M20	39.5 (1.56)	22 (0.87)	32.5 (1.28)	30.5 (1.20)	4 (0.16)	M0PC3922	39.5 (1.56)	37.5 (1.48)	22 (0.87)	20 (0.79)
M8RX25G4Y	M0PC2.4M40	49.7 (1.96)	24 (0.94)	34.5 (1.36)	34.5 (1.36)	4 (0.16)	M0PC5026	50 (1.97)	48 (1.89)	26 (1.02)	22 (0.87)

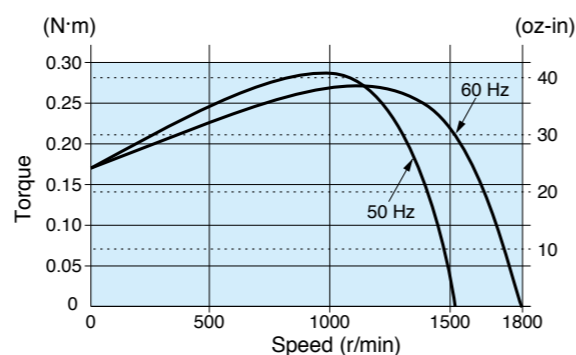
* Capacitors (single item) can also be purchased.

Connection diagram



Speed-torque characteristics

M8RX25G4L



* Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

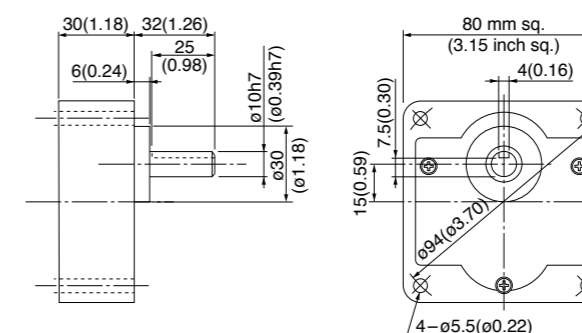
Features B-64 System configuration B-65 Coding system B-65 Model list B-68

Gear head (dimensions)

Scale: 1/3, Unit: mm (inch)

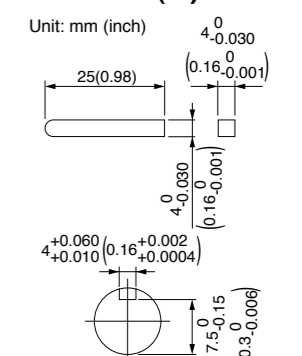
MX8G□B (ball bearing) Mass 0.6 kg(1.32 lb)

MX8G□M (metal bearing) Mass 0.6 kg(1.32 lb)



Key and keyway (dimensions) [attachment]

MX8G□B(M)



(Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

Gear head combination B-121 Round shaft motor B-123 Decimal gear head B-448 Gear head -inch (U.S.A.) B-449 Controls C-4 Option D-2

Reversible motor (leadwire)

US CE UK CA 80 mm (3.15 inch) sq. 25 W

Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting current (A)	Starting torque N-m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)	Torque N-m (oz-in)			
80 mm sq.	M8RX25G4LG M8RX25G4LGA	4	25	100	50	30	59	0.60	1250	0.19 (26.9)	1.1	0.19 (26.9)	10
					60		61	0.61	1550	0.15 (21.2)	1.1	0.19 (26.9)	(250 V)
	M8RX25G4DG M8RX25G4DGA	4	25	110	60	30	58	0.53	1575	0.15 (21.2)	1.1	0.17 (24.1)	8
					60		61	0.53	1600	0.15 (21.2)	1.2	0.19 (26.9)	(250 V)
	M8RX25G4YG M8RX25G4YGA	4	25	200	50	30	59	0.30	1200	0.20 (28.3)	0.45	0.19 (26.9)	2.5
					60		66	0.34	1525	0.16 (22.7)	0.46	0.19 (26.9)	(450 V)
	M8RX25G4GG M8RX25G4GGA	4	25	220	50	30	60	0.28	1225	0.19 (26.9)	0.47	0.18 (25.5)	2
					60		60	0.27	1550	0.15 (21.2)	0.46	0.18 (25.5)	
					50		62	0.28	1275	0.19 (26.9)	0.49	0.19 (26.9)	
					60		62	0.27	1575	0.15 (21.2)	0.48	0.19 (26.9)	

- The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-123.
- The models with a motor model number to which "A" is suffixed are not equipped with a capacitor cap. The models with a motor model number to which "A" is suffixed are not sold or available in Japan.
- For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.

Unit of permissible torque: upper (N·m) / lower (lb-in)

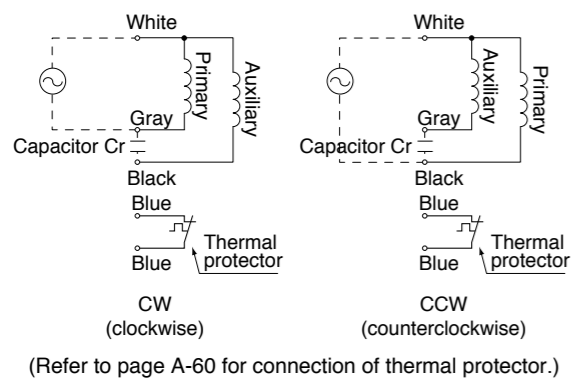
Reduction ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180	
Speed (r/min)	50 Hz 600	416.7 500	300 360	250 300	200 240	166.7 200	150 180	120 144	100 120	83.3 100	75 90	60 72	50 60	41.7 50	30 36	25 30	20 24	16.7 20	15 18	12.5 15	10 12	8.3 10	
Applicable gear head	MX8G3B to MX8G180B (ball bearing)	50 Hz	0.39 (3.45)	0.47 (4.16)	0.66 (5.84)	0.78 (6.90)	0.98 (8.67)	1.18 (10.4)	1.27 (11.2)	1.57 (13.9)	1.96 (17.3)	2.35 (20.8)	3.14 (27.8)	3.82 (33.8)	4.61 (40.8)	6.37 (56.4)	7.64 (67.6)						7.84 (69.4)
		60 Hz	0.32 (2.83)	0.39 (3.45)	0.55 (4.87)	0.66 (5.84)	0.81 (7.17)	0.98 (8.67)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.96 (17.3)	2.06 (18.2)	2.65 (23.5)	3.14 (27.8)	3.82 (33.8)	5.29 (46.8)	6.37 (56.4)					
Rotational direction		Same as motor rotational direction											Reverse to motor rotational direction										

Permissible torque at output shaft of gear head using decimal gear head

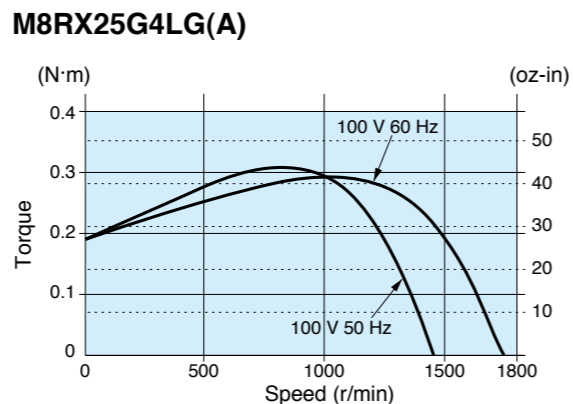
* For external dimensions of the decimal gear head, refer to page B-448.

Applicable gear head		Reduction ratio	200	250	300	360	500	600	750	900	1000	1200	1500	1800	
Bearing	Decimal gear head	Speed (r/min)	50 Hz	7.5	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	
		60 Hz	9	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1	
MX8G□B (ball bearing) MX8G□M (metal bearing)	MX8G10XB	Permissible torque	N·m (lb-in)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	
		Rotational direction		Same as motor rotational direction											Reverse to motor rotational direction

Connection diagram



Speed-torque characteristics



* Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

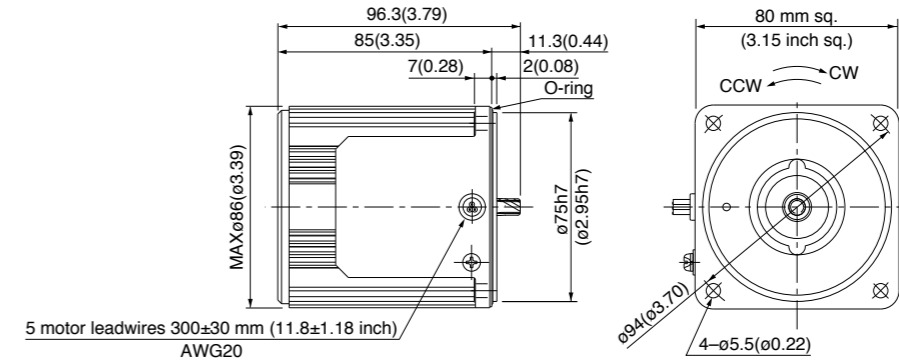
Features B-64 System configuration B-65 Coding system B-65 Model list B-68

Motor (dimensions)

Scale: 1/3, Unit: mm (inch)

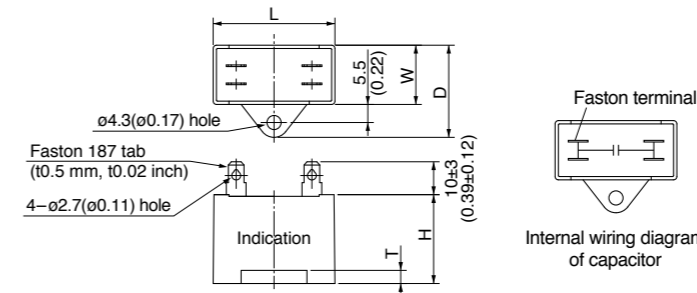
M8RX25G4LG(A)	4P 25 W 100 V
M8RX25G4DG(A)	4P 25 W 110 V / 115 V
M8RX25G4YG(A)	4P 25 W 200 V
M8RX25G4GG(A)	4P 25 W 220 V / 230 V

Mass 1.5 kg 3.31 lb
Helical gear
Module 0.5
Number of teeth 9



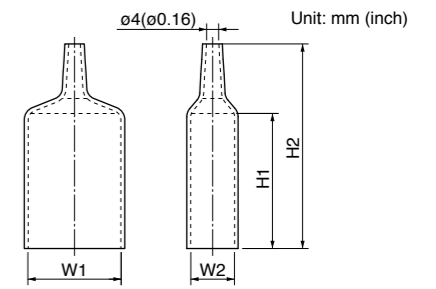
Capacitor (dimensions) [attachment]

Unit: mm (inch)



Capacitor cap (dimensions) [attachment]

Unit: mm (inch)



Capacitor dimension list

Unit: upper (mm) / lower (inch)

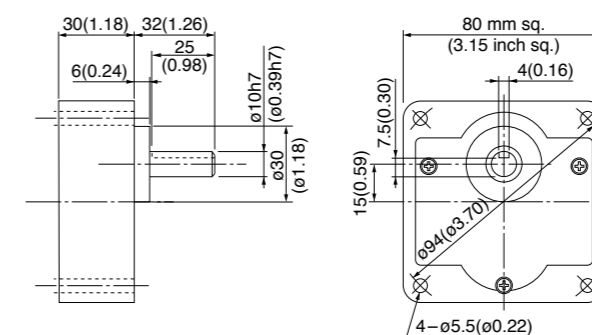
Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	Capacitor cap (attachment)	W1	W2	H1	H2
M8RX25G4LG(A)	M0PC10M25G	58 (2.28)	21 (0.83)	31 (1.22)	31 (1.22)	4 (0.16)	M0PC5821G	58 (2.28)	21 (0.83)	55 (2.17)	78 (3.07)
M8RX25G4DG(A)	M0PC8M25G	48 (1.89)	21 (0.83)	31 (1.22)	31 (1.22)	4 (0.16)	M0PC4821G	48 (1.89)	21 (0.83)	55 (2.17)	78 (3.07)
M8RX25G4YG(A)	M0PC2.5M45G	48 (1.89)	21 (0.83)	31 (1.22)	31 (1.22)	4 (0.16)	M0PC4821G	48 (1.89)	21 (0.83)	55 (2.17)	78 (3.07)
M8RX25G4GG(A)	M0PC2M45G	48 (1.89)	19 (0.75)	29 (1.14)	29 (1.14)	4 (0.16)	M0PC4819G	48 (1.89)	19 (0.75)	55 (2.17)	78 (3.07)

* The models with a motor model number to which "A" is suffixed are not equipped with a capacitor cap.
* Capacitors (single item), capacitor caps (single item) can also be purchased.

Gear head (dimensions)

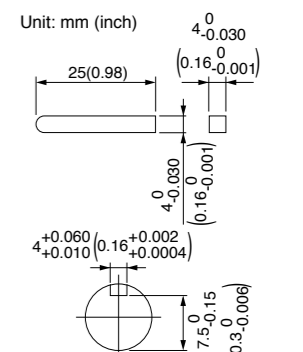
Scale: 1/3, Unit: mm (inch)

MX8G□B (ball bearing) Mass 0.6 kg (1.32 lb) MX8G□M (metal bearing) Mass 0.6 kg (1.32 lb)



Key and keyway (dimensions) [attachment]

MX8G□B(M)



(Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

Gear head combination B-121 Round shaft motor B-123 Decimal gear head B-448 Gear head -inch (U.S.A.) B-449 Controls C-4 Option D-2

Reversible motor (leadwire)

90 mm (3.54 inch) sq. 40 W

Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting current (A)	Starting torque N-m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)	Torque N-m (oz-in)			
90 mm sq.	M9RX40G4L	4	40	100	50	30	94	0.96	1200	0.32 (45.3)	1.6	0.27 (38.2)	15 (210 V)
							93	0.93	1525	0.25 (35.4)	1.5	0.26 (36.8)	
	M9RX40G4Y	4	40	200	50	30	92	0.48	1200	0.32 (45.3)	0.81	0.28 (39.7)	3.8 (400 V)
							93	0.46	1525	0.25 (35.4)	0.77	0.29 (41.1)	

* The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-123.
* For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.

Unit of permissible torque: upper (N·m) / lower (lb-in)

Reduction ratio	Unit of permissible torque: upper (N·m) / lower (lb-in)																							
	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180		
Speed (r/min)	50 Hz	500	416.7	300	250	200	166.7	150	120	100	83.3	75	60	50	41.7	30	25	20	16.7	15	12.5	10	8.3	
	60 Hz	600	500	360	300	240	200	180	144	120	100	90	72	60	50	36	30	24	20	18	15	12	10	
Applicable gear head	MX9G3B to MX9G180B (ball bearing)	50 Hz	0.66 (5.84)	0.78 (6.90)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.86 (16.5)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.92 (34.7)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	7.94 (70.3)	9.80 (86.7)							
		60 Hz	0.55 (4.87)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)							
	MX9G3M to MX9G180M (metal bearing)	50 Hz	0.66 (5.84)	0.78 (6.90)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.86 (16.5)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.92 (34.7)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	7.94 (70.3)	9.80 (86.7)							
	60 Hz	0.55 (4.87)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)								
Rotational direction		Same as motor rotational direction											Reverse to motor rotational direction											

Permissible torque at output shaft of gear head using decimal gear head

* For external dimensions of the decimal gear head, refer to page B-448.

Applicable gear head		Reduction ratio	Reduction ratio																						
Bearing	Decimal gear head		Speed (r/min)	200	250	300	360	500	600	750	900	1000	1200	1500	1800										
		MX9G□B (ball bearing)		MX9G10XB	50 Hz	7.5	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8								
60 Hz	9		7.2		6	5	3.6	3	2.4	2	1.8	1.5	1.2	1											
MX9G□M (metal bearing)		Permissible torque	N-m (lb-in)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)											
		Rotational direction		Same as motor rotational direction											Reverse to motor rotational direction										

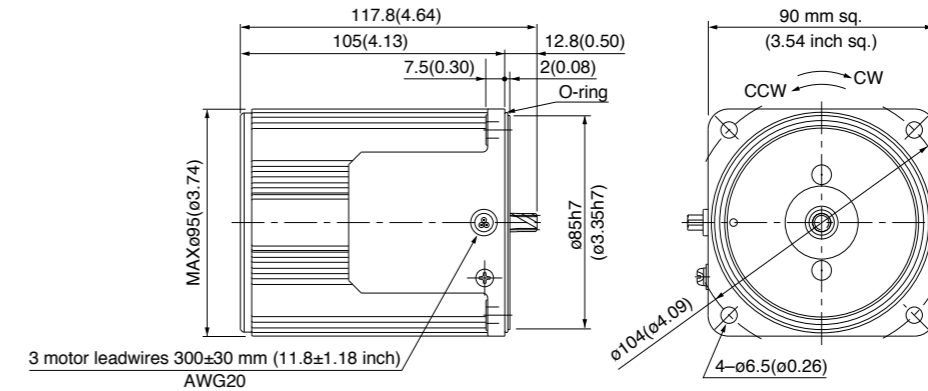
Refer to page B-446 for the allowable shaft torque of the right-angle shaft type gearhead.

Motor (dimensions)

Scale: 1/3, Unit: mm (inch)

M9RX40G4L 4P 40 W 100 V
M9RX40G4Y 4P 40 W 200 V

Mass 2.4 kg 5.29 lb
Helical gear
Module 0.55
Number of teeth 9

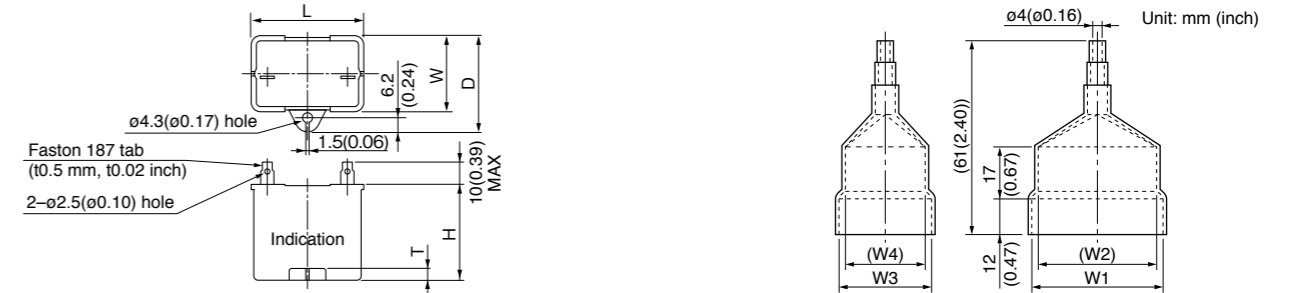


Capacitor (dimensions) [attachment]

Unit: mm (inch)

Capacitor cap (dimensions) [option]

Unit: mm (inch)

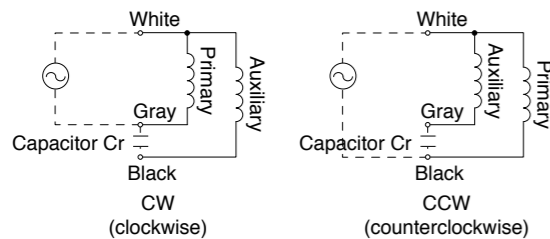


Capacitor dimension list Unit: upper (mm) / lower (inch)

Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	Capacitor cap (option)	W1	W2	W3	W4
M9RX40G4L	M0PC15M20	39.5 (1.56)	26.7 (1.05)	37 (1.46)	41 (1.61)	4 (0.16)	M0PC3926	39.5 (1.56)	37.5 (1.48)	26 (1.02)	25 (0.98)
M9RX40G4Y	M0PC3.8M40	50 (1.97)	26.7 (1.05)	37.5 (1.48)	38 (1.50)	4 (0.16)	M0PC5026	50 (1.97)	48 (1.89)	26 (1.02)	22 (0.87)

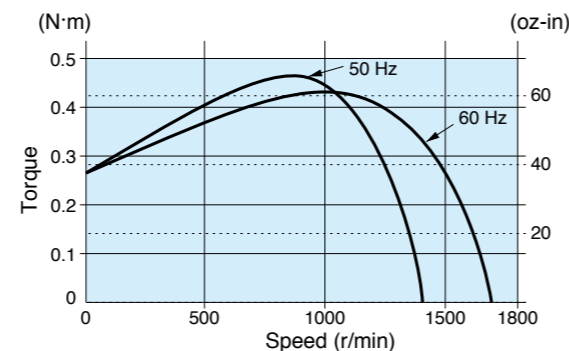
* Capacitors (single item) can also be purchased.

Connection diagram



Speed-torque characteristics

M9RX40G4L



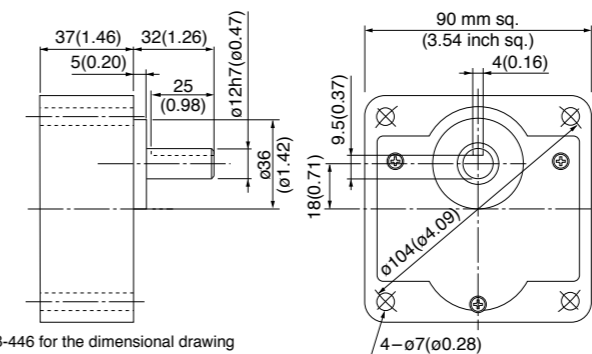
* Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

Features B-64 System configuration B-65 Coding system B-65 Model list B-68

Gear head (dimensions)

Scale: 1/3, Unit: mm (inch)

MX9G□B (ball bearing) Mass 0.8 kg (1.76 lb) MX9G□M (metal bearing) Mass 0.8 kg (1.76 lb)



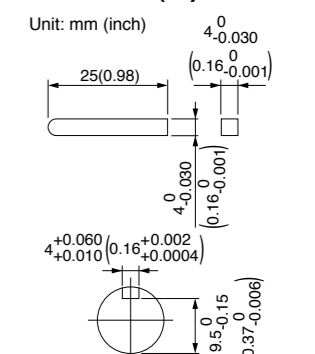
See page B-446 for the dimensional drawing of the right-angle shaft type gearhead.

(Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

Gear head combination B-121 Round shaft motor B-123 Decimal gear head B-448 Gear head -inch (U.S.A.) B-449 Controls C-4 Option D-2

Key and keyway (dimensions) [attachment]

MX9G□B(M)



Reversible motor (leadwire)

US CE UK CA 90 mm (3.54 inch) sq. 40 W

Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting current (A)	Starting torque N-m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)	Torque N-m (oz-in)			
90 mm sq.	M9RX40G4LG M9RX40G4LGA	4	40	100	50	30	86	0.87	1275	0.30 (42.5)	1.7	0.30 (42.5)	16
					60		93	0.95	1575	0.24 (34.0)	1.6	0.30 (42.5)	(250 V)
	M9RX40G4DG M9RX40G4DGA	4	40	110	60	30	91	0.83	1550	0.25 (35.4)	1.7	0.25 (35.4)	12
					60		94	0.82	1575	0.24 (34.0)	1.8	0.29 (41.1)	(250 V)
	M9RX40G4YG M9RX40G4YGA	4	40	200	50	30	91	0.45	1200	0.32 (45.3)	0.67	0.30 (42.5)	4
					60		109	0.57	1500	0.25 (35.4)	0.70	0.30 (42.5)	(450 V)
	M9RX40G4GG M9RX40G4GGA	4	40	220	50	30	88	0.40	1250	0.31 (43.9)	0.71	0.30 (42.5)	3.5
					60		104	0.49	1550	0.25 (35.4)	0.71	0.30 (42.5)	
					50		92	0.40	1300	0.29 (41.1)	0.74	0.33 (46.7)	
					60		110	0.50	1575	0.24 (34.0)	0.74	0.33 (46.7)	

- The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-123.
- The models with a motor model number to which "A" is suffixed are not equipped with a capacitor cap. The models with a motor model number to which "A" is suffixed are not sold or available in Japan.
- For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.

Unit of permissible torque: upper (N-m) / lower (lb-in)

Reduction ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180		
Speed (r/min)	50 Hz	500	416.7	300	250	200	166.7	150	120	100	83.3	75	60	50	41.7	30	25	20	16.7	15	12.5	10	8.3	
Applicable gear head	60 Hz	600	500	360	300	240	200	180	144	120	100	90	72	60	50	36	30	24	20	18	15	12	10	
	MX9G3B to MX9G180B (ball bearing)	50 Hz	0.66 (5.84)	0.78 (6.90)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.86 (16.5)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.92 (34.7)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	7.94 (70.3)	9.80 (86.7)							
MX9G3M to MX9G180M (metal bearing)	60 Hz	0.55 (4.87)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)								9.80 (86.7)
	Rotational direction	Same as motor rotational direction											Reverse to motor rotational direction											

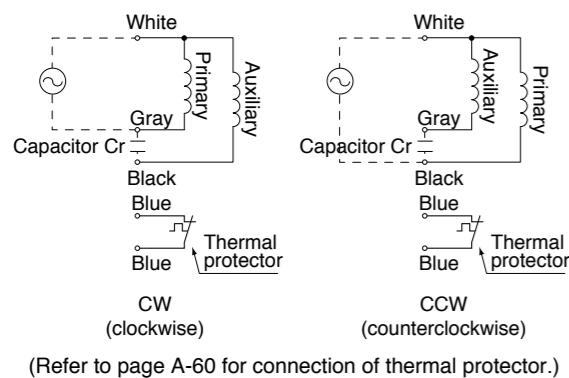
Permissible torque at output shaft of gear head using decimal gear head

* For external dimensions of the decimal gear head, refer to page B-448.

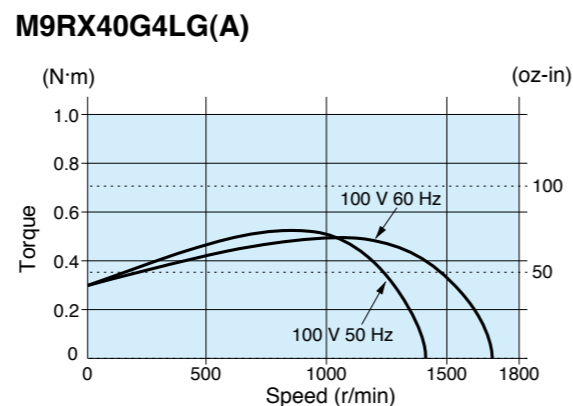
Applicable gear head		Reduction ratio	200	250	300	360	500	600	750	900	1000	1200	1500	1800	
Bearing	Decimal gear head	Speed (r/min)	50 Hz	7.5	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8
		60 Hz	9	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1	
MX9G□B (ball bearing) MX9G□M (metal bearing)	MX9G10XB	Permissible torque	N-m	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)
		Rotational direction	Same as motor rotational direction											Reverse to motor rotational direction	

Refer to page B-446 for the allowable shaft torque of the right-angle shaft type gearhead.

Connection diagram



Speed-torque characteristics



* Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

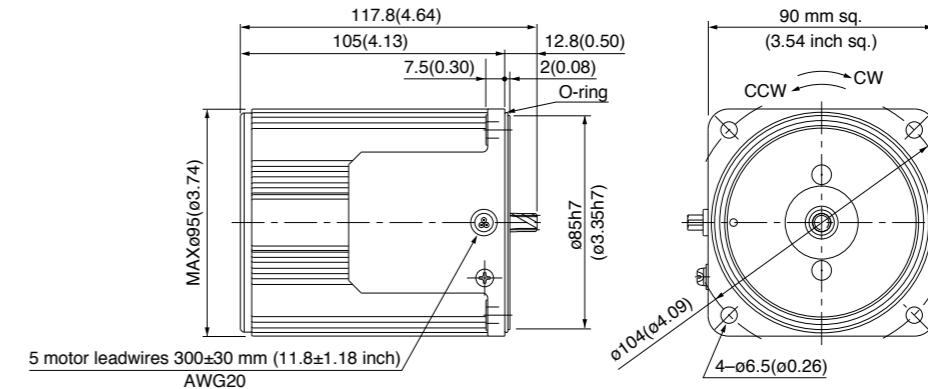
Features B-64 System configuration B-65 Coding system B-65 Model list B-68

Motor (dimensions)

Scale: 1/3, Unit: mm (inch)

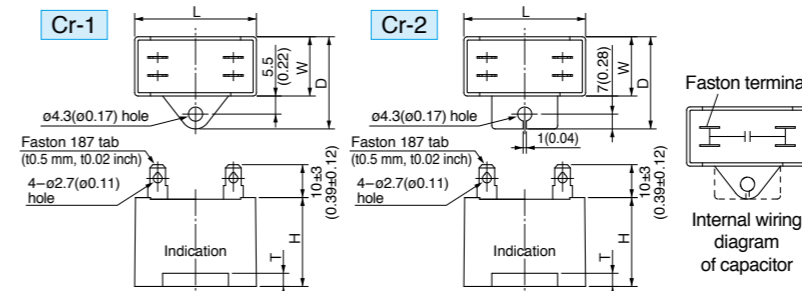
M9RX40G4LG(A)	4P 40 W 100 V
M9RX40G4DG(A)	4P 40 W 110 V / 115 V
M9RX40G4YG(A)	4P 40 W 200 V
M9RX40G4GG(A)	4P 40 W 220 V / 230 V

Mass	2.4 kg	5.29 lb
Helical gear	Module	0.55
	Number of teeth	9



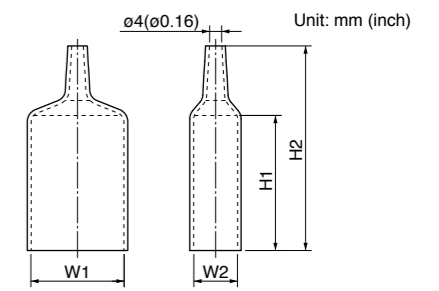
Capacitor (dimensions) [attachment]

Unit: mm (inch)



Capacitor cap (dimensions) [attachment]

Unit: mm (inch)



Capacitor dimension list

Unit: upper (mm) / lower (inch)

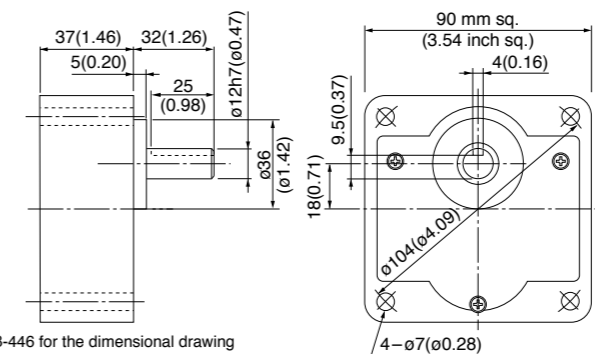
Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	dimension No.	Capacitor cap (attachment)	W1	W2	H1	H2
M9RX40G4LG(A)	M0PC16M25G	58 (2.28)	23.5 (0.93)	38.5 (1.52)	37 (1.46)	4 (0.16)	Cr-2	M0PC5823G	58 (2.28)	23.5 (0.93)	55 (2.17)	78 (3.07)
M9RX40G4DG(A)	M0PC12M25G	58 (2.28)	22 (0.87)	32 (1.26)	35 (1.38)	4 (0.16)	Cr-1	M0PC5822G	58 (2.28)	22 (0.87)	55 (2.17)	78 (3.07)
M9RX40G4YG(A)	M0PC4M45G	58 (2.28)	23.5 (0.93)	38.5 (1.52)	37 (1.46)	4 (0.16)	Cr-2	M0PC5823G	58 (2.28)	23.5 (0.93)	55 (2.17)	78 (3.07)
M9RX40G4GG(A)	M0PC3.5M45G	58 (2.28)	22 (0.87)	32 (1.26)	35 (1.38)	4 (0.16)	Cr-1	M0PC5822G	58 (2.28)	22 (0.87)	55 (2.17)	78 (3.07)

* The models with a motor model number to which "A" is suffixed are not equipped with a capacitor cap.
* Capacitors (single item), capacitors cap (single item) can also be purchased.

Gear head (dimensions)

Scale: 1/3, Unit: mm (inch)

MX9G□B (ball bearing) Mass 0.8 kg (1.76 lb) MX9G□M (metal bearing) Mass 0.8 kg (1.76 lb)



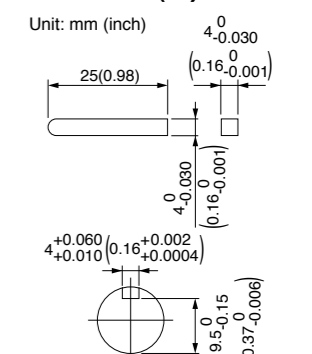
See page B-446 for the dimensional drawing of the right-angle shaft type gearhead.

(Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

Gear head combination B-121 Round shaft motor B-123 Decimal gear head B-448 Gear head -inch (U.S.A.) B-449 Controls C-4 Option D-2

Key and keyway (dimensions) [attachment]

Unit: mm (inch)



Reversible motor (leadwire)

90 mm (3.54 inch) sq. 60 W

Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting current (A)	Starting torque N-m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)	Torque N-m (oz-in)			
90 mm sq.	M9RZ60G4L	4	60	100	50	30	144	1.5	1200	0.46 (65.1)	2.4	0.50 (70.8)	25 (200 V)
							163	1.5	1500	0.39 (55.2)	2.3	0.53 (75.1)	
	M9RZ60G4Y	4	60	200	50	30	146	0.74	1225	0.46 (65.1)	1.2	0.53 (75.1)	6.2 (375 V)
							153	0.77	1525	0.39 (55.2)	1.3	0.55 (77.9)	

The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-124. For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.

Unit of permissible torque: upper (N·m) / lower (lb-in)

Reduction ratio	Speed (r/min)																								
	50 Hz	60 Hz	500	416.7	300	250	200	166.7	150	120	100	83.3	75	60	50	41.7	30	25	20	16.7	15	12.5	10	8.3	7.5
Applicable gear head	MZ9G3B to MZ9G200B (ball bearing / hinge not attached)	50 Hz	0.98 (8.7)	1.18 (10.4)	1.57 (13.9)	1.96 (17.3)	2.35 (20.8)	2.94 (26.0)	3.14 (27.8)	3.92 (34.7)	4.70 (41.6)	5.59 (49.5)	6.27 (55.5)	7.55 (66.8)	9.11 (80.6)	11.0 (97.4)	15.2 (135)	17.8 (158)							19.6 (173)
		60 Hz	0.78 (6.9)	0.98 (8.7)	1.37 (12.1)	1.57 (13.9)	1.96 (17.3)	2.35 (20.8)	2.65 (23.5)	3.33 (29.5)	3.92 (34.7)	4.70 (41.6)	5.29 (46.8)	6.47 (57.3)	7.55 (66.8)	9.11 (80.6)	12.6 (112)	15.2 (135)							19.6 (173)
Rotational direction	Same as motor rotational direction										Reverse to motor rotational direction														

Permissible torque at output shaft of gear head using decimal gear head

* For external dimensions of the decimal gear head, refer to page B-448.

Applicable gear head	Reduction ratio	Speed (r/min)													
		250	300	360	500	600	750	900	1000	1200	1500	1800	2000		
Bearing	MZ9G10XB	50 Hz	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8	0.75	
		60 Hz	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1	0.9	
MZ9G□B (ball bearing / Hinge not attached)	Permissible torque	N-m (lb-in)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	
		Rotational direction	Reverse to motor rotational direction												Same as motor rotational direction

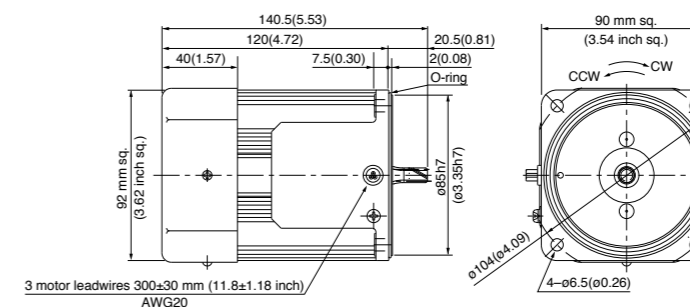
Refer to pages B-444 and B-445 for the allowable shaft torque of the heavy-duty gearhead. Refer to page B-446 for the allowable shaft torque of the right-angle shaft type gearhead.

Motor (dimensions)

Scale: 1/4, Unit: mm (inch)

M9RZ60G4L 4P 60 W 100 V (with fan)
M9RZ60G4Y 4P 60 W 200 V (with fan)

Mass 2.7 kg (5.95 lb)
Helical gear
Module 0.6
Number of teeth 9

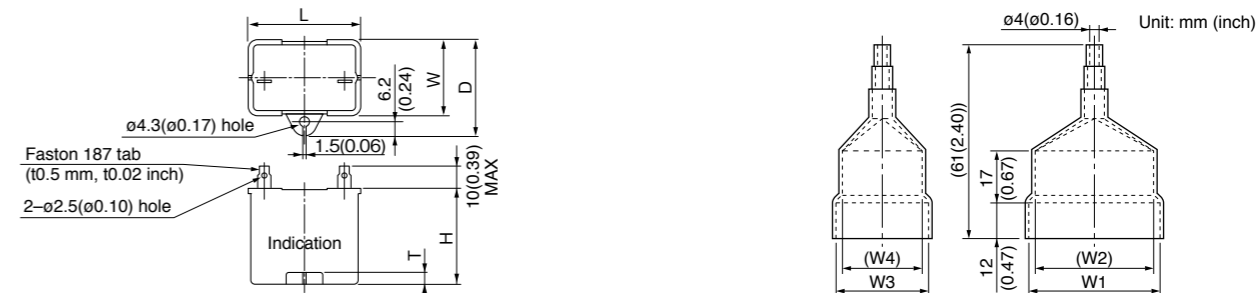


Capacitor (dimensions) [attachment]

Unit: mm (inch)

Capacitor cap (dimensions) [option]

Unit: mm (inch)



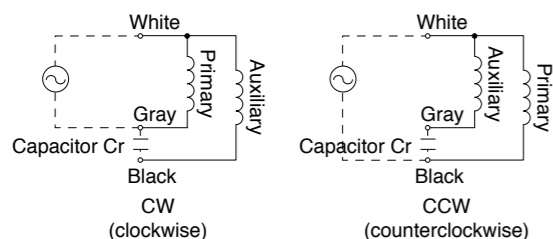
Capacitor dimension list

Unit: upper (mm) / lower (inch)

Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	Capacitor cap (option)	W1	W2	W3	W4
M9RZ60G4L	M0PC25M20	50.2 (1.98)	31	41	42 (1.65)	5 (0.20)	M0PC5032	50 (1.97)	48 (1.89)	32.5 (1.28)	29.5 (1.16)
M9RZ60G4Y	M0PC6.2M38	50 (1.97)	30.5 (1.20)	41 (1.61)	41.5 (1.63)	4 (0.16)	M0PC5032	50 (1.97)	48 (1.89)	32.5 (1.28)	29.5 (1.16)

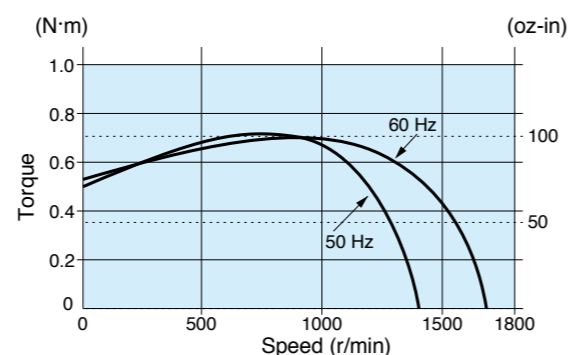
* Capacitors (single item) can also be purchased.

Connection diagram



Speed-torque characteristics

M9RZ60G4L



* Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

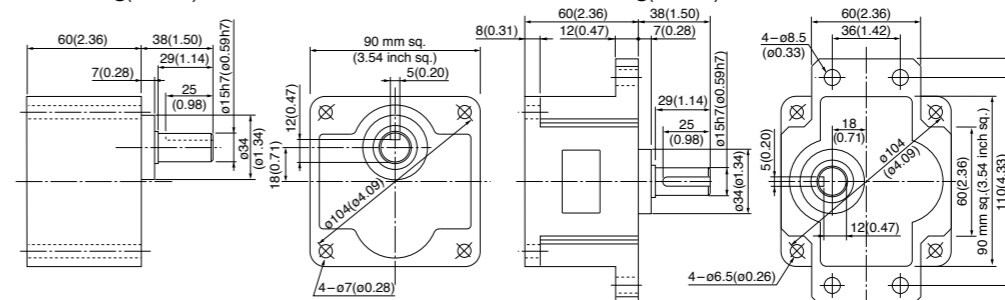
Features B-64 System configuration B-65 Coding system B-65 Model list B-68

Gear head (dimensions)

Scale: 1/4, Unit: mm (inch)

MZ9G□B (ball bearing / hinge not attached)
Mass 1.4 kg (3.09 lb)

MY9G□B (ball bearing / hinge attached)
Mass 1.4 kg (3.09 lb)



See page B-444 for the dimensional drawing of the heavy-duty gearhead. See page B-446 for the dimensional drawing of the right-angle shaft type gearhead.

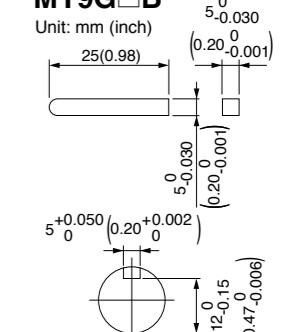
Note) MZ / MY is available for a gear head of either type.

(Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

Gear head combination B-121 Round shaft motor B-124 Decimal gear head B-448 Gear head -inch (U.S.A.) B-449 Controls C-4 Option D-2

Key and keyway (dimensions) [attachment]

MZ9G□B
MY9G□B



Reversible motor (leadwire)

US CE UK CA 90 mm (3.54 inch) sq. 60 W

Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting current (A)	Starting torque N-m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)	Torque N-m (oz-in)			
90 mm sq.	M9RZ60G4LG M9RZ60G4LGA	4	60	100	50	30	137	1.4	1250	0.46 (65.1)	2.4	0.51 (72.2)	25
					60		147	1.5	1550	0.37 (52.4)	2.4	0.53 (75.1)	(250 V)
	M9RZ60G4DG M9RZ60G4DGA	4	60	110	60	30	138	1.3	1575	0.36 (51.0)	2.5	0.50 (70.8)	20
					60		144	1.3	1600	0.36 (51.0)	2.6	0.55 (77.9)	(250 V)
	M9RZ60G4YG M9RZ60G4YGA	4	60	200	50	30	135	0.67	1200	0.48 (68.0)	1.0	0.51 (72.2)	6
					60		158	0.81	1500	0.38 (53.8)	1.1	0.53 (75.1)	(450 V)
	M9RZ60G4GG M9RZ60G4GGA	4	60	220	50	30	137	0.64	1225	0.47 (66.6)	1.1	0.50 (70.8)	5
					60		145	0.67	1550	0.37 (52.4)	1.1	0.52 (73.6)	(450 V)
					50		145	0.66	1275	0.45 (63.7)	1.1	0.57 (80.7)	
					60		151	0.67	1575	0.36 (51.0)	1.1	0.57 (80.7)	

- The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-124.
- The models with a motor model number to which "A" is suffixed are not equipped with a capacitor cap. The models with a motor model number to which "A" is suffixed are not sold or available in Japan.
- For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.

Unit of permissible torque: upper (N-m) / lower (lb-in)

Reduction ratio	Speed (r/min)																								
	50 Hz	60 Hz	500	416.7	300	250	200	166.7	150	120	100	83.3	75	60	50	41.7	30	25	20	16.7	15	12.5	10	8.3	7.5
Applicable gear head	MZ9G3B to MZ9G200B (ball bearing / hinge not attached)	50 Hz	0.98 (8.7)	1.18 (10.4)	1.57 (13.9)	1.96 (17.3)	2.35 (20.8)	2.94 (26.0)	3.14 (27.8)	3.92 (34.7)	4.70 (41.6)	5.59 (49.5)	6.27 (55.5)	7.55 (66.8)	9.11 (80.6)	11.0 (97.4)	15.2 (135)	17.8 (158)							19.6 (173)
		60 Hz	0.78 (6.9)	0.98 (8.7)	1.37 (12.1)	1.57 (13.9)	1.96 (17.3)	2.35 (20.8)	2.65 (23.5)	3.33 (29.5)	3.92 (34.7)	4.70 (41.6)	5.29 (46.8)	6.47 (57.3)	7.55 (66.8)	9.11 (80.6)	12.6 (112)	15.2 (135)							19.6 (173)
Rotational direction		Same as motor rotational direction										Reverse to motor rotational direction													

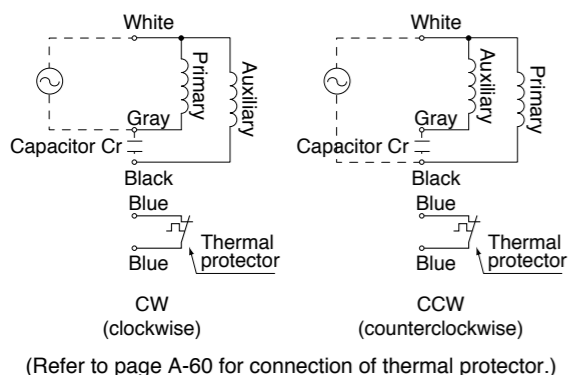
Permissible torque at output shaft of gear head using decimal gear head

* For external dimensions of the decimal gear head, refer to page B-448.

Applicable gear head	Reduction ratio	Speed (r/min)															
		250	300	360	500	600	750	900	1000	1200	1500	1800	2000				
MZ9G□B (ball bearing / hinge not attached)	MZ9G10XB	50 Hz	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8	0.75			
		60 Hz	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1	0.9			
Permissible torque	N-m (lb-in)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)			
Rotational direction		Reverse to motor rotational direction										Same as motor rotational direction					

Refer to pages B-444 and B-445 for the allowable shaft torque of the heavy-duty gearhead.
Refer to page B-446 for the allowable shaft torque of the right-angle shaft type gearhead.

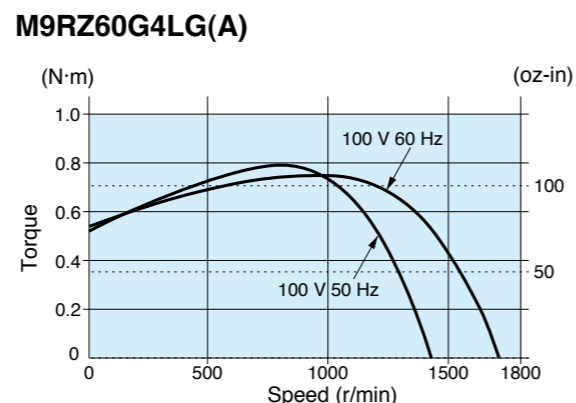
Connection diagram



* Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

Features B-64 System configuration B-65 Coding system B-65 Model list B-68

Speed-torque characteristics

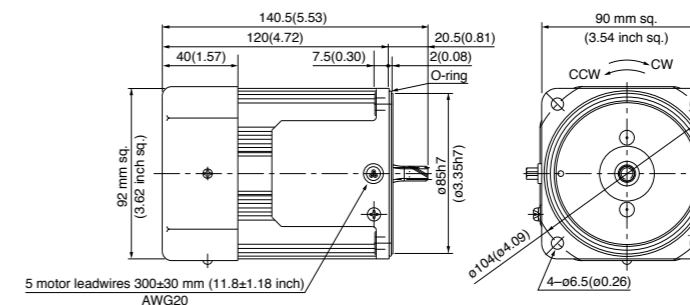


Motor (dimensions)

Scale: 1/4, Unit: mm (inch)

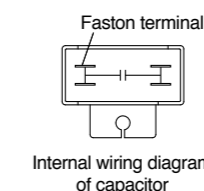
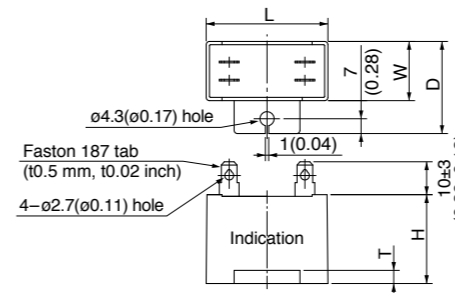
Motor model	4P	60 W	100 V (with fan)
M9RZ60G4LG(A)	4P	60 W	100 V (with fan)
M9RZ60G4DG(A)	4P	60 W	110 V / 115 V (with fan)
M9RZ60G4YG(A)	4P	60 W	200 V (with fan)
M9RZ60G4GG(A)	4P	60 W	220 V / 230V (with fan)

Mass	Helical gear	Module	Number of teeth
2.7 kg (5.95 lb)		0.6	9



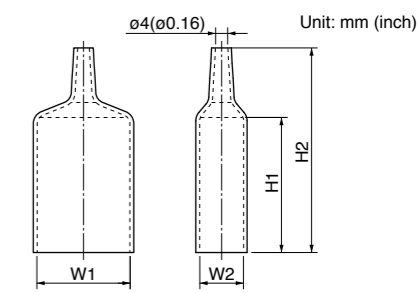
Capacitor (dimensions) [attachment]

Unit: mm (inch)



Capacitor cap (dimensions) [attachment]

Unit: mm (inch)



Capacitor dimension list

Unit: upper (mm) / lower (inch)

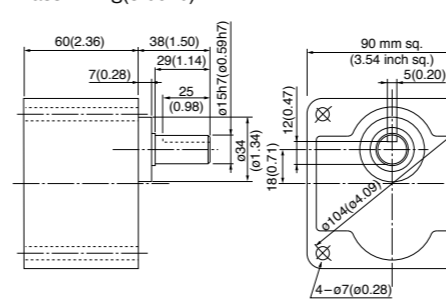
Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	Capacitor cap (attachment)	W1	W2	H1	H2
M9RZ60G4LG(A)	M0PC25M25G	58 (2.28)	35 (1.38)	50 (1.97)	50 (1.97)	4 (0.16)	M0PC5835G	58 (2.28)	35 (1.38)	55 (2.17)	78 (3.07)
M9RZ60G4DG(A)	M0PC20M25G	58 (2.28)	29 (1.14)	44 (1.73)	41 (1.61)	4 (0.16)	M0PC5829G	58 (2.28)	29 (1.14)	55 (2.17)	78 (3.07)
M9RZ60G4YG(A)	M0PC6M45G	58 (2.28)	29 (1.14)	44 (1.73)	41 (1.61)	4 (0.16)	M0PC5829G	58 (2.28)	29 (1.14)	55 (2.17)	78 (3.07)
M9RZ60G4GG(A)	M0PC5M45G	58 (2.28)	29 (1.14)	44 (1.73)	41 (1.61)	4 (0.16)	M0PC5829G	58 (2.28)	29 (1.14)	55 (2.17)	78 (3.07)

* The models with a motor model number to which "A" is suffixed are not equipped with a capacitor cap.
* Capacitors (single item), capacitors cap (single item) can also be purchased.

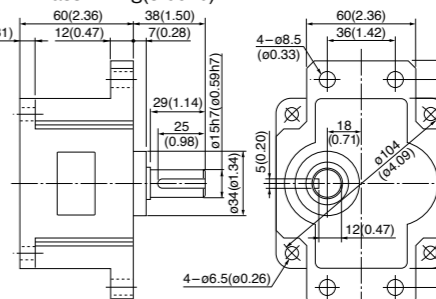
Gear head (dimensions)

Scale: 1/4, Unit: mm (inch)

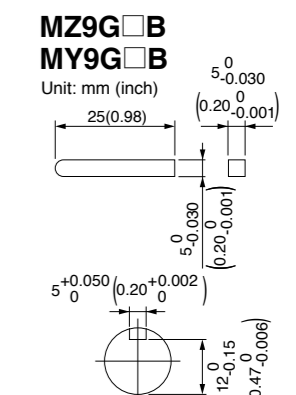
MZ9G□B (ball bearing / hinge not attached)
Mass 1.4 kg (3.09 lb)



MY9G□B (ball bearing / hinge attached)
Mass 1.4 kg (3.09 lb)



Key and keyway (dimensions) [attachment]



See page B-444 for the dimensional drawing of the heavy-duty gearhead.
See page B-446 for the dimensional drawing of the right-angle shaft type gearhead.

Note) MZ / MY is available for a gear head of either type.

Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

Gear head combination B-121 Round shaft motor B-124 Decimal gear head B-448 Gear head -inch (U.S.A.) B-449 Controls C-4 Option D-2

Reversible motor (leadwire)

90 mm (3.54 inch) sq. 90 W

Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting current (A)	Starting torque N-m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)	Torque N-m (oz-in)			
90 mm sq.	M9RZ90G4L	4	90	100	50	30	171	1.7	1225	0.70 (99.1)	2.8	0.63 (89.2)	30 (200 V)
							181	1.9	1525	0.56 (79.3)	2.7	0.64 (90.6)	
	M9RZ90G4Y	4	90	200	50	30	184	0.93	1150	0.72 (102)	1.4	0.64 (90.6)	7.5 (370 V)
							170	0.96	1475	0.57 (80.7)	1.4	0.66 (93.5)	

The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-124. For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.

Unit of permissible torque: upper (N·m) / lower (lb-in)

Reduction ratio	Speed (r/min)																								
	50 Hz	60 Hz	500	416.7	300	250	200	166.7	150	120	100	83.3	75	60	50	41.7	30	25	20	16.7	15	12.5	10	8.3	7.5
Applicable gear head	MZ9G3B to MZ9G200B (ball bearing / hinge not attached)	50 Hz	1.37 (12.1)	1.67 (14.8)	2.25 (19.9)	2.74 (24.3)	3.43 (30.4)	4.12 (36.5)	4.51 (39.9)	5.68 (50.3)	6.76 (59.8)	8.04 (71.2)	9.02 (79.8)	10.9 (96.5)	13.0 (115)	15.7 (139)	19.6 (173)								
		60 Hz	1.18 (10.4)	1.37 (12.1)	1.86 (16.5)	2.25 (19.9)	2.84 (25.1)	3.43 (30.4)	3.72 (32.9)	4.70 (41.6)	5.68 (50.3)	6.76 (59.8)	7.55 (66.8)	9.21 (81.5)	10.9 (96.5)	13.0 (115)	18.3 (162)	19.6 (173)							
Rotational direction	Same as motor rotational direction										Reverse to motor rotational direction														

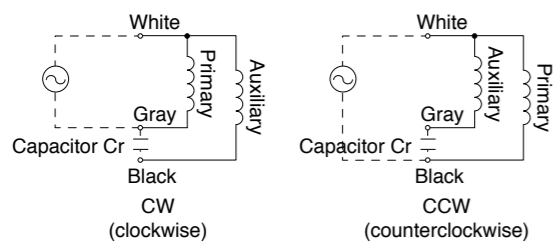
Permissible torque at output shaft of gear head using decimal gear head

* For external dimensions of the decimal gear head, refer to page B-448.

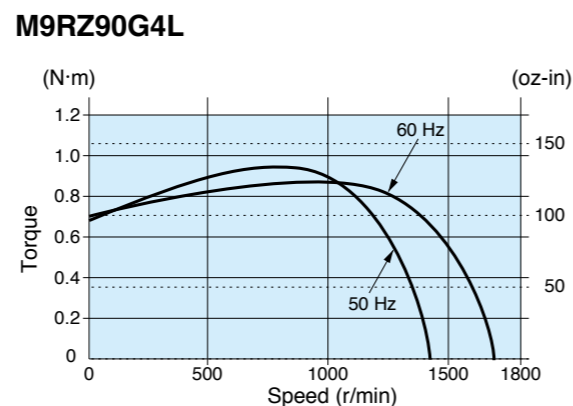
Applicable gear head	Reduction ratio	Speed (r/min)													
		250	300	360	500	600	750	900	1000	1200	1500	1800	2000		
MZ9G□B (ball bearing / hinge not attached)	MZ9G10XB	50 Hz	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8	0.75	
		60 Hz	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1	0.9	
MY9G□B (ball bearing / hinge attached)	MZ9G10XB	Permissible torque	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (200)	
		Rotational direction	Reverse to motor rotational direction												Same as motor rotational direction

Refer to pages B-444 and B-445 for the allowable shaft torque of the heavy-duty gearhead. Refer to page B-446 for the allowable shaft torque of the right-angle shaft type gearhead.

Connection diagram



Speed-torque characteristics



* Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

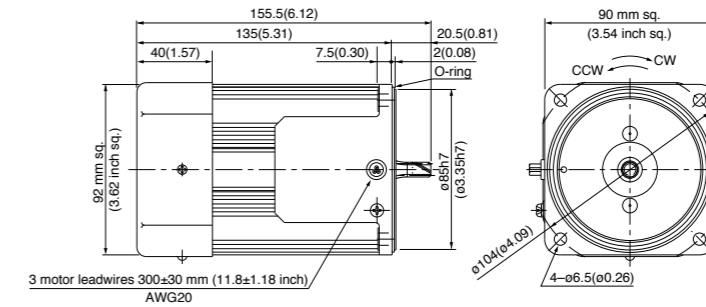
Features B-64 System configuration B-65 Coding system B-65 Model list B-68

Motor (dimensions)

Scale: 1/4, Unit: mm (inch)

M9RZ90G4L 4P 90 W 100 V (with fan)
M9RZ90G4Y 4P 90 W 200 V (with fan)

Mass 3.2 kg (7.05 lb)
Helical gear
Module 0.6
Number of teeth 9



Capacitor (dimensions) [attachment]

Unit: mm (inch)

Capacitor cap (dimensions) [option]

Unit: mm (inch)



Capacitor dimension list

Unit: upper (mm) / lower (inch)

Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	Capacitor cap (option)	W1	W2	H1	H2
M9RZ90G4L	M0PC30M20A	50.2 (1.98)	35 (1.38)	45.5 (1.79)	47 (1.85)	5 (0.20)	M0PC5835G	58 (2.28)	35 (1.38)	55 (2.17)	78 (3.07)
M9RZ90G4Y	M0PC7.5M37	50 (1.97)	34 (1.34)	45 (1.77)	45 (1.77)	6 (0.24)	M0PC5835G	58 (2.28)	35 (1.38)	55 (2.17)	78 (3.07)

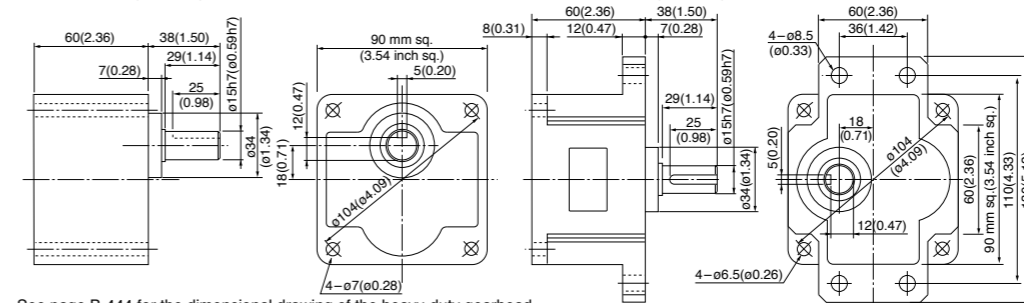
* Capacitors (single item) can also be purchased.

Gear head (dimensions)

Scale: 1/4, Unit: mm (inch)

MZ9G□B (ball bearing / hinge not attached)
Mass 1.4 kg (3.09 lb)

MY9G□B (ball bearing / hinge attached)
Mass 1.4 kg (3.09 lb)



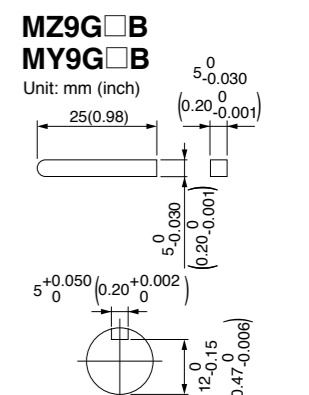
See page B-444 for the dimensional drawing of the heavy-duty gearhead. See page B-446 for the dimensional drawing of the right-angle shaft type gearhead.

Note) MZ / MY is available for a gear head of either type.

Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

Gear head combination B-121 Round shaft motor B-124 Decimal gear head B-448 Gear head -inch (U.S.A.) B-449 Controls C-4 Option D-2

Key and keyway (dimensions) [attachment]



Reversible motor (leadwire)

US CE UK CA 90 mm (3.54 inch) sq. 90 W

Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting current (A)	Starting torque N-m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)	Torque N-m (oz-in)			
90 mm sq.	M9RZ90G4LG M9RZ90G4LGA	4	90	100	50	30	195	2.0	1175	0.73 (104)	3.0	0.68 (96.3)	32
					60		203	2.0	1525	0.57 (80.7)	2.9	0.68 (96.3)	(250 V)
	M9RZ90G4DG M9RZ90G4DGA	4	90	110	60	30	201	1.8	1550	0.55 (77.9)	3.1	0.72 (102)	28
					60		209	1.8	1575	0.55 (77.9)	3.2	0.79 (112)	(250 V)
	M9RZ90G4YG M9RZ90G4YGA	4	90	200	50	30	185	0.93	1175	0.73 (104)	1.4	0.68 (96.3)	8
					60		206	1.1	1500	0.57 (80.7)	1.4	0.68 (96.3)	(450 V)
	M9RZ90G4GG M9RZ90G4GGA	4	90	220	50	30	191	0.89	1225	0.70 (99.1)	1.5	0.72 (102)	7
					60		197	0.90	1550	0.55 (77.9)	1.4	0.72 (102)	(450 V)
					50		202	0.92	1250	0.69 (97.7)	1.6	0.79 (112)	
					60		204	0.88	1575	0.55 (77.9)	1.5	0.79 (112)	

- The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-124.
- The models with a motor model number to which "A" is suffixed are not equipped with a capacitor cap.
- The models with a motor model number to which "A" is suffixed are not sold or available in Japan.
- For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.

Unit of permissible torque: upper (N·m) / lower (lb-in)

Reduction ratio	Speed (r/min)																									
	50 Hz	60 Hz	500	416.7	300	250	200	166.7	150	120	100	83.3	75	60	50	41.7	30	25	20	16.7	15	12.5	10	8.3	7.5	
Applicable gear head	MZ9G3B to MZ9G200B (ball bearing / hinge not attached)	50 Hz	1.37 (12.1)	1.67 (14.8)	2.25 (19.9)	2.74 (24.3)	3.43 (30.4)	4.12 (36.5)	4.51 (39.9)	5.68 (50.3)	6.76 (59.8)	8.04 (71.2)	9.02 (79.8)	10.9 (96.5)	13.0 (115)	15.7 (139)	19.6 (173)									
		60 Hz	1.18 (10.4)	1.37 (12.1)	1.86 (16.5)	2.25 (19.9)	2.84 (25.1)	3.43 (30.4)	3.72 (32.9)	4.70 (41.6)	5.68 (50.3)	6.76 (59.8)	7.55 (66.8)	9.21 (81.5)	10.9 (96.5)	13.0 (115)	18.3 (162)									
Rotational direction		Same as motor rotational direction										Reverse to motor rotational direction														

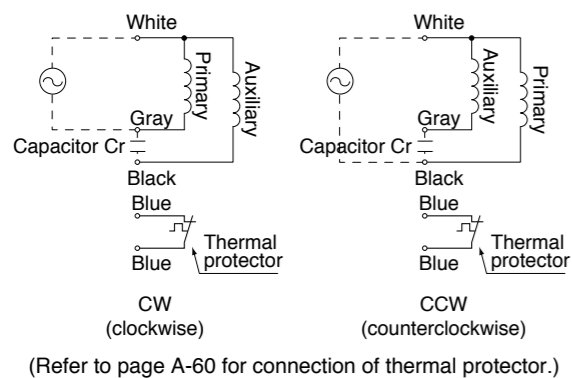
Permissible torque at output shaft of gear head using decimal gear head

* For external dimensions of the decimal gear head, refer to page B-448.

Applicable gear head	Reduction ratio	Speed (r/min)															
		250	300	360	500	600	750	900	1000	1200	1500	1800	2000				
MZ9G□B (ball bearing / hinge not attached)	MZ9G10XB	50 Hz	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8	0.75			
		60 Hz	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1	0.9			
MY9G□B (ball bearing / hinge attached)		Permissible torque	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)			
		Rotational direction	Reverse to motor rotational direction												Same as motor rotational direction		

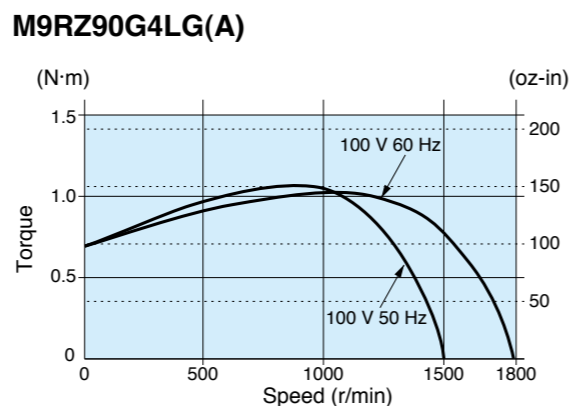
Refer to pages B-444 and B-445 for the allowable shaft torque of the heavy-duty gearhead.
Refer to page B-446 for the allowable shaft torque of the right-angle shaft type gearhead.

Connection diagram



(Refer to page A-60 for connection of thermal protector.)

Speed-torque characteristics

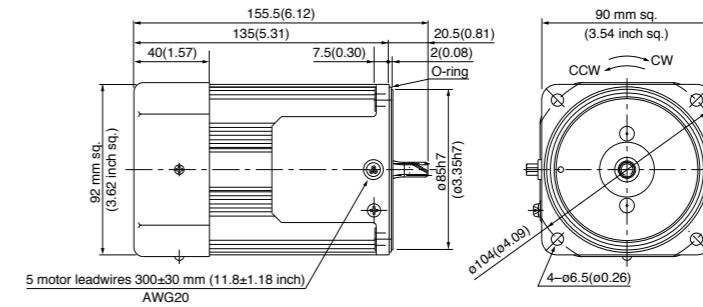


Motor (dimensions)

Scale: 1/4, Unit: mm (inch)

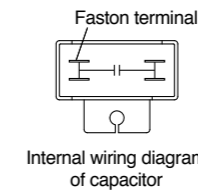
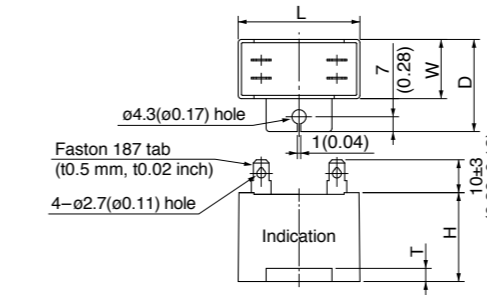
M9RZ90G4LG(A)	4P	90 W	100 V (with fan)
M9RZ90G4DG(A)	4P	90 W	110 V / 115 V (with fan)
M9RZ90G4YG(A)	4P	90 W	200 V (with fan)
M9RZ90G4GG(A)	4P	90 W	220 V / 230 V (with fan)

Mass	Helical gear	Module	Number of teeth
3.2 kg (7.05 lb)		0.6	9



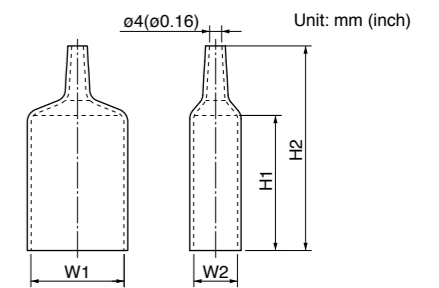
Capacitor (dimensions) [attachment]

Unit: mm (inch)



Capacitor cap (dimensions) [attachment]

Unit: mm (inch)



Capacitor dimension list

Unit: upper (mm) / lower (inch)

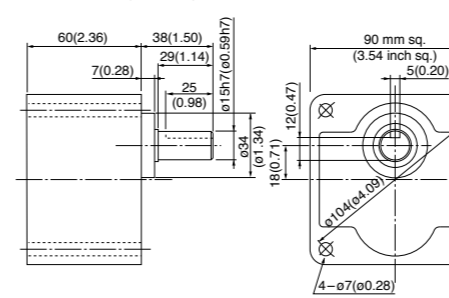
Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	Capacitor cap (attachment)	W1	W2	H1	H2
M9RZ90G4LG(A)	M0PC32M25G	58 (2.28)	35 (1.38)	50 (1.97)	50 (1.97)	4 (0.16)	M0PC5835G	58 (2.28)	35 (1.38)	55 (2.17)	78 (3.07)
M9RZ90G4DG(A)	M0PC28M25G	58 (2.28)	35 (1.38)	50 (1.97)	50 (1.97)	4 (0.16)	M0PC5835G	58 (2.28)	35 (1.38)	55 (2.17)	78 (3.07)
M9RZ90G4YG(A)	M0PC8M45G	58 (2.28)	35 (1.38)	50 (1.97)	50 (1.97)	4 (0.16)	M0PC5835G	58 (2.28)	35 (1.38)	55 (2.17)	78 (3.07)
M9RZ90G4GG(A)	M0PC7M45G	58 (2.28)	35 (1.38)	50 (1.97)	50 (1.97)	4 (0.16)	M0PC5835G	58 (2.28)	35 (1.38)	55 (2.17)	78 (3.07)

* The models with a motor model number to which "A" is suffixed are not equipped with a capacitor cap.
* Capacitors (single item), capacitors cap (single item) can also be purchased.

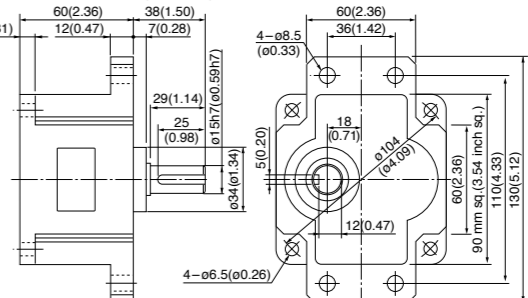
Gear head (dimensions)

Scale: 1/4, Unit: mm (inch)

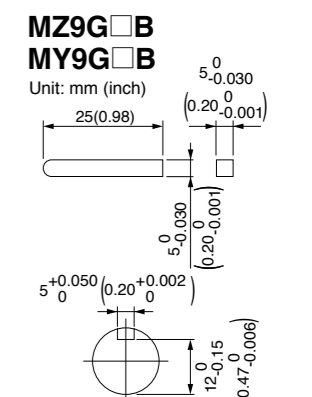
MZ9G□B (ball bearing / hinge not attached)
Mass 1.4 kg (3.09 lb)



MY9G□B (ball bearing / hinge attached)
Mass 1.4 kg (3.09 lb)



Key and keyway (dimensions) [attachment]



See page B-444 for the dimensional drawing of the heavy-duty gearhead.
See page B-446 for the dimensional drawing of the right-angle shaft type gearhead.

Note) MZ / MY is available for a gear head of either type.

(Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

* Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

Features B-64 System configuration B-65 Coding system B-65 Model list B-68

Gear head combination B-121 Round shaft motor B-124 Decimal gear head B-448 Gear head -inch (U.S.A.) B-449 Controls C-4 Option D-2

Induction motor
Reversible motor
3-phase motor
Electromagnetic brake motor
Variable speed induction motor
Variable speed reversible motor
Variable speed electromagnetic brake single-phase motor
Variable speed unit motor
C&B motor
2-pole round shaft motor
Gear head
Gear head -inch (U.S.A.)

Reversible motor (sealed connector)

US CE UK CA 80 mm (3.15 inch) sq. 25 W

Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting current (A)	Starting torque N-m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)	Torque N-m (oz-in)			
80 mm sq.	M8RX25GK4LG M8RX25GK4LGA	4	25	100	50	30	59	0.60	1250	0.19 (26.9)	1.1	0.19 (26.9)	10 (250 V)
					60		61	0.61	1550	0.15 (21.2)	1.1	0.19 (26.9)	
	M8RX25GK4DG M8RX25GK4DGA	4	25	110	60	30	58	0.53	1575	0.15 (21.2)	1.1	0.17 (24.1)	8 (250 V)
					60		61	0.53	1600	0.15 (21.2)	1.2	0.19 (26.9)	
	M8RX25GK4YG M8RX25GK4YGA	4	25	200	50	30	59	0.30	1200	0.20 (28.3)	0.45	0.19 (26.9)	2.5 (450 V)
					60		66	0.34	1525	0.16 (22.7)	0.46	0.19 (26.9)	
	M8RX25GK4GG M8RX25GK4GGA	4	25	220	50	30	60	0.28	1225	0.19 (26.9)	0.47	0.18 (25.5)	2 (450 V)
					60		60	0.27	1550	0.15 (21.2)	0.46	0.18 (25.5)	
					50		62	0.28	1275	0.19 (26.9)	0.49	0.19 (26.9)	
					60		62	0.27	1575	0.15 (21.2)	0.48	0.19 (26.9)	

- The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-124.
- The models with a motor model number to which "A" is suffixed are not equipped with a capacitor cap. The models with a motor model number to which "A" is suffixed are not sold or available in Japan.
- For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.

Unit of permissible torque: upper (N·m) / lower (lb-in)

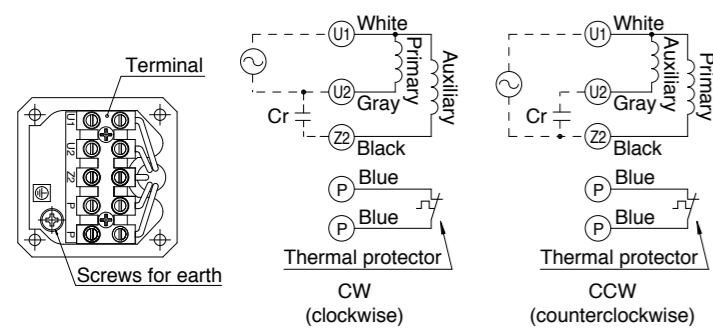
Reduction ratio	Speed (r/min)																								
	50 Hz	60 Hz	500	416.7	300	250	200	166.7	150	120	100	83.3	75	60	50	41.7	30	25	20	16.7	15	12.5	10	8.3	
Applicable gear head	MX8G3B to MX8G180B (ball bearing)	50 Hz	0.39 (3.45)	0.47 (4.16)	0.66 (5.84)	0.78 (6.90)	0.98 (8.67)	1.18 (10.4)	1.27 (11.2)	1.57 (13.9)	1.96 (17.3)	2.35 (20.8)	2.55 (22.6)	3.14 (27.8)	3.82 (33.8)	4.61 (40.8)	6.37 (56.4)	7.64 (67.6)							7.84 (69.4)
		60 Hz	0.32 (2.83)	0.39 (3.45)	0.55 (4.87)	0.66 (5.84)	0.81 (7.17)	0.98 (8.67)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.96 (17.3)	2.06 (18.2)	2.65 (23.5)	3.14 (27.8)	3.82 (33.8)	5.29 (46.8)	6.37 (56.4)							7.84 (69.4)
Rotational direction		Same as motor rotational direction												Reverse to motor rotational direction											

Permissible torque at output shaft of gear head using decimal gear head

* For external dimensions of the decimal gear head, refer to page B-448.

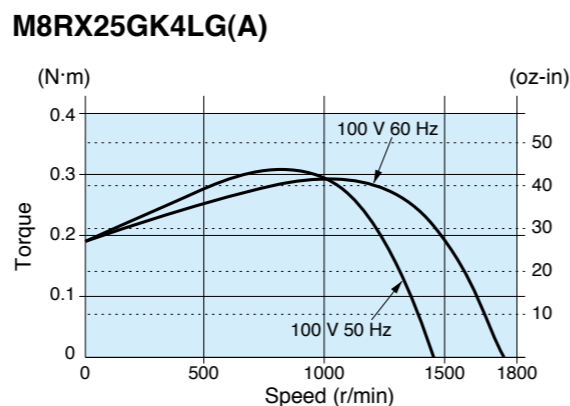
Applicable gear head	Reduction ratio	Speed (r/min)												
		200	250	300	360	500	600	750	900	1000	1200	1500	1800	
Bearing	Decimal gear head	50 Hz	7.5	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8
		60 Hz	9	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1
MX8G□B (ball bearing) MX8G□M (metal bearing)	MX8G10XB	Permissible torque	N·m (lb-in)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)	7.84 (69.4)
		Rotational direction	Same as motor rotational direction		Reverse to motor rotational direction									

Connection diagram



(Refer to page A-60 for connection of thermal protector.)

Speed-torque characteristics

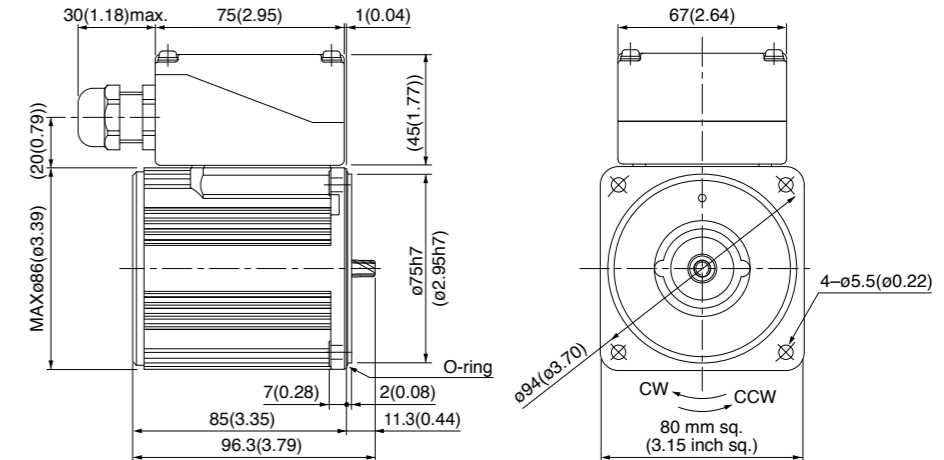


Motor (dimensions)

Scale: 1/3, Unit: mm (inch)

- M8RX25GK4LG(A) 4P 25 W 100 V
- M8RX25GK4DG(A) 4P 25 W 110 V / 115 V
- M8RX25GK4YG(A) 4P 25 W 200 V
- M8RX25GK4GG(A) 4P 25 W 220 V / 230 V

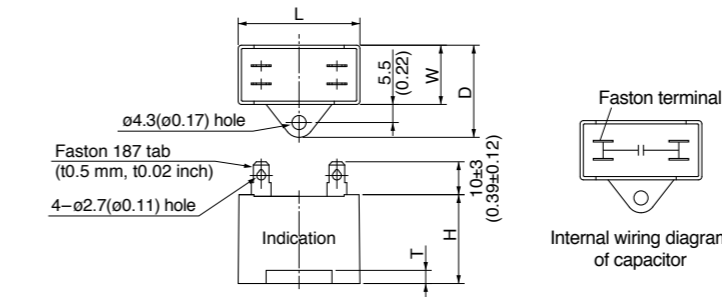
Mass 1.8 kg 3.97 lb
Helical gear
Module 0.5
Number of teeth 9



* Diameter of applicable cabtyre cable to be ø8(0.31) to ø12(0.47).

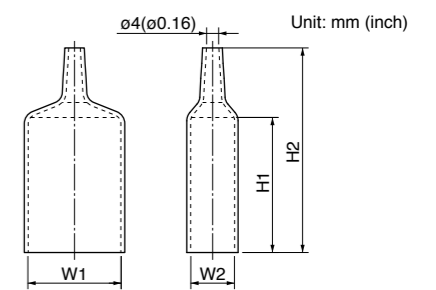
Capacitor (dimensions) [attachment]

Unit: mm (inch)



Capacitor cap (dimensions) [attachment]

Unit: mm (inch)



Capacitor dimension list

Unit: upper (mm) / lower (inch)

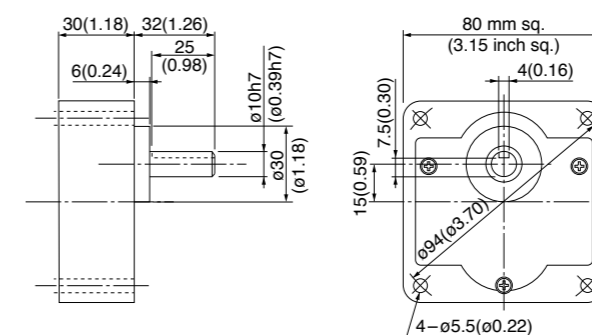
Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	Capacitor cap (attachment)	W1	W2	H1	H2
M8RX25GK4LG(A)	M0PC10M25G	58 (2.28)	21 (0.83)	31 (1.22)	31 (1.22)	4 (0.16)	M0PC5821G	58 (2.28)	21 (0.83)	55 (2.17)	78 (3.07)
M8RX25GK4DG(A)	M0PC8M25G	48 (1.89)	21 (0.83)	31 (1.22)	31 (1.22)	4 (0.16)	M0PC4821G	48 (1.89)	21 (0.83)	55 (2.17)	78 (3.07)
M8RX25GK4YG(A)	M0PC2.5M45G	48 (1.89)	21 (0.83)	31 (1.22)	31 (1.22)	4 (0.16)	M0PC4821G	48 (1.89)	21 (0.83)	55 (2.17)	78 (3.07)
M8RX25GK4GG(A)	M0PC2M45G	48 (1.89)	19 (0.75)	29 (1.14)	29 (1.14)	4 (0.16)	M0PC4819G	48 (1.89)	19 (0.75)	55 (2.17)	78 (3.07)

- The models with a motor model number to which "A" is suffixed are not equipped with a capacitor cap.
- Capacitors (single item), capacitors cap (single item) can also be purchased.

Gear head (dimensions)

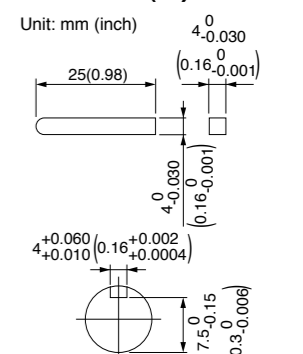
Scale: 1/3, Unit: mm (inch)

- MX8G□B (ball bearing) Mass 0.6 kg (1.32 lb)
- MX8G□M (metal bearing) Mass 0.6 kg (1.32 lb)



Key and keyway (dimensions) [attachment]

Unit: mm (inch)



* Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

Features B-64 System configuration B-65 Coding system B-65 Model list B-68

(Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

Gear head combination B-122 Round shaft motor B-124 Decimal gear head B-448 Gear head -inch (U.S.A.) B-449 Controls C-4 Option D-2

Induction motor
Reversible motor
3-phase motor
Electromagnetic brake motor
Variable speed induction motor
Variable speed reversible motor
Variable speed electromagnetic brake single-phase motor
Variable speed unit motor
2-pole round shaft motor
Gear head
Gear head -inch (U.S.A.)

Reversible motor (sealed connector)

90 mm (3.54 inch) sq. 40 W

Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting current (A)	Starting torque N-m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)	Torque N-m (oz-in)			
90 mm sq.	M9RX40GK4L	4	40	100	50	30	94	0.96	1200	0.32 (45.3)	1.6	0.27 (38.2)	15 (210 V)
					60		93	0.93	1525	0.25 (35.4)	1.5	0.26 (36.8)	
	M9RX40GK4Y	4	40	200	50	30	92	0.48	1200	0.32 (45.3)	0.81	0.28 (39.7)	3.8 (400 V)
					60		93	0.46	1525	0.25 (35.4)	0.77	0.29 (41.1)	

The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-124. For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.

Unit of permissible torque: upper (N·m) / lower (lb-in)

Reduction ratio	Speed (r/min)																		
	50 Hz	60 Hz	500	416.7	300	250	200	166.7	150	120	100	83.3	75	60	50	36	30	25	20
3	0.66 (5.84)	0.78 (6.90)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.86 (16.5)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.92 (34.7)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	7.94 (70.3)	9.80 (86.7)				
3.6	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
5	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
6	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
7.5	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
9	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
10	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
12.5	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
15	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
18	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
20	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
25	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
30	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
36	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
50	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
60	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
75	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
90	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
100	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
120	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
150	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				
180	0.66 (5.84)	0.66 (5.84)	0.90 (7.97)	1.08 (9.56)	1.27 (11.2)	1.57 (13.9)	1.76 (15.6)	2.25 (19.9)	2.74 (24.3)	3.23 (28.6)	3.53 (31.2)	4.41 (39.0)	5.29 (46.8)	6.37 (56.4)	8.82 (78.1)				

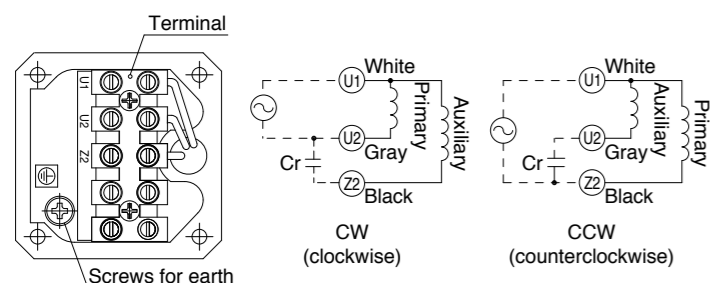
Permissible torque at output shaft of gear head using decimal gear head

For external dimensions of the decimal gear head, refer to page B-448.

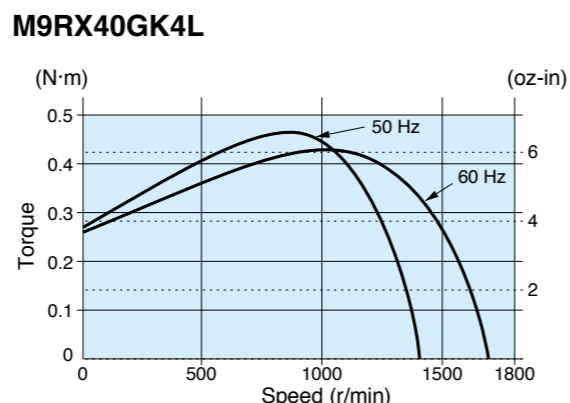
Applicable gear head	Reduction ratio	Speed (r/min)													
		200	250	300	360	500	600	750	900	1000	1200	1500	1800		
MX9G□B (ball bearing)	MX9G10XB	50 Hz	7.5 (86.7)	6 (86.7)	5 (86.7)	4.2 (86.7)	3 (86.7)	2.5 (86.7)	2 (86.7)	1.7 (86.7)	1.5 (86.7)	1.3 (86.7)	1 (86.7)	0.8 (86.7)	
		60 Hz	9 (86.7)	7.2 (86.7)	6 (86.7)	5 (86.7)	3.6 (86.7)	3 (86.7)	2.4 (86.7)	2 (86.7)	1.8 (86.7)	1.5 (86.7)	1.2 (86.7)	1 (86.7)	
MX9G□M (metal bearing)	MX9G10XB	Permissible torque	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	9.80 (86.7)	
		Rotational direction	Same as motor rotational direction												Reverse to motor rotational direction

Refer to page B-446 for the allowable shaft torque of the right-angle shaft type gearhead.

Connection diagram



Speed-torque characteristics



Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

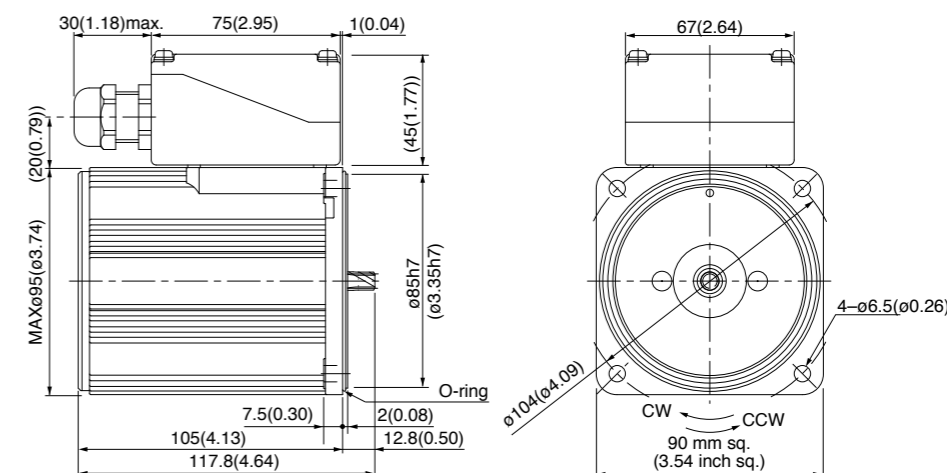
Features B-64 System configuration B-65 Coding system B-65 Model list B-68

Motor (dimensions)

Scale: 1/3, Unit: mm (inch)

M9RX40GK4L 4P 40 W 100 V
M9RX40GK4Y 4P 40 W 200 V

Mass 2.8 kg 6.17 lb
Helical gear
Module 0.55
Number of teeth 9



* Diameter of applicable cabtyre cable to be ø8(0.31) to ø12(0.47).

Capacitor (dimensions) [attachment]

Unit: mm (inch)

Capacitor cap (dimensions) [option]

Unit: mm (inch)



Capacitor dimension list

Unit: upper (mm) / lower (inch)

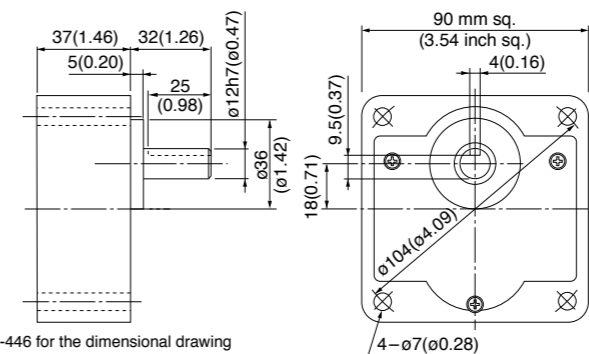
Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	Capacitor cap (option)	W1	W2	W3	W4
M9RX40GK4L	M0PC15M20	39.5 (1.56)	26.7 (1.05)	37 (1.46)	41 (1.61)	4 (0.16)	M0PC3926	39.5 (1.56)	37.5 (1.48)	26 (1.02)	25 (0.98)
M9RX40GK4Y	M0PC3.8M40	50 (1.97)	26.7 (1.05)	37.5 (1.48)	38 (1.50)	4 (0.16)	M0PC5026	50 (1.97)	48 (1.89)	26 (1.02)	22 (0.87)

* Capacitors (single item) can also be purchased.

Gear head (dimensions)

Scale: 1/3, Unit: mm (inch)

MX9G□B (ball bearing) Mass 0.8 kg(1.76 lb) MX9G□M (metal bearing) Mass 0.8 kg(1.76 lb)



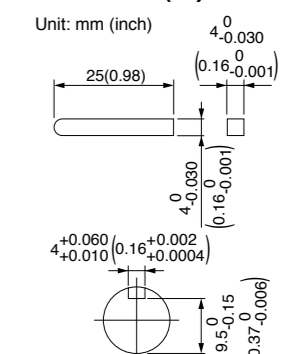
See page B-446 for the dimensional drawing of the right-angle shaft type gearhead.

(Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

Gear head combination B-122 Round shaft motor B-124 Decimal gear head B-448 Gear head -inch (U.S.A.) B-449 Controls C-4 Option D-2

Key and keyway (dimensions) [attachment]

MX9G□B(M)



Reversible motor (sealed connector)

90 mm (3.54 inch) sq. 60 W

Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting current (A)	Starting torque N-m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)	Torque N-m (oz-in)			
90 mm sq.	M9RZ60GK4L	4	60	100	50	30	144	1.5	1200	0.46 (65.1)	2.4	0.50 (70.8)	25 (200 V)
							163	1.5	1500	0.39 (55.2)	2.3	0.53 (75.1)	
	M9RZ60GK4Y	4	60	200	50	30	146	0.74	1225	0.46 (65.1)	1.2	0.53 (75.1)	6.2 (375 V)
							153	0.77	1525	0.39 (55.2)	1.3	0.55 (77.9)	

The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-124. For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.

Unit of permissible torque: upper (N·m) / lower (lb-in)

Reduction ratio	Speed (r/min)																									
	50 Hz	60 Hz	500	416.7	300	250	200	166.7	150	120	100	83.3	75	60	50	41.7	30	25	20	16.7	15	12.5	10	8.3	7.5	
Applicable gear head	MZ9G3B to MZ9G200B (ball bearing / hinge not attached)	50 Hz	0.98 (8.7)	1.18 (10.4)	1.57 (13.9)	1.96 (17.3)	2.35 (20.8)	2.94 (26.0)	3.14 (27.8)	3.92 (34.7)	4.70 (41.6)	5.59 (49.5)	6.27 (55.5)	7.55 (66.8)	9.11 (80.6)	11.0 (97.4)	15.2 (135)	17.8 (158)								19.6 (173)
		60 Hz	0.78 (6.9)	0.98 (8.7)	1.37 (12.1)	1.57 (13.9)	1.96 (17.3)	2.35 (20.8)	2.65 (23.5)	3.33 (29.5)	3.92 (34.7)	4.70 (41.6)	5.29 (46.8)	6.47 (57.3)	7.55 (66.8)	9.11 (80.6)	12.6 (112)	15.2 (135)								19.6 (173)
Rotational direction	Same as motor rotational direction											Reverse to motor rotational direction														

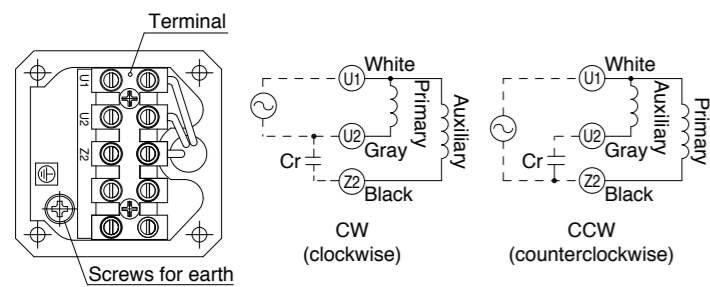
Permissible torque at output shaft of gear head using decimal gear head

* For external dimensions of the decimal gear head, refer to page B-448.

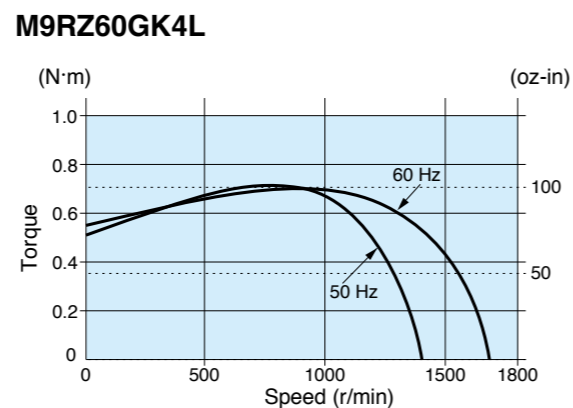
Applicable gear head	Reduction ratio	Speed (r/min)													
		250	300	360	500	600	750	900	1000	1200	1500	1800	2000		
MZ9G□B (ball bearing / Hinge not attached)	MZ9G10XB	50 Hz	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8	0.75	
		60 Hz	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1	0.9	
MY9G□B (ball bearing / Hinge attached)	MZ9G10XB	Permissible torque	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (200)	
		Rotational direction	Reverse to motor rotational direction											Same as motor rotational direction	

Refer to pages B-444 and B-445 for the allowable shaft torque of the heavy-duty gearhead. Refer to page B-446 for the allowable shaft torque of the right-angle shaft type gearhead.

Connection diagram



Speed-torque characteristics



* Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

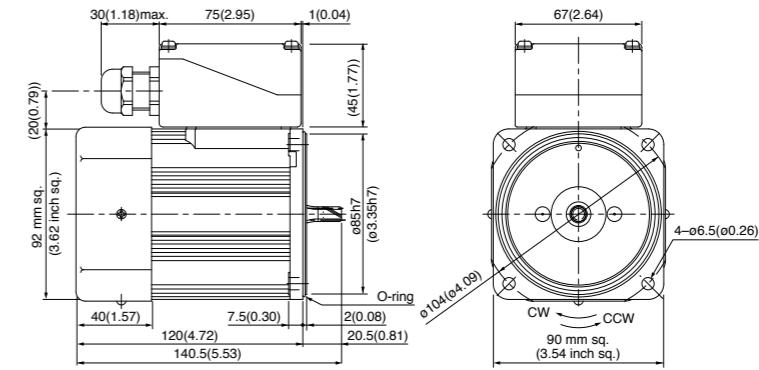
Features B-64 System configuration B-65 Coding system B-65 Model list B-68

Motor (dimensions)

Scale: 1/4, Unit: mm (inch)

M9RZ60GK4L 4P 60 W 100 V (with fan)
M9RZ60GK4Y 4P 60 W 200 V (with fan)

Mass 3.0 kg 6.61 lb
Helical gear
Module 0.5
Number of teeth 9



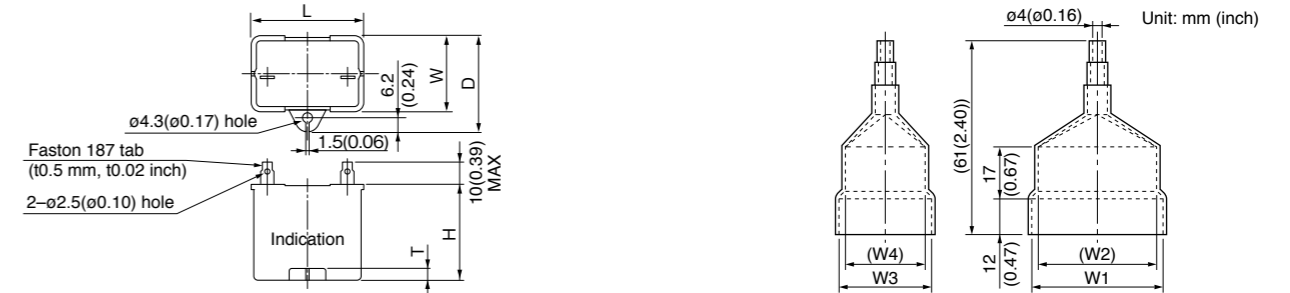
* Diameter of applicable cable to be ø8(0.31) to ø12(0.47).

Capacitor (dimensions) [attachment]

Unit: mm (inch)

Capacitor cap (dimensions) [option]

Unit: mm (inch)



Capacitor dimension list

Unit: upper (mm) / lower (inch)

Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	Capacitor cap (option)	W1	W2	W3	W4
M9RZ60GK4L	M0PC25M20	50.2 (1.98)	31 (1.22)	41 (1.61)	42 (1.65)	5 (0.20)	M0PC5032	50 (1.97)	48 (1.89)	32.5 (1.28)	29.5 (1.16)
M9RZ60GK4Y	M0PC6.2M38	50 (1.97)	30.5 (1.20)	41 (1.61)	41.5 (1.63)	4 (0.16)	M0PC5032	50 (1.97)	48 (1.89)	32.5 (1.28)	29.5 (1.16)

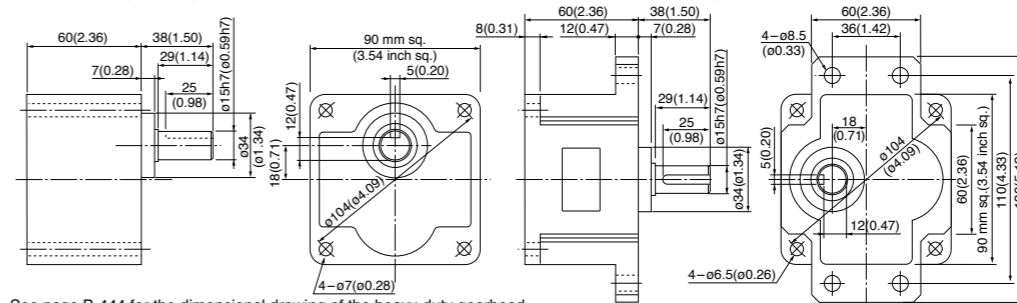
* Capacitors (single item) can also be purchased.

Gear head (dimensions)

Scale: 1/4, Unit: mm (inch)

MZ9G□B (ball bearing / hinge not attached)
Mass 1.4 kg(3.09 lb)

MY9G□B (ball bearing / hinge attached)
Mass 1.4 kg(3.09 lb)



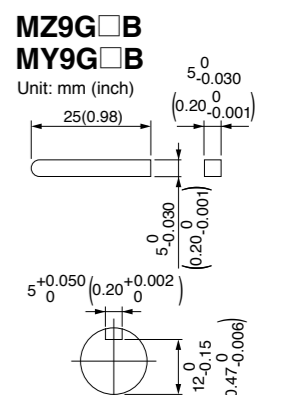
See page B-444 for the dimensional drawing of the heavy-duty gearhead. See page B-446 for the dimensional drawing of the right-angle shaft type gearhead.

Note) MZ / MY is available for a gear head of either type.

(Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

Gear head combination B-122 Round shaft motor B-124 Decimal gear head B-448 Gear head -inch (U.S.A.) B-449 Controls C-4 Option D-2

Key and keyway (dimensions) [attachment]



Reversible motor (sealed connector)

US CE UK CA CCC 90 mm (3.54 inch) sq. 60 W

Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting current (A)	Starting torque N-m (oz-in)	Capacitor (μF) (rated voltage)
							Input (W)	Current (A)	Speed (r/min)	Torque N-m (oz-in)			
90 mm sq.	M9RZ60GK4LG M9RZ60GK4LGA	4	60	100	50	30	137	1.4	1250	0.46 (65.1)	2.4	0.51 (72.2)	25
					60		147	1.5	1550	0.37 (52.4)	2.4	0.53 (75.1)	(250 V)
	M9RZ60GK4DG M9RZ60GK4DGA	4	60	110	60	30	138	1.3	1575	0.36 (51.0)	2.5	0.50 (70.8)	20
					115		144	1.3	1600	0.36 (51.0)	2.6	0.55 (77.9)	(250 V)
	M9RZ60GK4YG M9RZ60GK4YGA	4	60	200	50	30	135	0.67	1200	0.48 (68.0)	1.0	0.51 (72.2)	6
					60		158	0.81	1500	0.38 (53.8)	1.1	0.53 (75.1)	(450 V)
	M9RZ60GK4GG M9RZ60GK4GGA	4	60	220	50	30	137	0.64	1225	0.47 (66.6)	1.1	0.50 (70.8)	5
					60		145	0.67	1550	0.37 (52.4)	1.1	0.52 (73.6)	(450 V)
					50		145	0.66	1275	0.45 (63.7)	1.1	0.57 (80.7)	
					60		151	0.67	1575	0.36 (51.0)	1.1	0.57 (80.7)	

- The specifications and wire connections of the round shaft motor are the same as those of the pinion shaft type. For the dimensional outline drawing, refer to page B-124.
- The models with a motor model number to which "A" is suffixed are not equipped with a capacitor cap.
- The models with a motor model number to which "A" is suffixed are not sold or available in Japan.
- For the combination of motor and gearhead, refer to pages B-68 and B-69 of applicable gearheads in the model list.

Permissible torque at output shaft of gear head

* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2% to 20%.

Unit of permissible torque: upper (N·m) / lower (lb-in)

Reduction ratio	Speed (r/min)																								
	50 Hz	60 Hz	500	416.7	300	250	200	166.7	150	120	100	83.3	75	60	50	41.7	30	25	20	16.7	15	12.5	10	8.3	7.5
Applicable gear head	MZ9G3B to MZ9G200B (ball bearing / hinge not attached)	50 Hz	0.98 (8.7)	1.18 (10.4)	1.57 (13.9)	1.96 (17.3)	2.35 (20.8)	2.94 (26.0)	3.14 (27.8)	3.92 (34.7)	4.70 (41.6)	5.59 (49.5)	6.27 (55.5)	7.55 (66.8)	9.11 (80.6)	11.0 (97.4)	15.2 (135)	17.8 (158)							19.6 (173)
		60 Hz	0.78 (6.9)	0.98 (8.7)	1.37 (12.1)	1.57 (13.9)	1.96 (17.3)	2.35 (20.8)	2.65 (23.5)	3.33 (29.5)	3.92 (34.7)	4.70 (41.6)	5.29 (46.8)	6.47 (57.3)	7.55 (66.8)	9.11 (80.6)	12.6 (112)	15.2 (135)							19.6 (173)
Rotational direction		Same as motor rotational direction										Reverse to motor rotational direction													

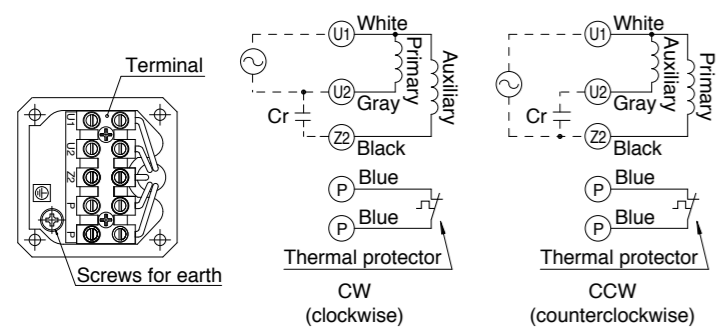
Permissible torque at output shaft of gear head using decimal gear head

* For external dimensions of the decimal gear head, refer to page B-448.

Applicable gear head	Reduction ratio	Speed (r/min)															
		250	300	360	500	600	750	900	1000	1200	1500	1800	2000				
Bearing	Decimal gear head	50 Hz	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8	0.75			
		60 Hz	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1	0.9			
MZ9G□B (ball bearing / hinge not attached) MY9G□B (ball bearing / hinge attached)	MZ9G10XB	Permissible torque	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)	19.6 (173)			
		Rotational direction	Reverse to motor rotational direction												Same as motor rotational direction		

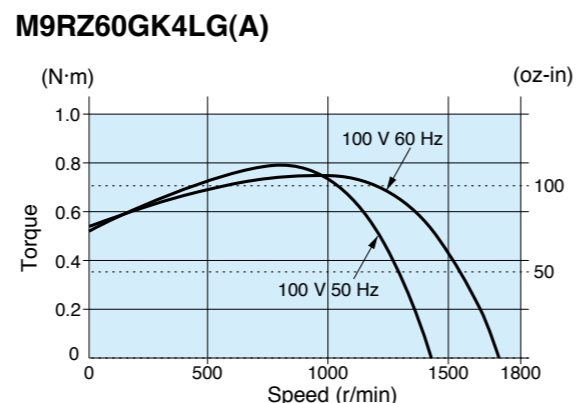
Refer to pages B-444 and B-445 for the allowable shaft torque of the heavy-duty gearhead.
Refer to page B-446 for the allowable shaft torque of the right-angle shaft type gearhead.

Connection diagram



(Refer to page A-60 for connection of thermal protector.)

Speed-torque characteristics



* Please read your User's manual carefully so that you will understand the operation and safety precautions before attempting to operate the system.

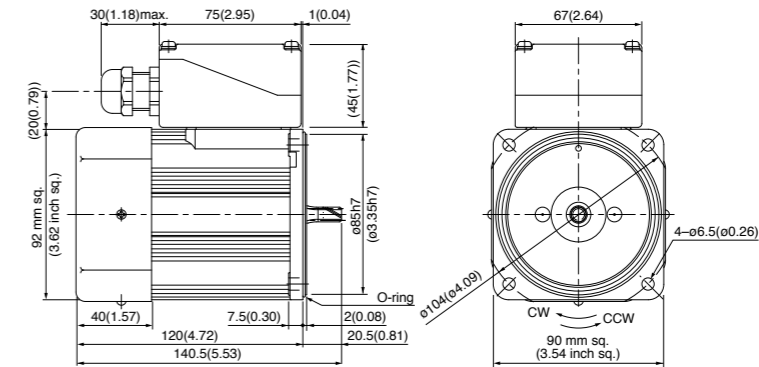
Features B-64 System configuration B-65 Coding system B-65 Model list B-68

Motor (dimensions)

Scale: 1/4, Unit: mm (inch)

M9RZ60GK4LG(A)	4P 60 W 100 V (with fan)
M9RZ60GK4DG(A)	4P 60 W 110 V / 115 V (with fan)
M9RZ60GK4YG(A)	4P 60 W 200 V (with fan)
M9RZ60GK4GG(A)	4P 60 W 220 V / 230 V (with fan)

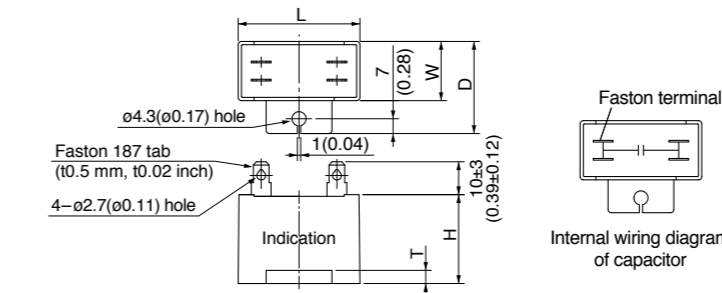
Mass	3.0 kg	6.61 lb
Helical gear	Module	0.6
	Number of teeth	9



* Diameter of applicable cable to be ø8(0.31) to ø12(0.47).

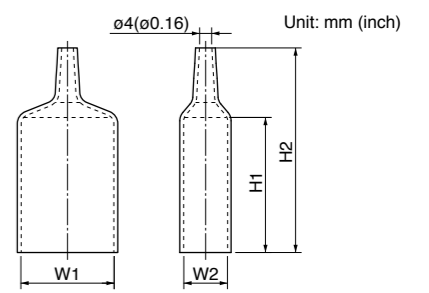
Capacitor (dimensions) [attachment]

Unit: mm (inch)



Capacitor cap (dimensions) [attachment]

Unit: mm (inch)



Capacitor dimension list

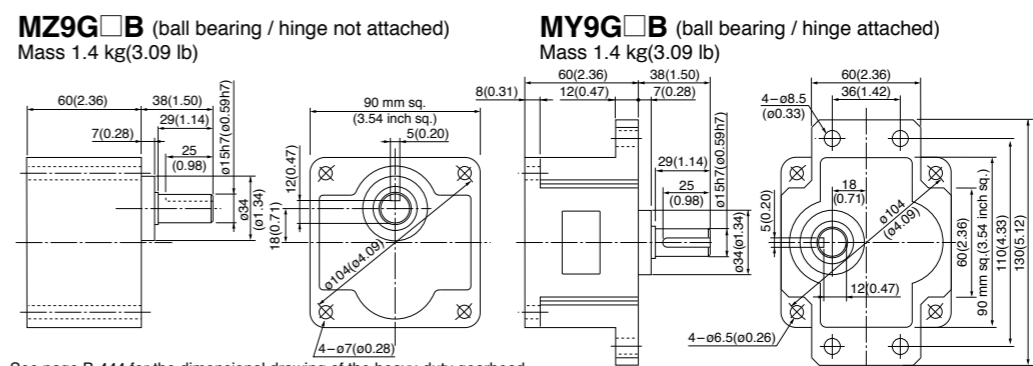
Unit: upper (mm) / lower (inch)

Model number of motor	Model number of capacitor (attachment)	L	W	D	H	T	Capacitor cap (attachment)	W1	W2	H1	H2
M9RZ60GK4LG(A)	M0PC25M25G	58 (2.28)	35 (1.38)	50 (1.97)	50 (1.97)	4 (0.16)	M0PC5835G	58 (2.28)	35 (1.38)	55 (2.17)	78 (3.07)
M9RZ60GK4DG(A)	M0PC20M25G	58 (2.28)	29 (1.14)	44 (1.73)	41 (1.61)	4 (0.16)	M0PC5829G	58 (2.28)	29 (1.14)	55 (2.17)	78 (3.07)
M9RZ60GK4YG(A)	M0PC6M45G	58 (2.28)	29 (1.14)	44 (1.73)	41 (1.61)	4 (0.16)	M0PC5829G	58 (2.28)	29 (1.14)	55 (2.17)	78 (3.07)
M9RZ60GK4GG(A)	M0PC5M45G	58 (2.28)	29 (1.14)	44 (1.73)	41 (1.61)	4 (0.16)	M0PC5829G	58 (2.28)	29 (1.14)	55 (2.17)	78 (3.07)

* The models with a motor model number to which "A" is suffixed are not equipped with a capacitor cap.
* Capacitors (single item), capacitors cap (single item) can also be purchased.

Gear head (dimensions)

Scale: 1/4, Unit: mm (inch)



See page B-444 for the dimensional drawing of the heavy-duty gearhead.
See page B-446 for the dimensional drawing of the right-angle shaft type gearhead.

Note) MZ / MY is available for a gear head of either type.

(Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

Gear head combination B-122 Round shaft motor B-124 Decimal gear head B-448 Gear head -inch (U.S.A.) B-449 Controls C-4 Option D-2

Key and keyway (dimensions) [attachment]

