

⚠ 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 : _____

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The contents of this catalog apply to the products as of April 2022.

Compact AC Geared Motor



Speed Controller Overview

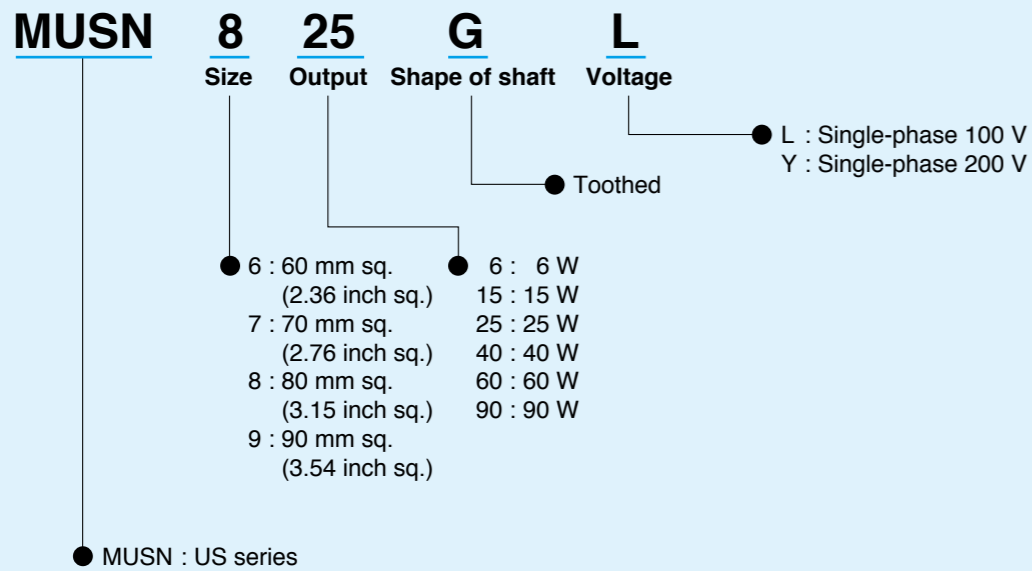
Orders are no longer accepted later than the end of March 2022.

Overview of Speed Controllers

- These controllers vary speed of compact geared motors.

Product designation

- Unit type speed controller



Speed controller

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

Unit type US series



• Features

<US series>

- Provided with quick-connect* socket
- Can be extended up to 5 m through extension cable (option)

* When connected (B-323 page) unit motor.

• US series

- Please refer to pages B-324 to B-340 to check the specification and combination of motor and speed controller.
- When ordering the motor and speed controller as a set, place an order using the unit model number.

• Part No.

Capacity	Voltage	US series
6 W	100 V	DVUS606L
	200 V	DVUS606Y
15 W	100 V	DVUS715L
	200 V	DVUS715Y
25 W	100 V	DVUS825L
	200 V	DVUS825Y
40 W	100 V	DVUS940L
	200 V	DVUS940Y
60 W	100 V	DVUS960L
	200 V	DVUS960Y
90 W	100 V	DVUS990L
	200 V	DVUS990Y

• Specification

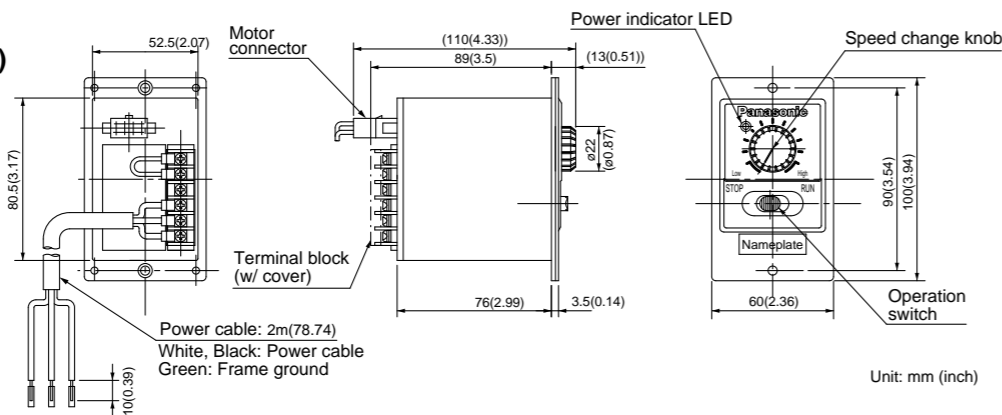
	US series
Output	6 W : 15 W : 25 W : 40 W : 60 W : 90 W
Rated voltage	single-phase 100 VAC / single-phase 200 VAC
Power frequency	50 Hz / 60 Hz
Speed control range	90 r/min to 1400 r/min / 90 r/min to 1700 r/min
Speed variation	5 % (standard value)
Speed setting	Analog
Operating temperature	-10 °C to 40 °C
Storage temperature	-20 °C to 60 °C
Soft-start/soft-down time	—

- The 90 W models contain a thermal protector to prevent burnout for motor.

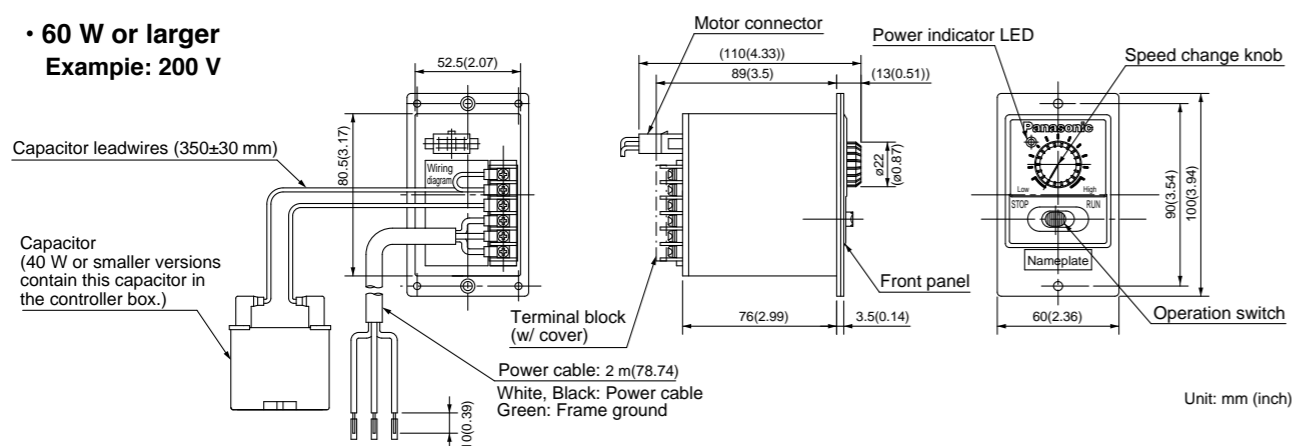
• Outline drawing

US series

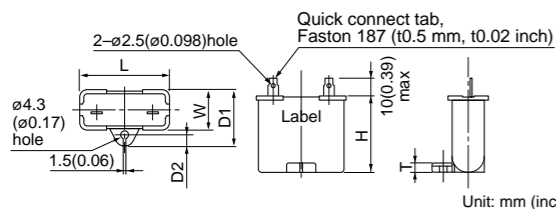
• 40 W or smaller (w/ internal capacitor)
Example: 200 V



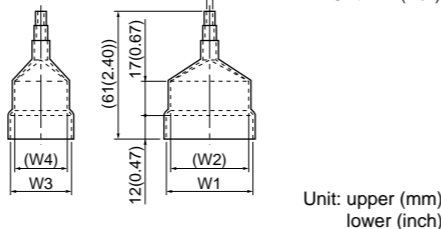
• 60 W or larger
Example: 200 V



Capacitor



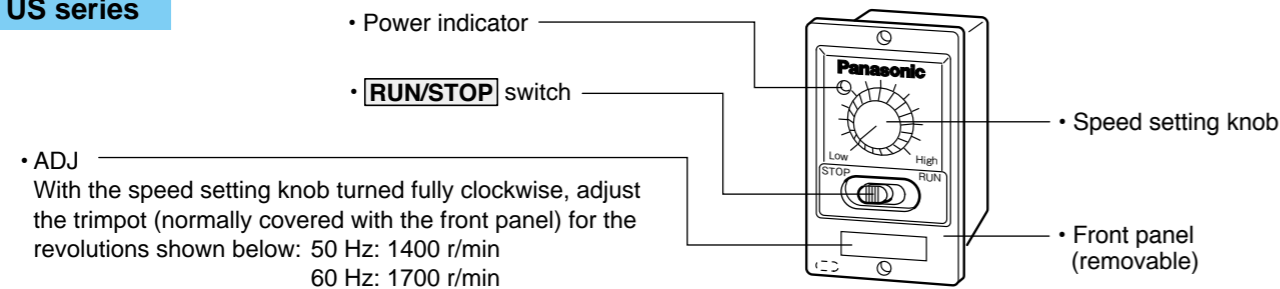
Capacitor cap



Capacitor part No.	Voltage	Designation	L	W	D1	D2	H	T	Capacitor cap part No.	W1	W2	W3	W4
M0PC20M20A	100 V	MUSN960GL	39.5 (1.56)	26.7 (1.05)	37 (1.46)	6 (0.24)	41 (1.61)	4 (0.16)	M0PC3926	39.5 (1.56)	37.5 (1.48)	26 (1.02)	25 (0.98)
M0PC5M40	200 V	MUSN960GY	50 (1.97)	30.5 (1.20)	41 (1.61)	6.2 (0.24)	41.5 (1.63)	4 (0.16)	M0PC5032	50 (1.97)	48 (1.89)	32.5 (1.28)	29.5 (1.16)
M0PC25M20	100 V	MUSN990GL	50.2 (1.98)	31 (1.22)	41 (1.61)	6.2 (0.24)	42 (1.65)	4 (0.16)	M0PC5032	50 (1.97)	48 (1.89)	32.5 (1.28)	29.5 (1.16)
M0PC6.2M38	200 V	MUSN990GY	50 (1.97)	30.5 (1.20)	41 (1.61)	6.2 (0.24)	41.5 (1.65)	4 (0.16)	M0PC5032	50 (1.97)	48 (1.89)	32.5 (1.28)	29.5 (1.16)

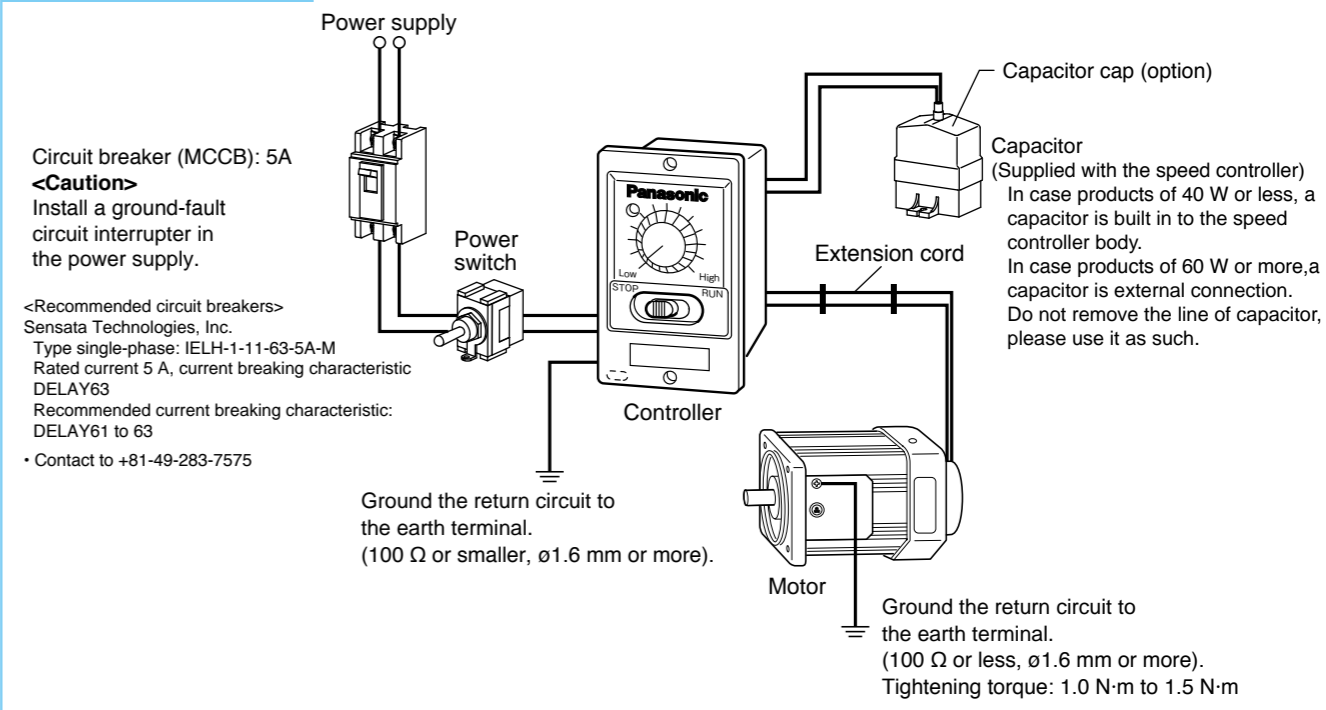
• Names and functions

US series



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

Wiring diagram



• Operating method (US series)

1. Connect the "motor connector".
2. Make sure that the **RUN/STOP** switch is in "STOP" position. Connect the power cable to the AC source.
3. Turn on power. "Power" indicator will light.
4. Place the **RUN/STOP** switch in "RUN" position, and the motor starts.
CAUTION: Do not place the switch lever in between RUN and STOP.
5. To stop the motor, move the lever to "STOP" position.
Note that the **RUN/STOP** switch does not turn on/off power supply: when not using the motor for a long period, turn off the main power switch.
6. If there is a forced cooling fan equipped to the motor, the fan will start rotating when power is turned on to the controller. In order to stop the forced cooling fan, please turn off the source of power to the controller.

• Changing direction of rotation (US series)

• Unidirectional rotatio

Terminal "CW" or "CCW" on the controller rear panel should be left open.

Direction when viewed from motor output shaft end		[Note]
Clockwise	Connect COM to CW	When a gear head is connected, the direction of its output shaft may or may not be the same as that of motor shaft depending on the reduction ratio.
Counterclockwise	Connect COM to CCW	

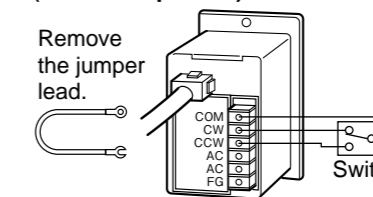
• Normal/reverse rotation

When it is necessary to select the rotating direction, connect the switch as shown in the figure.

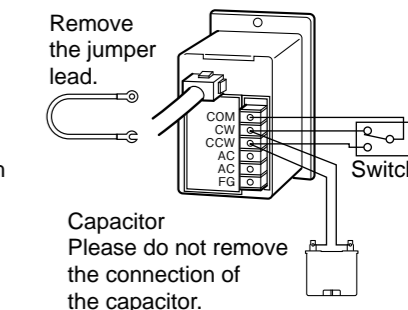
[Note]
Do not operate this switch while the motor is running.

Switch specification
• Single-pole double-throw: ON-OFF-ON
• 100 V power: 5 A at 200 VAC or more
• 200 V power: 3 A at 400 VAC or more

40 W or smaller (Built-in capacitor)



60 W or larger



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

• Mounting method (US series)

<Mounting through square holes>

Unit: mm (inch)

Caution
Mounting screws and nuts are not included in accessories. Please prepare by customer.

Mounting procedure

1. Drill 2 square holes in the object.
2. Secure the controller and front panel with 2 M4 screws.

<Mounting without using square hole>

Unit: mm (inch)

Caution
Wall thickness of the equipment where the controller is to be mounted should be 2 mm or less. Mounting screws and nuts are not included in accessories. Please prepare by customer.

Mounting procedure

1. Drill 2 square holes in the wall of the object.
2. Remove the front panel from the controller.
3. Secure the controller body with M3 flat-head screws and nuts.
4. Place the front panel on the wall and secure the panel with M4 screws and nuts.

<To install controller and motor separately>

When installing the speed controller at a distance more than 1 m from the motor, use optional "extension cord" that is supplied as standard accessory (allowable distance 5 m). Refer to page D-4 (Option).

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