

 Safety Precautions

- Important Notes on exporting this product or equipment containing this product;
If the end-user or application of this product is related to military affairs or weapons, its export may be controlled by “Foreign Exchange and Foreign Trade Control Law” of Japan where export license will be required before product can be exported from Japan.
- This product is designed and manufactured for use in General Purpose Industrial Equipment and it is not intended to be used in equipment or system that may cause personal injury or death.
- All servicing such as installation, wiring, operation, maintenance and etc., should be performed by qualified personnel only.
- Tighten mounting screws with an adequate torque by taking into consideration strength of the screws and the characteristics of material to which the product will be mounted. Over tightening can damage the screw and/or material; under tightening can result in loosening.
*Example: apply 2.7 N·m – 3.3 N·m torque when tightening steel screw (M5) to steel surface.
- Install safety equipment to prevent serious accidents or loss that is expected in case of failure of this product.
- Consult us before using this product under such special conditions and environments as nuclear energy control, aerospace, transportation, medical equipment, various safety equipments or equipments which require a lesser air contamination.
- We have been making the best effort to ensure the highest quality of our products, however, some applications with exceptionally large external noise disturbance and static electricity, or failure in input power, wiring and components may result in unexpected action. It is highly recommended that you make a fail-safe design and secure the safety in the operative range.
- If the motor shaft is not electrically grounded, it may cause an electrolytic corrosion to the bearing, depending on the condition of the machine and its mounting environment, and may result in the bearing noise. Checking and verification by customer is required.
- Failure of this product depending on its content may generate smoke of about one cigarette. Take this into consideration when the application of the machine is clean room related.
- Please be careful when using the product in an environment with high concentrations of sulfur or sulfuric gases, as sulfuration can lead to disconnection from the chip resistor or a poor contact connection.
- Do not input a supply voltage which significantly exceeds the rated range to the power supply of this product. Failure to heed this caution may lead to damage of the internal parts, causing smoke and/or fire and other troubles.
- The user is responsible for matching between machine and components in terms of configuration, dimensions, life expectancy, characteristics, when installing the machine or changing specification of the machine. The user is also responsible for complying with applicable laws and regulations.
- Manufacturer’s warranty will be invalid if the product has been used outside its stated specifications.
- Component parts are subject to minor change to improve performance.
- Read and observe the instruction manual to ensure correct use of the product.

Repair	Consult to the dealer from whom you have purchased this product for details of repair work. When the product is incorporated to the machine you have purchased, consult to the machine manufacturer or its dealer.
URL	• Technical information of this product (Operating Instructions, CAD data, Inquiries) can be downloaded from the following web site. <industrial.panasonic.com/ac/e/>

Contact to :

ISO 9001

ISO9001 Certificate division

ISO 14001

ISO14001 Certificate division

Panasonic Corporation,
Automotive & Industrial Systems Company,
Electromechanical Control Business Division,
Motor Business Unit
1-1 Morofuku 7-chome, Daito, Osaka 574-0044, Japan
Tel : +81-72-871-1212
Fax: +81-72-870-3151

The contents of this catalog apply to the products as of June 2018.

• Printed colors may be slightly different from the actual products.
• Specifications and design of the products are subject to change without notice for the product improvement.

Panasonic

COMPACT AC GEARED MOTOR

COMPACT AC GEARED MOTOR

2018/6

This product is for industrial equipment. Don't use this product at general household.

Table of Contents

Information

• Information contained in the catalog	A-	2
• Product list	A-	4
• Selection by keywords	A-	24
• Product Type Contents		
Motor	A-	28
Gear head	A-	29
Speed controller	A-	30
Brake unit	A-	30
Special (produced to custom order)	A-	31
• Terminology		
Motor	A-	32
Gear head	A-	34
• Handling instructions	A-	35
• Motor selection	A-	48
• Safety standard approved motor	A-	59

Motors

• Induction motor	B-	1
• Reversible motor	B-	63
• 3-phase motor	B-	125
• Electromagnetic brake motor	B-	167
• Variable speed induction motor	B-	223
• Variable speed reversible motor	B-	267
• Variable speed electromagnetic brake single-phase motor	B-	309
• Variable speed unit motor	B-	323
• C&B motor	B-	341
• 2-pole round shaft motor	B-	405
• Gear head	B-	431
• Gear head -Inch (U.S.A.)	B-	449

Controls

• Speed controller	C-	1
• Brake unit	C-	25

Options/Index

• Options	D-	1
• Index	D-	8

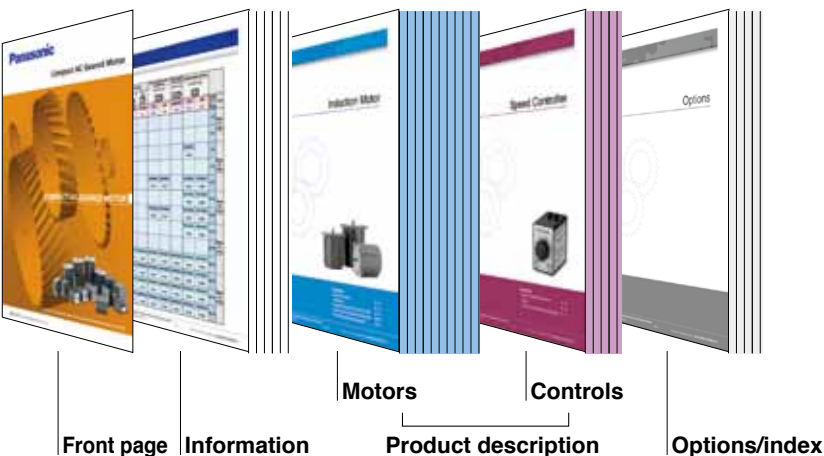
Information contained in the catalog

Configuration and contents of catalog

Product description / Conversion Table

Configuration

The catalog is divided into the following sections.



• Information [A-2 to A-62](#)

Information on product selection, terms used in this catalog, handling precautions and safety standards.

• Product description

<Motors> [B-1 to B-456](#)

List of motors and gear heads

<Controls> [C-1 to C-36](#)

Control related products

• Options & index [D-1 to D-16](#)

List of options. Index sorted by parts number. (Alphabetical order)

Information



• Product list

List of motors and gear heads

[A-4](#)



• Selection by keywords

Objective product can be found by using keywords (function, specification).

[A-24](#)



• Product Type Contents

List of all product families introduced in this catalog.

[A-28](#)



• Terminology

Description of terms used in this catalog.

[A-32](#)



• Handling instructions

Description of special precautions and handling techniques that must be implemented to assure product performance.

[A-35](#)



• Motor selection

Guidance to select the most suitable motor for the application.

[A-48](#)



• Safety standard approved motor

Outline of product safety standards referenced in this catalog.

[A-59](#)

Product outline

The product is briefly described by using the following information and data.

- Overview, system block diagram, part No. description, product-specific information
- Model list
- Product information for each model

Description of product

A Index

- Each series is color coded.

Motors

Controls

- Classification is made in terms of function.

B Size and output

- Indicates the size and output shown on the page.

C Footer

- Indicates the page(s) on which related products and information are found.

• Product information (D to I)

- The facing page contains product specifications.

D Specification

- Defines major requirements such as voltage, current and torque.
- Description is basically on pinion shaft type but almost equally applicable to round shaft.

E Permissible load torque with gear head directly connected

- Specifies the allowable load torque with gear head directly connected.

F Permissible load torque with decimal gear head used

- Specifies the allowable load torque when the decimal gear head is used.

Conversion Table

To convert top row values to left column values(or vice versa), multiply by the value in the table.

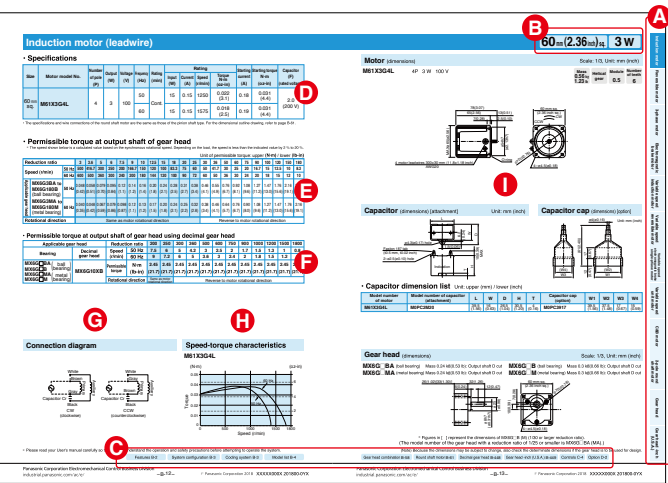
(X = Y x multiply unit)

• Length

Y \ X	mm	cm	m	in
mm	1	0.1	0.001	0.0393701
cm	10	1	0.01	0.393701
m	1000	100	1	39.3701
in	25.4	2.54	0.0254	1

• Weight

Y \ X	g	kg	oz	lb
g	1	0.001	0.035274	0.00220462
kg	1000	1	35.274	2.20462
oz	28.3495	0.0283495	1	0.0625
lb	453.592	0.453592	16	1



G Wiring diagram

- Represents typical wiring for the product.

H Speed-torque curve

- Represents typical speed-torque curve of the product.

I Outline drawing

- Shows dimensions of the motor (gear head).
- Dimensions of motor-gear head combination and round shaft type are shown on different pages. See the footer.
- Fit tolerance symbol (JIS) is used in dimensions of motor "Faucet face" and "gear head" output shaft. For further information, see page A-33.

• Inertia

Y \ X	kg-cm ²	oz-in ²	lb-in ²
kg-cm ²	1	5.46745	0.341718
oz-in ²	0.182899	1	0.0625
lb-in ²	2.9263	16	1

• Torque

Y \ X	N·m	oz-in	lb-in
N·m	1	141.6121	8.850759
oz-in	7.061541 x 10 ⁻³	1	0.0625
lb-in	1.12985 x 10 ³	16	1

Product list

Pinion shaft motor [Japanese version]

		Induction				Reversible					3-phase		Electromagnetic brake, single-phase		Electromagnetic brake, 3-phase	Variable speed induction			
		Leadwire type		Sealed connector type		Leadwire type		Sealed connector type			Leadwire type	Sealed connector type	Leadwire type		Leadwire type	Leadwire type			
																			
Size	Voltage (V)	100	200	100	200	100	200	100	200		200/220	200/220	100	200	200/220	100	200	Voltage (V)	Size
	Output	Page	Page	Page	Page	Page	Page	Page	Page		Page	Page	Page	Page	Page	Page	Page	Page	
42 mm sq. (1.65 inch sq.)	1 W	M41A1G4L				M4RA1G4L												1 W	42 mm sq. (1.65 inch sq.)
		B-10				B-72													
	3 W																	3 W	
60 mm sq. (2.36 inch sq.)	3 W	M61X3G4L														M61X3GV4L		3 W	60 mm sq. (2.36 inch sq.)
		B-12														B-232			
	4 W					M6RX4G4L												4 W	
						B-74													
	6 W	M61X6G4L	M61X6G4Y			M6RX6G4L	M6RX6G4Y						M6RX6GB4L	M6RX6GB4Y		M61X6GV4L	M61X6GV4Y	6 W	
		B-14	B-14			B-76	B-76						B-178	B-178		B-234	B-234		
70 mm sq. (2.76 inch sq.)	10 W	M71X10G4L	M71X10G4Y			M7RX10G4L	M7RX10G4Y									M71X10GV4L	M71X10GV4Y	10 W	70 mm sq. (2.76 inch sq.)
		B-18	B-18			B-80	B-80									B-238	B-238		
	15 W	M71X15G4L	M71X15G4Y			M7RX15G4L	M7RX15G4Y						M7RX15GB4L	M7RX15GB4Y		M71X15GV4L	M71X15GV4Y	15 W	
		B-20	B-20			B-82	B-82						B-182	B-182		B-240	B-240		
80 mm sq. (3.15 inch sq.)	15 W	M81X15G4L	M81X15G4Y													M81X15GV4L	M81X15GV4Y	15 W	80 mm sq. (3.15 inch sq.)
		B-24	B-24													B-244	B-244		
	20 W					M8RX20G4L	M8RX20G4Y											20 W	
						B-86	B-86												
	25 W	M81X25G4L	M81X25G4Y	M81X25GK4L	M81X25GK4Y	M8RX25G4L	M8RX25G4Y	M8RX25GK4L	M8RX25GK4Y		M8MX25G4Y	M8MX25GK4Y	M8RX25GB4L	M8RX25GB4Y	M8MX25GB4Y	M81X25GV4L	M81X25GV4Y	25 W	
		B-26	B-26	B-42	B-42	B-88	B-88	B-104	B-104		B-130	B-146	B-186	B-186	B-202	B-246	B-246		
90 mm sq. (3.54 inch sq.)	40 W	M91X40G4L	M91X40G4Y	M91X40GK4L	M91X40GK4Y	M9RX40G4L	M9RX40G4Y	M9RX40GK4L	M9RX40GK4Y		M9MX40G4Y	M9MX40GK4Y	M9RX40GB4L	M9RX40GB4Y	M9MX40GB4Y	M91X40GV4L	M91X40GV4Y	40 W	90 mm sq. (3.54 inch sq.)
		B-30	B-30	B-46	B-46	B-92	B-92	B-108	B-108		B-134	B-150	B-190	B-190	B-206	B-250	B-250		
	60 W	M91Z60G4L	M91Z60G4Y	M91Z60GK4L	M91Z60GK4Y	M9RZ60G4L	M9RZ60G4Y	M9RZ60GK4L	M9RZ60GK4Y		M9MZ60G4Y	M9MZ60GK4Y	M9RZ60GB4L	M9RZ60GB4Y	M9MZ60GB4Y	M91Z60GV4L	M91Z60GV4Y	60 W	
		B-34	B-34	B-50	B-50	B-96	B-96	B-112	B-112		B-138	B-154	B-194	B-194	B-210	B-254	B-254		
	90 W	M91Z90G4L	M91Z90G4Y	M91Z90GK4L	M91Z90GK4Y	M9RZ90G4L	M9RZ90G4Y	M9RZ90GK4L	M9RZ90GK4Y		M9MZ90G4Y	M9MZ90GK4Y	M9RZ90GB4L	M9RZ90GB4Y	M9MZ90GB4Y	M91Z90GV4L	M91Z90GV4Y	90 W	
		B-38	B-38	B-54	B-54	B-100	B-100	B-116	B-116		B-142	B-158	B-198	B-198	B-214	B-258	B-258		

Product list

Pinion shaft motor [Japanese version]

		Variable speed reversible		Variable speed electromagnetic brake, single-phase		Variable speed unit			C&B induction				C&B 3-phase		C&B variable speed induction			
		Leadwire type		Leadwire type		US series			Leadwire type		Sealed connector type		Leadwire type	Sealed connector type	Leadwire type			
																		
Size	Voltage (V)	100	200	100	200	100	200		100	200	100	200	200/220	200/220	100	200	Voltage (V)	Size
	Output	Page	Page	Page	Page	Page	Page		Page	Page	Page	Page	Page	Page	Page	Page	Page	
42 mm sq. (1.65 inch sq.)	1 W																1 W	42 mm sq. (1.65 inch sq.)
	3 W																3 W	
60 mm sq. (2.36 inch sq.)	3 W																3 W	60 mm sq. (2.36 inch sq.)
	4 W	M6RX4GV4L															4 W	
		B-274																
	6 W	M6RX6GV4L	M6RX6GV4Y	M6RX6GBV4L	M6RX6GBV4Y	MUSN606GL	MUSN606GY		M61X6H4L	M61X6H4Y						M61X6HV4L	M61X6HV4Y	
B-276		B-276	B-314	B-314	B-328	B-328		B-352	B-352						B-388	B-388		
70 mm sq. (2.76 inch sq.)	10 W	M7RX10GV4L	M7RX10GV4Y														10 W	70 mm sq. (2.76 inch sq.)
		B-280	B-280															
	15 W	M7RX15GV4L	M7RX15GV4Y	M7RX15GBV4L	M7RX15GBV4Y	MUSN715GL	MUSN715GY		M71X15H4L	M71X15H4Y						M71X15HV4L	M71X15HV4Y	
B-282		B-282	B-316	B-316	B-330	B-330		B-354	B-354						B-390	B-390		
80 mm sq. (3.15 inch sq.)	15 W																15 W	80 mm sq. (3.15 inch sq.)
	20 W	M8RX20GV4L	M8RX20GV4Y														20 W	
		B-286	B-286															
	25 W	M8RX25GV4L	M8RX25GV4Y	M8RX25GBV4L	M8RX25GBV4Y	MUSN825GL	MUSN825GY		M81X25H4L	M81X25H4Y	M81X25HK4L	M81X25HK4Y	M8MX25H4Y	M8MX25HK4Y	M81X25HV4L	M81X25HV4Y	25 W	
B-288		B-288	B-318	B-318	B-332	B-332		B-356	B-356	B-364	B-364	B-372	B-380	B-392	B-392			
90 mm sq. (3.54 inch sq.)	40 W	M9RX40GV4L	M9RX40GV4Y	M9RX40GBV4L	M9RX40GBV4Y	MUSN940GL	MUSN940GY		M91X40H4L	M91X40H4Y	M91X40HK4L	M91X40HK4Y	M9MX40H4Y	M9MX40HK4Y	M91X40HV4L	M91X40HV4Y	40 W	90 mm sq. (3.54 inch sq.)
		B-292	B-292	B-320	B-320	B-334	B-334		B-358	B-358	B-366	B-366	B-374	B-382	B-394	B-394		
	60 W	M9RZ60GV4L	M9RZ60GV4Y			MUSN960GL	MUSN960GY		M91Z60H4L	M91Z60H4Y	M91Z60HK4L	M91Z60HK4Y	M9MZ60H4Y	M9MZ60HK4Y	M91Z60HV4L	M91Z60HV4Y	60 W	
		B-296	B-296			B-336	B-336		B-360	B-360	B-368	B-368	B-376	B-384	B-396	B-396		
	90 W	M9RZ90GV4L	M9RZ90GV4Y			MUSN990GL	MUSN990GY		M91Z90H4L	M91Z90H4Y	M91Z90HK4L	M91Z90HK4Y	M9MZ90H4Y	M9MZ90HK4Y	M91Z90HV4L	M91Z90HV4Y	90 W	
B-300		B-300			B-338	B-338		B-362	B-362	B-370	B-370	B-378	B-386	B-398	B-398			

Product list

Round shaft motor [Japanese version]

		Induction				Reversible					3-phase		Electromagnetic brake, single-phase		Electromagnetic brake, 3-phase	Variable speed induction			
		Leadwire type		Sealed connector type		Leadwire type		Sealed connector type			Leadwire type	Sealed connector type	Leadwire type		Leadwire type	Leadwire type			
																			
Size	Voltage (V)	100	200	100	200	100	200	100	200		200/220	200/220	100	200	200/220	100	200	Voltage (V)	Size
	Output	Page	Page	Page	Page	Page	Page	Page	Page		Page	Page	Page	Page	Page	Page	Page	Page	
42 mm sq. (1.65 inch sq.)	1 W	M41A1S4L				M4RA1S4L												1 W	42 mm sq. (1.65 inch sq.)
		B-61				B-123													
	3 W																	3 W	
60 mm sq. (2.36 inch sq.)	3 W	M61X3S4LS														M61X3SV4LS		3 W	60 mm sq. (2.36 inch sq.)
		B-61														B-264			
	4 W					M6RX4S4LS												4 W	
						B-123													
	6 W	M61X6S4LS	M61X6S4YS			M6RX6S4LS	M6RX6S4YS						M6RX6SB4LS	M6RX6SB4YS		M61X6SV4LS	M61X6SV4YS	6 W	
		B-61	B-61			B-123	B-123						B-220	B-220		B-264	B-264		
70 mm sq. (2.76 inch sq.)	10 W	M71X10S4LS	M71X10S4YS			M7RX10S4LS	M7RX10S4YS									M71X10SV4LS	M71X10SV4YS	10 W	70 mm sq. (2.76 inch sq.)
		B-61	B-61			B-123	B-123									B-264	B-264		
	15 W	M71X15S4LS	M71X15S4YS			M7RX15S4LS	M7RX15S4YS						M7RX15SB4LS	M7RX15SB4YS		M71X15SV4LS	M71X15SV4YS	15 W	
		B-61	B-61			B-123	B-123						B-220	B-220		B-264	B-264		
80 mm sq. (3.15 inch sq.)	15 W	M81X15S4LS	M81X15S4YS													M81X15SV4LS	M81X15SV4YS	15 W	80 mm sq. (3.15 inch sq.)
		B-61	B-61													B-264	B-264		
	20 W					M8RX20S4LS	M8RX20S4YS											20 W	
						B-123	B-123												
	25 W	M81X25S4LS	M81X25S4YS	M81X25SK4LS	M81X25SK4YS	M8RX25S4LS	M8RX25S4YS	M8RX25SK4LS	M8RX25SK4YS		M8MX25S4YS	M8MX25SK4YS	M8RX25SB4LS	M8RX25SB4YS	M8MX25SB4YS	M81X25SV4LS	M81X25SV4YS	25 W	
		B-61	B-61	B-62	B-62	B-123	B-123	B-124	B-124		B-164	B-165	B-220	B-220	B-221	B-264	B-264		
90 mm sq. (3.54 inch sq.)	40 W	M91X40S4LS	M91X40S4YS	M91X40SK4LS	M91X40SK4YS	M9RX40S4LS	M9RX40S4YS	M9RX40SK4LS	M9RX40SK4YS		M9MX40S4YS	M9MX40SK4YS	M9RX40SB4LS	M9RX40SB4YS	M9MX40SB4YS	M91X40SV4LS	M91X40SV4YS	40 W	90 mm sq. (3.54 inch sq.)
		B-61	B-61	B-62	B-62	B-123	B-123	B-124	B-124		B-164	B-165	B-220	B-220	B-221	B-265	B-265		
	60 W	M91Z60S4LS	M91Z60S4YS	M91Z60SK4LS	M91Z60SK4YS	M9RZ60S4LS	M9RZ60S4YS	M9RZ60SK4LS	M9RZ60SK4YS		M9MZ60S4YS	M9MZ60SK4YS	M9RZ60SB4LS	M9RZ60SB4YS	M9MZ60SB4YS	M91Z60SV4LS	M91Z60SV4YS	60 W	
		B-62	B-62	B-62	B-62	B-124	B-124	B-124	B-124		B-164	B-165	B-220	B-220	B-221	B-265	B-265		
	90 W	M91Z90S4LS	M91Z90S4YS	M91Z90SK4LS	M91Z90SK4YS	M9RZ90S4LS	M9RZ90S4YS	M9RZ90SK4LS	M9RZ90SK4YS		M9MZ90S4YS	M9MZ90SK4YS	M9RZ90SB4LS	M9RZ90SB4YS	M9MZ90SB4YS	M91Z90SV4LS	M91Z90SV4YS	90 W	
		B-62	B-62	B-62	B-62	B-124	B-124	B-124	B-124		B-164	B-165	B-220	B-220	B-221	B-265	B-265		

Product list

Round shaft motor [Japanese version]

2-pole motor [Japanese version]

Pinion shaft motor [International standard approved]



Size		Variable speed reversible	
		Leadwire type	
Size	Voltage (V)	100	200
	Output	Page	Page
42 mm sq. (1.65 inch sq.)	1 W		
	3 W		
60 mm sq. (2.36 inch sq.)	3 W		
	4 W	M6RX4SV4LS B-306	
	6 W	M6RX6SV4LS B-306	M6RX6SV4YS B-306
70 mm sq. (2.76 inch sq.)	10 W	M7RX10SV4LS B-306	M7RX10SV4YS B-306
	15 W	M7RX15SV4LS B-306	M7RX15SV4YS B-306
80 mm sq. (3.15 inch sq.)	15 W		
	20 W	M8RX20SV4LS B-306	M8RX20SV4YS B-306
	25 W	M8RX25SV4LS B-306	M8RX25SV4YS B-306
90 mm sq. (3.54 inch sq.)	40 W	M9RX40SV4LS B-307	M9RX40SV4YS B-307
	60 W	M9RZ60SV4LS B-307	M9RZ60SV4YS B-307
	90 W	M9RZ90SV4LS B-307	M9RZ90SV4YS B-307

		Pinion shaft	Round shaft
Size		Induction	Induction
		Leadwire type	Leadwire type
Size	Voltage (V)	100	100
	Output	Page	Page
42 mm sq. (1.65 inch sq.)	1 W		
	3 W	M41A3G2L B-8	M41A3S2L B-408
60 mm sq. (2.36 inch sq.)	3 W		
	4 W		
	6 W		
70 mm sq. (2.76 inch sq.)	10 W		
	15 W		
80 mm sq. (3.15 inch sq.)	20 W		M81X20S2LS B-409
	40 W		M81X40S2LS B-410
	60 W		M81X60S2LS B-412
90 mm sq. (3.54 inch sq.)	60 W		M91X60S2LS B-414
	90 W		M91Z90S2LS B-416
	150 W		M91ZA5S2LS B-418

<The models with a motor model number to which “A” or “B” is suffixed are not equipped with a capacitor cap.>

Size		Induction							
		Leadwire type				Sealed connector type			
Size	Voltage (V)	100	110/115	200	220/230	100	110/115	200	220/230
	Output	Page	Page	Page	Page	Page	Page	Page	Page
42 mm sq. (1.65 inch sq.)	1 W								
	3 W								
60 mm sq. (2.36 inch sq.)	3 W								
	4 W								
	6 W	M61X6G4LG M61X6G4LGA B-16	M61X6G4DG M61X6G4DGA B-16	M61X6G4YG M61X6G4YGA B-16	M61X6G4GG M61X6G4GGA B-16				
70 mm sq. (2.76 inch sq.)	10 W								
	15 W	M71X15G4LG M71X15G4LGA B-22	M71X15G4DG M71X15G4DGA B-22	M71X15G4YG M71X15G4YGA B-22	M71X15G4GG M71X15G4GGA B-22				
80 mm sq. (3.15 inch sq.)	15 W								
	20 W								
	25 W	M81X25G4LG M81X25G4LGA B-28	M81X25G4DG M81X25G4DGA B-28	M81X25G4YG M81X25G4YGA B-28	M81X25G4GG M81X25G4GGA B-28	M81X25GK4LG M81X25GK4DGA B-44	M81X25GK4YG M81X25GK4YGA B-44	M81X25GK4GG M81X25GK4GGA B-44	M81X25GK4GG M81X25GK4GGA B-44
90 mm sq. (3.54 inch sq.)	40 W	M91X40G4LG M91X40G4LGA B-32	M91X40G4DG M91X40G4DGA B-32	M91X40G4YG M91X40G4YGA B-32	M91X40G4GG M91X40G4GGA B-32	M91X40GK4LG M91X40GK4DGA B-48	M91X40GK4YG M91X40GK4YGA B-48	M91X40GK4GG M91X40GK4GGA B-48	M91X40GK4GG M91X40GK4GGA B-48
	60 W	M91Z60G4LG M91Z60G4LGA B-36	M91Z60G4DG M91Z60G4DGA B-36	M91Z60G4YG M91Z60G4YGA B-36	M91Z60G4GG M91Z60G4GGA M91Z60G4GGB M91Z60G4GGC B-36	M91Z60GK4LG M91Z60GK4DGA B-52	M91Z60GK4YG M91Z60GK4YGA B-52	M91Z60GK4GG M91Z60GK4GGA M91Z60GK4GGB M91Z60GK4GGC B-52	M91Z60GK4GG M91Z60GK4GGA M91Z60GK4GGB M91Z60GK4GGC B-52
	90 W	M91Z90G4LG M91Z90G4LGA B-40	M91Z90G4DG M91Z90G4DGA B-40	M91Z90G4YG M91Z90G4YGA B-40	M91Z90G4GG M91Z90G4GGA M91Z90G4GGB M91Z90G4GGC B-40	M91Z90GK4LG M91Z90GK4DGA B-56	M91Z90GK4YG M91Z90GK4YGA B-56	M91Z90GK4GG M91Z90GK4GGA M91Z90GK4GGB M91Z90GK4GGC B-56	M91Z90GK4GG M91Z90GK4GGA M91Z90GK4GGB M91Z90GK4GGC B-56

* The models with a model number to which “A” or “B” is suffixed (not equipped with a capacitor cap) are not sold or available in Japan.

Product list

Pinion shaft motor [International standard approved]



<The models with a motor model number to which “A” is suffixed are not equipped with a capacitor cap.>

Size		Reversible									3-phase			Electromagnetic brake, single-phase				Electromagnetic brake, 3-phase				
		Leadwire type				Sealed connector type					Leadwire type	Sealed connector type		Leadwire type				Leadwire type				
																						
Voltage (V)	Output	100	110/115	200	220/230	100	110/115	200	220/230		200/220/230		200/220/230	380/400	100	110/115	200	220/230	200/220/230	Voltage (V)	Output	Size
Page	Page	Page	Page	Page	Page	Page	Page	Page	Page		Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Size
42 mm sq. (1.65 inch sq.)	1 W																			1 W	42 mm sq. (1.65 inch sq.)	
	3 W																			3 W		
60 mm sq. (2.36 inch sq.)	3 W																			3 W	60 mm sq. (2.36 inch sq.)	
	4 W																			4 W		
	6 W	M6RX6G4LG M6RX6G4LGA	M6RX6G4DG M6RX6G4DGA	M6RX6G4YG M6RX6G4YGA	M6RX6G4GG M6RX6G4GGA									M6RX6GB4LG M6RX6GB4LGA	M6RX6GB4DG M6RX6GB4DGA	M6RX6GB4YG M6RX6GB4YGA	M6RX6GB4GG M6RX6GB4GGA			6 W		
		B-78	B-78	B-78	B-78									B-180	B-180	B-180	B-180					
70 mm sq. (2.76 inch sq.)	10 W																			10 W	70 mm sq. (2.76 inch sq.)	
	15 W	M7RX15G4LG M7RX15G4LGA	M7RX15G4DG M7RX15G4DGA	M7RX15G4YG M7RX15G4YGA	M7RX15G4GG M7RX15G4GGA									M7RX15GB4LG M7RX15GB4LGA	M7RX15GB4DG M7RX15GB4DGA	M7RX15GB4YG M7RX15GB4YGA	M7RX15GB4GG M7RX15GB4GGA			15 W		
		B-84	B-84	B-84	B-84									B-184	B-184	B-184	B-184					
80 mm sq. (3.15 inch sq.)	15 W																			15 W	80 mm sq. (3.15 inch sq.)	
	20 W																			20 W		
	25 W	M8RX25G4LG M8RX25G4LGA	M8RX25G4DG M8RX25G4DGA	M8RX25G4YG M8RX25G4YGA	M8RX25G4GG M8RX25G4GGA	M8RX25GK4LG M8RX25GK4LGA	M8RX25GK4DG M8RX25GK4DGA	M8RX25GK4YG M8RX25GK4YGA	M8RX25GK4GG M8RX25GK4GGA		M8MX25G4YG M8MX25G4YGA	M8MX25GK4YG M8MX25GK4YGA	M8MX25GK4CG M8MX25GK4CGA	M8RX25GB4LG M8RX25GB4LGA	M8RX25GB4DG M8RX25GB4DGA	M8RX25GB4YG M8RX25GB4YGA	M8RX25GB4GG M8RX25GB4GGA	M8MX25GB4YG M8MX25GB4YGA		25 W		
		B-90	B-90	B-90	B-90	B-106	B-106	B-106	B-106		B-132	B-148	B-148	B-188	B-188	B-188	B-188	B-204				
90 mm sq. (3.54 inch sq.)	40 W	M9RX40G4LG M9RX40G4LGA	M9RX40G4DG M9RX40G4DGA	M9RX40G4YG M9RX40G4YGA	M9RX40G4GG M9RX40G4GGA	M9RX40GK4LG M9RX40GK4LGA	M9RX40GK4DG M9RX40GK4DGA	M9RX40GK4YG M9RX40GK4YGA	M9RX40GK4GG M9RX40GK4GGA		M9MX40G4YG M9MX40G4YGA	M9MX40GK4YG M9MX40GK4YGA	M9MX40GK4CG M9MX40GK4CGA	M9RX40GB4LG M9RX40GB4LGA	M9RX40GB4DG M9RX40GB4DGA	M9RX40GB4YG M9RX40GB4YGA	M9RX40GB4GG M9RX40GB4GGA	M9MX40GB4YG M9MX40GB4YGA		40 W	90 mm sq. (3.54 inch sq.)	
	60 W	M9RZ60G4LG M9RZ60G4LGA	M9RZ60G4DG M9RZ60G4DGA	M9RZ60G4YG M9RZ60G4YGA	M9RZ60G4GG M9RZ60G4GGA	M9RZ60GK4LG M9RZ60GK4LGA	M9RZ60GK4DG M9RZ60GK4DGA	M9RZ60GK4YG M9RZ60GK4YGA	M9RZ60GK4GG M9RZ60GK4GGA		M9MZ60G4YG M9MZ60G4YGA	M9MZ60GK4YG M9MZ60GK4YGA	M9MZ60GK4CG M9MZ60GK4CGA	M9RZ60GB4LG M9RZ60GB4LGA	M9RZ60GB4DG M9RZ60GB4DGA	M9RZ60GB4YG M9RZ60GB4YGA	M9RZ60GB4GG M9RZ60GB4GGA	M9MZ60GB4YG M9MZ60GB4YGA		60 W		
	90 W	M9RZ90G4LG M9RZ90G4LGA	M9RZ90G4DG M9RZ90G4DGA	M9RZ90G4YG M9RZ90G4YGA	M9RZ90G4GG M9RZ90G4GGA	M9RZ90GK4LG M9RZ90GK4LGA	M9RZ90GK4DG M9RZ90GK4DGA	M9RZ90GK4YG M9RZ90GK4YGA	M9RZ90GK4GG M9RZ90GK4GGA		M9MZ90G4YG M9MZ90G4YGA	M9MZ90GK4YG M9MZ90GK4YGA	M9MZ90GK4CG M9MZ90GK4CGA	M9RZ90GB4LG M9RZ90GB4LGA	M9RZ90GB4DG M9RZ90GB4DGA	M9RZ90GB4YG M9RZ90GB4YGA	M9RZ90GB4GG M9RZ90GB4GGA	M9MZ90GB4YG M9MZ90GB4YGA		90 W		
		B-102	B-102	B-102	B-102	B-118	B-118	B-118	B-118		B-144	B-160	B-160	B-200	B-200	B-200	B-200	B-216				

* The models with a model number to which “A” is suffixed (not equipped with a capacitor cap) are not sold or available in Japan.

Product list

Pinion shaft motor [International standard approved]



Round shaft motor [International standard approved]



<The models with a motor model number to which “A” or “B” is suffixed are not equipped with a capacitor cap.>

Size		Variable speed induction				Variable speed reversible					Induction								Voltage (V) Output		Size
		Leadwire type				Leadwire type					Leadwire type				Sealed connector type						
																					
	Voltage (V)	100	110/115	200	220/230	100	110/115	200	220/230		100	110/115	200	220/230	100	110/115	200	220/230			
	Output	Page	Page	Page	Page	Page	Page	Page	Page		Page	Page	Page	Page	Page	Page	Page	Page	Page	Output	
42 mm sq. (1.65 inch sq.)	1 W																			1 W	42 mm sq. (1.65 inch sq.)
	3 W																			3 W	
60 mm sq. (2.36 inch sq.)	3 W																			3 W	60 mm sq. (2.36 inch sq.)
	4 W																			4 W	
	6 W	M61X6GV4LG M61X6GV4LGA	M61X6GV4DG M61X6GV4DGA	M61X6GV4YG M61X6GV4YGA	M61X6GV4GG M61X6GV4GGA	M6RX6GV4LG M6RX6GV4LGA	M6RX6GV4DG M6RX6GV4DGA	M6RX6GV4YG M6RX6GV4YGA	M6RX6GV4GG M6RX6GV4GGA		M61X6S4LG M61X6S4LGA	M61X6S4DG M61X6S4DGA	M61X6S4YG M61X6S4YGA	M61X6S4GG M61X6S4GGA						6 W	
		B-236	B-236	B-236	B-236	B-278	B-278	B-278	B-278		B-61	B-61	B-61	B-61							
70 mm sq. (2.76 inch sq.)	10 W																			10 W	70 mm sq. (2.76 inch sq.)
	15 W	M71X15GV4LG M71X15GV4LGA	M71X15GV4DG M71X15GV4DGA	M71X15GV4YG M71X15GV4YGA	M71X15GV4GG M71X15GV4GGA	M7RX15GV4LG M7RX15GV4LGA	M7RX15GV4DG M7RX15GV4DGA	M7RX15GV4YG M7RX15GV4YGA	M7RX15GV4GG M7RX15GV4GGA		M71X15S4LG M71X15S4LGA	M71X15S4DG M71X15S4DGA	M71X15S4YG M71X15S4YGA	M71X15S4GG M71X15S4GGA						15 W	
		B-242	B-242	B-242	B-242	B-284	B-284	B-284	B-284		B-61	B-61	B-61	B-61							
80 mm sq. (3.15 inch sq.)	15 W																			15 W	80 mm sq. (3.15 inch sq.)
	20 W																			20 W	
	25 W	M81X25GV4LG M81X25GV4LGA	M81X25GV4DG M81X25GV4DGA	M81X25GV4YG M81X25GV4YGA	M81X25GV4GG M81X25GV4GGA	M8RX25GV4LG M8RX25GV4LGA	M8RX25GV4DG M8RX25GV4DGA	M8RX25GV4YG M8RX25GV4YGA	M8RX25GV4GG M8RX25GV4GGA		M81X25S4LG M81X25S4LGA	M81X25S4DG M81X25S4DGA	M81X25S4YG M81X25S4YGA	M81X25S4GG M81X25S4GGA	M81X25SK4LG M81X25SK4LGA	M81X25SK4DG M81X25SK4DGA	M81X25SK4YG M81X25SK4YGA	M81X25SK4GG M81X25SK4GGA		25 W	
		B-248	B-248	B-248	B-248	B-290	B-290	B-290	B-290		B-61	B-61	B-61	B-61	B-62	B-62	B-62	B-62			
90 mm sq. (3.54 inch sq.)	40 W	M91X40GV4LG M91X40GV4LGA	M91X40GV4DG M91X40GV4DGA	M91X40GV4YG M91X40GV4YGA	M91X40GV4GG M91X40GV4GGA	M9RX40GV4LG M9RX40GV4LGA	M9RX40GV4DG M9RX40GV4DGA	M9RX40GV4YG M9RX40GV4YGA	M9RX40GV4GG M9RX40GV4GGA		M91X40S4LG M91X40S4LGA	M91X40S4DG M91X40S4DGA	M91X40S4YG M91X40S4YGA	M91X40S4GG M91X40S4GGA	M91X40SK4LG M91X40SK4LGA	M91X40SK4DG M91X40SK4DGA	M91X40SK4YG M91X40SK4YGA	M91X40SK4GG M91X40SK4GGA		40 W	90 mm sq. (3.54 inch sq.)
	60 W	M91Z60GV4LG M91Z60GV4LGA	M91Z60GV4DG M91Z60GV4DGA	M91Z60GV4YG M91Z60GV4YGA	M91Z60GV4GG M91Z60GV4GGA M91Z60GV4GGB M91Z60GV4GGC	M9RZ60GV4LG M9RZ60GV4LGA	M9RZ60GV4DG M9RZ60GV4DGA	M9RZ60GV4YG M9RZ60GV4YGA	M9RZ60GV4GG M9RZ60GV4GGA		M91Z60S4LG M91Z60S4LGA	M91Z60S4DG M91Z60S4DGA	M91Z60S4YG M91Z60S4YGA	M91Z60S4GG M91Z60S4GGA M91Z60S4GGB M91Z60S4GGC	M91Z60SK4LG M91Z60SK4LGA	M91Z60SK4DG M91Z60SK4DGA	M91Z60SK4YG M91Z60SK4YGA	M91Z60SK4GG M91Z60SK4GGA M91Z60SK4GGB M91Z60SK4GGC		60 W	
	90 W	M91Z90GV4LG M91Z90GV4LGA	M91Z90GV4DG M91Z90GV4DGA	M91Z90GV4YG M91Z90GV4YGA	M91Z90GV4GG M91Z90GV4GGA M91Z90GV4GGB M91Z90GV4GGC	M9RZ90GV4LG M9RZ90GV4LGA	M9RZ90GV4DG M9RZ90GV4DGA	M9RZ90GV4YG M9RZ90GV4YGA	M9RZ90GV4GG M9RZ90GV4GGA		M91Z90S4LG M91Z90S4LGA	M91Z90S4DG M91Z90S4DGA	M91Z90S4YG M91Z90S4YGA	M91Z90S4GG M91Z90S4GGA M91Z90S4GGB M91Z90S4GGC	M91Z90SK4LG M91Z90SK4LGA	M91Z90SK4DG M91Z90SK4DGA	M91Z90SK4YG M91Z90SK4YGA	M91Z90SK4GG M91Z90SK4GGA M91Z90SK4GGB M91Z90SK4GGC		90 W	
		B-252	B-252	B-252	B-252	B-294	B-294	B-294	B-294		B-61	B-61	B-61	B-61	B-62	B-62	B-62	B-62			
		B-256	B-256	B-256	B-256	B-298	B-298	B-298	B-298		B-62	B-62	B-62	B-62	B-62	B-62	B-62	B-62			
		B-260	B-260	B-260	B-260	B-302	B-302	B-302	B-302		B-62	B-62	B-62	B-62	B-62	B-62	B-62	B-62			

* The models with a model number to which “A” or “B” is suffixed (not equipped with a capacitor cap) are not sold or available in Japan.

Product list

Round shaft motor [International standard approved]



<The models with a motor model number to which “A” is suffixed are not equipped with a capacitor cap.>

		Reversible									3-phase			Electromagnetic brake, single-phase				Electromagnetic brake, 3-phase			
		Leadwire type				Sealed connector type						Leadwire type	Sealed connector type		Leadwire type						Leadwire type
																					
Size	Voltage (V)	100	110/115	200	220/230	100	110/115	200	220/230		200/220/230	200/220/230	380/400	100	110/115	200	220/230	200/220/230	Voltage (V)	Size	
	Output	Page	Page	Page	Page	Page	Page	Page	Page		Page	Page	Page	Page	Page	Page	Page	Page	Page		Output
42 mm sq. (1.65 inch sq.)	1 W																		1 W	42 mm sq. (1.65 inch sq.)	
	3 W																		3 W		
60 mm sq. (2.36 inch sq.)	3 W																		3 W	60 mm sq. (2.36 inch sq.)	
	4 W																		4 W		
	6 W	M6RX6S4LG M6RX6S4LGA	M6RX6S4DG M6RX6S4DGA	M6RX6S4YG M6RX6S4YGA	M6RX6S4GG M6RX6S4GGA									M6RX6SB4LG M6RX6SB4LGA	M6RX6SB4DG M6RX6SB4DGA	M6RX6SB4YG M6RX6SB4YGA	M6RX6SB4GG M6RX6SB4GGA		6 W		
70 mm sq. (2.76 inch sq.)	10 W																		10 W	70 mm sq. (2.76 inch sq.)	
	15 W	M7RX15S4LG M7RX15S4LGA	M7RX15S4DG M7RX15S4DGA	M7RX15S4YG M7RX15S4YGA	M7RX15S4GG M7RX15S4GGA									M7RX15SB4LG M7RX15SB4LGA	M7RX15SB4DG M7RX15SB4DGA	M7RX15SB4YG M7RX15SB4YGA	M7RX15SB4GG M7RX15SB4GGA		15 W		
80 mm sq. (3.15 inch sq.)	15 W																		15 W	80 mm sq. (3.15 inch sq.)	
	20 W																		20 W		
	25 W	M8RX25S4LG M8RX25S4LGA	M8RX25S4DG M8RX25S4DGA	M8RX25S4YG M8RX25S4YGA	M8RX25S4GG M8RX25S4GGA	M8RX25SK4LG M8RX25SK4LGA	M8RX25SK4DG M8RX25SK4DGA	M8RX25SK4YG M8RX25SK4YGA	M8RX25SK4GG M8RX25SK4GGA		M8MX25S4YG M8MX25S4YGA	M8MX25SK4YG M8MX25SK4YGA	M8MX25SK4CG M8MX25SK4CGA	M8RX25SB4LG M8RX25SB4LGA	M8RX25SB4DG M8RX25SB4DGA	M8RX25SB4YG M8RX25SB4YGA	M8RX25SB4GG M8RX25SB4GGA	M8MX25SB4YG M8MX25SB4YGA	25 W		
90 mm sq. (3.54 inch sq.)	40 W	M9RX40S4LG M9RX40S4LGA	M9RX40S4DG M9RX40S4DGA	M9RX40S4YG M9RX40S4YGA	M9RX40S4GG M9RX40S4GGA	M9RX40SK4LG M9RX40SK4LGA	M9RX40SK4DG M9RX40SK4DGA	M9RX40SK4YG M9RX40SK4YGA	M9RX40SK4GG M9RX40SK4GGA		M9MX40S4YG M9MX40S4YGA	M9MX40SK4YG M9MX40SK4YGA	M9MX40SK4CG M9MX40SK4CGA	M9RX40SB4LG M9RX40SB4LGA	M9RX40SB4DG M9RX40SB4DGA	M9RX40SB4YG M9RX40SB4YGA	M9RX40SB4GG M9RX40SB4GGA	M9MX40SB4YG M9MX40SB4YGA	40 W	90 mm sq. (3.54 inch sq.)	
	60 W	M9RZ60S4LG M9RZ60S4LGA	M9RZ60S4DG M9RZ60S4DGA	M9RZ60S4YG M9RZ60S4YGA	M9RZ60S4GG M9RZ60S4GGA	M9RZ60SK4LG M9RZ60SK4LGA	M9RZ60SK4DG M9RZ60SK4DGA	M9RZ60SK4YG M9RZ60SK4YGA	M9RZ60SK4GG M9RZ60SK4GGA		M9MZ60S4YG M9MZ60S4YGA	M9MZ60SK4YG M9MZ60SK4YGA	M9MZ60SK4CG M9MZ60SK4CGA	M9RZ60SB4LG M9RZ60SB4LGA	M9RZ60SB4DG M9RZ60SB4DGA	M9RZ60SB4YG M9RZ60SB4YGA	M9RZ60SB4GG M9RZ60SB4GGA	M9MZ60SB4YG M9MZ60SB4YGA	60 W		
	90 W	M9RZ90S4LG M9RZ90S4LGA	M9RZ90S4DG M9RZ90S4DGA	M9RZ90S4YG M9RZ90S4YGA	M9RZ90S4GG M9RZ90S4GGA	M9RZ90SK4LG M9RZ90SK4LGA	M9RZ90SK4DG M9RZ90SK4DGA	M9RZ90SK4YG M9RZ90SK4YGA	M9RZ90SK4GG M9RZ90SK4GGA		M9MZ90S4YG M9MZ90S4YGA	M9MZ90SK4YG M9MZ90SK4YGA	M9MZ90SK4CG M9MZ90SK4CGA	M9RZ90SB4LG M9RZ90SB4LGA	M9RZ90SB4DG M9RZ90SB4DGA	M9RZ90SB4YG M9RZ90SB4YGA	M9RZ90SB4GG M9RZ90SB4GGA	M9MZ90SB4YG M9MZ90SB4YGA	90 W		

* The models with a model number to which “A” is suffixed (not equipped with a capacitor cap) are not sold or available in Japan.

Product list

Round shaft motor [International standard approved]



		Variable speed induction				Variable speed reversible			
		Leadwire type				Leadwire type			
Size	Voltage (V) Output	100	110/115	200	220/230	100	110/115	200	220/230
		Page	Page	Page	Page	Page	Page	Page	Page
42 mm sq. (1.65 inch sq.)	1 W								
	3 W								
60 mm sq. (2.36 inch sq.)	3 W								
	4 W								
	6 W	M61X6SV4LG M61X6SV4LGA	M61X6SV4DG M61X6SV4DGA	M61X6SV4YG M61X6SV4YGA	M61X6SV4GG M61X6SV4GGA	M6RX6SV4LG M6RX6SV4LGA	M6RX6SV4DG M6RX6SV4DGA	M6RX6SV4YG M6RX6SV4YGA	M6RX6SV4GG M6RX6SV4GGA
		B-264	B-264	B-264	B-264	B-306	B-306	B-306	B-306
70 mm sq. (2.76 inch sq.)	10 W								
	15 W	M71X15SV4LG M71X15SV4LGA	M71X15SV4DG M71X15SV4DGA	M71X15SV4YG M71X15SV4YGA	M71X15SV4GG M71X15SV4GGA	M7RX15SV4LG M7RX15SV4LGA	M7RX15SV4DG M7RX15SV4DGA	M7RX15SV4YG M7RX15SV4YGA	M7RX15SV4GG M7RX15SV4GGA
		B-264	B-264	B-264	B-264	B-306	B-306	B-306	B-306
80 mm sq. (3.15 inch sq.)	15 W								
	20 W								
	25 W	M81X25SV4LG M81X25SV4LGA	M81X25SV4DG M81X25SV4DGA	M81X25SV4YG M81X25SV4YGA	M81X25SV4GG M81X25SV4GGA	M8RX25SV4LG M8RX25SV4LGA	M8RX25SV4DG M8RX25SV4DGA	M8RX25SV4YG M8RX25SV4YGA	M8RX25SV4GG M8RX25SV4GGA
		B-264	B-264	B-264	B-264	B-306	B-306	B-306	B-306
90 mm sq. (3.54 inch sq.)	40 W	M91X40SV4LG M91X40SV4LGA	M91X40SV4DG M91X40SV4DGA	M91X40SV4YG M91X40SV4YGA	M91X40SV4GG M91X40SV4GGA	M9RX40SV4LG M9RX40SV4LGA	M9RX40SV4DG M9RX40SV4DGA	M9RX40SV4YG M9RX40SV4YGA	M9RX40SV4GG M9RX40SV4GGA
		B-265	B-265	B-265	B-265	B-307	B-307	B-307	B-307
	60 W	M91Z60SV4LG M91Z60SV4LGA	M91Z60SV4DG M91Z60SV4DGA	M91Z60SV4YG M91Z60SV4YGA	M91Z60SV4GG M91Z60SV4GGA M91Z60SV4GGB M91Z60SV4GGC	M9RZ60SV4LG M9RZ60SV4LGA	M9RZ60SV4DG M9RZ60SV4DGA	M9RZ60SV4YG M9RZ60SV4YGA	M9RZ60SV4GG M9RZ60SV4GGA
		B-265	B-265	B-265	B-265	B-307	B-307	B-307	B-307
	90 W	M91Z90SV4LG M91Z90SV4LGA	M91Z90SV4DG M91Z90SV4DGA	M91Z90SV4YG M91Z90SV4YGA	M91Z90SV4GG M91Z90SV4GGA M91Z90SV4GGB M91Z90SV4GGC	M9RZ90SV4LG M9RZ90SV4LGA	M9RZ90SV4DG M9RZ90SV4DGA	M9RZ90SV4YG M9RZ90SV4YGA	M9RZ90SV4GG M9RZ90SV4GGA
		B-265	B-265	B-265	B-265	B-307	B-307	B-307	B-307

2-pole round shaft motor [International standard approved]



<The models with a motor model number to which “A” or “B” is suffixed are not equipped with a capacitor cap.>

		Induction				3-phase
		Leadwire type				Leadwire type
Size	Voltage (V) Output	100	110/115	200	220/230	200/220/230
		Page	Page	Page	Page	Page
42 mm sq. (1.65 inch sq.)	1 W					
	3 W					
60 mm sq. (2.36 inch sq.)	3 W					
	4 W					
	6 W					
70 mm sq. (2.76 inch sq.)	10 W					
	15 W					
80 mm sq. (3.15 inch sq.)	20 W					
	40 W	M81X40S2LG M81X40S2LGA	M81X40S2DG M81X40S2DGA	M81X40S2YG M81X40S2YGA	M81X40S2GG M81X40S2GGA	M8MX40S2YG M8MX40S2YGA
		B-411	B-411	B-411	B-411	B-421
	60 W	M81X60S2LG M81X60S2LGA	M81X60S2DG M81X60S2DGA	M81X60S2YG M81X60S2YGA	M81X60S2GG M81X60S2GGA	M8MX60S2YG M8MX60S2YGA
		B-413	B-413	B-413	B-413	B-423
90 mm sq. (3.54 inch sq.)	60 W	M91X60S2LG M91X60S2LGA	M91X60S2DG M91X60S2DGA	M91X60S2YG M91X60S2YGA	M91X60S2GG M91X60S2GGA	M9MX60S2YG M9MX60S2YGA
		B-415	B-415	B-415	B-415	B-425
	90 W	M91Z90S2LG M91Z90S2LGA	M91Z90S2DG M91Z90S2DGA	M91Z90S2YG M91Z90S2YGA	M91Z90S2GG M91Z90S2GGA	M9MZ90S2YG M9MZ90S2YGA
		B-417	B-417	B-417	B-417	B-427
	150 W	M91ZA5S2LG M91ZA5S2LGA	M91ZA5S2DG M91ZA5S2DGA	M91ZA5S2YG M91ZA5S2YGA	M91ZA5S2GG M91ZA5S2GGA	M9MZA5S2YG M9MZA5S2YGA
		B-419	B-419	B-419	B-419	B-429

* The models with a model number to which “A” or “B” is suffixed (not equipped with a capacitor cap) are not sold or available in Japan.

Product list

Gear head

Ball bearing

Size		Reduction ratio	Ball bearing  Page	Hinge
42 mm sq. (1.65 inch sq.)				
60 mm sq. (2.36 inch sq.)		1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	MX6G3BA – MX6G180B B-12	
70 mm sq. (2.76 inch sq.)		1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	MX7G3BA – MX7G180B B-18	
80 mm sq. (3.15 inch sq.)		1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	MX8G3B – MX8G180B B-24	
90 mm sq. (3.54 inch sq.)	40 W	1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	MX9G3B – X9G180B B-30	
	Common to 60 W, 90 W	1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180, 1/200	MZ9G3B – MZ9G200B B-34	
		1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180, 1/200	MY9G3B – MY9G200B B-34	○

Metal bearing

Size		Reduction ratio	Metal bearing  Page	Hinge
42 mm sq. (1.65 inch sq.)				
60 mm sq. (2.36 inch sq.)		1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	MX6G3MA – MX6G180M B-12	
70 mm sq. (2.76 inch sq.)		1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	MX7G3MA – MX7G180M B-18	
80 mm sq. (3.15 inch sq.)		1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	MX8G3M – MX8G180M B-24	
90 mm sq. (3.54 inch sq.)	40 W	1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	MX9G3M – MX9G180M B-30	
	Common to 60 W, 90 W			

* For C&B motor, use gear head dedicated to C&B motor, shown on page A-23.

Ball bearing and metal bearing

Size		Reduction ratio	Ball bearing and metal bearing  Page	Hinge
42 mm sq. (1.65 inch sq.)		1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/12.5, 1/15, 1/18, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	M4GA3F – M4GA180F B-8	
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.)	40 W			
	Common to 60 W, 90 W			

High torque gear head

Size		Reduction ratio	 Page	Hinge
90 mm sq. (3.54 inch sq.)		1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180, 1/200	MR9G50B – MR9G200B B-444	
		1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180, 1/200	MP9G50B – MP9G200B B-444	○

Right-angle gear head

Size		Reduction ratio	 Page	Hinge
90 mm sq. (3.54 inch sq.)	40 W	1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/12.5, 1/15, 1/18, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	MX9G3R – MX9G180R B-446	
	Common to 60 W, 90 W	1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/12.5, 1/15, 1/18, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180, 1/200	MZ9G3R – MZ9G200R B-446	

Product list

Decimal gear head

Size		Reduction ratio	Page	Applicable gear head
60 mm sq. (2.36 inch sq.)		1/10	MX6G10XB B-448	MX6G*BA MX6G*B
70 mm sq. (2.76 inch sq.)		1/10	MX7G10XB B-448	MX7G*BA MX7G*B
80 mm sq. (3.15 inch sq.)		1/10	MX8G10XB B-448	MX8G*B
90 mm sq. (3.54 inch sq.)	40 W	1/10	MX9G10XB B-448	MX9G*B
	Common to 60 W, 90 W	1/10	MZ9G10XB B-448	MZ9G*B MY9G*B MR9G*B MP9G*B

Gear head

Gear head-Inch (U.S.A.)

Size		Reduction ratio	Ball bearing Page	Hinge
42 mm sq. (1.65 inch sq.)				
60 mm sq. (2.36 inch sq.)		1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	MX6G3BU – MX6G180BU B-451	
70 mm sq. (2.76 inch sq.)		1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	MX7G3BU – MX7G180BU B-451	
80 mm sq. (3.15 inch sq.)		1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	MX8G3BU – MX8G180BU B-451	
90 mm sq. (3.54 inch sq.)	40 W	1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	MX9G3BU – MX9G180BU B-451	
	Common to 60 W, 90 W	1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180, 1/200	MZ9G3BU – MZ9G200BU B-451	

Gear head for C&B motor

Size		Reduction ratio	Ball bearing Page	Hinge
42 mm sq. (1.65 inch sq.)				
60 mm sq. (2.36 inch sq.)		1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	MX6G3H – MX6G180H B-352	
70 mm sq. (2.76 inch sq.)		1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	MX7G3H – MX7G180H B-354	
80 mm sq. (3.15 inch sq.)		1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	MX8G3H – MX8G180H B-356	
90 mm sq. (3.54 inch sq.)	40 W	1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	MX9G3H – MX9G180H B-358	
	Common to 60 W, 90 W	1/3, 1/3.6, 1/5, 1/6, 1/7.5, 1/9, 1/10, 1/12.5, 1/15, 1/18, 1/20, 1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180, 1/200	MY9G3H – MY9G200H B-360	○

Selection by keywords

Motor selection guide

Variable speed	Protection of leadwires	Brake	Braking frequency	Operation mode	No. of phases	Type	Page
Constant	Leadwire protection not required	No brake required to stop		Continuous run required	Single-phase 2-pole	2-pole round-shaft motor (induction)	B-406
					Single-phase 4-pole	Induction motor (4-pole)	B- 4
				Continuous run not required	3-phase	3-phase motor	B-126
		Brake required to stop Brake to be kept applied	Low braking frequency	Continuous run required	Single-phase	Reversible motor	B- 64
				Continuous run not required	3-phase	3-phase motor with electromagnetic brake	B-202
		Brake required to stop Continuous application not required	Low braking frequency	Normal/reverse rotation	Single-phase	Single-phase motor with electromagnetic brake	B-178
					Single-phase	Reversible motor	B- 64
			High braking frequency	One-directional rotation only	3-phase	3-phase motor with brake unit	B-130 + C-25
					Single-phase	C&B motor (induction)	B-352
	Leadwire protection required	No brake required		Continuous run required	3-phase	C&B motor (3-phase motor)	B-372
					Single-phase	Induction motor with sealed connector	B- 42
				Continuous run not required	3-phase	3-phase motor with sealed connector	B-146
		Brake required Continuous application not required	Low braking frequency	Normal/reverse rotation	Single-phase	Reversible motor with sealed connector	B-104
					3-phase	3-phase motor with brake unit and sealed connector	B-146 + C-25
			High braking frequency	One-directional rotation only	Single-phase	C&B induction motor with sealed connector	B-364
					3-phase	C&B 3-phase motor with sealed connector	B-380
		No brake required to stop		Continuous run required	Single-phase	Variable speed induction	B-232 + C- 1
					Single-phase	Variable speed reversible	B-274 + C- 1
				Continuous run not required	Single-phase	Variable speed with electromagnetic brake	B-314 + C- 1
Variable		Brake required to stop Brake to be kept applied		Short-time run only (30-minutes rating)	Single-phase	Variable speed reversible	B-274 + C- 1
					Single-phase	Variable speed reversible	B-274 + C- 1
		Brake required to stop Continuous application not required	Low braking frequency	Continuous run only	Single-phase	C&B motor (variable speed induction motor)	B-388 + C- 1
					Single-phase	C&B motor (variable speed induction motor)	B-388 + C- 1
					Single-phase	C&B motor (variable speed induction motor)	B-388 + C- 1

Selection by keywords

Gear head selection guide

Size	Output	Gear type	Hinge	Bearing	Part No.
42 mm sq. (1.65 inch sq.)	1 W to 3 W	Normal load gear	Without hinge	Ball bearing and metal	M4GA□F
60 mm sq. (2.36 inch sq.)	3 W to 6 W	Normal load gear		Ball bearing	MX6G□B(A)
		Metal			MX6G□M(A)
		Decimal gear		Ball bearing	MX6G10XB
		for C&B motor		Ball bearing	MX6G□H
		Inch sized (U.S.A.)		Ball bearing	MX6G□BU
70 mm sq. (2.76 inch sq.)	10 W to 15 W	Normal load gear		Ball bearing	MX7G□B(A)
		Metal			MX7G□M(A)
		Decimal gear		Ball bearing	MX7G10XB
		for C&B motor		Ball bearing	MX7G□H
		Inch sized (U.S.A.)		Ball bearing	MX7G□BU
80 mm sq. (3.15 inch sq.)	15 W to 25 W	Normal load gear		Ball bearing	MX8G□B
		Metal			MX8G□M
		Decimal gear		Ball bearing	MX8G10XB
		for C&B motor		Ball bearing	MX8G□H
		Inch sized (U.S.A.)		Ball bearing	MX8G□BU
90 mm sq. (3.54 inch sq.)	40 W	Normal load gear		Ball bearing	MX9G□B
		Metal			MX9G□M
		Right-angle gear		Ball bearing	MX9G□R
		Decimal gear		Ball bearing	MX9G10XB
		for C&B motor		Ball bearing	MX9G□H
90 mm sq. (3.54 inch sq.)	60 W or larger	Inch sized (U.S.A.)		Ball bearing	MX9G□BU
		Permissible torque 19.6 N·m (173 lb-in)	With hinge	Ball bearing	MY9G□B
		Right-angle gear	Without hinge		MZ9G□B
		Decimal gear			MZ9G□R
		for C&B motor	With hinge		MZ9G10XB
		Inch sized (U.S.A.)	Without hinge		MY9G□H
	60 W or larger High torque type	Permissible torque 29.4 N·m (260 lb-in)	With hinge		MZ9G□BU
			Without hinge		MP9G□B
					MR9G□B

• Gear heads are described on the respective page where the applicable motors are also described.

Control device selection guide

Power supply	Application	Type	Voltage	Part No.	Applicable motor	Page
Single-phase	Speed change (Speed controller)	Separate type	Volume control type (pot.) International standard approved (MGSD)	100 V~120 V	MGSD*1	3 W to 90 W C- 6
				200 V~240 V	MGSD B2	
			High-performance type (EX)	100 V	DV113*	
				200 V	DV123*	
		Unit type	Volume control type (pot.) (US)	100 V	Unit model No. MUSN***L Controller No. DVUS***L	6 W to 90 W Unit motor B-323 Unit controller C- 21
				200 V	Unit model No. MUSN***Y Controller No. DVUS***Y	
	Instantaneous stop (Brake unit)	Contactless (MB48X)	For induction motor	100 V	DVMB48XZ	1 W to 90 W C- 27
				200 V		
			For reversible motor	100 V		
				200 V		
			For electromagnetic brake motor	100 V		
				200 V		
		Contacting	Popular type (SD)	100 V	DZ9102	3 W to 90 W C- 30
				200 V	DZ9202	
			High-performance type (EX)	100 V	DZ9113	
				200 V	DZ9213	
3-phase		Contacting	Popular type (SD)	3-phase 200 V	DZ9302	25 W to 90 W C- 30