

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.
- 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 Electronic data of this product (Instruction Manual, CAD data) can be downloaded from the following web site;
industrial.panasonic.com/ac/e/

● Contact to : _____

Panasonic Corporation, Industrial Device Business Division

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Compact AC Geared Motor

COMPACT AC GEARED MOTOR

COMPACT AC GEARED MOTOR

2021/4

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

2021.04 | industrial.panasonic.com/ac/e/

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• Speed controller	E-	1
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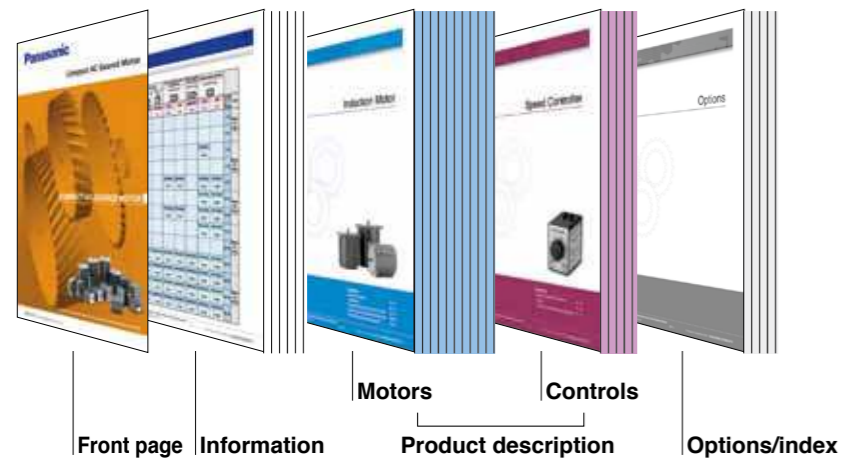
Information contained in the catalog

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



• **Handling instructions**
Description of special precautions and handling techniques that must be implemented to assure product performance.
➔ A-35



• **Selection by keywords**
Objective product can be found by using keywords (function, specification).
➔ A-24



• **Motor selection**
Guidance to select the most suitable motor for the application.
➔ A-48



• **Product Type Contents**
List of all product families introduced in this catalog.
➔ A-28



• **Safety standard approved motor**
Outline of product safety standards referenced in this catalog.
➔ A-59



• **Terminology**
Description of terms used in this catalog.
➔ A-32

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

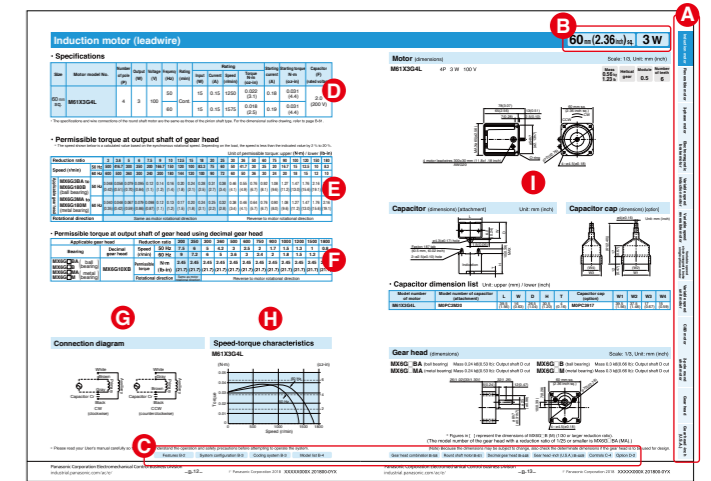
• Defines major requirements such as voltage, current and torque.
• Description is basically on pinion shaft type but almost equally applicable to round shaft.

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.



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.

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

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]

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

Product list




Pinion shaft motor [Japanese version]

Orders are no longer accepted later than the end of March 2022.

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

Product list

Round shaft motor [Japanese version]

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

Product list

Round shaft motor [Japanese version]

2-pole motor [Japanese version]

Pinion shaft motor [International standard approved]



• Pinion shaft • Round shaft

Size		Variable speed reversible	
		Leadwire type	
		100	200
		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

Size		Induction		3-phase	
		Leadwire type		Leadwire type	
		100	200	200/220	
		Page	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	M81X20S2YS B-409	
	40 W		M81X40S2LS B-410	M81X40S2YS B-410	M8MX40S2YS B-420
	60 W		M81X60S2LS B-412	M81X60S2YS B-412	M8MX60S2YS B-422
90 mm sq. (3.54 inch sq.)	60 W		M91X60S2LS B-414	M91X60S2YS B-414	M9MX60S2YS B-424
	90 W		M91Z90S2LS B-416	M91Z90S2YS B-416	M9MZ90S2YS B-426
	150 W		M91ZA5S2LS B-418	M91ZA5S2YS B-418	M9MZA5S2YS B-428

<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			
		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	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 M81X25GK4LGA B-44	M81X25GK4DG M81X25GK4DGA B-44	M81X25GK4YG M81X25GK4YGA 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 M91X40GK4LGA B-48	M91X40GK4DG M91X40GK4DGA B-48	M91X40GK4YG M91X40GK4YGA 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 M91Z60GK4LGA B-52	M91Z60GK4DG M91Z60GK4DGA B-52	M91Z60GK4YG M91Z60GK4YGA 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 M91Z90GK4LGA B-56	M91Z90GK4DG M91Z90GK4DGA B-56	M91Z90GK4YG M91Z90GK4YGA 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	Voltage (V) Output	Reversible								3-phase	Electromagnetic brake, single-phase				Electromagnetic brake, 3-phase	Voltage (V) Output	Size				
		Leadwire type 				Sealed connector type 					Leadwire type 							Leadwire type 			
		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				
		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																		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
		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
		B-94	B-94	B-94	B-94	B-110	B-110	B-110	B-110				B-136	B-152	B-152	B-192	B-192	B-192	B-192	B-208	
	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
		B-98	B-98	B-98	B-98	B-114	B-114	B-114	B-114				B-140	B-156	B-156	B-196	B-196	B-196	B-196	B-212	
	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	Voltage (V) Output	Variable speed induction				Variable speed reversible				Induction								Voltage (V) Output	Size						
		100	110/115	200	220/230	100	110/115	200	220/230	Leadwire type				Sealed connector type											
		Page	Page	Page	Page	Page	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																						1 W	42 mm sq. (1.65 inch sq.)	
	3 W																								3 W
60 mm sq. (2.36 inch sq.)	3 W																							3 W	
	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	
	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	
	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
			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			
	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
		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				
	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-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.>

Size	Voltage (V) Output	Reversible								3-phase	Electromagnetic brake, single-phase				Electromagnetic brake, 3-phase	Voltage (V) Output	Size				
		Leadwire type 				Sealed connector type 					Leadwire type 							Leadwire type 			
		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				
		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																		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
		B-123	B-123	B-123	B-123								B-220	B-220	B-220	B-220					
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
		B-123	B-123	B-123	B-123								B-220	B-220	B-220	B-220					
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
		B-123	B-123	B-123	B-123	B-124	B-124	B-124	B-124				B-164	B-165	B-165	B-220	B-220	B-220	B-220	B-221	
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
		B-123	B-123	B-123	B-123	B-124	B-124	B-124	B-124				B-164	B-165	B-165	B-220	B-220	B-220	B-220	B-221	
	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
		B-124	B-124	B-124	B-124	B-124	B-124	B-124	B-124				B-164	B-165	B-165	B-220	B-220	B-220	B-220	B-221	
	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
		B-124	B-124	B-124	B-124	B-124	B-124	B-124	B-124				B-164	B-165	B-165	B-220	B-220	B-220	B-220	B-221	

* 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]



2-pole round shaft motor [International standard approved]



Size		Variable speed induction				Variable speed reversible			
		Leadwire type				Leadwire type			
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	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

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

Size		Induction				3-phase
		Leadwire type				Leadwire type
Voltage (V)		100	110/115	200	220/230	200/220/230
Output		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	Hinge	
		Page		
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,	MX6G3BA – MX6G180B		
	1/25, 1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	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,	MX7G3BA – MX7G180B		
	1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	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,	MX8G3B – MX8G180B		
	1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	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
	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,		MZ9G3B – MZ9G200B
		1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180, 1/200		B-30
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,	MY9G3B – MY9G200B		
	1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180, 1/200	B-34		

Metal bearing

Size	Reduction ratio	Metal bearing	Hinge	
		Page		
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,	MX6G3MA – MX6G180M		
	1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	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,	MX7G3MA – MX7G180M		
	1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	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,	MX8G3M – MX8G180M		
	1/30, 1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	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
	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	Hinge
		Page	
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,	M4GA3F – M4GA180F	
	1/36, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180	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		Hinge
		Page	
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		Hinge
		Page	
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	
	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,	MZ9G3R – MZ9G200R
		1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180, 1/200	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	MX9G10XB B-448	MX9G*B
	Common to 60 W, 90 W	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	
	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	
	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	
90 mm sq. (3.54 inch sq.)	Common to 60 W, 90 W	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	
	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	
	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	
90 mm sq. (3.54 inch sq.)	Common to 60 W, 90 W	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			
				Continuous run not required	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		Continuous run required	Single-phase	Reversible motor	B- 64			
				Continuous run not required	3-phase	3-phase motor with electromagnetic brake	B-202			
				Continuous run not required	Single-phase	Single-phase motor with electromagnetic brake	B-178			
		Brake required to stop Continuous application not required		Low braking frequency	Normal/reverse rotation	Single-phase	Reversible motor	B- 64		
				Low braking frequency	Normal/reverse rotation	3-phase	3-phase motor with brake unit	B-130 + C-25		
				High braking frequency	One-directional rotation only	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			
				Continuous run not required	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		
				Low braking frequency	Normal/reverse rotation	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		
		High braking frequency		One-directional rotation only	3-phase	C&B 3-phase motor with sealed connector	B-380			
		Variable			No brake required to stop		Continuous run required	Single-phase	Variable speed induction	B-232 + C- 1
							Continuous run not required	Single-phase	Variable speed reversible	B-274 + C- 1
Brake required to stop Brake to be kept applied	Short-time run only (30-minutes rating)		Single-phase		Variable speed with electromagnetic brake		B-314 + C- 1			
	Short-time run only (30-minutes rating)		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		
	High braking frequency		Continuous run only		Single-phase		C&B motor (variable speed induction motor)	B-388 + C- 1		

Orders are no longer accepted later than the end of March 2022.

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Selection by keywords

Gear head selection guide

Control device 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		
				Ball bearing	MX6G□B(A)		
60 mm sq. (2.36 inch sq.)	3 W to 6 W	Normal load gear		Metal	MX6G□M(A)		
				Decimal gear for C&B motor	Ball bearing	MX6G10XB	
					Ball bearing	MX6G□H	
					Ball bearing	MX6G□BU	
					Inch sized (U.S.A.)		
70 mm sq. (2.76 inch sq.)	10 W to 15 W	Normal load gear		Ball bearing	MX7G□B(A)		
				Decimal gear for C&B motor	Metal	MX7G□M(A)	
					Ball bearing	MX7G10XB	
					Ball bearing	MX7G□H	
					Ball bearing	MX7G□BU	
80 mm sq. (3.15 inch sq.)	15 W to 25 W	Normal load gear		Ball bearing	MX8G□B		
				Decimal gear for C&B motor	Metal	MX8G□M	
					Ball bearing	MX8G10XB	
					Ball bearing	MX8G□H	
					Ball bearing	MX8G□BU	
90 mm sq. (3.54 inch sq.)	40 W	Normal load gear		Ball bearing	MX9G□B		
				Right-angle gear Decimal gear for C&B motor	Metal	MX9G□M	
					Ball bearing	MX9G□R	
			Ball bearing		MX9G10XB		
			Ball bearing		MX9G□H		
90 mm sq. (3.54 inch sq.)	60 W or larger	Permissible torque 19.6 N·m (173 lb-in)	With hinge	Ball bearing	MX9G□BU		
			Right-angle gear Decimal gear for C&B motor	Without hinge	Ball bearing	MY9G□B	
				Inch sized (U.S.A.)	Without hinge	Ball bearing	MZ9G□B
					Without hinge	Ball bearing	MZ9G□R
					Without hinge	Ball bearing	MZ9G10XB
	60 W or larger High torque type	Permissible torque 29.4 N·m (260 lb-in)		With hinge	Ball bearing	MY9G□H	
				Without hinge	Ball bearing	MZ9G□BU	
					Without hinge	Ball bearing	MP9G□B
					Without hinge	Ball bearing	MR9G□B

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

Power supply	Application	Type	Voltage	Part No.	Applicable motor	Page		
Single-phase	Speed change (Speed controller)	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				
		Separate type <small>Orders are no longer accepted later than the end of March 2021.</small>	High-performance type (EX)	100 V	DV113*	6 W to 90 W	Unit motor B-323 Unit controller C- 21	
				200 V	DV123*			
		Unit type <small>Orders are no longer accepted later than the end of March 2022.</small>	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) <small>Orders are no longer accepted later than the end of March 2022.</small>	Contactless (MB48X)	For induction motor	100 V	DVMB48XZ	1 W to 90 W	C- 27
					200 V			
					For reversible motor			
				200 V				
	For electromagnetic brake motor			100 V				
				200 V				
	3-phase	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		