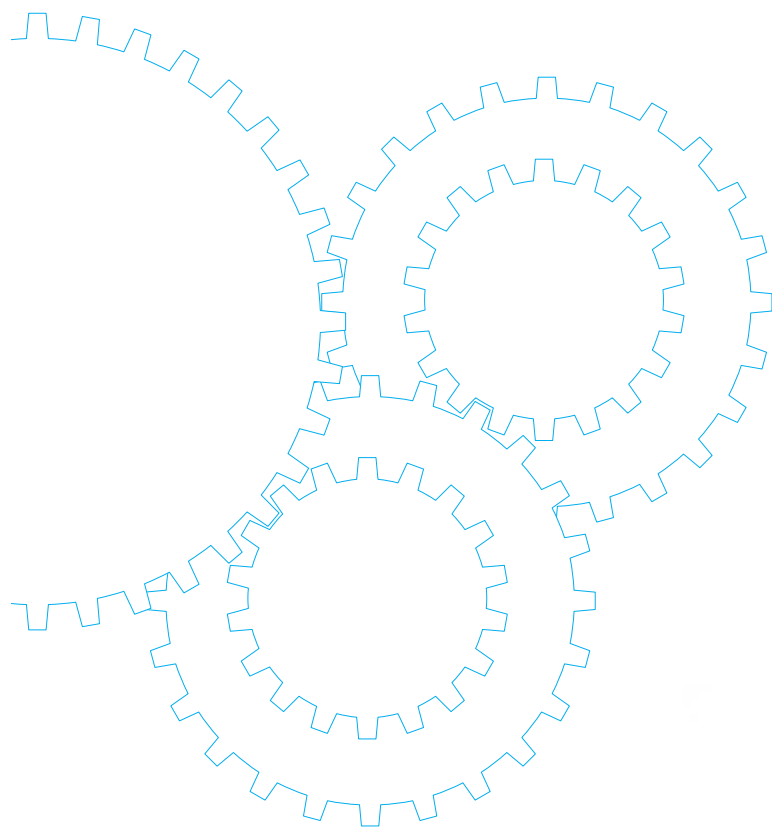


3-phase Motor



Contents

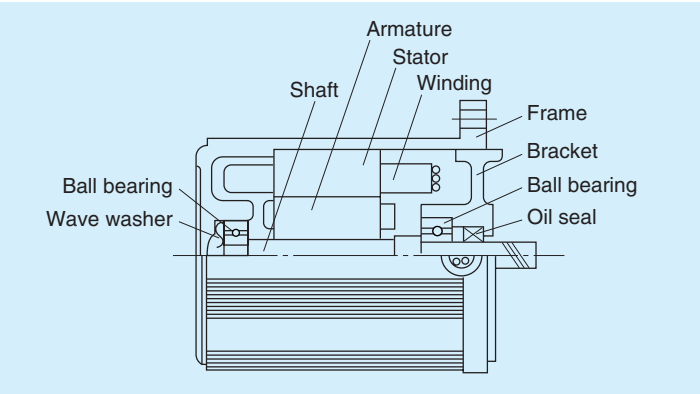
• Motor Overview	B-126
• Model list	B-128
• Product information for each model	B-130
• Gear head combination dimensions	B-162
• Round shaft motor dimensions	B-164

Outline of 3-phase motor

Features

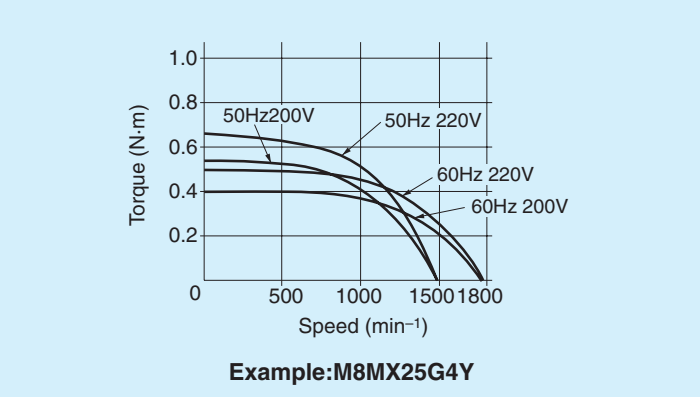
- The 3-phase motor is an induction motor for 3-phase power.
- Continuous time rating
- The motor with national specifications is of heatproof class 120 (E); the motor with specifications compliant with overseas standards is of heatproof class 130 (B).

Construction

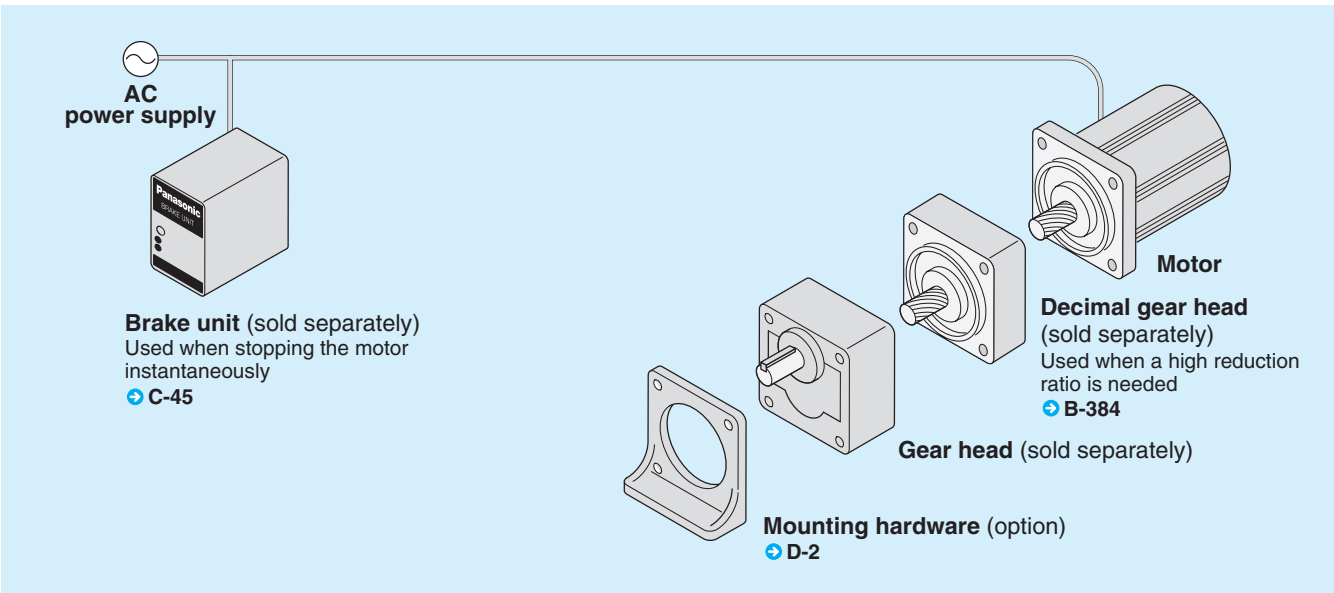


Characteristics

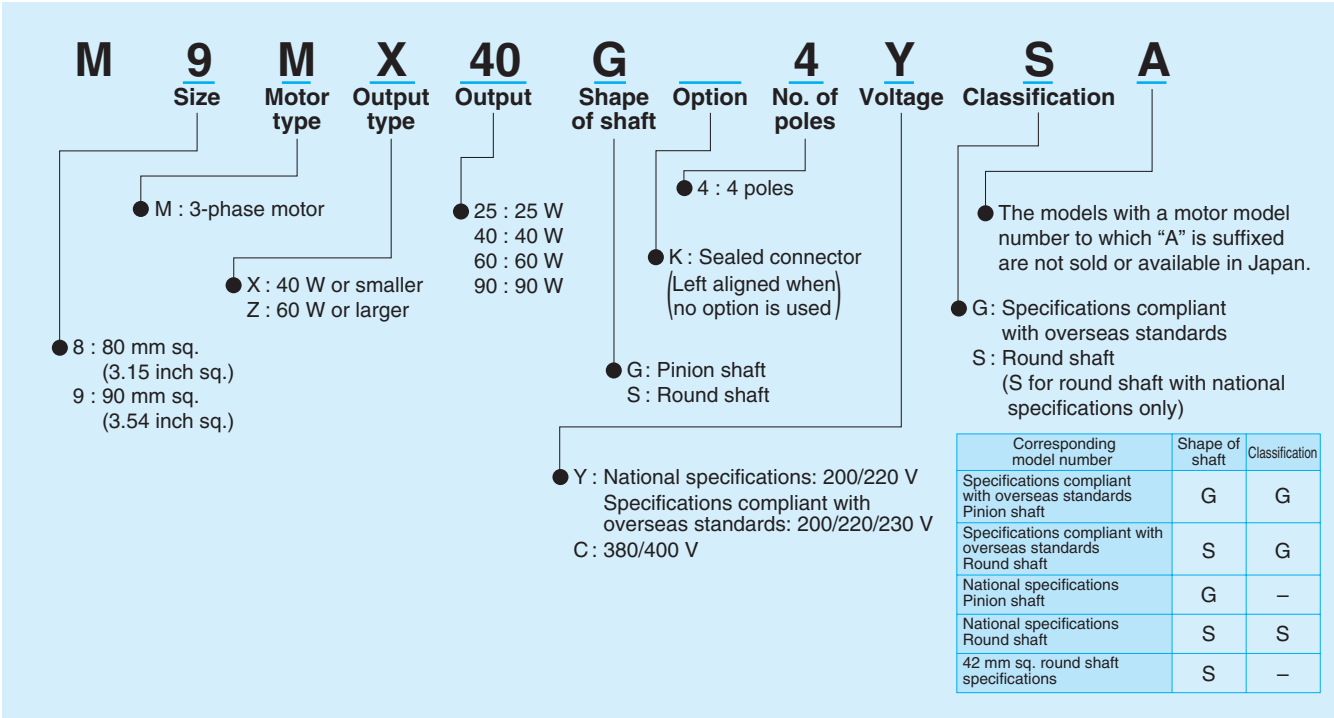
Speed-torque characteristics



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.

Model list of 3-phase motor

Pinion shaft motor

Applicable gear head

★ Motor compliant with overseas standards c   

Size	Output (W)	Leadwire type			Sealed connector type		
		Model number	Specifications	Page	Model number	Specifications	Page
80 mm sq. (3.15 inch sq.)	25	M8MX25G4Y	200/220V	B-130	M8MX25GK4Y	200/220V	B-146
		M8MX25G4YG(A)	200/220/230V ★	B-132	M8MX25GK4YG(A)	200/220/230V ★	B-148
					M8MX25GK4CG(A)	380/400V ★	B-148
90 mm sq. (3.54 inch sq.)	40	M9MX40G4Y	200/220V	B-134	M9MX40GK4Y	200/220V	B-150
		M9MX40G4YG(A)	200/220/230V ★	B-136	M9MX40GK4YG(A)	200/220/230V ★	B-152
					M9MX40GK4CG(A)	380/400V ★	B-152
	60	M9MZ60G4Y	200/220V	B-138	M9MZ60GK4Y	200/220V	B-154
		M9MZ60G4YG(A)	200/220/230V ★	B-140	M9MZ60GK4YG(A)	200/220/230V ★	B-156
					M9MZ60GK4CG(A)	380/400V ★	B-156
	90	M9MZ90G4Y	200/220V	B-142	M9MZ90GK4Y	200/220V	B-158
		M9MZ90G4YG(A)	200/220/230V ★	B-144	M9MZ90GK4YG(A)	200/220/230V ★	B-160
					M9MZ90GK4CG(A)	380/400V ★	B-160

■ Hinge attached

Standard gear head		High torque gear head	Right-angle gear head	Gear head -Inch (U.S.A.)	Decimal gear head
Ball bearing	metal bearing				
MX8G□B	MX8G□M	—	—	MX9G□BU	MX8G10XB
MX9G□B	MX9G□M	—	MX9G□R	MX9G□BU	MX9G10XB
MZ9G□B	—	MR9G□B	MZ9G□R	MZ9G□BU	MZ9G10XB
MY9G□B		MP9G□B			

* 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.

Round shaft motor

★ Motor compliant with overseas standards c   
Ⓟ Electrical Appliance and Material Safety Law

Size	Output (W)	Leadwire type		Sealed connector type	
		Model number	Specifications	Model number	Specifications
80 mm sq. (3.15 inch sq.)	25	M8MX25S4YS	200/220V	M8MX25SK4YS	200/220V Ⓟ
		M8MX25S4YG(A)	200/220/230V ★	M8MX25SK4YG(A)	200/220/230V ★ Ⓟ
				M8MX25SK4CG(A)	380/400V ★
90 mm sq. (3.54 inch sq.)	40	M9MX40S4YS	200/220V	M9MX40SK4YS	200/220V Ⓟ
		M9MX40S4YG(A)	200/220/230V ★	M9MX40SK4YG(A)	200/220/230V ★ Ⓟ
				M9MX40SK4CG(A)	380/400V ★
	60	M9MZ60S4YS	200/220V	M9MZ60SK4YS	200/220V Ⓟ
		M9MZ60S4YG(A)	200/220/230V ★	M9MZ60SK4YG(A)	200/220/230V ★ Ⓟ
				M9MZ60SK4CG(A)	380/400V ★
	90	M9MZ90S4YS	200/220V	M9MZ90SK4YS	200/220V Ⓟ
		M9MZ90S4YG(A)	200/220/230V ★	M9MZ90SK4YG(A)	200/220/230V ★ Ⓟ
				M9MZ90SK4CG(A)	380/400V ★

* 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-164.

<Notice>
380V/400V 3-phase round shaft motors with a sealed connector are not covered by the Electrical Appliance and Material Safety Law.

3-phase 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)
							Input (W)	Current (A)	Speed (min ⁻¹)	Torque N·m (oz·in)		
80 mm sq.	M8MX25G4Y	4	25	200	50	Cont.	50	0.25	1350	0.18 (25.5)	0.62	0.54 (76.5)
							47	0.22	1625	0.15 (21.2)	0.58	0.40 (56.6)
				220	60	Cont.	54	0.27	1375	0.18 (25.5)	0.67	0.66 (93.5)
							49	0.23	1650	0.15 (21.2)	0.64	0.50 (70.8)

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-164.

Permissible torque at output shaft of gear head

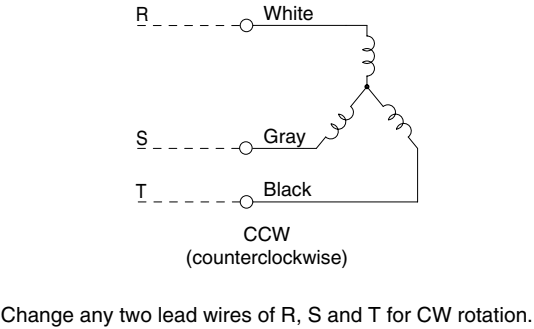
The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2 to 20%.

		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 (min ⁻¹)		50Hz	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
		60Hz	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)	50Hz	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)					
	MX8G3M to MX8G180M (metal bearing)	60Hz	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

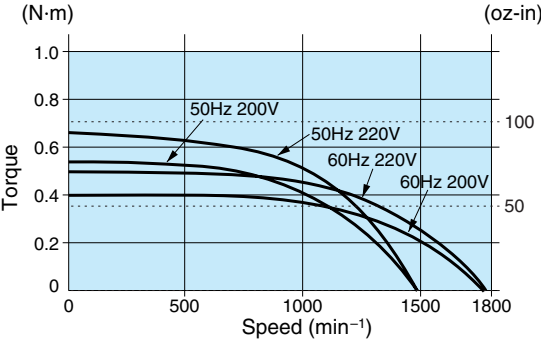
Applicable gear head		Reduction ratio		200	250	300	360	500	600	750	900	1000	1200	1500	1800
Bearing	Decimal gear head	Speed (min ⁻¹)	50Hz	7.5	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8
			60Hz	9	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1
MX8G□B (ball bearing) MX8G□M (metal bearing)	MX8G10XB	Permissible torque	N·m (lb·in)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

Connection diagram



Speed-torque characteristics

M8MX25G4Y



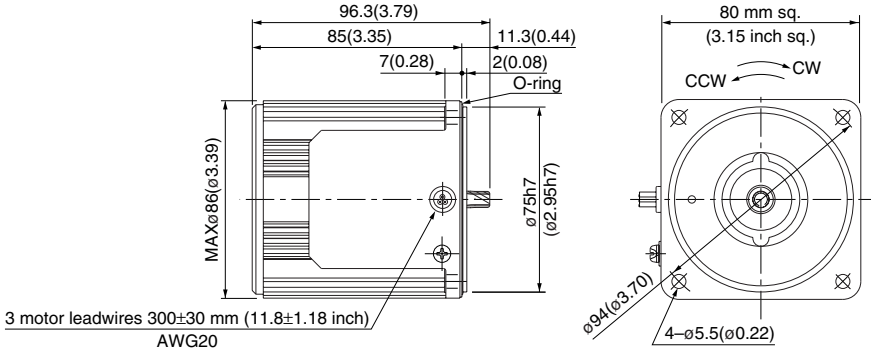
Motor (dimensions)

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

M8MX25G4Y

4P 25 W 200 V / 220 V

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



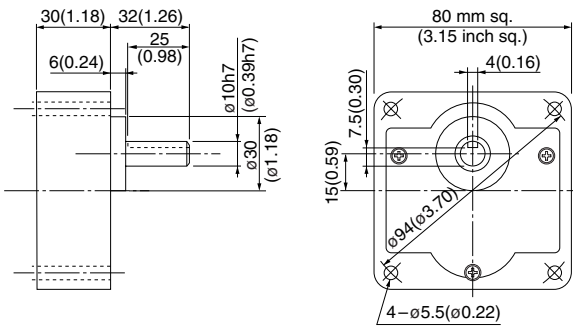
* Diameter of applicable cabtyre cable to be ø8(ø0.31) to ø12(ø0.47).

Gear head (dimensions)

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

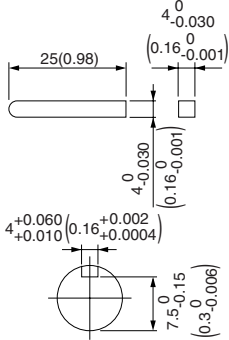
MX8G□B (ball bearing) /

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



Key and keyway (dimensions) [attachment]

MX8G□B(M)



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

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

3-phase motor (leadwire)

c







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)
							Input (W)	Current (A)	Speed (min ⁻¹)	Torque N·m (oz·in)		
80 mm sq.	M8MX25G4YG M8MX25G4YGA	4	25	200	50	Cont.	50	0.25	1350	0.18 (25.5)	0.62	0.54 (76.5)
					60		47	0.22	1625	0.15 (21.2)	0.58	0.40 (56.6)
					220		49	0.23	1650	0.14 (19.8)	0.64	0.50 (70.8)
					230		50	0.24	1675	0.14 (19.8)	0.65	0.54 (76.5)

- 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-164.
- The models with a motor model number to which "A" is suffixed are not sold or available in Japan.

Permissible torque at output shaft of gear head

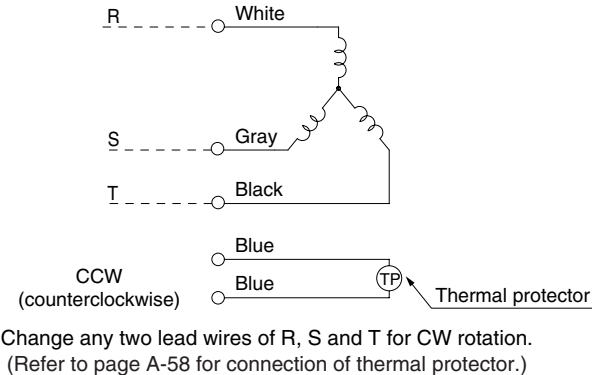
* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2 to 20%.

		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 (min ⁻¹)		50Hz	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
		60Hz	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)	50Hz	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)					
	MX8G3M to MX8G180M (metal bearing)	60Hz	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										

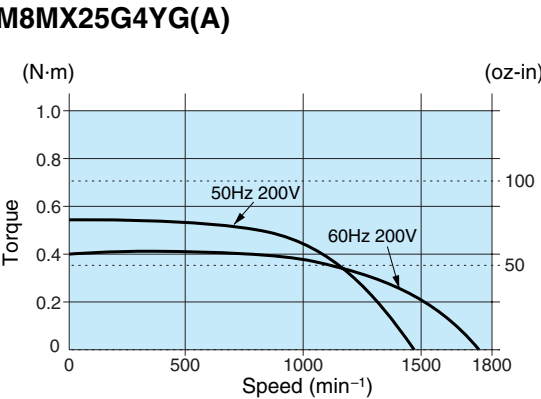
Permissible torque at output shaft of gear head using decimal gear head

Applicable gear head		Reduction ratio		200	250	300	360	500	600	750	900	1000	1200	1500	1800
Bearing	Decimal gear head	Speed (min ⁻¹)	50Hz	7.5	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8
			60Hz	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)	7.84 (69.4)
		Rotational direction		Same as motor rotational direction			Reverse to motor rotational direction								

Connection diagram



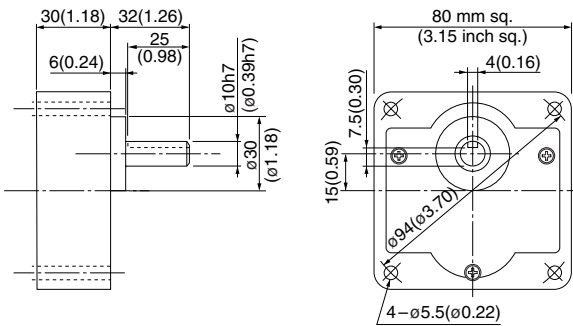
Speed-torque characteristics



Gear head (dimensions)

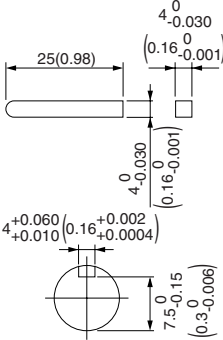
Scale: 1/3, Unit: mm (inch)

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



Key and keyway (dimensions) [attachment]

MX8G□B(M)



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

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

3-phase 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)
							Input (W)	Current (A)	Speed (min ⁻¹)	Torque N·m (oz·in)		
90 mm sq.	M9MX40G4Y	4	40	200	50	Cont.	69	0.31	1350	0.28 (39.7)	0.90	0.72 (102)
							68	0.29	1625	0.24 (34.0)	0.82	0.51 (72.2)
				220	50	Cont.	70	0.32	1375	0.27 (38.2)	1.0	0.88 (125)
							66	0.28	1675	0.23 (32.6)	0.91	0.63 (89.2)

• 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-164.

Permissible torque at output shaft of gear head

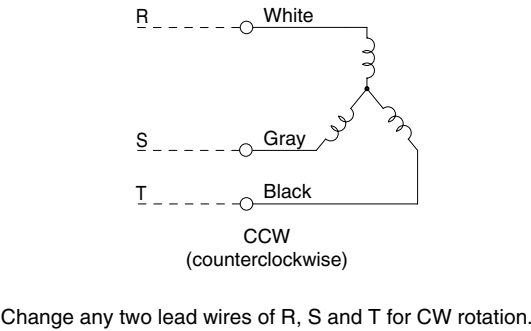
* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2 to 20%.

		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 (min ⁻¹)	50Hz	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	
	60Hz	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)	50Hz	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)	60Hz	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

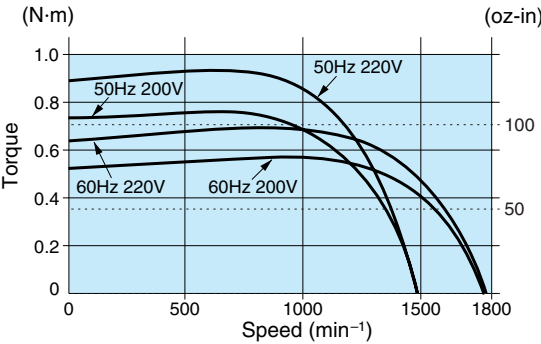
Applicable gear head		Reduction ratio		200	250	300	360	500	600	750	900	1000	1200	1500	1800
Bearing	Decimal gear head	Speed (min ⁻¹)	50Hz	7.5	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8
			60Hz	9	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1
MX9G□B (ball bearing) MX9G□M (metal bearing)	MX9G10XB	Permissible torque	N·m (lb·in)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

Connection diagram



Speed-torque characteristics

M9MX40G4Y

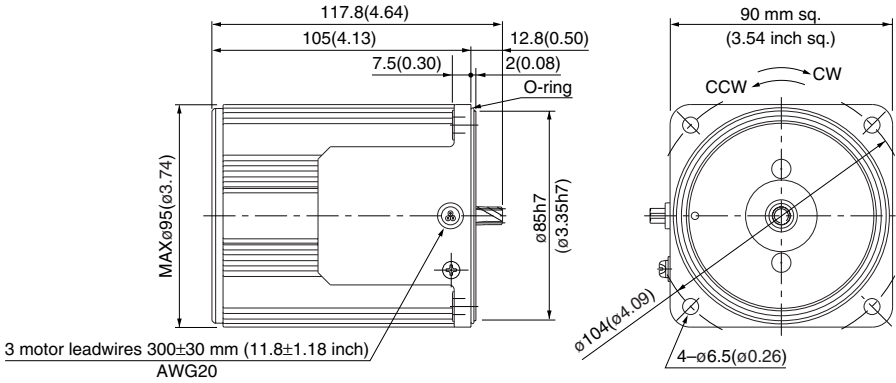


Motor (dimensions)

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

M9MX40G4Y 4P 40 W 200 V / 220 V

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

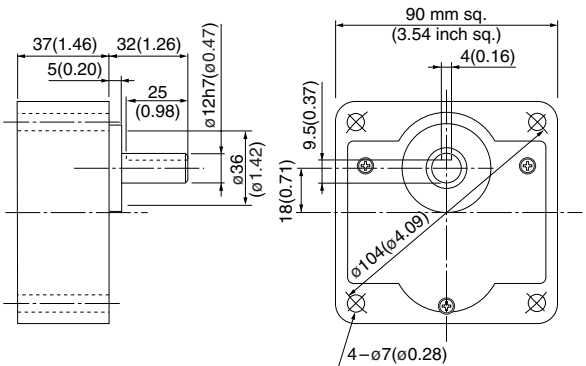


* Diameter of applicable cabtyre cable to be ø8(ø0.31) to ø12(ø0.47).

Gear head (dimensions)

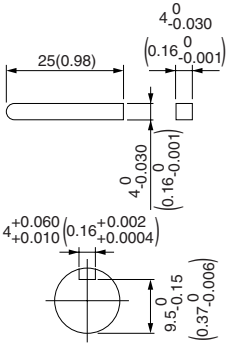
Scale: 1/3, Unit: mm (inch)

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



Key and keyway (dimensions) [attachment]

MX9G□B(M)



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

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

3-phase 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)
							Input (W)	Current (A)	Speed (min ⁻¹)	Torque N·m (oz·in)		
90 mm sq.	M9MX40G4YG M9MX40G4YGA	4	40	200	50	Cont.	69	0.31	1350	0.28 (39.7)	0.90	0.72 (102)
					60		68	0.29	1625	0.24 (34.0)	0.82	0.51 (72.2)
				220	60		66	0.28	1675	0.23 (32.6)	0.91	0.63 (89.2)
					60		66	0.29	1675	0.23 (32.6)	0.96	0.69 (97.7)

- 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-164.
- The models with a motor model number to which "A" is suffixed are not sold or available in Japan.

Permissible torque at output shaft of gear head

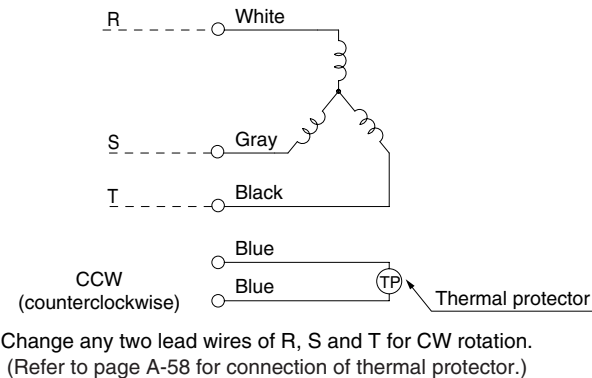
* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2 to 20%.

		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 (min ⁻¹)		50Hz	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
		60Hz	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)	50Hz	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)	60Hz	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

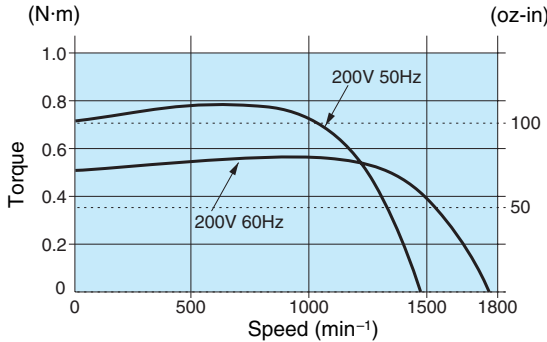
Applicable gear head		Reduction ratio		200	250	300	360	500	600	750	900	1000	1200	1500	1800
Bearing	Decimal gear head	Speed (min ⁻¹)	50Hz	7.5	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8
			60Hz	9	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1
MX9G□B (ball bearing) MX9G□M (metal bearing)	MX9G10XB	Permissible torque	N·m (lb·in)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

Connection diagram



Speed-torque characteristics

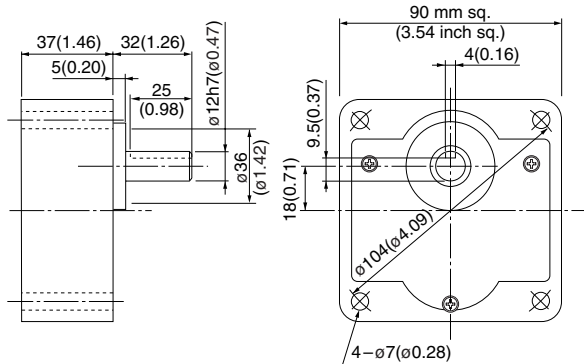
M9MX40G4YG(A)



Gear head (dimensions)

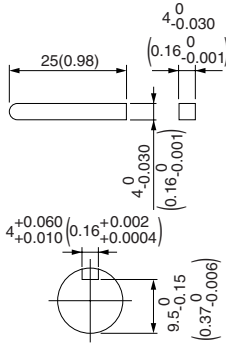
Scale: 1/3, Unit: mm (inch)

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



Key and keyway (dimensions) [attachment]

MX9G□B(M)



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

3-phase 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	Starting torque
							Input (W)	Current (A)	Speed (min ⁻¹)	Torque N·m (oz·in)	current (A)	N·m (oz·in)
90 mm sq.	M9MZ60G4Y	4	60	200	50	Cont.	101	0.45	1350	0.42 (59.5)	1.3	1.0 (142)
							96	0.41	1625	0.35 (49.6)	1.2	0.69 (97.7)
				220	50	Cont.	103	0.46	1375	0.41 (58.1)	1.5	1.2 (170)
							98	0.40	1650	0.34 (48.1)	1.3	0.87 (123)

- 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-164.

- **Permissible torque at output shaft of gear head**

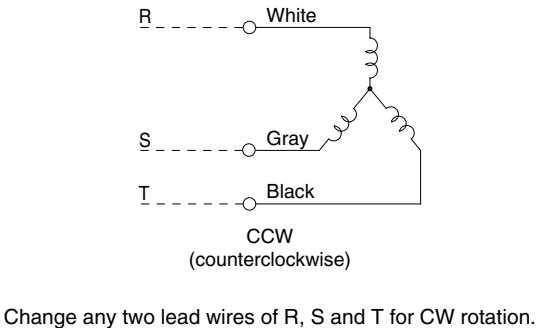
* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2 to 20%.

		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	200	
Speed (min ⁻¹)		50Hz	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
		60Hz	600	500	360	300	240	200	180	144	120	100	90	72	60	50	36	30	24	20	18	15	12	10	9
Applicable gear head	MZ9G3B to MZ9G200B (ball bearing hinge not attached)	50Hz	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)						
	MY9G3B to MY9G200B (ball bearing hinge attached)	60Hz	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						Same as motor rotational direction									

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

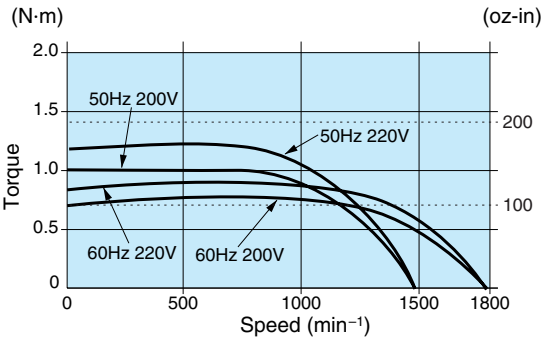
Applicable gear head		Reduction ratio		250	300	360	500	600	750	900	1000	1200	1500	1800
Bearing	Decimal gear head	Speed (min ⁻¹)	50Hz	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8
		60Hz	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1	
MZ9G□B (ball bearing / Hinge not attached)	MZ9G10XB	Permissible torque	N·m (lb-in)	19.6 (173)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

Connection diagram



Speed-torque characteristics

M9MZ60G4Y



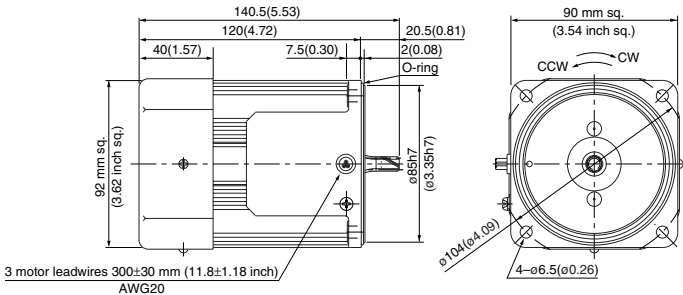
Motor (dimensions)

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

M9MZ60G4Y

4P 60 W 200 V / 220 V (with fan)

Mass 2.7 kg 5.95 lb	Helical gear	Module 0.6	Number of teeth 9
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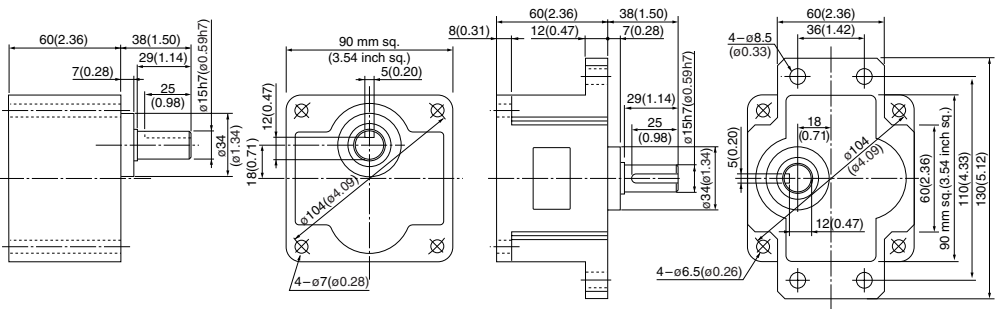
* Diameter of applicable cabtyre cable to be ø8(ø0.31) to ø12(ø0.47).

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)

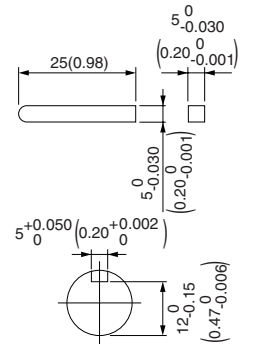


Note) MZ / MY is available for a gear head of either type.

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

Key and keyway
(dimensions) [attachment]

MZ9G□B
MY9G□B



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

3-phase motor (leadwire)

c







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)
							Input (W)	Current (A)	Speed (min ⁻¹)	Torque N·m (oz·in)		
90 mm sq.	M9MZ60G4YG M9MZ60G4YGA	4	60	200	50	Cont.	101	0.45	1350	0.42 (59.5)	1.3	1.0 (142)
					60		96	0.41	1625	0.35 (49.6)	1.2	0.69 (97.7)
					220		98	0.40	1650	0.35 (49.6)	1.3	0.87 (123)
					230		98	0.41	1675	0.34 (48.1)	1.4	1.0 (142)

- 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-164.
- The models with a motor model number to which "A" is suffixed are not sold or available in Japan.

Permissible torque at output shaft of gear head

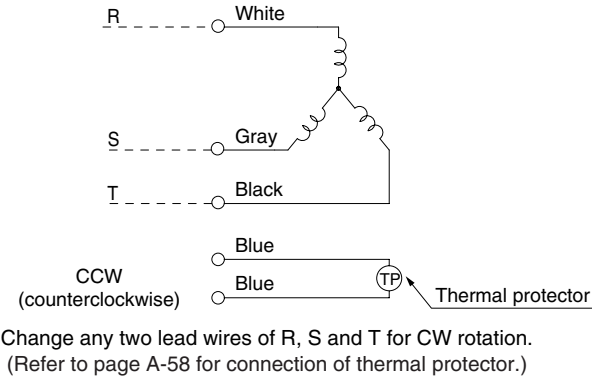
* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2 to 20%.

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	200	
Speed (min ⁻¹)		50Hz	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
		60Hz	600	500	360	300	240	200	180	144	120	100	90	72	60	50	36	30	24	20	18	15	12	10	9
Applicable gear head	MZ9G3B to MZ9G200B (ball bearing hinge not attached)	50Hz	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)						
	MY9G3B to MY9G200B (ball bearing hinge attached)	60Hz	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						Same as motor rotational direction									

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

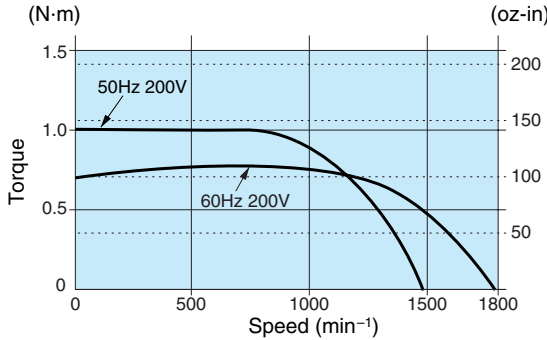
Applicable gear head		Reduction ratio		250	300	360	500	600	750	900	1000	1200	1500	1800
Bearing	Decimal gear head	Speed (min ⁻¹)	50Hz	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8
			60Hz	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1
MZ9G□B (ball bearing / Hinge not attached) MY9G□B (ball bearing / Hinge attached)	MZ9G10XB	Permissible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

Connection diagram



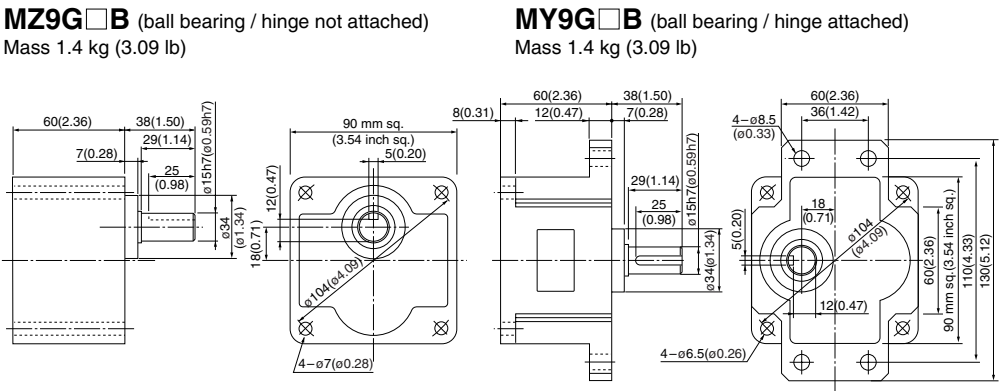
Speed-torque characteristics

M9MZ60G4YG(A)



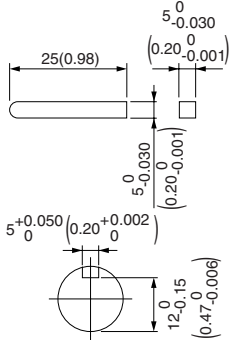
Gear head (dimensions)

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



Key and keyway (dimensions) [attachment]

MZ9G□B
MY9G□B



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.

3-phase 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)
							Input (W)	Current (A)	Speed (min ⁻¹)	Torque N-m (oz-in)		
90 mm sq.	M9MZ90G4Y	4	90	200	Cont.	141	0.62	1350	0.63 (89.2)	2.0	1.6 (227)	
						137	0.56	1625	0.53 (75.1)	1.8	1.1 (156)	
				220	Cont.	143	0.65	1400	0.62 (87.8)	2.2	2.0 (283)	
						137	0.56	1650	0.52 (73.6)	2.0	1.4 (198)	

- 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-164.

- **Permissible torque at output shaft of gear head**

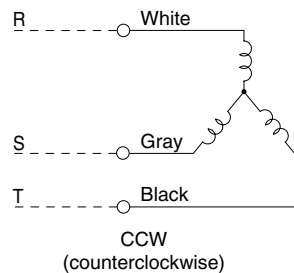
* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2 to 20%.

		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	200	
Speed (min ⁻¹)		50Hz	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
		60Hz	600	500	360	300	240	200	180	144	120	100	90	72	60	50	36	30	24	20	18	15	12	10	9
Applicable gear head	MZ9G3B to MZ9G200B (ball bearing hinge not attached)	50Hz	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)								
	MY9G3B to MY9G200B (ball bearing hinge attached)	60Hz	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							Same as motor rotational direction								

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

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

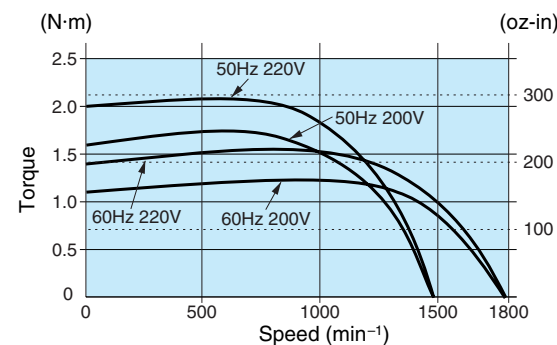
Connection diagram



Change any two lead wires of R, S and T for CW rotation.

Speed-torque characteristics

M9MZ90G4Y

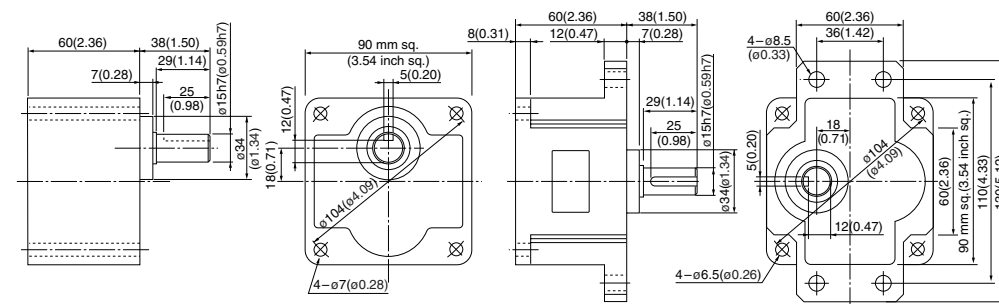


Gear head (dimensions)

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)

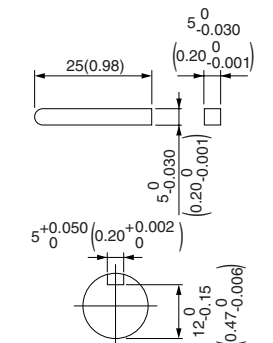


Note) MZ / MY is available for a gear head of either type.

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

Key and keyway
(dimensions) [attachment]

MZ9G□B
MY9G□B



3-phase motor (leadwire)

c

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)
							Input (W)	Current (A)	Speed (min ⁻¹)	Torque N·m (oz·in)		
90 mm sq.	M9MZ90G4YG M9MZ90G4YGA	4	90	200	50	Cont.	142	0.62	1350	0.63 (89.2)	2.0	1.6 (227)
					60		138	0.56	1625	0.53 (75.1)	1.8	1.1 (156)
					220		137	0.56	1650	0.52 (73.6)	2.0	1.4 (198)
					230		137	0.58	1675	0.51 (72.2)	2.1	1.6 (227)

- 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-164.
- The models with a motor model number to which "A" is suffixed are not sold or available in Japan.

Permissible torque at output shaft of gear head

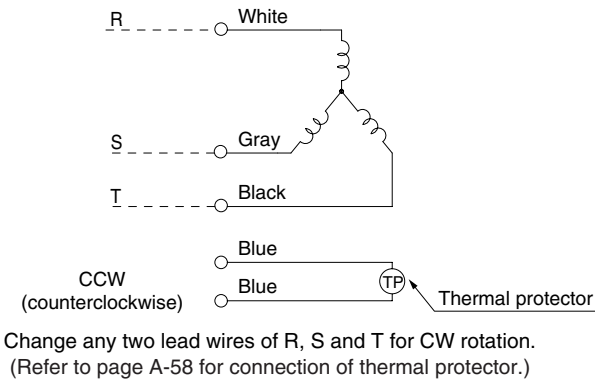
* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2 to 20%.

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	200	
Speed (min ⁻¹)		50Hz	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
		60Hz	600	500	360	300	240	200	180	144	120	100	90	72	60	50	36	30	24	20	18	15	12	10	9
Applicable gear head	MZ9G3B to MZ9G200B (ball bearing hinge not attached)	50Hz	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)								
	MY9G3B to MY9G200B (ball bearing hinge attached)	60Hz	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							Same as motor rotational direction									

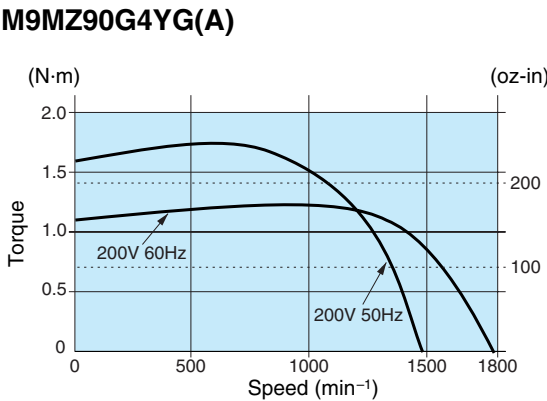
Permissible torque at output shaft of gear head using decimal gear head

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

Connection diagram

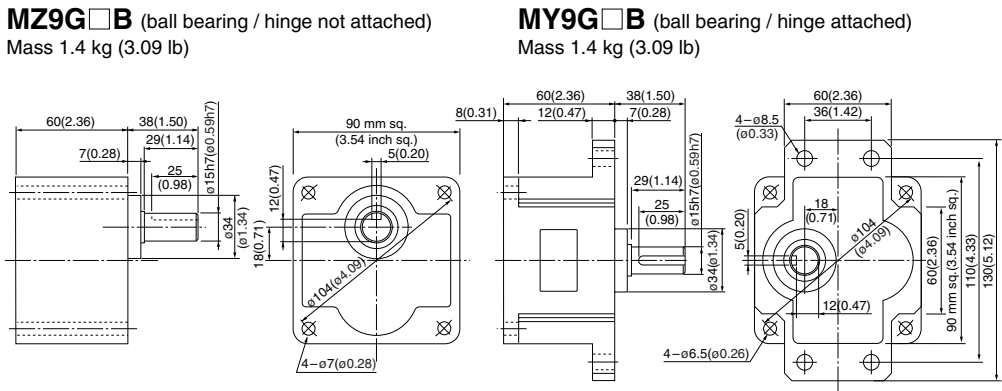


Speed-torque characteristics

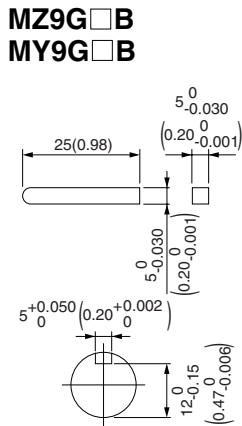


Gear head (dimensions)

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



Key and keyway (dimensions) [attachment]



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

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.

3-phase motor (sealed connector)

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)
							Input (W)	Current (A)	Speed (min ⁻¹)	Torque N-m (oz-in)		
80 mm sq.	M8MX25GK4Y	4	25	200	50	Cont.	50	0.25	1350	0.18 (25.5)	0.62	0.54 (76.5)
							47	0.22	1625	0.15 (21.2)	0.58	0.40 (56.6)
				220	50	Cont.	54	0.27	1375	0.18 (25.5)	0.67	0.66 (93.5)
							49	0.23	1650	0.15 (21.2)	0.64	0.50 (70.8)

- 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-165.

- **Permissible torque at output shaft of gear head**

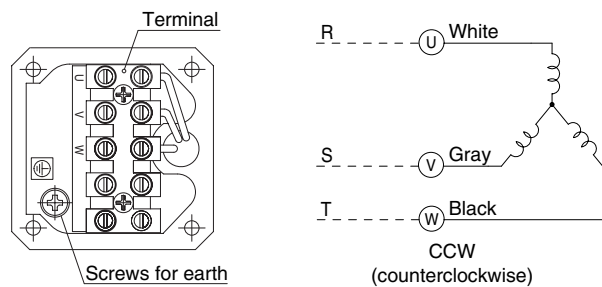
* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2 to 20%.

		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 (min ⁻¹)		50Hz	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
		60Hz	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)	50Hz	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)					
	MX8G3M to MX8G180M (metal bearing)	60Hz	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**

Applicable gear head		Reduction ratio		200	250	300	360	500	600	750	900	1000	1200	1500	1800
Bearing	Decimal gear head	Speed (min ⁻¹)	50Hz	7.5	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8
		60Hz	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)	7.84 (69.4)
		Rotational direction	Same as motor rotational direction		Reverse to motor rotational direction										

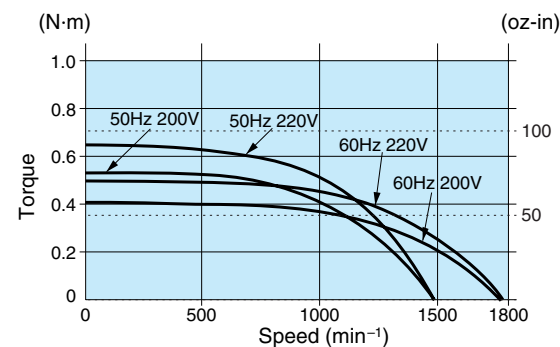
Connection diagram



Change any two lead wires of U, V and W for CW rotation.

Speed-torque characteristics

M8MX25GK4Y

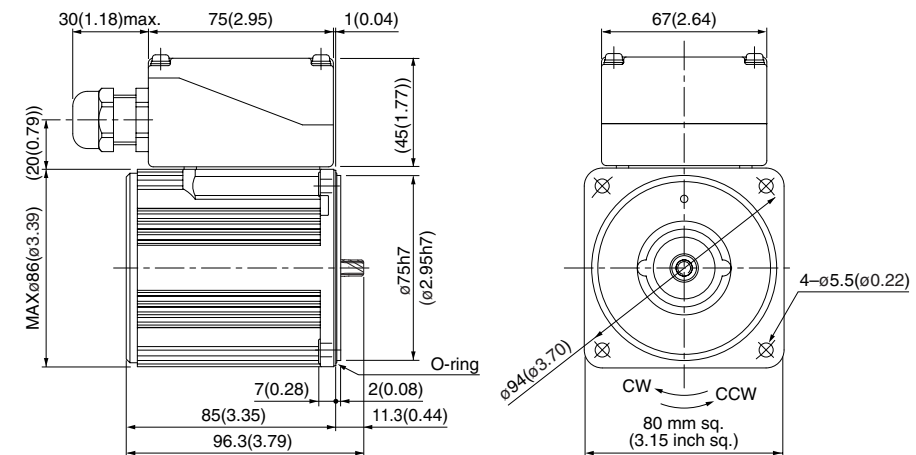


Motor (dimensions)

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

M8MX25GK4Y 4P 25 W 200 V / 220 V

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

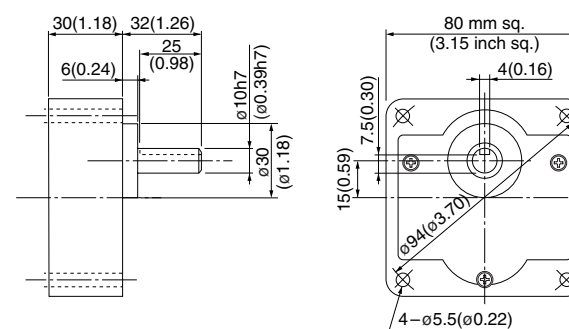


* Diameter of applicable cabtyre cable to be ø8(ø0.31) to ø12(ø0.47).

Gear head (dimensions)

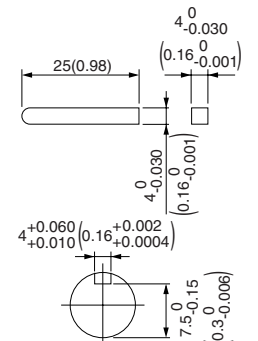
Scale: 1/3, Unit: mm (inch)

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



Key and keyway
(dimensions) [attachment]

MX8G□B(M)



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

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

3-phase motor (sealed connector)

c

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)
							Input (W)	Current (A)	Speed (min ⁻¹)	Torque N·m (oz·in)		
80 mm sq.	M8MX25GK4YG M8MX25GK4YGA	4	25	200	50	Cont.	50	0.25	1350	0.18 (25.5)	0.62	0.54 (76.5)
					60		47	0.22	1625	0.15 (21.2)	0.58	0.40 (56.6)
				220	60		49	0.23	1650	0.14 (19.8)	0.64	0.50 (70.8)
				230	60		50	0.24	1675	0.14 (19.8)	0.65	0.54 (76.5)
	M8MX25GK4CG M8MX25GK4CGA	4	25	380	50	Cont.	49	0.12	1325	0.18 (25.5)	0.29	0.50 (70.8)
				400	50		52	0.12	1325	0.18 (25.5)	0.32	0.56 (79.3)

- 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-165.
- The models with a motor model number to which "A" is suffixed are not sold or available in Japan.

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%.

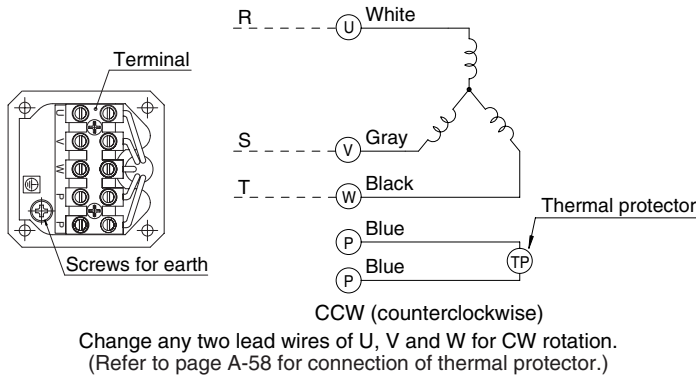
Unit of permissible torque: upper (N·m) / lower (lb·in)

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 (min ⁻¹)		50Hz	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
		60Hz	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)	50Hz	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 (13.9)	1.57 (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)						
	MX8G3M to MX8G180M (metal bearing)	60Hz	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

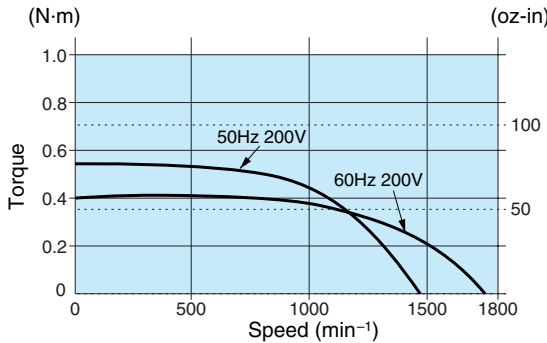
Applicable gear head		Reduction ratio		200	250	300	360	500	600	750	900	1000	1200	1500	1800
Bearing	Decimal gear head	Speed (min ⁻¹)	50Hz	7.5	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8
			60Hz	9	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1
MX8G□B (ball bearing) MX8G□M (metal bearing)	MX8G10XB	Permissible torque	N·m (lb·in)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

Connection diagram



Speed-torque characteristics

M8MX25GK4YG(A)

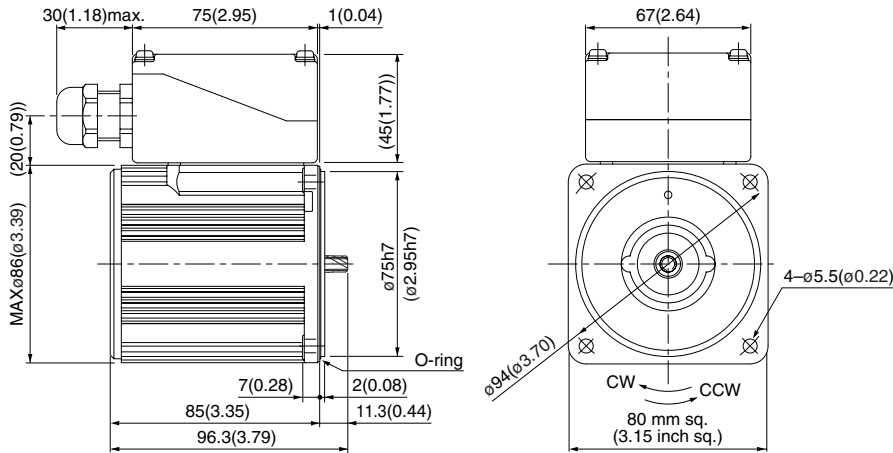


Motor (dimensions)

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

M8MX25GK4YG(A) 4P 25 W 200 V / 220 V / 230 V
M8MX25GK4CG(A) 4P 25 W 380 V / 400 V

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

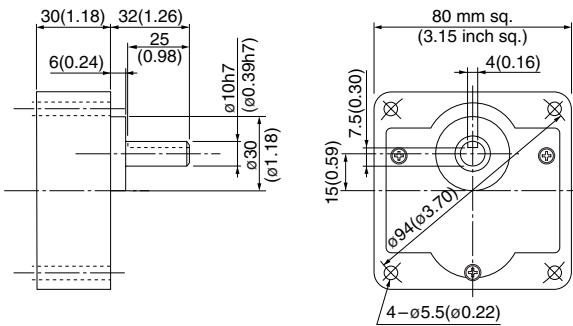


* Diameter of applicable cabtyre cable to be ø8(ø0.31) to ø12(ø0.47).

Gear head (dimensions)

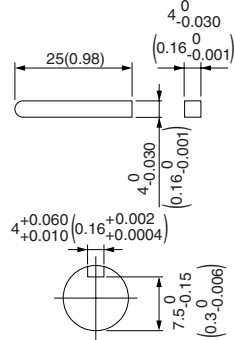
Scale: 1/3, Unit: mm (inch)

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



Key and keyway (dimensions) [attachment]

MX8G□B(M)



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

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

3-phase 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)
							Input (W)	Current (A)	Speed (min ⁻¹)	Torque N·m (oz·in)		
90 mm sq.	M9MX40GK4Y	4	40	200	50	Cont.	69	0.31	1350	0.28 (39.7)	0.90	0.72 (102)
					60	Cont.	68	0.29	1625	0.24 (34.0)	0.82	0.51 (72.2)
				220	50	Cont.	70	0.32	1375	0.27 (38.2)	1.0	0.88 (125)
					60	Cont.	66	0.28	1675	0.23 (32.6)	0.91	0.63 (89.2)

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-165.

Permissible torque at output shaft of gear head

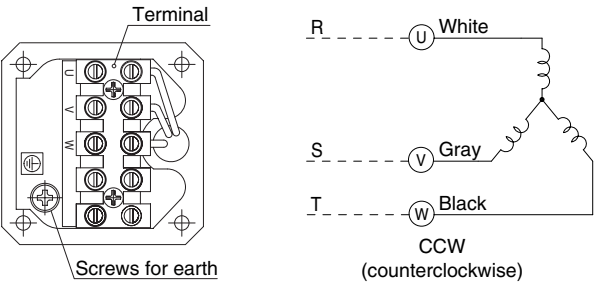
The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2 to 20%.

		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 (min ⁻¹)	50Hz	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	
	60Hz	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)	50Hz	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)	60Hz	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

Applicable gear head		Reduction ratio		200	250	300	360	500	600	750	900	1000	1200	1500	1800
Bearing	Decimal gear head	Speed (min ⁻¹)	50Hz	7.5	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8
			60Hz	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 (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)	9.80 (86.7)
		Rotational direction		Same as motor rotational direction			Reverse to motor rotational direction								

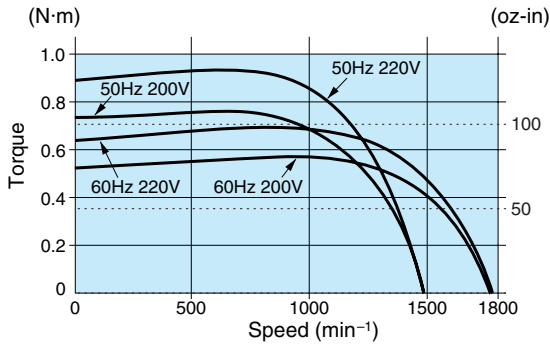
Connection diagram



Change any two lead wires of U, V and W for CW rotation.

Speed-torque characteristics

M9MX40GK4Y

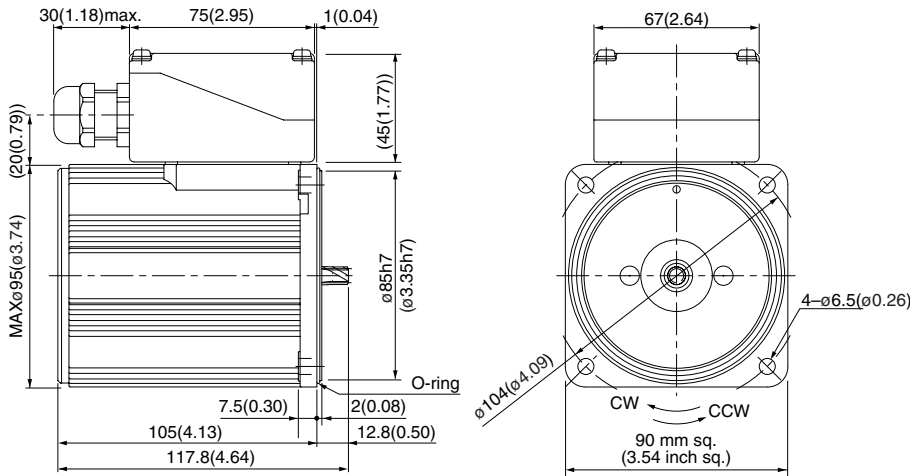


Motor (dimensions)

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

M9MX40GK4Y 4P 40 W 200 V / 220 V

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

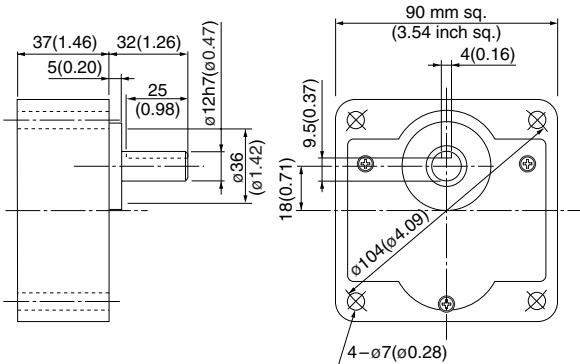


* Diameter of applicable cabtyre cable to be ø8(ø0.31) to ø12(ø0.47).

Gear head (dimensions)

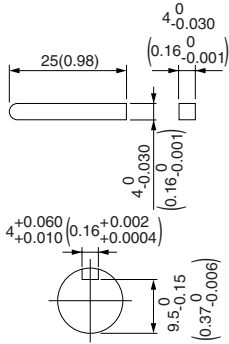
Scale: 1/3, Unit: mm (inch)

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



Key and keyway (dimensions) [attachment]

MX9G□B(M)



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

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

3-phase 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)
							Input (W)	Current (A)	Speed (min ⁻¹)	Torque N·m (oz·in)		
90 mm sq.	M9MX40GK4YG M9MX40GK4YGA	4	40	200	50	Cont.	69	0.31	1350	0.28 (39.7)	0.90	0.72 (102)
					60		68	0.29	1625	0.24 (34.0)	0.82	0.51 (72.2)
				220	60		66	0.28	1675	0.23 (32.6)	0.91	0.63 (89.2)
					60		66	0.29	1675	0.23 (32.6)	0.96	0.69 (97.7)
	M9MX40GK4CG M9MX40GK4CGA	4	40	380	50	Cont.	68	0.15	1325	0.29 (41.1)	0.44	0.64 (90.6)
				400	50		66	0.15	1350	0.28 (39.7)	0.47	0.74 (105)

- 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-165.
- The models with a motor model number to which "A" is suffixed are not sold or available in Japan.

Permissible torque at output shaft of gear head

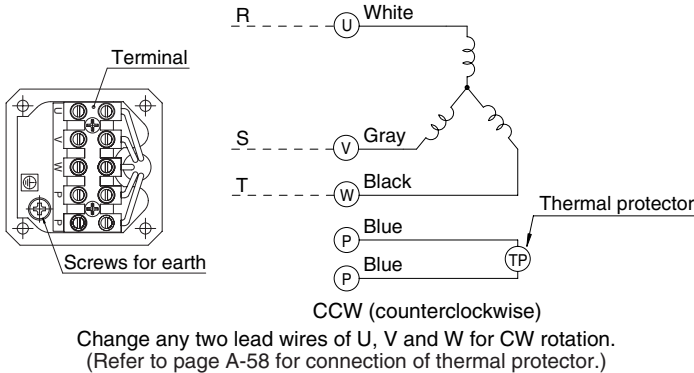
* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2 to 20%.

														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 (min ⁻¹)	50Hz	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		
	60Hz	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)	50Hz	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)	60Hz	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

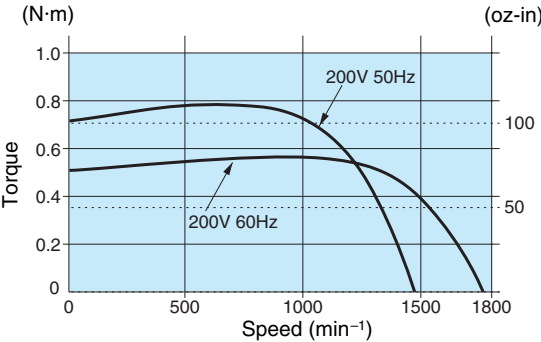
Applicable gear head		Reduction ratio		200	250	300	360	500	600	750	900	1000	1200	1500	1800
Bearing	Decimal gear head	Speed (min ⁻¹)	50Hz	7.5	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8
			60Hz	9	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1
MX9G□B (ball bearing) MX9G□M (metal bearing)	MX9G10XB	Permissible torque	N·m (lb·in)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

Connection diagram



Speed-torque characteristics

M9MX40GK4YG(A)

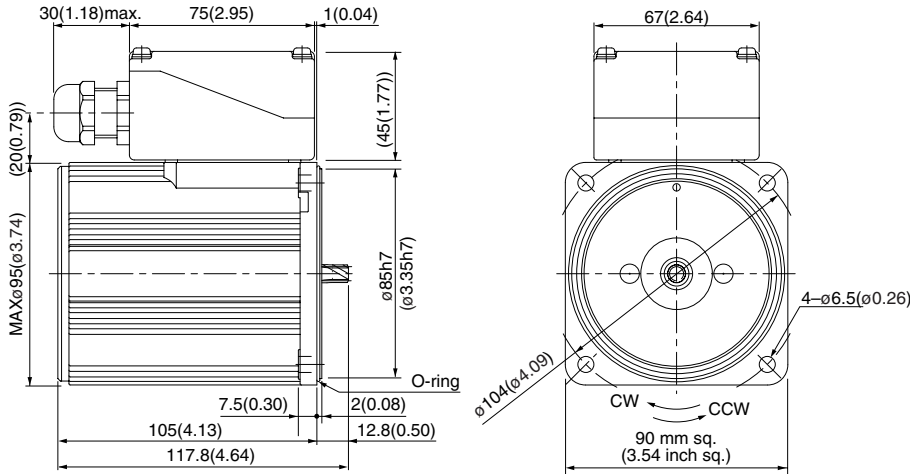


Motor (dimensions)

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

M9MX40GK4YG(A) 4P 40 W 200 V / 220 V / 230 V
M9MX40GK4CG(A) 4P 40 W 380 V / 400 V

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

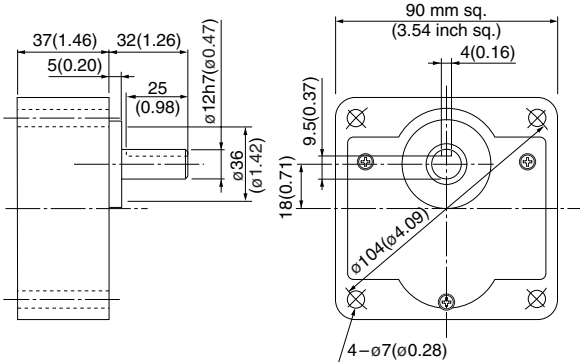


* Diameter of applicable cabtyre cable to be ø8(ø0.31) to ø12(ø0.47).

Gear head (dimensions)

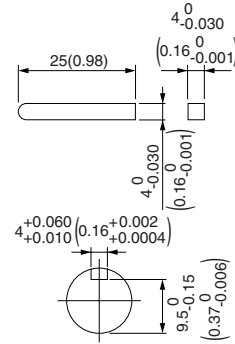
Scale: 1/3, Unit: mm (inch)

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



Key and keyway (dimensions) [attachment]

MX9G□B(M)



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

3-phase 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)
							Input (W)	Current (A)	Speed (min ⁻¹)	Torque N·m (oz·in)		
90 mm sq.	M9MZ60GK4Y	4	60	200	50	Cont.	101	0.45	1350	0.42 (59.5)	1.3	1.0 (142)
							96	0.41	1625	0.35 (49.6)	1.2	0.69 (97.7)
				220	50	Cont.	103	0.46	1375	0.41 (58.1)	1.5	1.2 (170)
							98	0.40	1650	0.34 (48.1)	1.3	0.87 (123)

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-165.

Permissible torque at output shaft of gear head

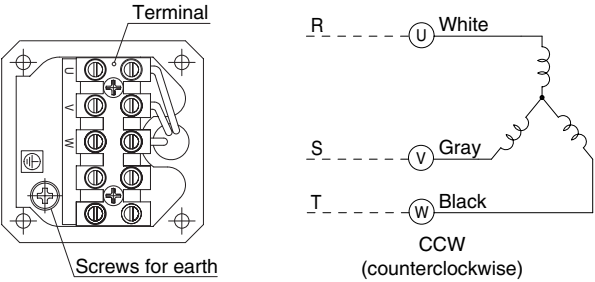
The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2 to 20%.

		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	200	
Speed (min ⁻¹)		50Hz	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
		60Hz	600	500	360	300	240	200	180	144	120	100	90	72	60	50	36	30	24	20	18	15	12	10	9
Applicable gear head	MZ9G3B to MZ9G200B (ball bearing hinge not attached)	50Hz	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)						
	MY9G3B to MY9G200B (ball bearing hinge attached)	60Hz	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						Same as motor rotational direction									

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

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

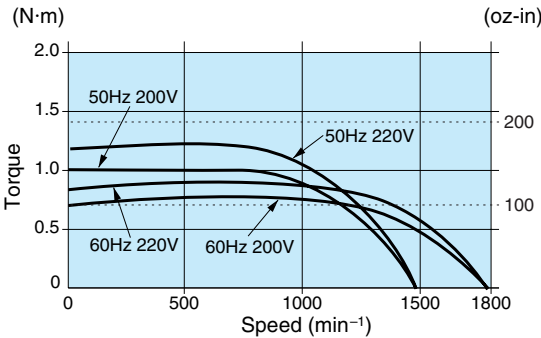
Connection diagram



Change any two lead wires of U, V and W for CW rotation.

Speed-torque characteristics

M9MZ60GK4Y

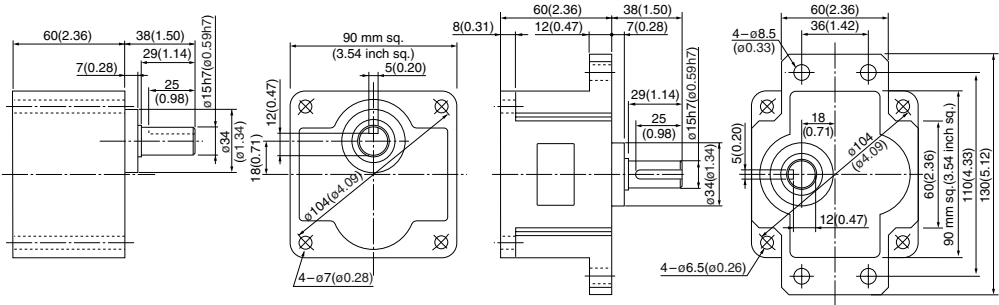


Gear head (dimensions)

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)

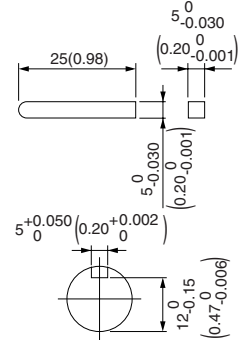


Note) MZ / MY is available for a gear head of either type.

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

Key and keyway (dimensions) [attachment]

MZ9G□B
MY9G□B



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

3-phase motor (sealed connector)

• Specifications

Size	Motor model No.	Number of pole (P)	Output (W)	Voltage (V)	Frequency (Hz)	Rating (min)	Rating				Starting	Starting torque
							Input (W)	Current (A)	Speed (min ⁻¹)	Torque N·m (oz-in)	current (A)	N·m (oz-in)
90 mm sq.	M9MZ60GK4YG M9MZ60GK4YGA	4	60	200	50	Cont.	101	0.45	1350	0.42 (59.5)	1.3	1.0 (142)
							96	0.41	1625	0.35 (49.6)	1.2	0.69 (97.7)
				220	60		98	0.40	1650	0.35 (49.6)	1.3	0.87 (123)
							230	60	98	0.41	1675	0.34 (48.1)
	M9MZ60GK4CG M9MZ60GK4CGA	4	60	380	50	Cont.	103	0.22	1325	0.43 (60.9)	0.62	0.88 (125)
				400	50		103	0.22	1325	0.43 (60.9)	0.65	1.0 (142)

- 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-165.
- The models with a motor model number to which "A" is suffixed are not sold or available in Japan.

- **Permissible torque at output shaft of gear head**

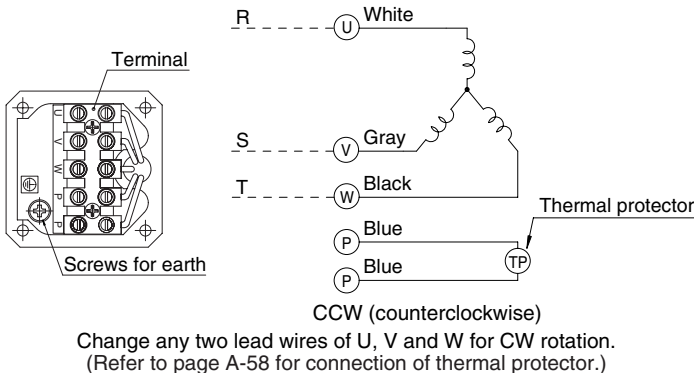
* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2 to 20%.

		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	200	
Speed (min ⁻¹)		50Hz	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
		60Hz	600	500	360	300	240	200	180	144	120	100	90	72	60	50	36	30	24	20	18	15	12	10	9
Applicable gear head	MZ9G3B to MZ9G200B (ball bearing hinge not attached)	50Hz	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)						
	MY9G3B to MY9G200B (ball bearing hinge attached)	60Hz	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						Same as motor rotational direction									

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

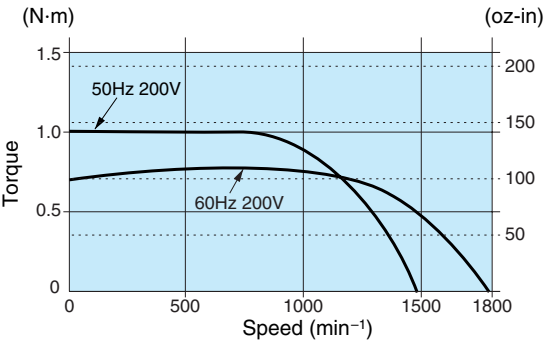
Applicable gear head		Reduction ratio		250	300	360	500	600	750	900	1000	1200	1500	1800
Bearing	Decimal gear head	Speed (min ⁻¹)	50Hz	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8
		60Hz	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1	
MZ9G□B (ball bearing / hinge not attached)	MZ9G10XB	Permissible torque	N·m (lb-in)	19.6 (173)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

Connection diagram



Speed-torque characteristics

M9MZ60GK4YG(A)

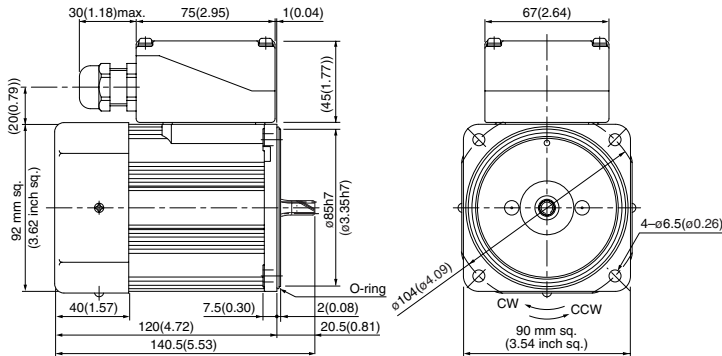


Motor (dimensions)

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

M9MZ60GK4YG(A)	4P	60 W	200 V / 220 V / 230 V (with fan)
M9MZ60GK4CG(A)	4P	60 W	380 V / 400 V (with fan)

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



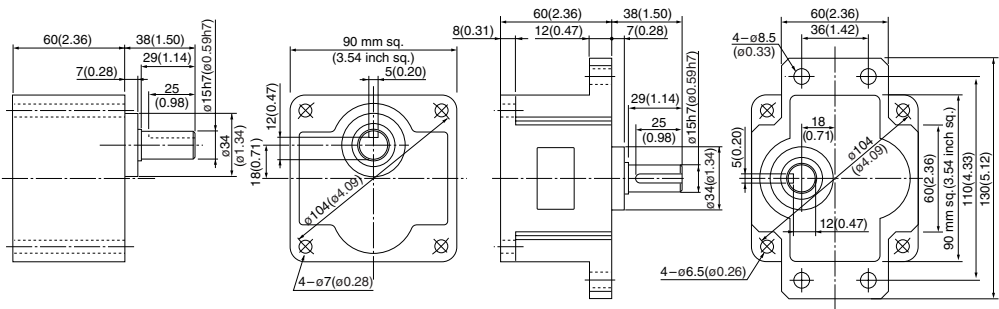
* Diameter of applicable cabtyre cable to be $\varnothing 8(\varnothing 0.31)$ to $\varnothing 12(\varnothing 0.47)$.

Gear head (dimensions)

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

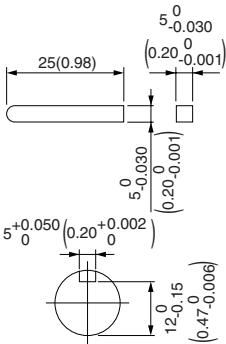
MZ9G□B (ball bearing / hinge not attached)
Mass 1.4 kg (3.09 lb)

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



Key and keyway
(dimensions) [attachment]

MZ9G□B
MY9G□B



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.

3-phase motor (sealed connector)

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)
							Input (W)	Current (A)	Speed (min ⁻¹)	Torque N·m (oz·in)		
90 mm sq.	M9MZ90GK4Y	4	90	200	50	Cont.	141	0.62	1350	0.63 (89.2)	2.0	1.6 (227)
							137	0.56	1625	0.53 (75.1)	1.8	1.1 (156)
				220	50	Cont.	143	0.65	1400	0.62 (87.8)	2.2	2.0 (283)
							137	0.56	1650	0.52 (73.6)	2.0	1.4 (198)

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-165.

Permissible torque at output shaft of gear head

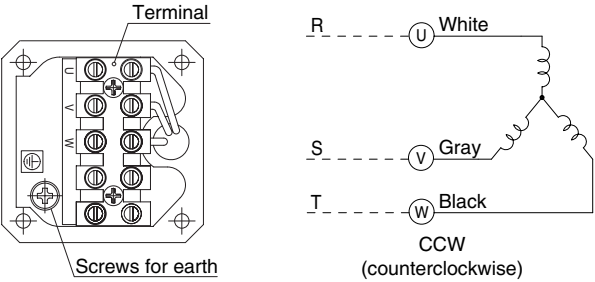
The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2 to 20%.

		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	200	
Speed (min ⁻¹)		50Hz	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
		60Hz	600	500	360	300	240	200	180	144	120	100	90	72	60	50	36	30	24	20	18	15	12	10	9
Applicable gear head	MZ9G3B to MZ9G200B (ball bearing hinge not attached)	50Hz	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)								
	MY9G3B to MY9G200B (ball bearing hinge attached)	60Hz	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						Same as motor rotational direction									

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

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

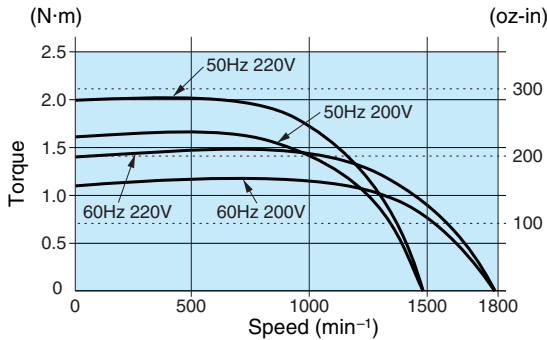
Connection diagram



Change any two lead wires of U, V and W for CW rotation.

Speed-torque characteristics

M9MZ90GK4Y

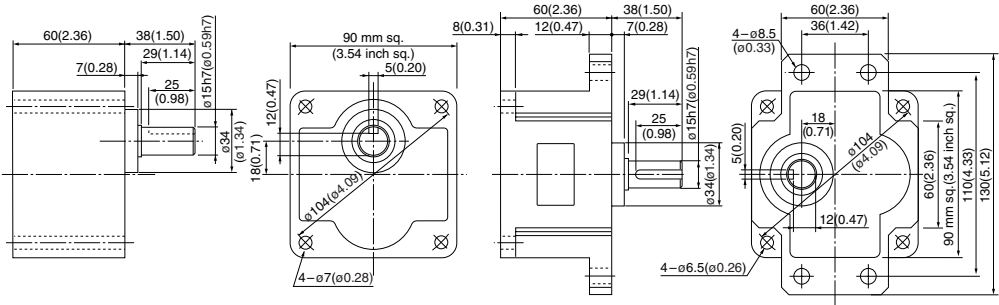


Gear head (dimensions)

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

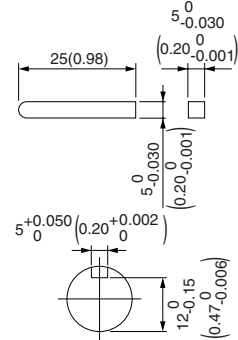
MZ9G□B (ball bearing / hinge not attached)
Mass 1.4 kg (3.09 lb)

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



Key and keyway (dimensions) [attachment]

MZ9G□B
MY9G□B



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.

3-phase motor (sealed connector)



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)
							Input (W)	Current (A)	Speed (min ⁻¹)	Torque N·m (oz·in)		
90 mm sq.	M9MZ90GK4YG M9MZ90GK4YGA	4	90	200	50	Cont.	142	0.62	1350	0.63 (89.2)	2.0	1.6 (227)
					60		138	0.56	1625	0.53 (75.1)	1.8	1.1 (156)
				220	60		137	0.56	1650	0.52 (73.6)	2.0	1.4 (198)
					60		137	0.58	1675	0.51 (72.2)	2.1	1.6 (227)
	M9MZ90GK4CG M9MZ90GK4CGA	4	90	380	50	Cont.	144	0.31	1325	0.65 (92.0)	1.0	1.4 (198)
				400	50		144	0.31	1350	0.64 (90.6)	1.0	1.6 (227)

- 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-165.
- The models with a motor model number to which "A" is suffixed are not sold or available in Japan.

Permissible torque at output shaft of gear head

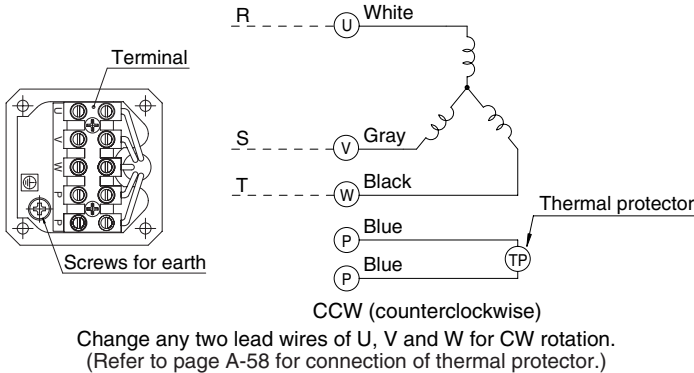
* The speed shown below is a calculated value based on the synchronous rotational speed. Depending on the load, the speed is less than the indicated value by 2 to 20%.

		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	200	
Speed (min ⁻¹)	50Hz	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	
	60Hz	600	500	360	300	240	200	180	144	120	100	90	72	60	50	36	30	24	20	18	15	12	10	9	
Applicable gear head	MZ9G3B to MZ9G200B (ball bearing hinge not attached)	50Hz	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)							19.6 (173)	
	MY9G3B to MY9G200B (ball bearing hinge attached)	60Hz	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						Same as motor rotational direction									

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

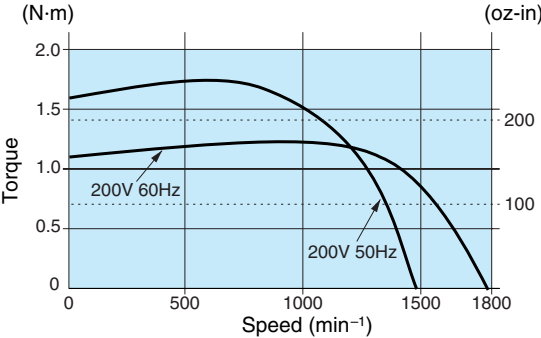
Applicable gear head		Reduction ratio		250	300	360	500	600	750	900	1000	1200	1500	1800
Bearing	Decimal gear head	Speed (min ⁻¹)	50Hz	6	5	4.2	3	2.5	2	1.7	1.5	1.3	1	0.8
			60Hz	7.2	6	5	3.6	3	2.4	2	1.8	1.5	1.2	1
MZ9G□B (ball bearing / hinge not attached) MY9G□B (ball bearing / hinge attached)	MZ9G10XB	Permissible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

Connection diagram



Speed-torque characteristics

M9MZ90GK4YG(A)

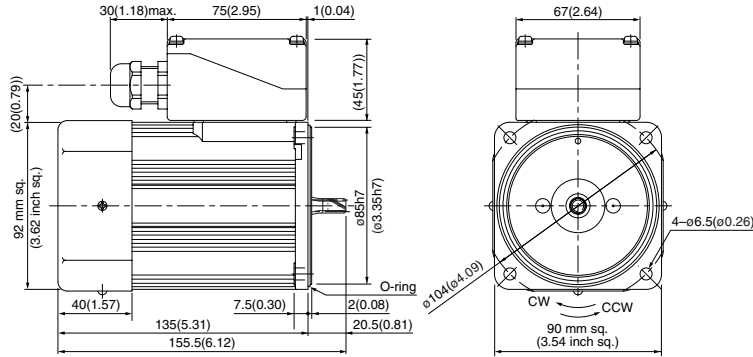


Motor (dimensions)

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

M9MZ90GK4YG(A) 4P 90 W 200 V / 220 V / 230 V (with fan)
M9MZ90GK4CG(A) 4P 90 W 380 V / 400 V (with fan)

Mass	Helical gear	Module	Number of teeth
3.3 kg 7.28 lb		0.6	9



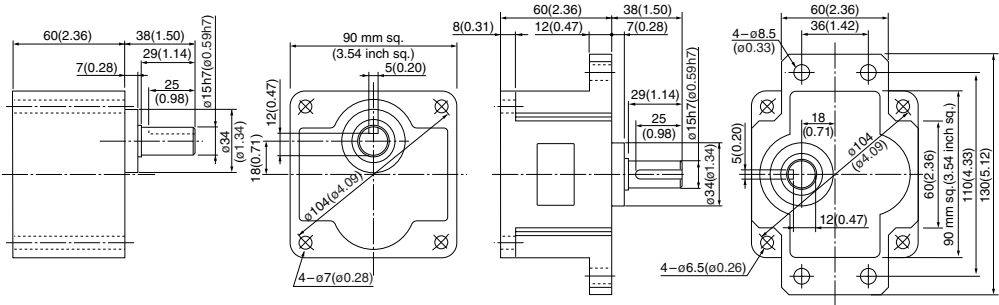
* Diameter of applicable cabtyre cable to be ø8(ø0.31) to ø12(ø0.47).

Gear head (dimensions)

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

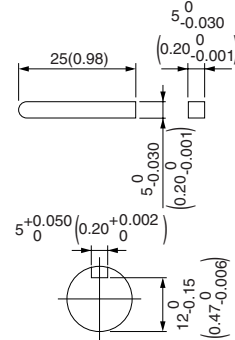
MZ9G□B (ball bearing / hinge not attached)
Mass 1.4 kg (3.09 lb)

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



Key and keyway (dimensions) [attachment]

MZ9G□B
MY9G□B



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

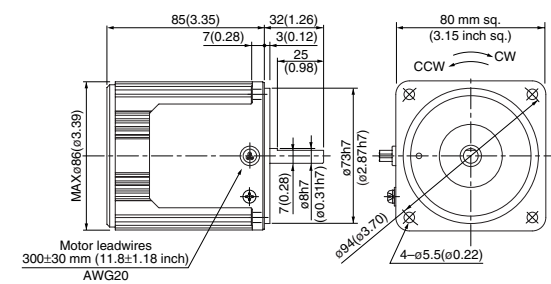
(Note) Because the dimensions may be subject to change, also check the determinate dimensions if the gear head is to be used for design.

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

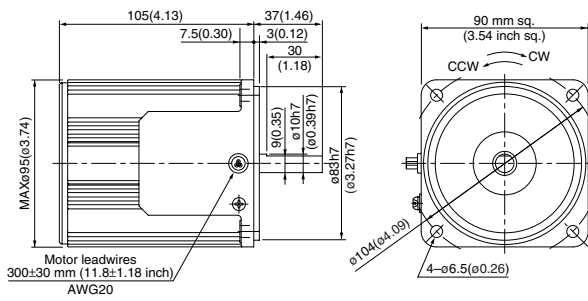
3-phase motor (4-pole round shaft / leadwire)

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

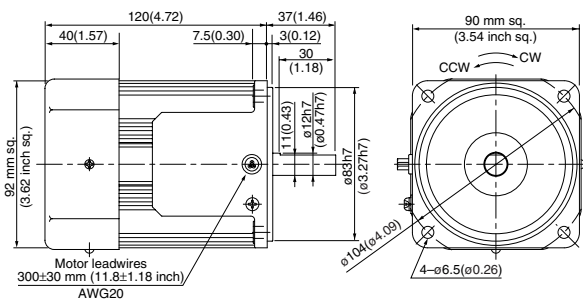
80 mm sq. (3.15 inch sq.) 25 W
Mass 1.5 kg (3.31 lb)
M8MX25S4YS
M8MX25S4YG(A)



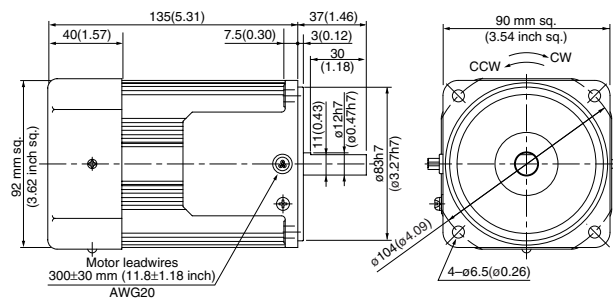
90 mm sq. (3.54 inch sq.) 40 W
Mass 2.4 kg (5.29 lb)
M9MX40S4YS
M9MX40S4YG(A)



90 mm sq. (3.54 inch sq.) 60 W
Mass 2.7 kg (5.95 lb)
M9MZ60S4YS (with fan)
M9MZ60S4YG(A) (with fan)



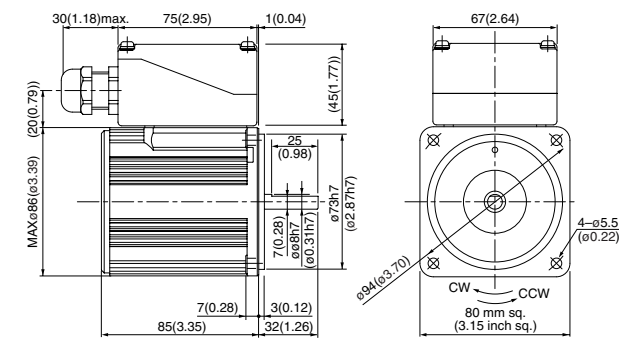
90 mm sq. (3.54 inch sq.) 90 W
Mass 3.2 kg (7.05 lb)
M9MZ90S4YS (with fan)
M9MZ90S4YG(A) (with fan)



3-phase motor (4-pole round shaft / sealed connector)

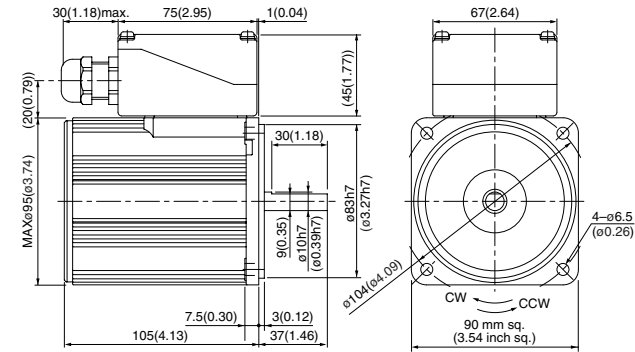
Dimensions
Scale: 1/4, Unit: mm (inch)

80 mm sq. (3.15 inch sq.) 25 W
Mass 1.8 kg (3.97 lb)
M8MX25SK4YS
M8MX25SK4YG(A)
M8MX25SK4CG(A)



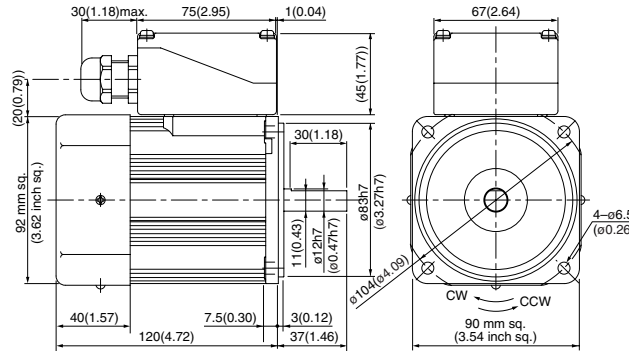
* Diameter of applicable cabtyre cable to be ø8(ø0.31) to ø12(ø0.47).

90 mm sq. (3.54 inch sq.) 40 W
Mass 2.8 kg (6.17 lb)
M9MX40SK4YS
M9MX40SK4YG(A)
M9MX40SK4CG(A)



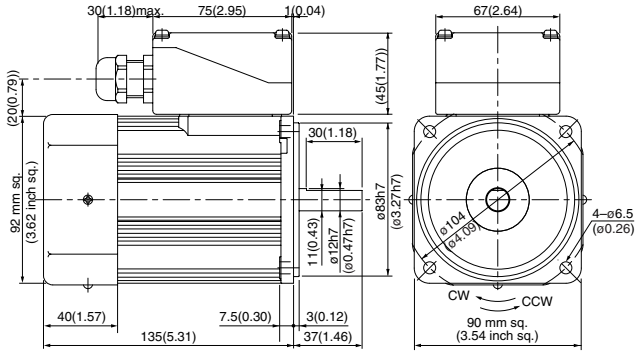
* Diameter of applicable cabtyre cable to be ø8(ø0.31) to ø12(ø0.47).

90 mm sq. (3.54 inch sq.) 60 W
Mass 3.0 kg (6.61 lb)
M9MZ60SK4YS (with fan)
M9MZ60SK4YG(A) (with fan)
M9MZ60SK4CG(A) (with fan)



* Diameter of applicable cabtyre cable to be ø8(ø0.31) to ø12(ø0.47).

90 mm sq. (3.54 inch sq.) 90 W
Mass 3.3 kg (7.28 lb)
M9MZ90SK4YS (with fan)
M9MZ90SK4YG(A) (with fan)
M9MZ90SK4CG(A) (with fan)



* Diameter of applicable cabtyre cable to be ø8(ø0.31) to ø12(ø0.47).

200 V/220 V/230 V round shaft motors with a sealed connector (with a terminal box) are covered by the Electrical Appliance and Material Safety Law. The indications on their nameplate are based on this law.

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

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

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

