

# G Proof Fan

These fans are suitable for cooling CT scanners and other devices subject to high G-force or vibration.

**Model Numbering System** Not every combination of the following codes or characters is available. Contact us for an available combination.

|            |            |           |                      |                 |            |                                       |
|------------|------------|-----------|----------------------|-----------------|------------|---------------------------------------|
| <b>9GP</b> | <b>12</b>  | <b>24</b> | <b>P</b>             | <b>1</b>        | <b>G</b>   | <b>001</b>                            |
| Type name  | Frame size | Voltage   | PWM control function | Frame thickness | Speed code | Individual customer's spec (3 digits) |

|                      |                                  |    |
|----------------------|----------------------------------|----|
| Type name            | 9GP                              |    |
| Frame size (mm)      | 12                               | 57 |
|                      | 120×120 $\phi$ 172×150 (sidecut) |    |
| Voltage (V)          | 24                               | 48 |
|                      | 24                               | 48 |
| Frame thickness (mm) | 1                                | 5  |
|                      | 38                               | 51 |
| Speed code           | G                                | H  |

**How to Read Specifications (DC fan)** The following is a sample. See respective product pages for detailed information.

| Model no.           | Rated voltage [V] | Operating voltage range [V] | Rated current [A] | Rated input [W] | Rated speed [min <sup>-1</sup> ] | Max. airflow [m <sup>3</sup> /min] [CFM] | Max. static pressure [Pa] [inchH <sub>2</sub> O] | SPL [dB (A)] | Operating temperature [°C] | Expected life [h]       |
|---------------------|-------------------|-----------------------------|-------------------|-----------------|----------------------------------|--|--|--------------|----------------------------|-------------------------|
| <b>9GA0412G7001</b> | 12                | 7 to 13.8                   | 0.17              | 2.04            | 13100                            | 0.36 12.7                                | 192 0.77   | 42           | -20 to +70                 | 40000/60°C (70000/40°C) |

- Rated voltage ..... This is the necessary voltage to drive the fan. E.g.) 12 VDC, 24 VDC, 48 VDC
- Operating voltage range ..... The voltage range over which fan operation is guaranteed.
- Rated current ..... The current when the fan is operating at rated voltage (at free air).
- Rated input ..... The power value when the fan is operating at rated voltage (at free air).
- Rated speed ..... The speed when the fan is operating at rated voltage (at free air).
- Max. airflow ..... The maximum airflow that the fan can generate during rated operation (measured with our double chamber measuring device). Airflow is the volume of air generated by the fan per unit of time.
- Max. static pressure ..... The maximum static pressure value that the fan can produce during rated operation (measured with our double chamber measuring device). Static pressure indicates a fan's ability to move air against resistance due to the internal structure of the device to which the fan is installed.
- SPL ..... SPL stands for Sound Pressure Level. The noise level during the fan's rated operation. Please refer to the technical material section for the measurement method.
- Operating temperature ..... The temperature range over which fan operation is guaranteed (Non- condensing).
- Expected life ..... Service life hours that 90% of bearings will survive without failing when continuously operated at the rated voltage and 60°C temperature. Expected life at 40°C is for reference only. For more information, please refer to the technical material section.



# 120x120x38 mm

San Ace 120GP 9GP type

## General Specifications

- Material ..... Frame: Aluminum (Black coating), Impeller: Plastic (Flammability: UL 94V-1)
- Expected life ..... See the table below. (L10 life: 90% survival rate for continuous operation in free air at 60°C, rated voltage)  
Expected life at 40°C is for reference only.
- Motor protection function ..... Locked rotor burnout protection, Reverse polarity protection  
For details, please refer to p. 599.
- Dielectric strength ..... 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and frame)
- Insulation resistance ..... 10 MΩ or more with a 500 VDC megger (between lead wire conductors and frame)
- Sound pressure level (SPL) ..... At 1 m away from the air inlet
- Storage temperature ..... -30 to +70°C (Non-condensing)
- Lead wire ..... ⊕Red ⊖Black (Sensor) Yellow (Control) Brown
- Mass ..... 440 g
- G-force tolerance ..... 735 m/s<sup>2</sup> (75 G) for 1,000 h (Measured with our G-force testing machine.)

## Specifications

The models listed below **have pulse sensors with PWM control function.**

| Model no.     | Rated voltage [V] | Operating voltage range [V] | PWM duty cycle [%] | Rated current [A] | Rated input [W] | Rated speed [min <sup>-1</sup> ] | Max. airflow [m <sup>3</sup> /min] [CFM] | Max. static pressure [Pa] [inchH <sub>2</sub> O] | SPL [dB (A)] | Operating temperature [°C] | Expected life [h]          |
|---------------|-------------------|-----------------------------|--------------------|-------------------|-----------------|----------------------------------|--|--|--------------|----------------------------|----------------------------|
| 9GP1224P1G001 | 24                | 15 to 30                    | 100                | 1.6               | 38.4            | 6550                             | 7.0 247                                  | 370 1.48   | 62           | -20 to +70                 | 40000/60°C<br>(70000/40°C) |
|               |                   |                             | 20                 | 0.12              | 2.88            | 2000                             | 2.13 75.2                                | 34.4 0.13  | 36           |                            |                            |
| 9GP1248P1G001 | 48                | 36 to 60                    | 100                | 0.8               | 38.4            | 6550                             | 7.0 247                                  | 370 1.48   | 62           |                            |                            |
|               |                   |                             | 20                 | 0.08              | 3.84            | 2000                             | 2.13 75.2                                | 34.4 0.13  | 36           |                            |                            |

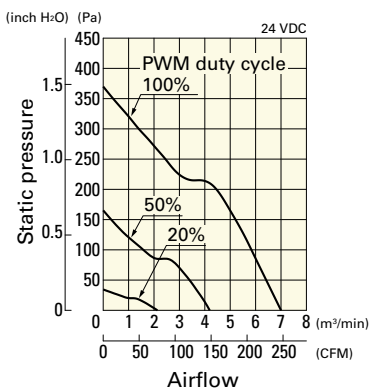
\* PWM input frequency is 25 kHz; models without specifications at 0% PWM duty cycle have zero fan speed at 0%.

Note: Sensor and control options are available for selection. Refer to the table on p. 632.

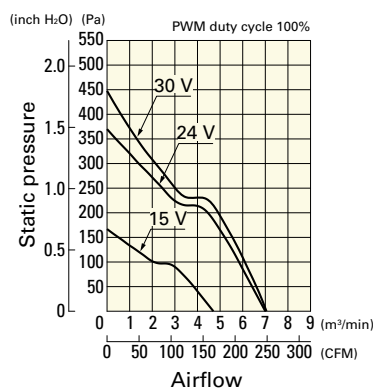
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

**9GP1224P1G001** With pulse sensor with PWM control function

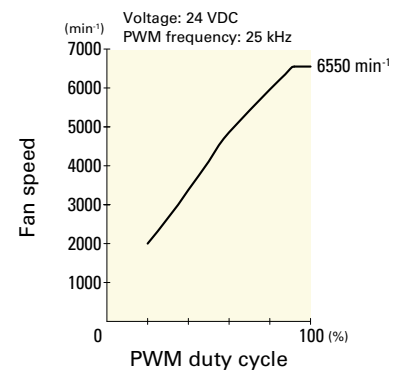
PWM duty cycle



Operating voltage range



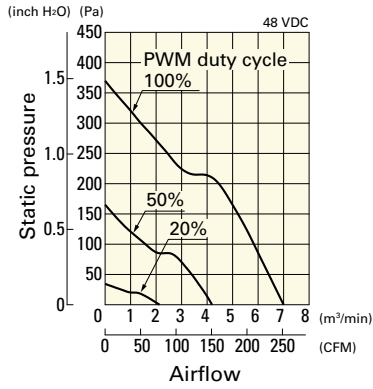
PWM duty - Speed characteristics example



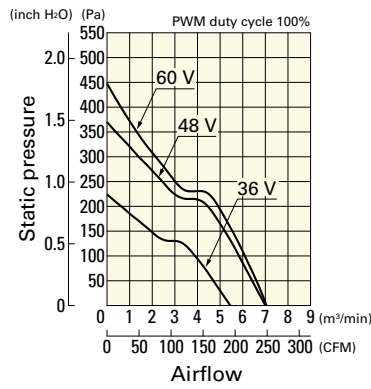
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

**9GP1248P1G001** With pulse sensor with PWM control function

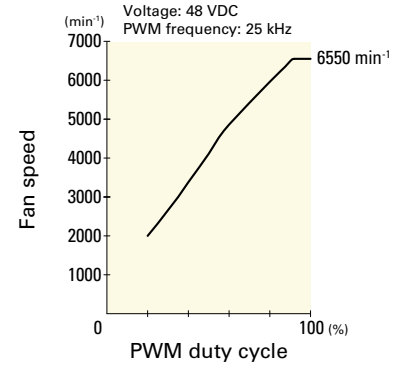
PWM duty cycle



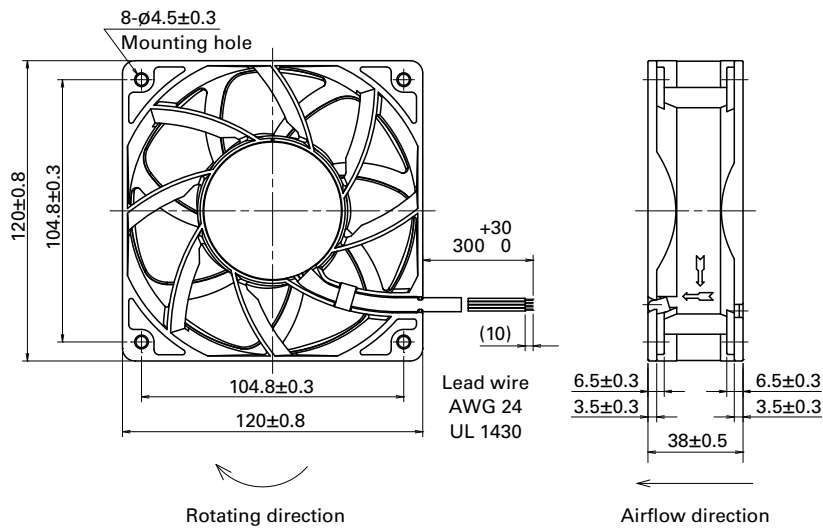
Operating voltage range



PWM duty - Speed characteristics example

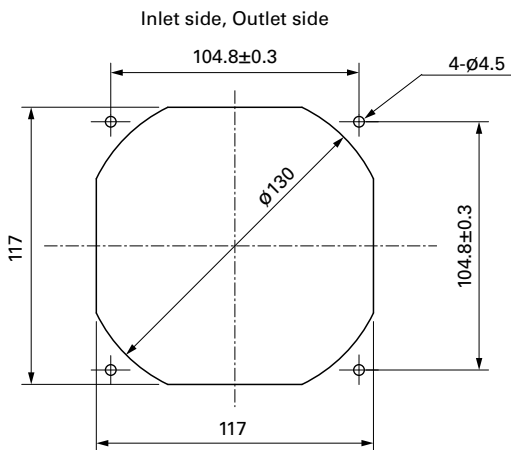


## Dimensions (unit: mm)



DC  
G Prof Fan 120 mm sq.

## Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



## Options

Finger guards

page: p. 585

Model no.: 109-019E, 109-019K, 109-019C, 109-019H

Resin finger guards

page: p. 591

Model no.: 109-1000G

Resin filter kits

page: p. 592

Model no.: 109-1000F13 (13PPI), 109-1000F20 (20PPI),  
109-1000F30 (30PPI), 109-1000F40 (40PPI)



# Ø 172x150x51 mm

San Ace 172GP 9GP type

Sidecut type

## General Specifications

- Material ..... Frame: Aluminum (Black coating), Impeller: Plastic (Flammability: UL 94V-1)
- Expected life ..... See the table below. (L10 life: 90% survival rate for continuous operation in free air at 60°C, rated voltage) Expected life at 40°C is for reference only.
- Motor protection function ..... Locked rotor burnout protection, Reverse polarity protection For details, please refer to p. 599.
- Dielectric strength ..... 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and frame)
- Insulation resistance ..... 10 MΩ or more with a 500 VDC megger (between lead wire conductors and frame)
- Sound pressure level (SPL) ..... At 1 m away from the air inlet
- Storage temperature ..... -30 to +70°C (Non-condensing)
- Lead wire ..... ⊕Red ⊖Black (Sensor) Yellow (Control) Brown
- Mass ..... 880 g
- G-force tolerance ..... 735 m/s<sup>2</sup> (75 G) for 1,000 h (Measured with our G-force testing machine.)

## Specifications

The models listed below **have pulse sensors with PWM control function.**

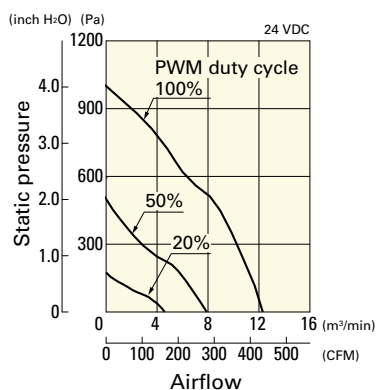
| Model no.     | Rated voltage [V] | Operating voltage range [V] | PWM duty cycle [%] | Rated current [A] | Rated input [W] | Rated speed [min <sup>-1</sup> ] | Max. airflow [m <sup>3</sup> /min] [CFM] | Max. static pressure [Pa] [inchH <sub>2</sub> O] | SPL [dB (A)] | Operating temperature [°C] | Expected life [h]       |
|---------------|-------------------|-----------------------------|--------------------|-------------------|-----------------|----------------------------------|--|--|--------------|----------------------------|-------------------------|
| 9GP5724P5H001 | 24                | 16 to 30                    | 100                | 5.0               | 120             | 8000                             | 12.3 434                                 | 1000 4.02  | 77           | -20 to +70                 | 40000/60°C (70000/40°C) |
|               |                   |                             | 20                 | 0.5               | 12.0            | 3000                             | 4.6 162                                  | 175 0.7  | 51           |                            |                         |
| 9GP5748P5G001 | 48                | 36 to 72                    | 100                | 5.0               | 240             | 10500                            | 16.1 568                                 | 1600 6.43  | 83           |                            |                         |
|               |                   |                             | 20                 | 0.41              | 19.7            | 3700                             | 5.6 198                                  | 250 1.01   | 57           |                            |                         |

\* PWM input frequency is 25 kHz; models without specifications at 0% PWM duty cycle have zero fan speed at 0%.

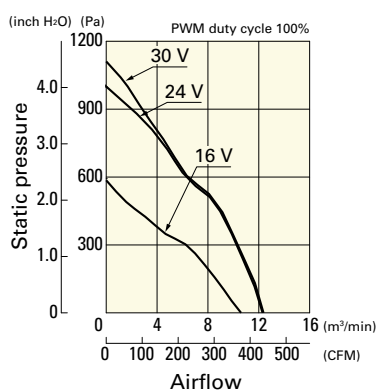
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

**9GP5724P5H001** With pulse sensor with PWM control function

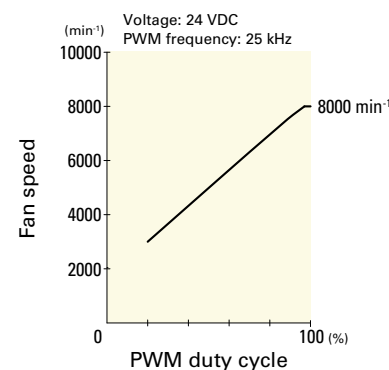
PWM duty cycle



Operating voltage range



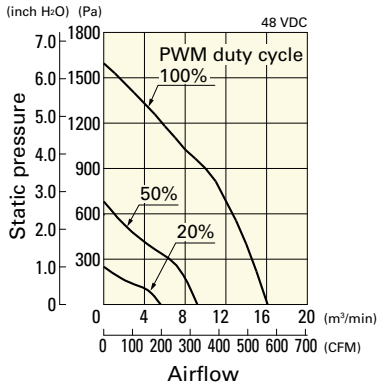
PWM duty - Speed characteristics example



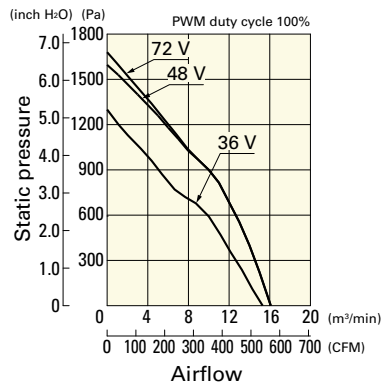
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9GP5748P5G001 With pulse sensor with PWM control function

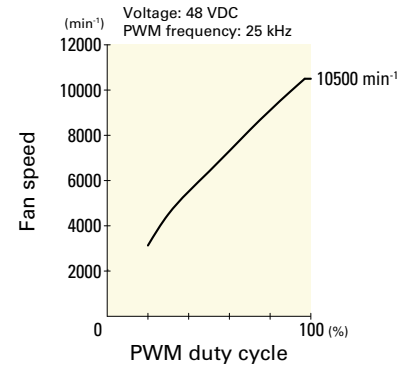
PWM duty cycle



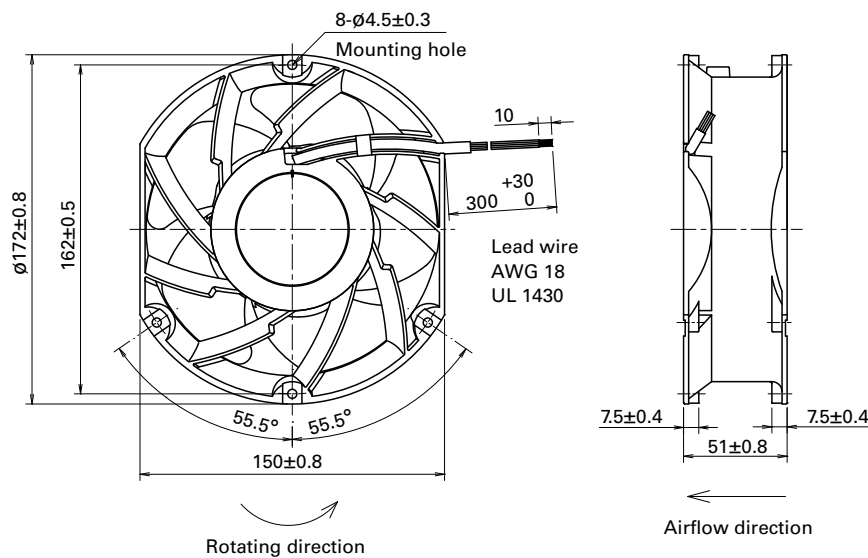
Operating voltage range



PWM duty - Speed characteristics example

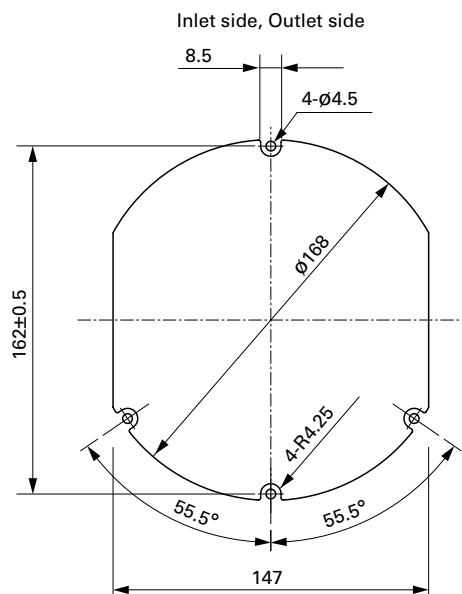


## Dimensions (unit: mm)



DC  
G Proof Fan ∅172 mm

## Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



## Options

Finger guards

page: p. 586

Model no.: 109-319J, 109-319E, 109-319H, 109-320



# Centrifugal Fan

Cooling fan blows air in a centrifugal course. It features high static pressure.  
 Related product: Splash Proof Centrifugal Fan p. 333

**Model Numbering System** Not every combination of the following codes or characters is available. Contact us for an available combination.

|           |               |           |                      |           |            |   |
|-----------|---------------|-----------|----------------------|-----------|------------|---|
| <b>9T</b> | <b>M</b>      | <b>48</b> | <b>P</b>             | <b>4</b>  | <b>H</b>   | <b>01</b>                                   |
| Type name | Impeller size | Voltage   | PWM control function | Thickness | Speed code | Individual customer's spec. (2 to 3 digits) |

## Bracket-mounted Centrifugal Fan

|             |               |           |                      |           |            |  |
|-------------|---------------|-----------|----------------------|-----------|------------|--|
| <b>9B1T</b> | <b>P</b>      | <b>48</b> | <b>P</b>             | <b>0</b>  | <b>H</b>   | <b>001</b>                             |
| Type name   | Impeller size | Voltage   | PWM control function | Thickness | Speed code | Individual customer's spec. (3 digits) |

|                    |   |      |       |      |      |                  |    |    |     |      |      |      |      |      |      |
|--------------------|---|------|-------|------|------|------------------|----|----|-----|------|------|------|------|------|------|
| Type name          | 9B1T 9T   |      |       |      |      |                  |    |    |     |      |      |      |      |      |      |
| Impeller size (mm) | <table border="1"> <tr> <td>D</td> <td>G, GA</td> <td>J</td> <td>M</td> <td>N</td> <td>P</td> <td>S</td> </tr> <tr> <td>∅70</td> <td>∅175</td> <td>∅133</td> <td>∅100</td> <td>∅150</td> <td>∅221</td> <td>∅225</td> </tr> </table> | D    | G, GA | J    | M    | N                | P  | S  | ∅70 | ∅175 | ∅133 | ∅100 | ∅150 | ∅221 | ∅225 |
| D                  | G, GA   | J    | M     | N    | P    | S                |    |    |     |      |      |      |      |      |      |
| ∅70                | ∅175  | ∅133 | ∅100  | ∅150 | ∅221 | ∅225             |    |    |     |      |      |      |      |      |      |
| Voltage (V)        | <table border="1"> <tr> <td>12</td> <td>24</td> <td>48</td> </tr> <tr> <td>12</td> <td>24</td> <td>48</td> </tr> </table>   | 12   | 24    | 48   | 12   | 24               | 48 |    |     |      |      |      |      |      |      |
| 12                 | 24  | 48   |       |      |      |                  |    |    |     |      |      |      |      |      |      |
| 12                 | 24  | 48   |       |      |      |                  |    |    |     |      |      |      |      |      |      |
| Thickness (mm)     | <table border="1"> <tr> <td>0</td> <td>1</td> <td>4</td> <td>6</td> </tr> <tr> <td>69 min., 99, 119</td> <td>35</td> <td>25</td> <td>20</td> </tr> </table>   | 0    | 1     | 4    | 6    | 69 min., 99, 119 | 35 | 25 | 20  |      |      |      |      |      |      |
| 0                  | 1   | 4    | 6     |      |      |                  |    |    |     |      |      |      |      |      |      |
| 69 min., 99, 119   | 35  | 25   | 20    |      |      |                  |    |    |     |      |      |      |      |      |      |
| Speed code         | H G etc.  |      |       |      |      |                  |    |    |     |      |      |      |      |      |      |

**How to Read Specifications (DC fan)** The following is a sample. See respective product pages for detailed information.

| Model no.           | Rated voltage [V] | Operating voltage range [V] | Rated current [A] | Rated input [W] | Rated speed [min <sup>-1</sup> ] | Max. airflow [m <sup>3</sup> /min] [CFM] | Max. static pressure [Pa] [inchH <sub>2</sub> O] | SPL [dB (A)] | Operating temperature [°C] | Expected life [h]       |
|---------------------|-------------------|-----------------------------|-------------------|-----------------|----------------------------------|--|--|--------------|----------------------------|-------------------------|
| <b>9GA0412G7001</b> | 12                | 7 to 13.8                   | 0.17              | 2.04            | 13100                            | 0.36 12.7                                | 192 0.77   | 42           | -20 to +70                 | 40000/60°C (70000/40°C) |

- Rated voltage ..... This is the necessary voltage to drive the fan. E.g.) 12 VDC, 24 VDC, 48 VDC
- Operating voltage range ..... The voltage range over which fan operation is guaranteed.
- Rated current ..... The current when the fan is operating at rated voltage (at free air).
- Rated input ..... The power value when the fan is operating at rated voltage (at free air).
- Rated speed ..... The speed when the fan is operating at rated voltage (at free air).
- Max. airflow ..... The maximum airflow that the fan can generate during rated operation (measured with our double chamber measuring device).  
Airflow is the volume of air generated by the fan per unit of time.
- Max. static pressure ..... The maximum static pressure value that the fan can produce during rated operation (measured with our double chamber measuring device).  
Static pressure indicates a fan's ability to move air against resistance due to the internal structure of the device to which the fan is installed.
- SPL ..... SPL stands for Sound Pressure Level. The noise level during the fan's rated operation.  
Please refer to the technical material section for the measurement method.
- Operating temperature ..... The temperature range over which fan operation is guaranteed (Non- condensing).
- Expected life ..... Service life hours that 90% of bearings will survive without failing when continuously operated at the rated voltage and 60°C temperature. Expected life at 40°C is for reference only.  
For more information, please refer to the technical material section.



# ∅70x20 mm

San Ace C70 9TD type

## General Specifications

- Material ..... Motor case: Aluminum (Black coating), Impeller: Plastic (Flammability: UL 94V-0)
- Expected life ..... See the table below. (L10 life: 90% survival rate for continuous operation in free air at 60°C, rated voltage)  
Expected life at 40°C is for reference only.
- Motor protection function ..... Locked rotor burnout protection, Reverse polarity protection  
For details, please refer to p. 599.
- Dielectric strength ..... 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and motor case)
- Insulation resistance ..... 10 MΩ or more with a 500 VDC megger (between lead wire conductors and motor case)
- Sound pressure level (SPL) ..... At 1 m away from the air inlet
- Storage temperature ..... -30 to +70°C (Non-condensing)
- Lead wire ..... ⊕Red ⊖Black (Sensor) Yellow (Control) Brown
- Mass ..... 90 g

## Specifications When the optional inlet nozzle (109-1106) is mounted.

The models listed below **have pulse sensors with PWM control function.**

| Model no.   | Rated voltage [V] | Operating voltage range [V] | PWM duty cycle* [%] | Rated current [A] | Rated input [W] | Rated speed [min <sup>-1</sup> ] | Max. airflow [m <sup>3</sup> /min] [CFM] | Max. static pressure [Pa] [inchH <sub>2</sub> O] | SPL [dB (A)] | Operating temperature [°C] | Expected life [h]          |
|-------------|-------------------|-----------------------------|---------------------|-------------------|-----------------|----------------------------------|--|--|--------------|----------------------------|----------------------------|
| 9TD12P6G001 | 12                | 10.8 to 13.2                | 100                 | 1.0               | 12              | 9200                             | 1.13 39.9                                | 560 2.24   | 61           | -20 to +70                 | 40000/60°C<br>(70000/40°C) |
|             |                   |                             | 20                  | 0.1               | 1.2             | 2000                             | 0.23 8.1                                 | 25 0.10  | 30           |                            |                            |

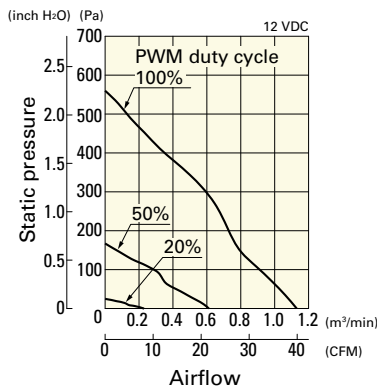
\* PWM input frequency is 25 kHz; models without specifications at 0% PWM duty cycle have zero fan speed at 0%.

Note: The maximum rated input value is 12.6 W.

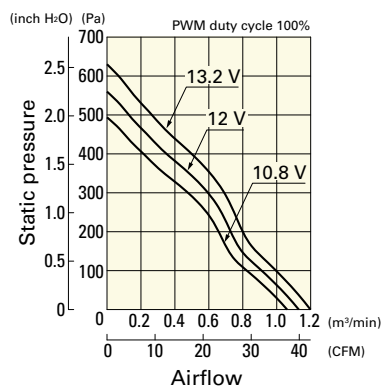
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

**9TD12P6G001** With pulse sensor with PWM control function

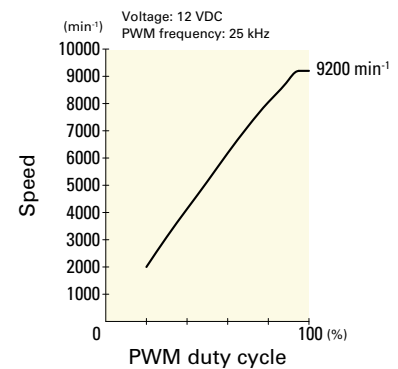
PWM duty cycle



Operating voltage range

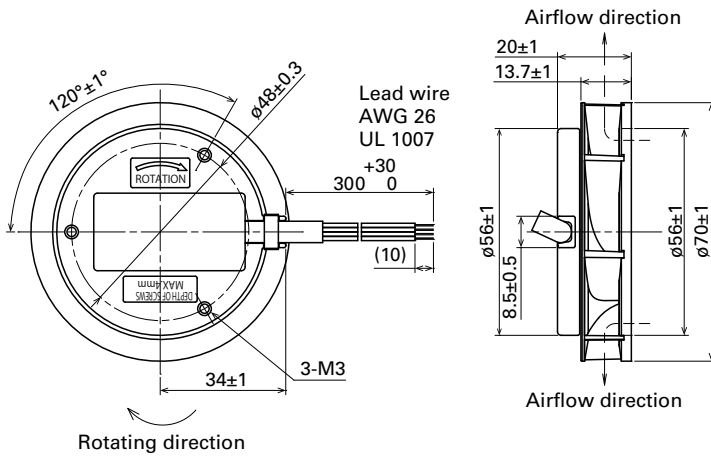


PWM duty - Speed characteristics example

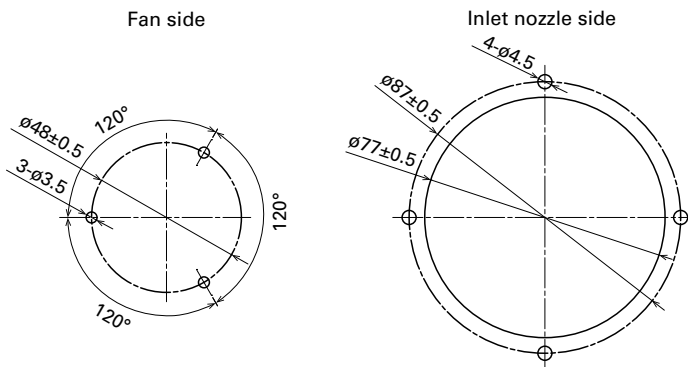




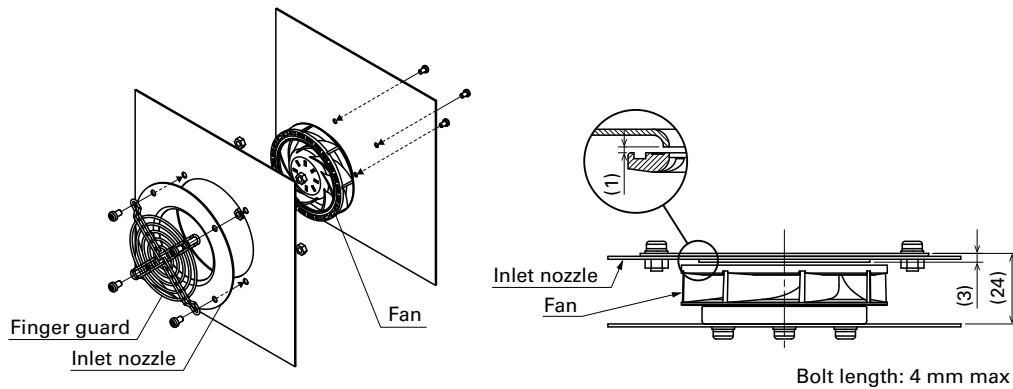
## Dimensions (unit: mm)



## Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



## Reference Diagram for Mounting



## Options

Finger guards

page: p. 584

Model no.: 109-1128

Inlet nozzle

page: p. 589

Model no.: 109-1106



# ∅ 100x25 mm

**San Ace C100 9TM** type

## General Specifications

- Material ..... Motor case: Aluminum (Black coating), Impeller: Plastic (Flammability: UL 94V-0)
- Expected life ..... See the table below. (L10 life: 90% survival rate for continuous operation in free air at 60°C, rated voltage)  
Expected life at 40°C is for reference only.
- Motor protection function ..... Locked rotor burnout protection, Reverse polarity protection  
For details, please refer to p. 599.
- Dielectric strength ..... 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and motor case)
- Insulation resistance ..... 10 MΩ or more with a 500 VDC megger (between lead wire conductors and motor case)
- Sound pressure level (SPL) ..... At 1 m away from the air inlet
- Storage temperature ..... -30 to +70°C (Non-condensing)
- Lead wire ..... ⊕Red ⊖Black (Sensor) Yellow (Control) Brown
- Mass ..... 150 g

## Specifications

When the optional inlet nozzle (109-1080) is mounted.

The models listed below **have pulse sensors with PWM control function.**

| Model no.  | Rated voltage [V] | Operating voltage range [V] | PWM duty cycle* [%] | Rated current [A] | Rated input [W] | Rated speed [min <sup>-1</sup> ] | Max. airflow [m <sup>3</sup> /min] [CFM] | Max. static pressure [Pa] [inchH <sub>2</sub> O] | SPL [dB (A)] | Operating temperature [°C] | Expected life [h]          |
|------------|-------------------|-----------------------------|---------------------|-------------------|-----------------|----------------------------------|--|--|--------------|----------------------------|----------------------------|
| 9TM24P4H01 | 24                | 21.6 to 26.4                | 100                 | 0.44              | 10.56           | 6400                             | 1.77 62.5                                | 560 2.25   | 60           | -20 to +70                 | 40000/60°C<br>(70000/40°C) |
|            |                   |                             | 0                   | 0.05              | 1.2             | 2000                             | 0.51 18.0                                | 48 0.19  | 34           |                            |                            |
| 9TM48P4H01 | 48                | 36 to 60                    | 100                 | 0.22              | 10.56           | 6400                             | 1.77 62.5                                | 560 2.25   | 60           |                            |                            |
|            |                   |                             | 0                   | 0.04              | 1.92            | 2000                             | 0.51 18.0                                | 48 0.19  | 34           |                            |                            |

\* PWM input frequency is 25 kHz; models without specifications at 0% PWM duty cycle have zero fan speed at 0%.

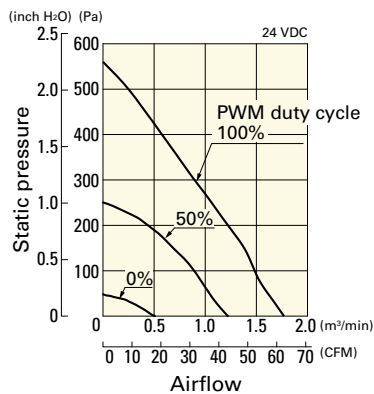
Note 1: The maximum rated input value is 14 W.

Note 2: Sensor and control options are available for selection. Refer to the table on p. 636.

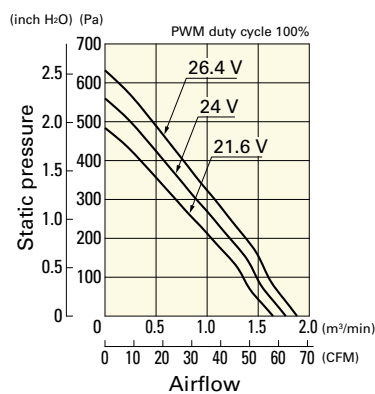
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

**9TM24P4H01** With pulse sensor with PWM control function

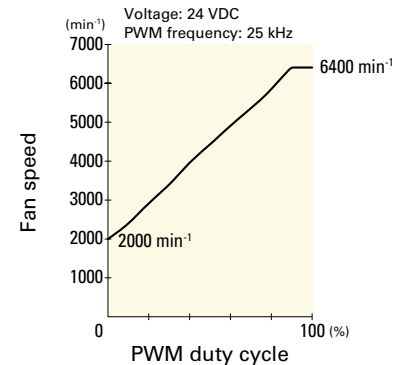
PWM duty cycle



Operating voltage range



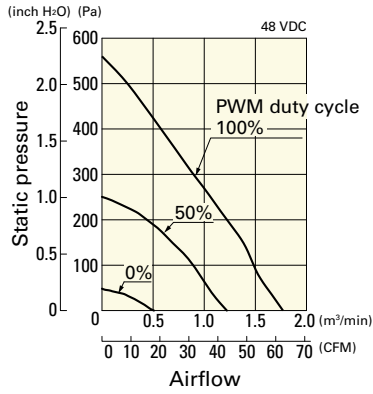
PWM duty - Speed characteristics example



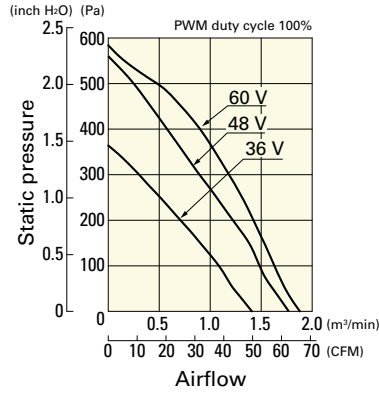
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

9TM48P4H01 With pulse sensor with PWM control function

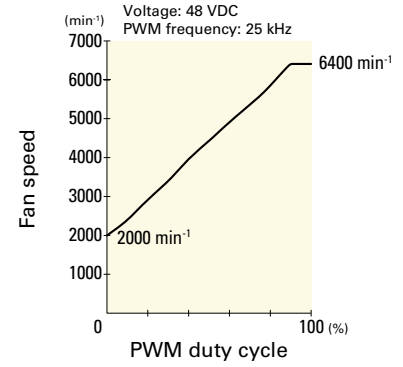
PWM duty cycle



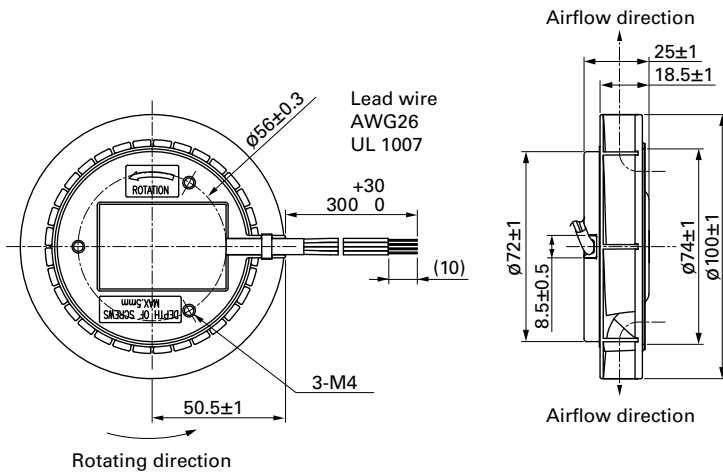
Operating voltage range



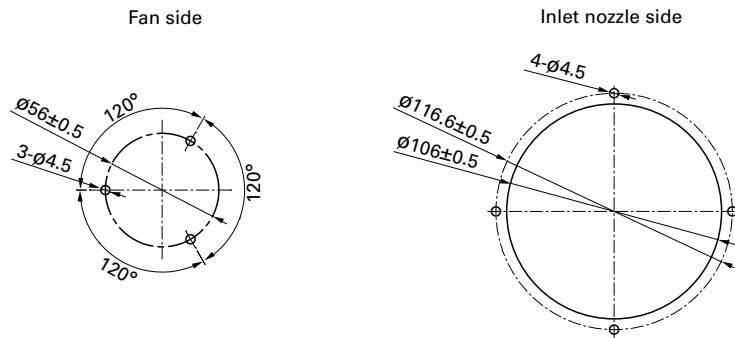
PWM duty - Speed characteristics example



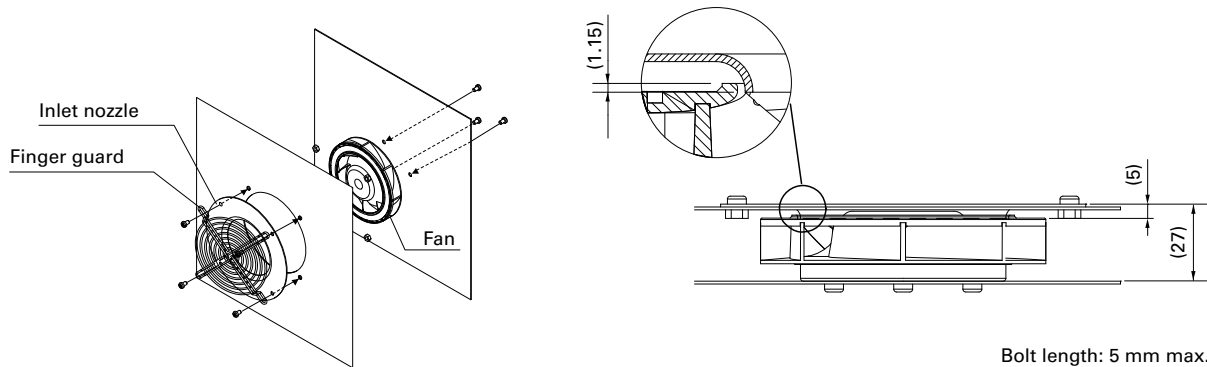
## Dimensions (unit: mm)



## Reference Dimensions of Mounting Holes and Vent Opening (unit: mm)



## Reference Diagram for Mounting



DC Centrifugal Fan  $\varnothing$ 100 mm

## Options

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Finger guards

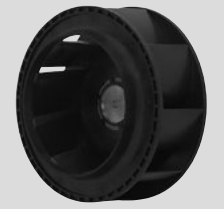
page: p. 584

Model no.: 109-099E, 109-099H

Inlet nozzle

page: p. 589

Model no.: 109-1080, 109-1080H



# Ø133x91 mm

San Ace C133 9TJ type

## General Specifications

- Material ..... Motor case: Aluminum (Black coating), Impeller: Plastic (Flammability: UL 94V-0)
- Expected life ..... See the table below. (L10 life: 90% survival rate for continuous operation in free air at 60°C, rated voltage) Expected life at 40°C is for reference only.
- Motor protection function ..... Locked rotor burnout protection, Reverse polarity protection For details, please refer to p. 599.
- Dielectric strength ..... 50/60 Hz, 500 VAC, for 1 minute (between lead wire conductors and motor case)
- Insulation resistance ..... 10 MΩ or more with a 500 VDC megger (between lead wire conductors and motor case)
- Sound pressure level (SPL) ..... At 1 m away from the air inlet
- Storage temperature ..... -30 to +70°C (Non-condensing)
- Lead wire ..... ⊕Red ⊖Black (Sensor) Yellow (Control) Brown
- Mass ..... 660 g

## Specifications When the optional inlet nozzle (109-1069) is mounted.

The models listed below **have pulse sensors with PWM control function.**

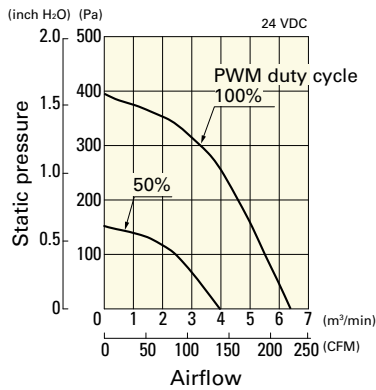
| Model no.  | Rated voltage [V] | Operating voltage range [V] | PWM duty cycle [%] | Rated current [A] | Rated input [W] | Rated speed [min <sup>-1</sup> ] | Max. airflow [m <sup>3</sup> /min] [CFM] | Max. static pressure [Pa] [inchH <sub>2</sub> O] | SPL [dB (A)] | Operating temperature [°C] | Expected life [h]          |
|------------|-------------------|-----------------------------|--------------------|-------------------|-----------------|----------------------------------|--|--|--------------|----------------------------|----------------------------|
| 9TJ24P0H61 | 24                | 20.4 to 27.6                | 100                | 1.2               | 28.8            | 4150                             | 6.39 226                                 | 395 1.59   | 61           | -20 to +70                 | 40000/60°C<br>(70000/40°C) |
| 9TJ48P0H01 | 48                | 36 to 72                    | 100                | 0.55              | 26.4            | 4150                             | 6.39 226                                 | 395 1.59   | 61           |                            |                            |

\* PWM input frequency is 25 kHz; models without specifications at 0% PWM duty cycle have zero fan speed at 0%.

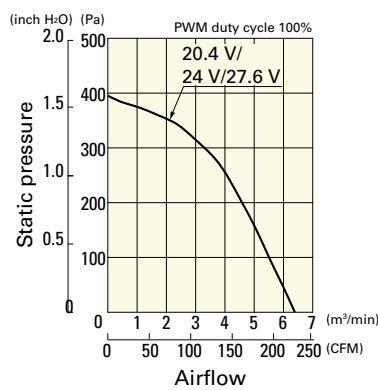
## Airflow - Static Pressure Characteristics / PWM Duty - Speed Characteristics Example

### 9TJ24P0H61 With pulse sensor with PWM control function

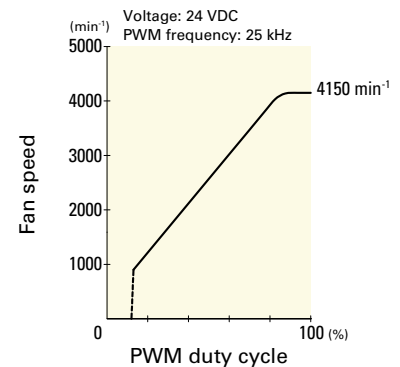
PWM duty cycle



Operating voltage range

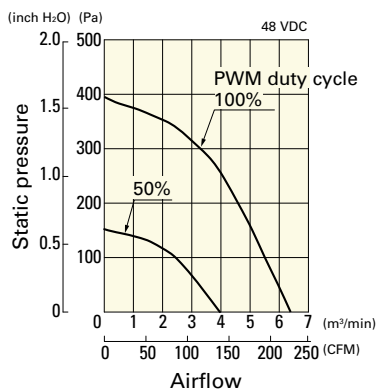


PWM duty - Speed characteristics example

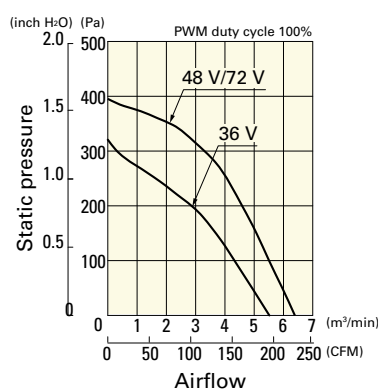


### 9TJ48P0H01 With pulse sensor with PWM control function

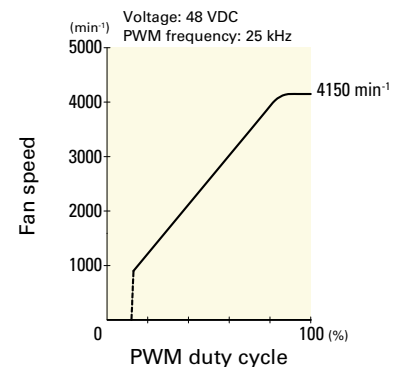
PWM duty cycle



Operating voltage range



PWM duty - Speed characteristics example



**Finger guards** List

Increases safety by preventing foreign objects from entering fans. Fans can be used with little effect on airflow and static pressure.

| Size   | Model no.  | Mounting side                 | Surface treatment              |                                |
|--|------------|-------------------------------|--------------------------------|--------------------------------|
|  |            |                               | Nickel-chrome plating (silver) | Cation electropainting (black) |
| <b>36 mm sq. type</b>  | 109-1050   | Inlet side, Outlet side       | ✓                              | –                              |
| <b>38 mm sq. type</b>  | 109-1065   | Inlet side, Outlet side       | ✓                              | –                              |
| <b>40 mm sq. type</b>  | 109-059    | Inlet side, Outlet side       | ✓                              | –                              |
|  | 109-059H   |                               | –                              | ✓                              |
| <b>52 mm sq. type</b>  | 109-149E   | Inlet side, Outlet side       | ✓                              | –                              |
|  | 109-149    | Outlet side                   | ✓                              | –                              |
| <b>60 mm sq. type</b>  | 109-139E   | Inlet side, Outlet side       | ✓                              | –                              |
|  | 109-139H   |                               | –                              | ✓                              |
| <b>70 mm sq. type, <math>\varnothing</math>70 mm type</b>        | 109-1128   | Inlet side, Outlet side       | ✓                              | –                              |
| <b>80 mm sq. type</b>  | 109-049E   | Inlet side, Outlet side       | ✓                              | –                              |
|  | 109-049H   |                               | –                              | ✓                              |
|  | 109-049C   | Outlet side                   | ✓                              | –                              |
| <b>92 mm sq. type</b>  | 109-099C   | Outlet side                   | ✓                              | –                              |
| <b><math>\varnothing</math>92 mm type</b>                        | 109-1147   | Impeller side, Nameplate side | ✓                              | –                              |
| <b>92 mm sq. type, <math>\varnothing</math>100 mm type</b>       | 109-099E   | Inlet side, Outlet side       | ✓                              | –                              |
|  | 109-099H   |                               | –                              | ✓                              |
| <b>120 mm sq. type</b>   | 109-019E   | Inlet side, Outlet side       | ✓                              | –                              |
|  | 109-019K   |                               | –                              | ✓                              |
|  | 109-019C   | Outlet side                   | ✓                              | –                              |
|  | 109-019H   |                               | –                              | ✓                              |
| <b>127 mm sq. type, <math>\varnothing</math>175 mm type</b>      | 109-722    | Inlet side, Outlet side       | ✓                              | –                              |
|  | 109-722H   | Inlet side, Outlet side       | –                              | ✓                              |
| <b>127 mm sq. type</b>   | 109-723    | Outlet side                   | ✓                              | –                              |
| <b><math>\varnothing</math>133 mm type</b>                       | 109-1112   | Inlet side                    | ✓                              | –                              |
| <b><math>\varnothing</math>136 mm type</b>                       | 109-1139   | Impeller side, Nameplate side | ✓                              | –                              |
| <b>140 mm sq. type</b>   | 109-719    | Inlet side, Outlet side       | ✓                              | –                              |
|  | 109-719H   |                               | –                              | ✓                              |
| <b>150 mm sq. type</b>   | 109-1051   | Inlet side, Outlet side       | ✓                              | –                              |
|  | 109-1052   | Outlet side                   | ✓                              | –                              |
| <b><math>\varnothing</math>150 mm type</b>                       | 109-1104   | Inlet side                    | ✓                              | –                              |
|  | 109-1104H  |                               | –                              | ✓                              |
| <b>160 mm sq. type</b>   | 109-619E   | Inlet side, Outlet side       | ✓                              | –                              |
|  | 109-619H   |                               | –                              | ✓                              |
|  | 109-620    | Outlet side                   | ✓                              | –                              |
| <b><math>\varnothing</math>172 mm Sidecut type</b>               | 109-319J   | Inlet side, Outlet side       | ✓                              | –                              |
| <b><math>\varnothing</math>172 mm Sidecut, Round type</b>        | 109-319E   | Inlet side, Outlet side       | ✓                              | –                              |
|  | 109-319H   |                               | –                              | ✓                              |
|  | 109-320    | Outlet side                   | ✓                              | –                              |
| <b><math>\varnothing</math>172 mm Round type</b>                 | 109-1066   | Inlet side, Outlet side       | ✓                              | –                              |
|  | 109-1068   | Outlet side                   | ✓                              | –                              |
| <b><math>\varnothing</math>200 mm type</b>                       | 109-1102*  | Inlet side, Outlet side       | ✓                              | –                              |
|  | 109-1102H* |                               | –                              | ✓                              |
|  | 109-1103*  | Outlet side                   | ✓                              | –                              |
|  | 109-1103H* |                               | –                              | ✓                              |
|  | 109-720    | Inlet side, Outlet side       | ✓                              | –                              |
|  | 109-720H   |                               | –                              | ✓                              |
|  | 109-721    | Outlet side                   | ✓                              | –                              |
| 109-721H   | –          |                               | ✓                              |                                |
| <b><math>\varnothing</math>221 mm type</b>                       | 109-1138   | Inlet side                    | ✓                              | –                              |
|  | 109-1138H  |                               | –                              | ✓                              |
| <b><math>\varnothing</math>225 mm type</b>                       | 109-1137   | Inlet side                    | ✓                              | –                              |
|  | 109-1137H  |                               | –                              | ✓                              |
| <b>270 mm sq. type<br/>(for Bracket-mounted Centrifugal Fan)</b> | 109-1146   | Inlet side                    | ✓                              | –                              |
|  | 109-1146H  |                               | –                              | ✓                              |

\* Applicable model no.: 9GV20\*

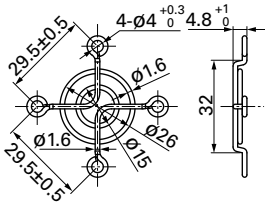
**Finger guards** Dimensions (unit: mm)

For use in environments subject to water splashes, cation electroplating models are recommended.

**36 mm sq. type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-1050  | Nickel-chrome plating (silver) | 4        |

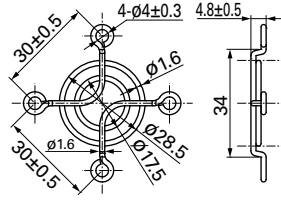
Inlet side, Outlet side



**38 mm sq. type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-1065  | Nickel-chrome plating (silver) | 5        |

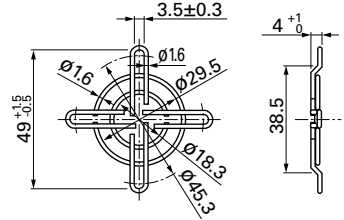
Inlet side, Outlet side



**40 mm sq. type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-059   | Nickel-chrome plating (silver) | 7        |
| 109-059H  | Cation electroplating (black)  |          |

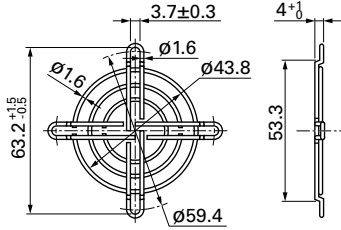
Inlet side, Outlet side



**52 mm sq. type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-149E  | Nickel-chrome plating (silver) | 9        |

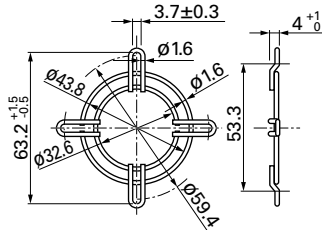
Inlet side, Outlet side



**60 mm sq. type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-149   | Nickel-chrome plating (silver) | 7        |

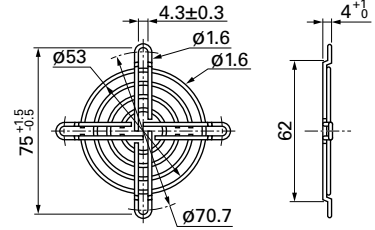
Outlet side



**60 mm sq. type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-139E  | Nickel-chrome plating (silver) | 14.5     |
| 109-139H  | Cation electroplating (black)  |          |

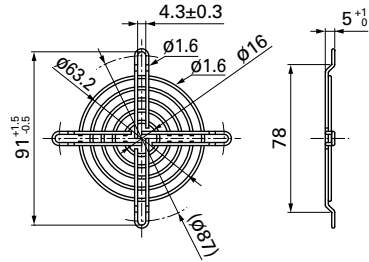
Inlet side, Outlet side



**70 mm sq. type, ø70 mm type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-1128  | Nickel-chrome plating (silver) | 17       |

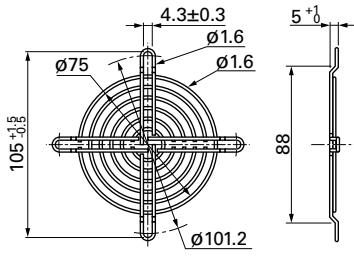
Inlet side, Outlet side



**80 mm sq. type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-049E  | Nickel-chrome plating (silver) | 21       |
| 109-049H  | Cation electroplating (black)  |          |

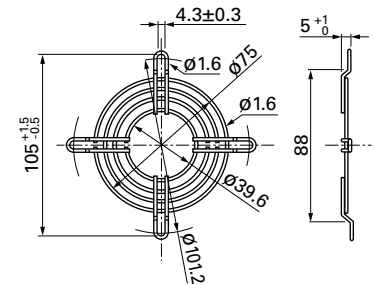
Inlet side, Outlet side



**80 mm sq. type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-049C  | Nickel-chrome plating (silver) | 17       |

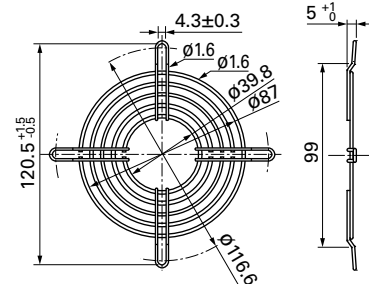
Outlet side



**92 mm sq. type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-099C  | Nickel-chrome plating (silver) | 22       |

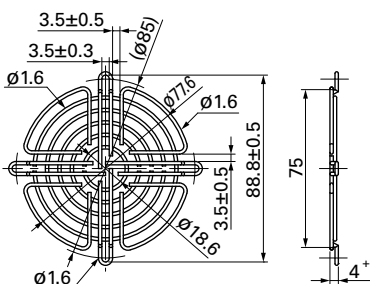
Outlet side



**ø92 mm type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-1147  | Nickel-chrome plating (silver) | 23       |

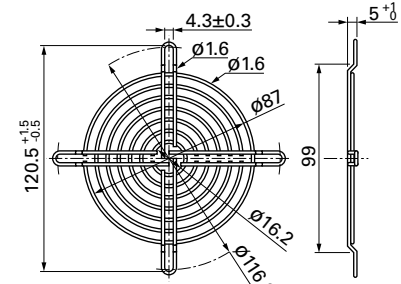
Impeller side, Nameplate side



**92 mm sq., ø100 mm type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-099E  | Nickel-chrome plating (silver) | 29       |
| 109-099H  | Cation electroplating (black)  |          |

Inlet side, Outlet side



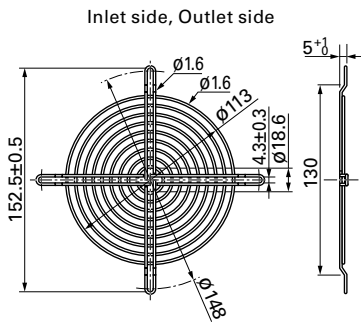
Option

**Finger guards** Dimensions (unit: mm)

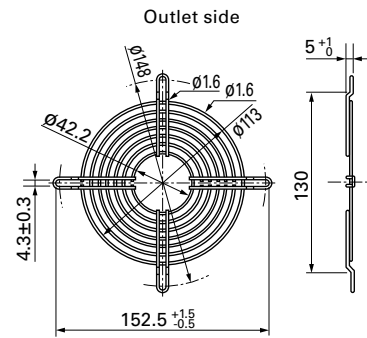
For use in environments subject to water splashes, cation electroplating models are recommended.

**120 mm sq. type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-019E  | Nickel-chrome plating (silver) | 42       |
| 109-019K  | Cation electroplating (black)  |          |

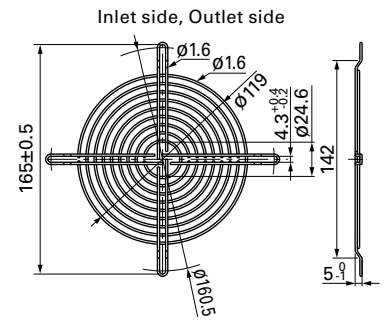


| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-019C  | Nickel-chrome plating (silver) | 32       |
| 109-019H  | Cation electroplating (black)  |          |



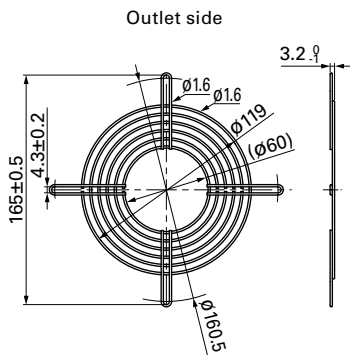
**127 mm sq., Ø175 mm type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-722   | Nickel-chrome plating (silver) | 43       |
| 109-722H  | Cation electroplating (black)  |          |



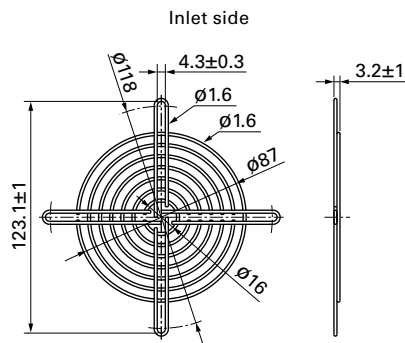
**127 mm sq. type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-723   | Nickel-chrome plating (silver) | 34       |



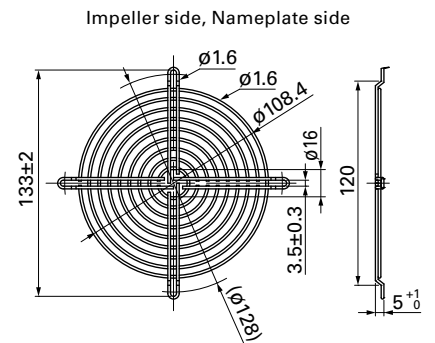
**Ø133 mm type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-1112  | Nickel-chrome plating (silver) | 65       |



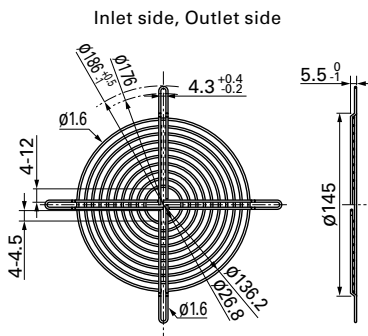
**Ø136 mm type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-1139  | Nickel-chrome plating (silver) | 41       |



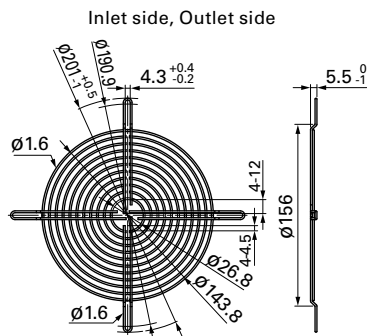
**140 mm sq. type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-719   | Nickel-chrome plating (silver) | 51       |
| 109-719H  | Cation electroplating (black)  |          |

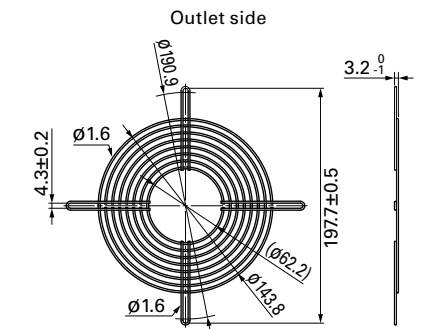


**150 mm sq. type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-1051  | Nickel-chrome plating (silver) | 63       |

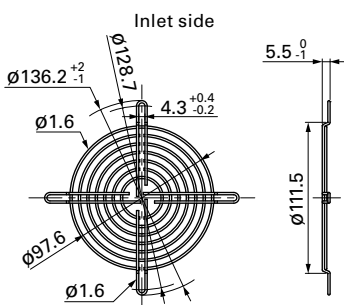


| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-1052  | Nickel-chrome plating (silver) | 53       |



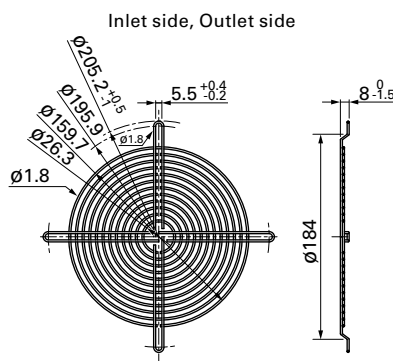
**Ø150 mm type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-1104  | Nickel-chrome plating (silver) | 31       |
| 109-1104H | Cation electroplating (black)  |          |

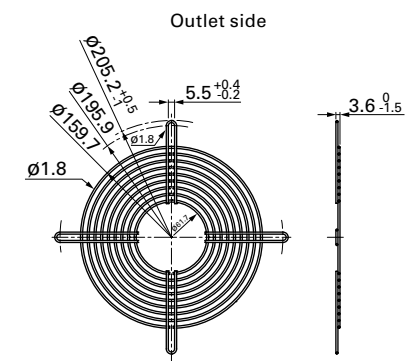


**160 mm sq. type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-619E  | Nickel-chrome plating (silver) | 85       |
| 109-619H  | Cation electroplating (black)  |          |



| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-620   | Nickel-chrome plating (silver) | 74       |



Option



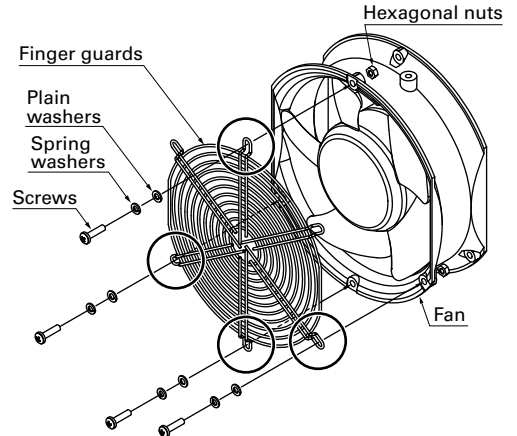
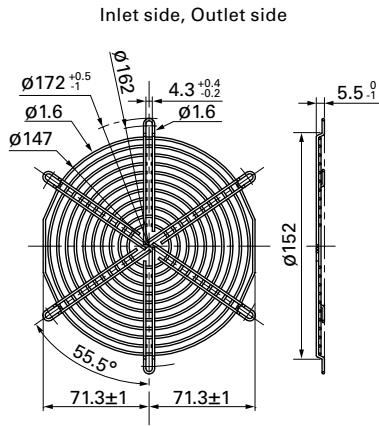
**Finger guards** Dimensions (unit: mm)

For use in environments subject to water splashes, cation electroplating models are recommended.

**Ø172 mm Sidecut type**

| Model no. | Surface treatment              | Mass (g) | Applicable model no.                  |
|-----------|--------------------------------|----------|---------------------------------------|
| 109-319J  | Nickel-chrome plating (silver) | 65       | 9HV57*/9SG57*/9GV57*<br>9CR57*/9WG57* |

Finger guard 109-319J should be mounted with four holes as in the drawing.



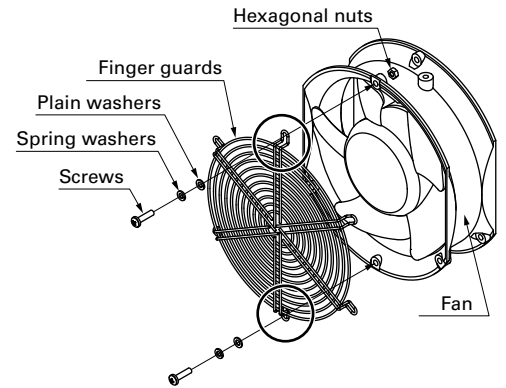
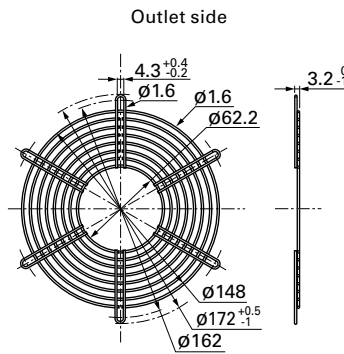
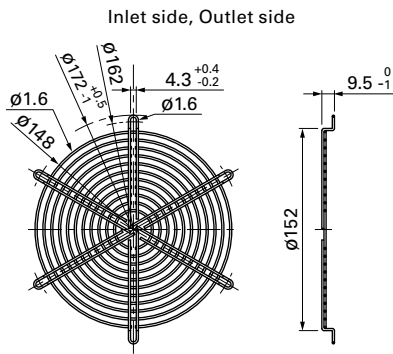
●No nuts or screws for use in attachment included.

**Ø172 mm Sidecut, Round type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-319E  | Nickel-chrome plating (silver) | 69       |
| 109-319H  | Cation electroplating (black)  |          |

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-320   | Nickel-chrome plating (silver) | 53       |

Finger guards 109-319E, 109-319H, and 109-320 should be mounted with two holes as in the drawing and do not use any other holes.

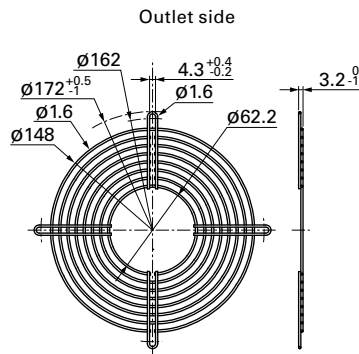
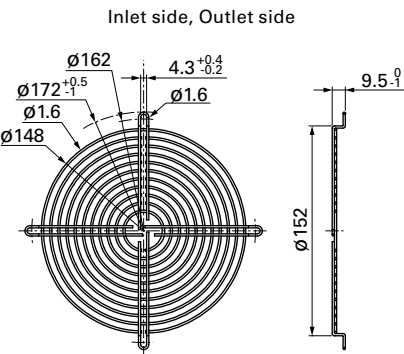


●No nuts or screws for use in attachment included.

**Ø172 mm Round type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-1066  | Nickel-chrome plating (silver) | 61       |

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-1068  | Nickel-chrome plating (silver) | 54       |



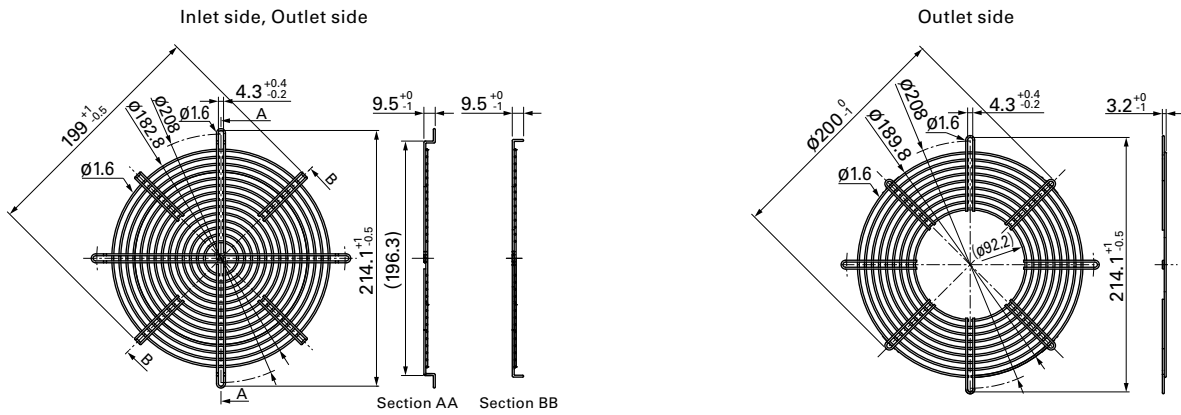
**Finger guards** Dimensions (unit: mm)

For use in environments subject to water splashes, cation electroplating models are recommended.

**ø200 mm type**

| Model no. | Surface treatment              | Mass (g) | Applicable model no. |
|-----------|--------------------------------|----------|----------------------|
| 109-1102  | Nickel-chrome plating (silver) | 100      | 9GV20*               |
| 109-1102H | Cation electroplating (black)  |          |                      |

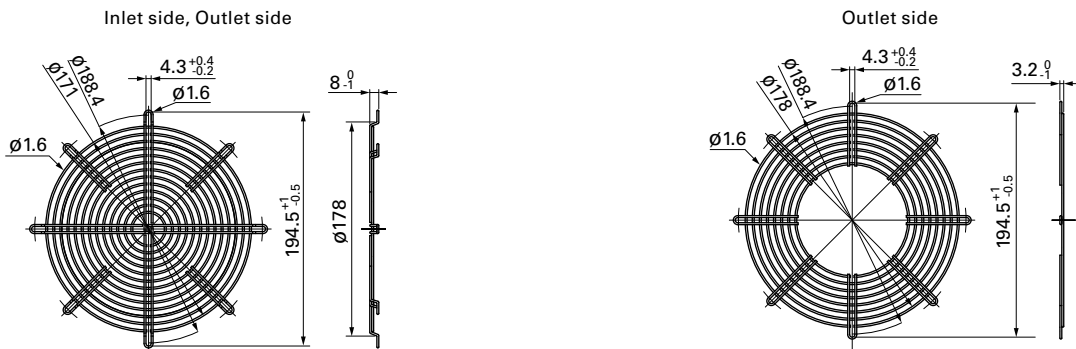
| Model no. | Surface treatment              | Mass (g) | Applicable model no. |
|-----------|--------------------------------|----------|----------------------|
| 109-1103  | Nickel-chrome plating (silver) | 80       | 9GV20*               |
| 109-1103H | Cation electroplating (black)  |          |                      |



**ø200 mm type**

| Model no. | Surface treatment              | Mass (g) | Applicable model no. |
|-----------|--------------------------------|----------|----------------------|
| 109-720   | Nickel-chrome plating (silver) | 84       | 109E20*<br>9EC20*    |
| 109-720H  | Cation electroplating (black)  |          |                      |

| Model no. | Surface treatment              | Mass (g) | Applicable model no. |
|-----------|--------------------------------|----------|----------------------|
| 109-721   | Nickel-chrome plating (silver) | 66       | 109E20*<br>9EC20*    |
| 109-721H  | Cation electroplating (black)  |          |                      |

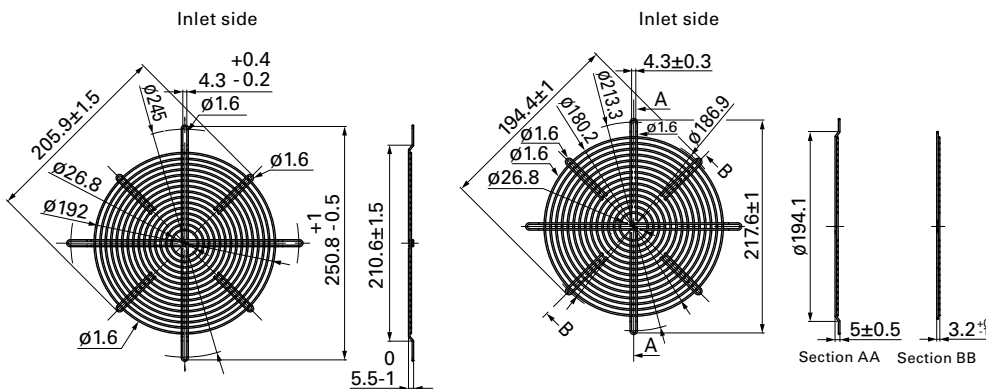


**ø221 mm type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-1138  | Nickel-chrome plating (silver) | 105      |
| 109-1138H | Cation electroplating (black)  |          |

**ø225 mm type**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-1137  | Nickel-chrome plating (silver) | 94       |
| 109-1137H | Cation electroplating (black)  |          |



Option

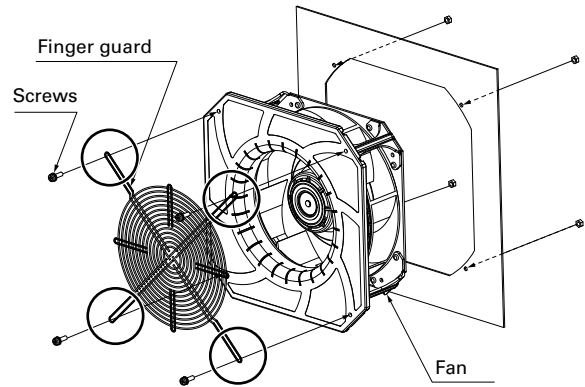
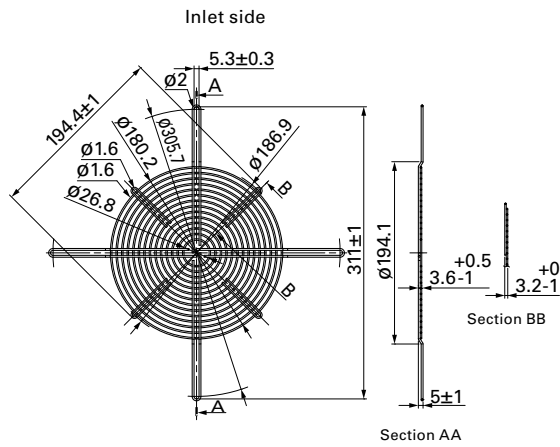
**Finger guards** Dimensions (unit: mm)

For use in environments subject to water splashes, cation electroplating models are recommended.

**270 mm sq. type (for Bracket-mounted Centrifugal Fan)**

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-1146  | Nickel-chrome plating (silver) | 106      |
| 109-1146H | Cation electropainting (black) |          |

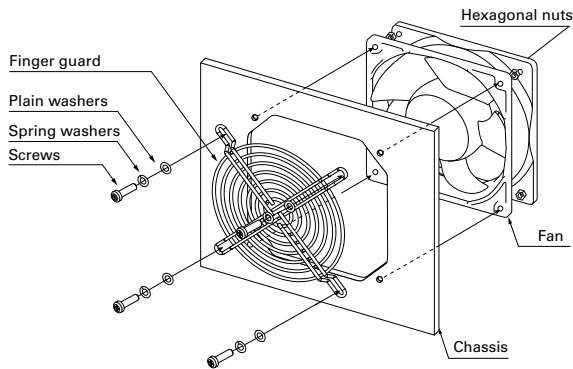
Finger guard 109-1146 and 109-1146H should be mounted with four holes as in the drawing.



●No nuts or screws for use in attachment included.

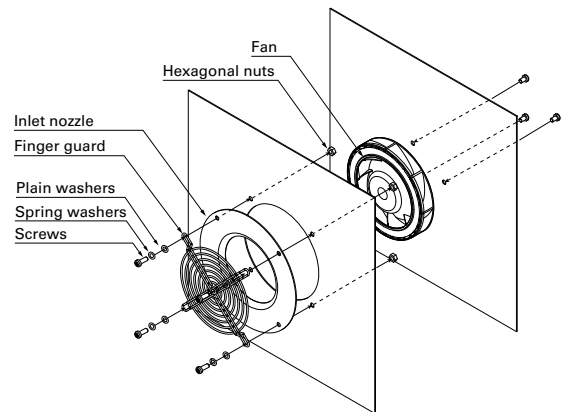
**Mounting example**

Axial fan



●No nuts or screws for use in attachment included.

Centrifugal fan

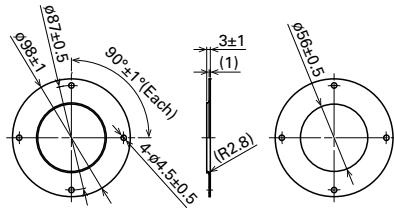


**Inlet nozzle for centrifugal fan and splash proof centrifugal fan** Dimensions (unit: mm)

Nozzle mounted in fan inlet side to adjust the flow of introduced air. Material: Steel sheet  
 For use in environments subject to water splashes, cation electroplating models are recommended.

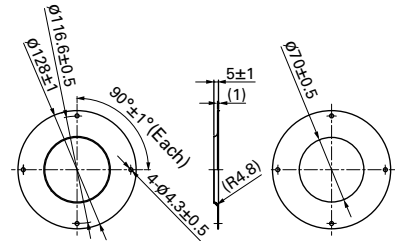
**∅70 mm type**

| Model no. | Surface treatment               | Mass (g) |
|-----------|---------------------------------|----------|
| 109-1106  | Electro nickel plating (silver) | 40       |



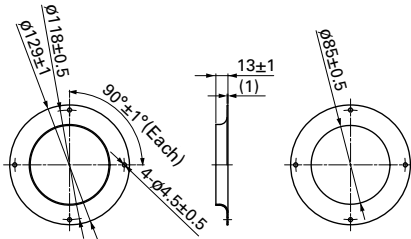
**∅100 mm type**

| Model no. | Surface treatment               | Mass (g) |
|-----------|---------------------------------|----------|
| 109-1080  | Electro nickel plating (silver) | 80       |
| 109-1080H | Cation electroplating (black)   |          |



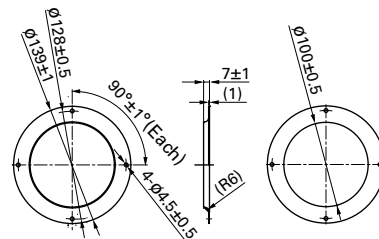
**∅133 mm type**

| Model no. | Surface treatment               | Mass (g) |
|-----------|---------------------------------|----------|
| 109-1069  | Electro nickel plating (silver) | 76       |
| 109-1069H | Cation electroplating (black)   |          |



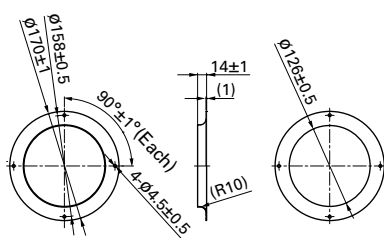
**∅150 mm type**

| Model no. | Surface treatment               | Mass (g) |
|-----------|---------------------------------|----------|
| 109-1081  | Electro nickel plating (silver) | 70       |
| 109-1081H | Cation electroplating (black)   |          |



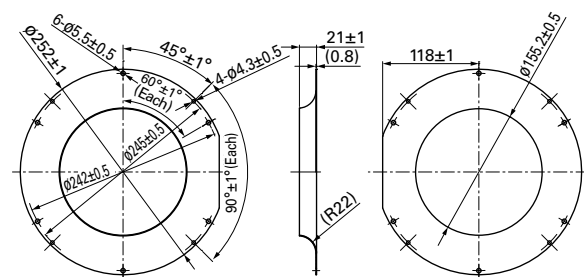
**∅175 mm type**

| Model no. | Surface treatment               | Mass (g) |
|-----------|---------------------------------|----------|
| 109-1073  | Electro nickel plating (silver) | 100      |
| 109-1073H | Cation electroplating (black)   |          |



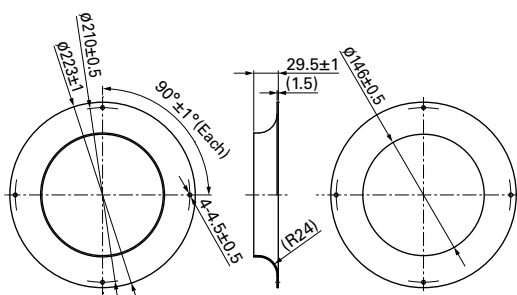
**∅221 mm type**

| Model no. | Surface treatment               | Mass (g) |
|-----------|---------------------------------|----------|
| 109-1135  | Electro nickel plating (silver) | 230      |
| 109-1135H | Cation electroplating (black)   |          |



**∅225 mm type**

| Model no. | Surface treatment               | Mass (g) |
|-----------|---------------------------------|----------|
| 109-1134  | Electro nickel plating (silver) | 360      |
| 109-1134H | Cation electroplating (black)   |          |



Option

## EMC guards Dimensions (unit: mm)

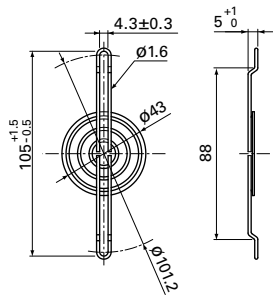
It is a metallic piece that protects materials from the adverse effects of electromagnetic noise sources. It provides electromagnetic shielding. It is attached to the casing of a device by means of the fan fixing screw (s). Ground the devices equipped with an EMC guard. Rust may occur if used in wet environments. Please refer to page 606 for detail.

### 80 mm sq. type

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-1038  | Nickel-chrome plating (silver) | 14       |

| Representative fans model numbers | Dimensions of fans (mm) |
|-----------------------------------|-------------------------|
| 109P08*                           | 80×80×20                |
| 9GV08*                            | 80×80×25                |
| 9GV08*                            | 80×80×38                |
| 9HV08*                            |                         |
| 9HVA08*                           |                         |
| 9HVB08*                           |                         |

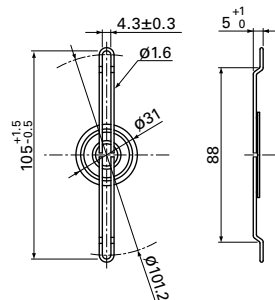


### 80 mm sq. type

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-1039  | Nickel-chrome plating (silver) | 10       |

| Representative fans model numbers | Dimensions of fans (mm) |
|-----------------------------------|-------------------------|
| 109P08*                           | 80×80×15                |
| 9GA08*                            | 80×80×20                |
| 109R08*                           | 80×80×25                |
| 9A08*                             |                         |
| 9GA08*                            | 80×80×32                |
| 9GA08*                            |                         |
| 9G08*                             | 80×80×38                |
| 9GA08*                            |                         |

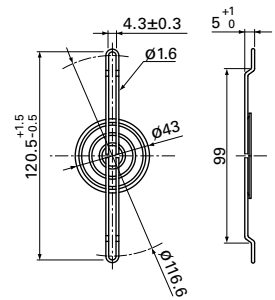


### 92 mm sq. type

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-1040  | Nickel-chrome plating (silver) | 15       |

| Representative fans model numbers | Dimensions of fans (mm) |
|-----------------------------------|-------------------------|
| 9G09*                             | 92×92×32                |
| 9G09*                             | 92×92×38                |
| 9GV09*                            |                         |
| 9GA09*                            |                         |
| 9AD09*                            |                         |

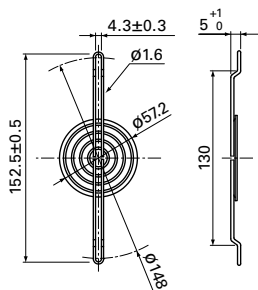


### 120 mm sq. type

| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-1037  | Nickel-chrome plating (silver) | 26       |

| Representative fans model numbers | Dimensions of fans (mm) |
|-----------------------------------|-------------------------|
| 9G12*                             | 120×120×25              |
| 9GV12*                            |                         |
| 9GL12*                            | 120×120×38              |
| 9G12*                             |                         |
| 9GV12*                            |                         |
| 9HV12*                            |                         |
| 9LG12*                            |                         |
| 9AD12*                            |                         |

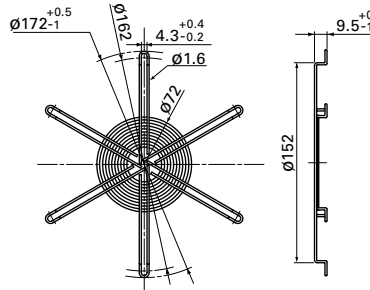


### Ø172 mm type

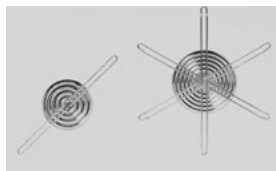
| Model no. | Surface treatment              | Mass (g) |
|-----------|--------------------------------|----------|
| 109-1036  | Nickel-chrome plating (silver) | 49       |

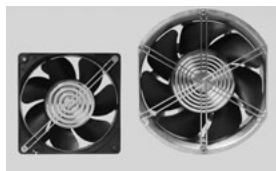
| Representative fans model numbers | Dimensions of fans (mm) |
|-----------------------------------|-------------------------|
| 109E47*                           | Ø172×25                 |
| 109L17*                           | Ø172×51                 |
| 9GV57*                            |                         |
| 109E17*                           |                         |
| 109E57*                           |                         |
| 9SG57*                            |                         |



Option



EMC guard



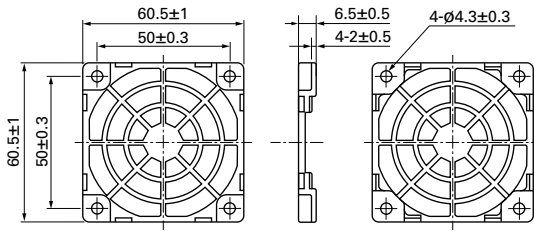
attached to a cooling fan

**Resin finger guards** Dimensions (unit: mm)

Material Frame: Resin (PPE+PS) UL file no. E82268 94V-0

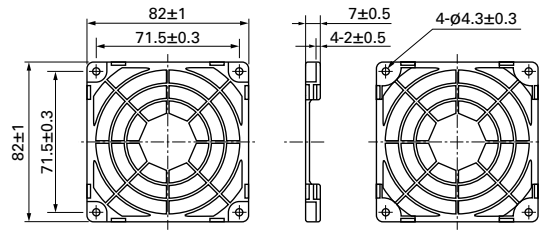
**60 mm sq. type**

| Model no. | Mass (g) |
|-----------|----------|
| 109-1003G | 7        |



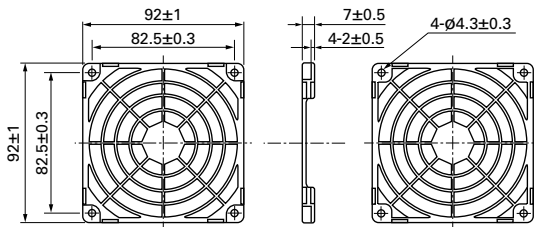
**80 mm sq. type**

| Model no. | Mass (g) |
|-----------|----------|
| 109-1002G | 10       |



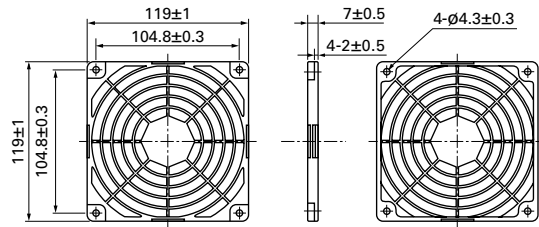
**92 mm sq. type**

| Model no. | Mass (g) |
|-----------|----------|
| 109-1001G | 12       |



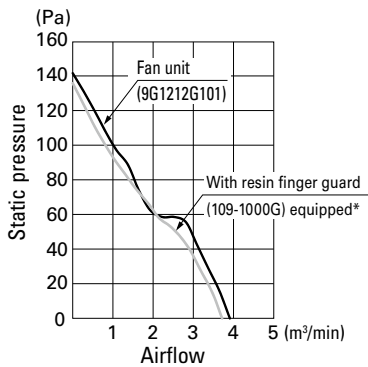
**120 mm sq. type**

| Model no. | Mass (g) |
|-----------|----------|
| 109-1000G | 23       |



**Airflow - Static pressure characteristics**

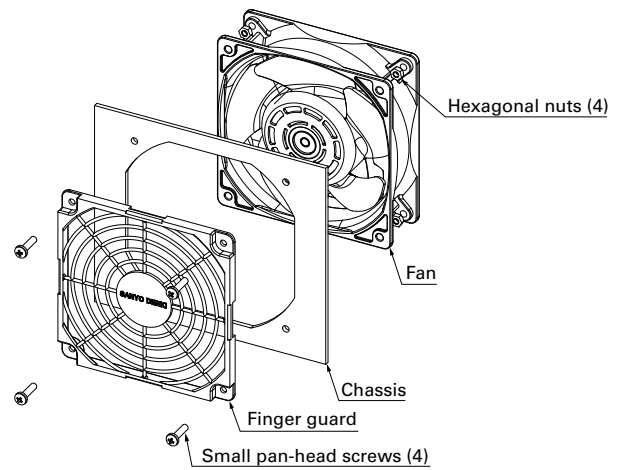
Measured with our double chamber measuring device (120 mm sq. type)



Applied voltage: 12 VDC

\* Finger guard is attached on air inlet side of fan.

**Mounting example**



- Operating temperature limit is between -20 to +70°C. (non condensing)
- Plastic finger guards are placed on both the intake and exhaust sides of the fan.
- No nuts or screws for use in attachment included.

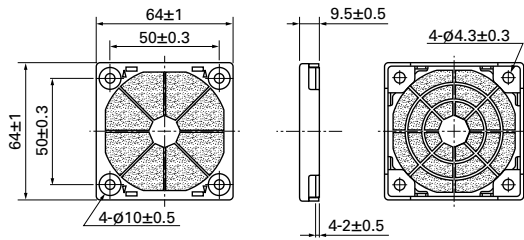
Option

**Resin filter kits** Dimensions (unit: mm)

Material Guard, cover: Resin (PPE+PS) UL file no. E82268 94V-0 Filter: Polyurethane foam UL file no. E74916 (S) 94HF-1  
 PPI: Particles Per Inch Indicates the number of holes per inch. Note that the higher the number, the finer the grain of the sponge.

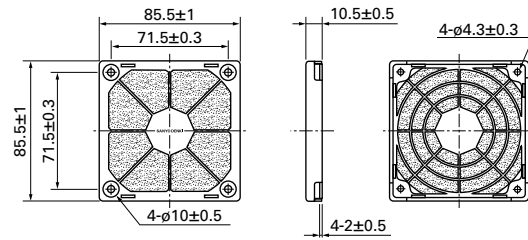
**60 mm sq. type**

| Model no.                    | Mass (g) |
|------------------------------|----------|
| 109-1003F13 (13 PPI)         | 11       |
| 109-1003F20 (20 PPI)         |          |
| 109-1003F30 (30 PPI)         |          |
| 109-1003F40 (40 PPI)         |          |
| Replacement filter model no. | Quantity |
| 109-1003M13 (13 PPI)         | 5        |
| 109-1003M20 (20 PPI)         |          |
| 109-1003M30 (30 PPI)         |          |
| 109-1003M40 (40 PPI)         |          |



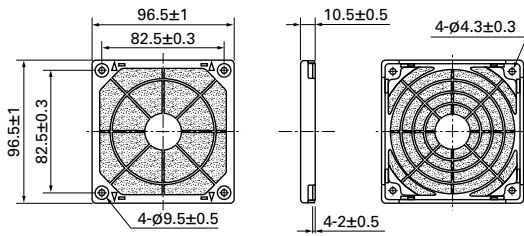
**80 mm sq. type**

| Model no.                    | Mass (g) |
|------------------------------|----------|
| 109-1002F13 (13 PPI)         | 19       |
| 109-1002F20 (20 PPI)         |          |
| 109-1002F30 (30 PPI)         |          |
| 109-1002F40 (40 PPI)         |          |
| Replacement filter model no. | Quantity |
| 109-1002M13 (13 PPI)         | 5        |
| 109-1002M20 (20 PPI)         |          |
| 109-1002M30 (30 PPI)         |          |
| 109-1002M40 (40 PPI)         |          |



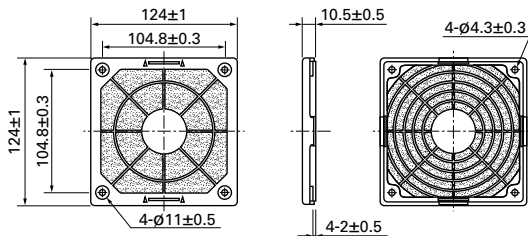
**92 mm sq. type**

| Model no.                    | Mass (g) |
|------------------------------|----------|
| 109-1001F13 (13 PPI)         | 25       |
| 109-1001F20 (20 PPI)         |          |
| 109-1001F30 (30 PPI)         |          |
| 109-1001F40 (40 PPI)         |          |
| Replacement filter model no. | Quantity |
| 109-1001M13 (13 PPI)         | 5        |
| 109-1001M20 (20 PPI)         |          |
| 109-1001M30 (30 PPI)         |          |
| 109-1001M40 (40 PPI)         |          |



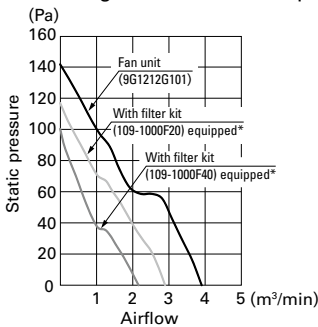
**120 mm sq. type**

| Model no.                    | Mass (g) |
|------------------------------|----------|
| 109-1000F13 (13 PPI)         | 44       |
| 109-1000F20 (20 PPI)         |          |
| 109-1000F30 (30 PPI)         |          |
| 109-1000F40 (40 PPI)         |          |
| Replacement filter model no. | Quantity |
| 109-1000M13 (13 PPI)         | 5        |
| 109-1000M20 (20 PPI)         |          |
| 109-1000M30 (30 PPI)         |          |
| 109-1000M40 (40 PPI)         |          |



**Airflow - Static pressure characteristics**

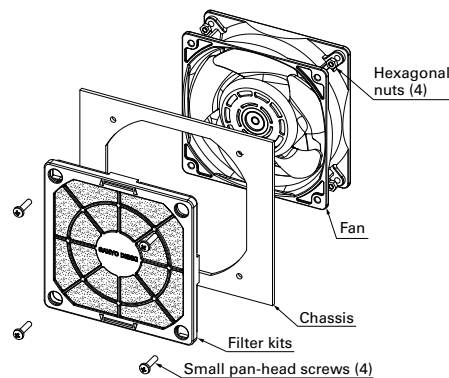
Measured with our double chamber measuring device (120 mm sq. type)



Applied voltage: 12 VDC

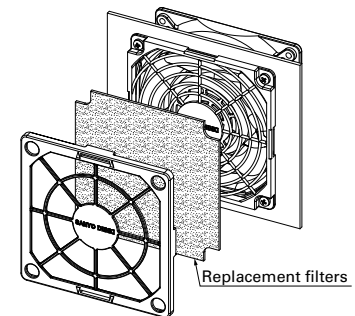
\* Filter kit is attached on air inlet side of fan.

**Mounting example**



**Filter replacement (example)**

Replacement filters can be replaced by taking off the front part of the filter kit. There is no need to remove the screws.



Option

- Filter kit is one of the option to keep air in the chassis clean filtering dust in external atmosphere when pulling-air cooling is implemented. The filter kit is hooked up through mounting hole of fan frame with screw as well as finger guard. Some performances (airflow & static pressure) of the fan motor decreases when filter kit is hooked up.
- This Filter Kit is composed of 3 components, including a guard, a filter and a cover. It is delivered as a finished product at delivery, saving assembly time when mounting. It can be mounted by inserting a screw in the apertures of the cover.
- The filter and cover can be easily removed from the guard with one touch. There is no need for fan removal when undertaking maintenance. ● Operating temperature limit is between -10 to +60°C. (non condensing)
- The filter will deteriorate with age, and the level of deterioration will vary upon usage conditions. Please be aware that the filter has a greater tendency to deteriorate under high temperature and humidity. For long-term storage, please store under the temperature range of 10 to 30°C, humidity range of 20 to 65%. Usage and storage period is approximately 2 years.
- Cooling ability decreases with filter contamination due to clogging. Filter replacement is recommended approximately every six months of usage. Please replace the filter if deterioration or clogging is seen at inspection.
- When replacing the filter, please use genuine SANYO DENKI filters. ● Do not water-wash the filter.
- Avoid use and storage under high temperature or humidity, direct sunlight or exposure to ultraviolet light, or in corrosive gas. ● No nuts or screws for use in attachment included.

# Index by Model No. - DC Fans

| Models listed in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "—" models.) |                   |                  |  | Frame size         | Rib | page |
|--------------------------------|---|-------------------|------------------|--|--------------------|-----|------|
|                                | Without sensor  | With pulse sensor | With lock sensor | With PWM control function and pulse sensor |                    |     |      |
|                                | 109BC12FC7-1  | 109BC12FA7-1      | ▶▶ 109BC12FC7-1  | 109BC12FD7-1                               |                    |     |      |
| 109BC12GC7-1                   | ▶▶ 109BC12GA7-1   | ▶▶ 109BC12GC7-1   | 109BC12GD7-1     | —  | 52 × 15 mm         | —   | 492  |
| 109BC12HC7-1                   | ▶▶ 109BC12HA7-1   | ▶▶ 109BC12HC7-1   | 109BC12HD7-1     | —  | 52 × 15 mm         | —   | 492  |
| 109BC12MC7-1                   | 109BC12MA7-1  | ▶▶ 109BC12MC7-1   | ▶▶ 109BC12MD7-1  | —  | 52 × 15 mm         | —   | 492  |
| 109BC24FC7-1                   | ▶▶ 109BC24FA7-1   | 109BC24FC7-1      | 109BC24FD7-1     | —  | 52 × 15 mm         | —   | 492  |
| 109BC24GC7-1                   | ▶▶ 109BC24GA7-1   | ▶▶ 109BC24GC7-1   | ▶▶ 109BC24GD7-1  | —  | 52 × 15 mm         | —   | 492  |
| 109BC24HC7-1                   | 109BC24HA7-1  | ▶▶ 109BC24HC7-1   | 109BC24HD7-1     | —  | 52 × 15 mm         | —   | 492  |
| 109BD12FC2                     | ▶▶ 109BD12FA2   | ▶▶ 109BD12FC2     | ▶▶ 109BD12FD2    | —  | 76 × 30 mm         | —   | 496  |
| 109BD12HC2                     | ▶▶ 109BD12HA2   | ▶▶ 109BD12HC2     | ▶▶ 109BD12HD2    | 109BD12P2H01                               | 76 × 30 mm         | —   | 496  |
| 109BD12MC2                     | ▶▶ 109BD12MA2   | ▶▶ 109BD12MC2     | 109BD12MD2       | —  | 76 × 30 mm         | —   | 496  |
| 109BD24FC2                     | ▶▶ 109BD24FA2   | ▶▶ 109BD24FC2     | 109BD24FD2       | —  | 76 × 30 mm         | —   | 496  |
| 109BD24HC2                     | ▶▶ 109BD24HA2   | ▶▶ 109BD24HC2     | ▶▶ 109BD24HD2    | —  | 76 × 30 mm         | —   | 496  |
| 109BD24MC2                     | ▶▶ 109BD24MA2   | ▶▶ 109BD24MC2     | ▶▶ 109BD24MD2    | —  | 76 × 30 mm         | —   | 496  |
| 109BG12HC1                     | ▶▶ 109BG12HA1   | ▶▶ 109BG12HC1     | ▶▶ 109BG12HD1    | —  | 160 × 40 mm        | —   | 512  |
| 109BG12MC1                     | ▶▶ 109BG12MA1   | ▶▶ 109BG12MC1     | 109BG12MD1       | —  | 160 × 40 mm        | —   | 512  |
| 109BG24HC1                     | ▶▶ 109BG24HA1   | ▶▶ 109BG24HC1     | ▶▶ 109BG24HD1    | —  | 160 × 40 mm        | —   | 512  |
| 109BG24MC1                     | 109BG24MA1  | ▶▶ 109BG24MC1     | 109BG24MD1       | —  | 160 × 40 mm        | —   | 512  |
| 109BJ12HC2                     | ▶▶ 109BJ12HA2   | ▶▶ 109BJ12HC2     | 109BJ12HD2       | —  | 127 × 32 mm        | —   | 510  |
| 109BJ12MC2                     | 109BJ12MA2  | ▶▶ 109BJ12MC2     | 109BJ12MD2       | —  | 127 × 32 mm        | —   | 510  |
| 109BJ24HC2                     | 109BJ24HA2  | ▶▶ 109BJ24HC2     | ▶▶ 109BJ24HD2    | —  | 127 × 32 mm        | —   | 510  |
| 109BJ24MC2                     | ▶▶ 109BJ24MA2   | 109BJ24MC2        | 109BJ24MD2       | —  | 127 × 32 mm        | —   | 510  |
| 109BM12GC2-1                   | 109BM12GA2-1  | 109BM12GC2-1      | 109BM12GD2-1     | —  | 97 × 33 mm         | —   | 506  |
| 109BM12HC2-1                   | 109BM12HA2-1  | 109BM12HC2-1      | 109BM12HD2-1     | —  | 97 × 33 mm         | —   | 506  |
| 109BM12MC2-1                   | 109BM12MA2-1  | 109BM12MC2-1      | 109BM12MD2-1     | 109BM12P2M01                               | 97 × 33 mm         | —   | 506  |
| 109BM24GC2-1                   | 109BM24GA2-1  | 109BM24GC2-1      | 109BM24GD2-1     | —  | 97 × 33 mm         | —   | 506  |
| 109BM24HC2-1                   | 109BM24HA2-1  | 109BM24HC2-1      | 109BM24HD2-1     | —  | 97 × 33 mm         | —   | 506  |
| 109BM24MC2-1                   | 109BM24MA2-1  | 109BM24MC2-1      | 109BM24MD2-1     | —  | 97 × 33 mm         | —   | 506  |
| 109E1312A101                   | 109E1312A102  | 109E1312A101      | 109E1312A1D01    | —  | 127 × 127 × 38 mm  | No  | 189  |
| 109E1312S101                   | 109E1312S102  | 109E1312S101      | 109E1312S1D01    | —  | 127 × 127 × 38 mm  | No  | 189  |
| 109E1324A101                   | 109E1324A102  | 109E1324A101      | 109E1324A1D01    | —  | 127 × 127 × 38 mm  | No  | 189  |
| 109E1324G101                   | 109E1324G102  | 109E1324G101      | 109E1324G1D01    | —  | 127 × 127 × 38 mm  | No  | 189  |
| 109E1324S101                   | 109E1324S102  | 109E1324S101      | 109E1324S1D01    | —  | 127 × 127 × 38 mm  | No  | 189  |
| 109E1348A101                   | 109E1348A102  | 109E1348A101      | 109E1348A1D01    | —  | 127 × 127 × 38 mm  | No  | 189  |
| 109E1348G101                   | 109E1348G102  | 109E1348G101      | 109E1348G1D01    | —  | 127 × 127 × 38 mm  | No  | 189  |
| 109E1348S101                   | 109E1348S102  | 109E1348S101      | 109E1348S1D01    | —  | 127 × 127 × 38 mm  | No  | 189  |
| 109E1712F501                   | 109E1712F502  | 109E1712F501      | 109E1712F5D01    | —  | ∅172 × 51 mm       | No  | 215  |
| 109E1712H501                   | ▶▶ 109E1712H502   | ▶▶ 109E1712H501   | 109E1712H5D01    | —  | ∅172 × 51 mm       | No  | 215  |
| 109E1712K501                   | 109E1712K502  | ▶▶ 109E1712K501   | —                | —  | ∅172 × 51 mm       | No  | 215  |
| 109E1712M501                   | 109E1712M502  | ▶▶ 109E1712M501   | —                | —  | ∅172 × 51 mm       | No  | 215  |
| 109E1712Y501                   | 109E1712Y502  | 109E1712Y501      | —                | —  | ∅172 × 51 mm       | No  | 215  |
| 109E1724C501                   | 109E1724C502  | ▶▶ 109E1724C501   | 109E1724C5D01    | 9EH1724P5C01                               | ∅172 × 51 mm       | No  | 215  |
| 109E1724F501                   | 109E1724F502  | 109E1724F501      | 109E1724F5D01    | —  | ∅172 × 51 mm       | No  | 215  |
| 109E1724H501                   | ▶▶ 109E1724H502   | ▶▶ 109E1724H501   | ▶▶ 109E1724H5D01 | —  | ∅172 × 51 mm       | No  | 215  |
| 109E1724K501                   | ▶▶ 109E1724K502   | ▶▶ 109E1724K501   | ▶▶ 109E1724K5D01 | —  | ∅172 × 51 mm       | No  | 215  |
| 109E1724M501                   | ▶▶ 109E1724M502   | ▶▶ 109E1724M501   | 109E1724M5D01    | —  | ∅172 × 51 mm       | No  | 215  |
| 109E1748C501                   | 109E1748C502  | ▶▶ 109E1748C501   | —                | —  | ∅172 × 51 mm       | No  | 215  |
| 109E1748F501                   | 109E1748F502  | 109E1748F501      | —                | —  | ∅172 × 51 mm       | No  | 215  |
| 109E1748H501                   | 109E1748H502  | ▶▶ 109E1748H501   | 109E1748H5D01    | —  | ∅172 × 51 mm       | No  | 215  |
| 109E1748K501                   | 109E1748K502  | 109E1748K501      | —                | 109E1748P5K03                              | ∅172 × 51 mm       | No  | 215  |
| 109E1748M501                   | 109E1748M502  | 109E1748M501      | —                | —  | ∅172 × 51 mm       | No  | 215  |
| 109E4712L401                   | 109E4712L402  | 109E4712L401      | 109E4712L4D01    | —  | ∅172 × 147 × 25 mm | No  | 202  |
| 109E4712M401                   | 109E4712M402  | 109E4712M401      | 109E4712M4D01    | —  | ∅172 × 147 × 25 mm | No  | 202  |
| 109E4724F401                   | 109E4724F402  | 109E4724F401      | 109E4724F4D01    | —  | ∅172 × 147 × 25 mm | No  | 202  |
| 109E4724H401                   | 109E4724H402  | 109E4724H401      | 109E4724H4D01    | 109E4724P4H01                              | ∅172 × 147 × 25 mm | No  | 202  |
| 109E4724L401                   | 109E4724L402  | 109E4724L401      | 109E4724L4D01    | —  | ∅172 × 147 × 25 mm | No  | 202  |
| 109E4724M401                   | 109E4724M402  | 109E4724M401      | 109E4724M4D01    | —  | ∅172 × 147 × 25 mm | No  | 202  |
| 109E4748F401                   | 109E4748F402  | 109E4748F401      | 109E4748F4D01    | —  | ∅172 × 147 × 25 mm | No  | 202  |
| 109E4748H401                   | 109E4748H402  | 109E4748H401      | 109E4748H4D01    | —  | ∅172 × 147 × 25 mm | No  | 202  |
| 109E4748L401                   | 109E4748L402  | 109E4748L401      | 109E4748L4D01    | —  | ∅172 × 147 × 25 mm | No  | 202  |
| 109E4748M401                   | 109E4748M402  | 109E4748M401      | 109E4748M4D01    | —  | ∅172 × 147 × 25 mm | No  | 202  |
| 109E4748S401                   | 109E4748S402  | 109E4748S401      | 109E4748S4D01    | —  | ∅172 × 147 × 25 mm | No  | 202  |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The ▶▶ mark indicates Short Lead Time Service applicable models. See p. 654 for details.



| Models listed in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "—" models.) |                   |                  |  | Frame size         | Rib | page |
|--------------------------------|---|-------------------|------------------|--|--------------------|-----|------|
|                                | Without sensor  | With pulse sensor | With lock sensor | With PWM control function and pulse sensor |                    |     |      |
|                                | 109E5712F501  | 109E5712F502      | 109E5712F501     | —  |                    |     |      |
| 109E5712H501                   | ☛ 109E5712H502  | ☛ 109E5712H501    | 109E5712H5D01    | —  | ∅172 × 150 × 51 mm | No  | 212  |
| 109E5712K501                   | 109E5712K502  | ☛ 109E5712K501    | 109E5712K5D01    | 109E5712P5K04                              | ∅172 × 150 × 51 mm | No  | 212  |
| 109E5712M501                   | 109E5712M502  | 109E5712M501      | 109E5712M5D01    | —  | ∅172 × 150 × 51 mm | No  | 212  |
| 109E5712Y501                   | 109E5712Y502  | 109E5712Y501      | —                | —  | ∅172 × 150 × 51 mm | No  | 212  |
| 109E5724C501                   | ☛ 109E5724C502  | ☛ 109E5724C501    | ☛ 109E5724C5D01  | 9EH5724P5C01                               | ∅172 × 150 × 51 mm | No  | 212  |
| 109E5724F501                   | 109E5724F502  | 109E5724F501      | —                | —  | ∅172 × 150 × 51 mm | No  | 212  |
| 109E5724H501                   | ☛ 109E5724H502  | ☛ 109E5724H501    | ☛ 109E5724H5D01  | —  | ∅172 × 150 × 51 mm | No  | 212  |
| 109E5724K501                   | ☛ 109E5724K502  | ☛ 109E5724K501    | 109E5724K5D01    | —  | ∅172 × 150 × 51 mm | No  | 212  |
| 109E5724M501                   | ☛ 109E5724M502  | ☛ 109E5724M501    | —                | —  | ∅172 × 150 × 51 mm | No  | 212  |
| 109E5748C501                   | 109E5748C502  | 109E5748C501      | —                | —  | ∅172 × 150 × 51 mm | No  | 212  |
| 109E5748F501                   | 109E5748F502  | 109E5748F501      | —                | —  | ∅172 × 150 × 51 mm | No  | 212  |
| 109E5748H501                   | 109E5748H502  | ☛ 109E5748H501    | 109E5748H5D01    | —  | ∅172 × 150 × 51 mm | No  | 212  |
| 109E5748K501                   | ☛ 109E5748K502  | ☛ 109E5748K501    | —                | —  | ∅172 × 150 × 51 mm | No  | 212  |
| 109E5748M501                   | 109E5748M502  | 109E5748M501      | —                | —  | ∅172 × 150 × 51 mm | No  | 212  |
| 109L1712H501                   | 109L1712H502  | 109L1712H501      | 109L1712H5D01    | —  | ∅172 × 51 mm       | No  | 440  |
| 109L1712M501                   | 109L1712M502  | 109L1712M501      | 109L1712M5D01    | —  | ∅172 × 51 mm       | No  | 440  |
| 109L1724H501                   | 109L1724H502  | 109L1724H501      | 109L1724H5D01    | —  | ∅172 × 51 mm       | No  | 440  |
| 109L1724M501                   | 109L1724M502  | 109L1724M501      | 109L1724M5D01    | —  | ∅172 × 51 mm       | No  | 440  |
| 109L1748H501                   | 109L1748H502  | 109L1748H501      | 109L1748H5D01    | —  | ∅172 × 51 mm       | No  | 440  |
| 109L1748M501                   | 109L1748M502  | 109L1748M501      | 109L1748M5D01    | —  | ∅172 × 51 mm       | No  | 440  |
| 109L5712H501                   | 109L5712H502  | 109L5712H501      | 109L5712H5D01    | —  | ∅172 × 150 × 51 mm | No  | 438  |
| 109L5712M501                   | 109L5712M502  | 109L5712M501      | 109L5712M5D01    | —  | ∅172 × 150 × 51 mm | No  | 438  |
| 109L5724H501                   | 109L5724H502  | 109L5724H501      | 109L5724H5D01    | —  | ∅172 × 150 × 51 mm | No  | 438  |
| 109L5724M501                   | 109L5724M502  | 109L5724M501      | 109L5724M5D01    | —  | ∅172 × 150 × 51 mm | No  | 438  |
| 109L5748H501                   | 109L5748H502  | 109L5748H501      | 109L5748H5D01    | —  | ∅172 × 150 × 51 mm | No  | 438  |
| 109L5748M501                   | 109L5748M502  | 109L5748M501      | 109L5748M5D01    | —  | ∅172 × 150 × 51 mm | No  | 438  |
| 109P0405F3013                  | 109P0405F3023   | ☛ 109P0405F3013   | ☛ 109P0405F3D013 | —  | 40 × 40 × 28 mm    | Yes | 53   |
| 109P0405F601                   | ☛ 109P0405F602  | ☛ 109P0405F601    | ☛ 109P0405F6D01  | —  | 40 × 40 × 20 mm    | Yes | 34   |
| 109P0405H3013                  | ☛ 109P0405H3023   | ☛ 109P0405H3013   | ☛ 109P0405H3D013 | —  | 40 × 40 × 28 mm    | Yes | 53   |
| 109P0405H601                   | ☛ 109P0405H602  | ☛ 109P0405H601    | ☛ 109P0405H6D01  | —  | 40 × 40 × 20 mm    | Yes | 34   |
| 109P0405H701                   | ☛ 109P0405H702  | ☛ 109P0405H701    | ☛ 109P0405H7D01  | —  | 40 × 40 × 15 mm    | Yes | 27   |
| 109P0405H901                   | ☛ 109P0405H902  | ☛ 109P0405H901    | ☛ 109P0405H9D01  | —  | 40 × 40 × 10 mm    | Yes | 23   |
| 109P0405J601                   | 109P0405J602  | ☛ 109P0405J601    | —                | —  | 40 × 40 × 20 mm    | Yes | 34   |
| 109P0405M601                   | ☛ 109P0405M602  | ☛ 109P0405M601    | ☛ 109P0405M6D01  | —  | 40 × 40 × 20 mm    | Yes | 34   |
| 109P0405M701                   | ☛ 109P0405M702  | ☛ 109P0405M701    | ☛ 109P0405M7D01  | —  | 40 × 40 × 15 mm    | Yes | 27   |
| 109P0405M901                   | ☛ 109P0405M902  | ☛ 109P0405M901    | ☛ 109P0405M9D01  | —  | 40 × 40 × 10 mm    | Yes | 23   |
| 109P0412B3013                  | ☛ 109P0412B3023   | ☛ 109P0412B3013   | ☛ 109P0412B3D013 | 109P0412P3B013                             | 40 × 40 × 28 mm    | Yes | 53   |
| 109P0412D601                   | ☛ 109P0412D602  | ☛ 109P0412D601    | ☛ 109P0412D6D01  | —  | 40 × 40 × 20 mm    | Yes | 34   |
| 109P0412E601                   | ☛ 109P0412E602  | ☛ 109P0412E601    | ☛ 109P0412E6D01  | —  | 40 × 40 × 20 mm    | Yes | 34   |
| 109P0412F3013                  | ☛ 109P0412F3023   | ☛ 109P0412F3013   | ☛ 109P0412F3D013 | —  | 40 × 40 × 28 mm    | Yes | 53   |
| 109P0412F601                   | ☛ 109P0412F602  | ☛ 109P0412F601    | ☛ 109P0412F6D01  | —  | 40 × 40 × 20 mm    | Yes | 34   |
| 109P0412G3013                  | ☛ 109P0412G3023   | ☛ 109P0412G3013   | ☛ 109P0412G3D013 | —  | 40 × 40 × 28 mm    | Yes | 53   |
| 109P0412G601                   | ☛ 109P0412G602  | ☛ 109P0412G601    | ☛ 109P0412G6D01  | —  | 40 × 40 × 20 mm    | Yes | 34   |
| 109P0412H3013                  | ☛ 109P0412H3023   | ☛ 109P0412H3013   | ☛ 109P0412H3D013 | 109P0412P3H013                             | 40 × 40 × 28 mm    | Yes | 53   |
| 109P0412H601                   | ☛ 109P0412H602  | ☛ 109P0412H601    | ☛ 109P0412H6D01  | —  | 40 × 40 × 20 mm    | Yes | 34   |
| 109P0412H701                   | ☛ 109P0412H702  | ☛ 109P0412H701    | ☛ 109P0412H7D01  | —  | 40 × 40 × 15 mm    | Yes | 27   |
| 109P0412H901                   | ☛ 109P0412H902  | ☛ 109P0412H901    | ☛ 109P0412H9D01  | 109P0412P9H01                              | 40 × 40 × 10 mm    | Yes | 23   |
| 109P0412J3013                  | ☛ 109P0412J3023   | ☛ 109P0412J3013   | ☛ 109P0412J3D013 | 9PH0412P3J013                              | 40 × 40 × 28 mm    | Yes | 53   |
| 109P0412K3013                  | ☛ 109P0412K3023   | ☛ 109P0412K3013   | ☛ 109P0412K3D013 | 9PH0412P3K033                              | 40 × 40 × 28 mm    | Yes | 53   |
| 109P0412M3013                  | ☛ 109P0412M3023   | ☛ 109P0412M3013   | ☛ 109P0412M3D013 | —  | 40 × 40 × 28 mm    | Yes | 53   |
| 109P0412M601                   | ☛ 109P0412M602  | ☛ 109P0412M601    | 109P0412M6D01    | —  | 40 × 40 × 20 mm    | Yes | 34   |
| 109P0412M701                   | ☛ 109P0412M702  | ☛ 109P0412M701    | ☛ 109P0412M7D01  | —  | 40 × 40 × 15 mm    | Yes | 27   |
| 109P0412M901                   | ☛ 109P0412M902  | ☛ 109P0412M901    | ☛ 109P0412M9D01  | —  | 40 × 40 × 10 mm    | Yes | 23   |
| 109P0412R701                   | 109P0412R702  | ☛ 109P0412R701    | 109P0412R7D01    | —  | 40 × 40 × 15 mm    | Yes | 27   |
| 109P0412S701                   | ☛ 109P0412S702  | ☛ 109P0412S701    | ☛ 109P0412S7D01  | —  | 40 × 40 × 15 mm    | Yes | 27   |
| 109P0424B3013                  | 109P0424B3023   | ☛ 109P0424B3013   | ☛ 109P0424B3D013 | —  | 40 × 40 × 28 mm    | Yes | 53   |
| 109P0424B601                   | ☛ 109P0424B602  | ☛ 109P0424B601    | ☛ 109P0424B6D01  | —  | 40 × 40 × 20 mm    | Yes | 34   |
| 109P0424D601                   | ☛ 109P0424D602  | ☛ 109P0424D601    | ☛ 109P0424D6D01  | —  | 40 × 40 × 20 mm    | Yes | 34   |
| 109P0424F3013                  | ☛ 109P0424F3023   | ☛ 109P0424F3013   | ☛ 109P0424F3D013 | —  | 40 × 40 × 28 mm    | Yes | 53   |
| 109P0424F601                   | ☛ 109P0424F602  | ☛ 109P0424F601    | ☛ 109P0424F6D01  | —  | 40 × 40 × 20 mm    | Yes | 34   |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The ☛ mark indicates Short Lead Time Service applicable models. See p. 654 for details.

| Models listed<br>in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "-" models.) |                   |                   |   | Frame size        | Rib | page |
|-----------------------------------|---|-------------------|-------------------|---|-------------------|-----|------|
|                                   | Without sensor  | With pulse sensor | With lock sensor  | With PWM control function<br>and pulse sensor |                   |     |      |
|                                   | 109P0424G3013   | ▶▶ 109P0424G3023  | ▶▶ 109P0424G3013  | 109P0424G3D013                                |                   |     |      |
| 109P0424G601                      | 109P0424G602  | ▶▶ 109P0424G601   | 109P0424G6D01     | —   | 40 × 40 × 20 mm   | Yes | 34   |
| 109P0424H3013                     | ▶▶ 109P0424H3023  | ▶▶ 109P0424H3013  | ▶▶ 109P0424H3D013 | —   | 40 × 40 × 28 mm   | Yes | 53   |
| 109P0424H601                      | ▶▶ 109P0424H602   | ▶▶ 109P0424H601   | ▶▶ 109P0424H6D01  | —   | 40 × 40 × 20 mm   | Yes | 34   |
| 109P0424H901                      | 109P0424H902  | 109P0424H901      | 109P0424H9D01     | —   | 40 × 40 × 10 mm   | Yes | 23   |
| 109P0424H701                      | ▶▶ 109P0424H702   | ▶▶ 109P0424H701   | ▶▶ 109P0424H7D01  | —   | 40 × 40 × 15 mm   | Yes | 27   |
| 109P0424J3013                     | ▶▶ 109P0424J3023  | ▶▶ 109P0424J3013  | ▶▶ 109P0424J3D013 | —   | 40 × 40 × 28 mm   | Yes | 53   |
| 109P0424R3013                     | 109P0424R3023   | 109P0424R3013     | —                 | —   | 40 × 40 × 28 mm   | Yes | 53   |
| 109P0505M701                      | ▶▶ 109P0505M702   | ▶▶ 109P0505M701   | ▶▶ 109P0505M7D01  | —   | 52 × 52 × 15 mm   | Yes | 60   |
| 109P0812C601                      | 109P0812C602  | 109P0812C601      | 109P0812C6D01     | —   | 80 × 80 × 20 mm   | Yes | 101  |
| 109P0812H601                      | ▶▶ 109P0812H602   | ▶▶ 109P0812H601   | ▶▶ 109P0812H6D01  | —   | 80 × 80 × 20 mm   | Yes | 101  |
| 109P0812H701                      | ▶▶ 109P0812H702   | ▶▶ 109P0812H701   | ▶▶ 109P0812H7D01  | —   | 80 × 80 × 15 mm   | Yes | 96   |
| 109P0812M601                      | ▶▶ 109P0812M602   | ▶▶ 109P0812M601   | ▶▶ 109P0812M6D01  | —   | 80 × 80 × 20 mm   | Yes | 101  |
| 109P0812M701                      | ▶▶ 109P0812M702   | ▶▶ 109P0812M701   | ▶▶ 109P0812M7D01  | —   | 80 × 80 × 15 mm   | Yes | 96   |
| 109P0824H601                      | ▶▶ 109P0824H602   | ▶▶ 109P0824H601   | ▶▶ 109P0824H6D01  | —   | 80 × 80 × 20 mm   | Yes | 101  |
| 109P0824H701                      | ▶▶ 109P0824H702   | ▶▶ 109P0824H701   | ▶▶ 109P0824H7D01  | —   | 80 × 80 × 15 mm   | Yes | 96   |
| 109P0824M601                      | ▶▶ 109P0824M602   | ▶▶ 109P0824M601   | ▶▶ 109P0824M6D01  | —   | 80 × 80 × 20 mm   | Yes | 101  |
| 109P0824M701                      | ▶▶ 109P0824M702   | ▶▶ 109P0824M701   | 109P0824M7D01     | —   | 80 × 80 × 15 mm   | Yes | 96   |
| 109P0848C601                      | 109P0848C602  | 109P0848C601      | 109P0848C6D01     | —   | 80 × 80 × 20 mm   | Yes | 101  |
| 109P0848H601                      | —   | 109P0848H601      | 109P0848H6D01     | —   | 80 × 80 × 20 mm   | Yes | 101  |
| 109P1312H101                      | 109P1312H102  | 109P1312H101      | 109P1312H1D01     | —   | 127 × 127 × 38 mm | Yes | 192  |
| 109P1312H1011                     | 109P1312H1021   | 109P1312H1011     | 109P1312H1D011    | —   | 127 × 127 × 38 mm | No  | 192  |
| 109P1312S101                      | 109P1312S102  | 109P1312S101      | 109P1312S1D01     | —   | 127 × 127 × 38 mm | Yes | 192  |
| 109P1312S1011                     | 109P1312S1021   | 109P1312S1011     | 109P1312S1D011    | —   | 127 × 127 × 38 mm | No  | 192  |
| 109P1324H101                      | 109P1324H102  | 109P1324H101      | 109P1324H1D01     | —   | 127 × 127 × 38 mm | Yes | 192  |
| 109P1324H1011                     | 109P1324H1021   | 109P1324H1011     | 109P1324H1D011    | —   | 127 × 127 × 38 mm | No  | 192  |
| 109P1324S101                      | 109P1324S102  | 109P1324S101      | 109P1324S1D01     | —   | 127 × 127 × 38 mm | Yes | 192  |
| 109P1324S1011                     | 109P1324S1021   | 109P1324S1011     | 109P1324S1D011    | —   | 127 × 127 × 38 mm | No  | 192  |
| 109P1348H101                      | 109P1348H102  | 109P1348H101      | 109P1348H1D01     | —   | 127 × 127 × 38 mm | Yes | 192  |
| 109P1348H1011                     | 109P1348H1021   | 109P1348H1011     | 109P1348H1D011    | —   | 127 × 127 × 38 mm | No  | 192  |
| 109P1348S101                      | 109P1348S102  | 109P1348S101      | 109P1348S1D01     | —   | 127 × 127 × 38 mm | Yes | 192  |
| 109P1348S1011                     | 109P1348S1021   | 109P1348S1011     | 109P1348S1D011    | —   | 127 × 127 × 38 mm | No  | 192  |
| 109P1412H101                      | 109P1412H102  | 109P1412H101      | 109P1412H1D01     | —   | 140 × 140 × 38 mm | Yes | 198  |
| 109P1412M101                      | 109P1412M102  | 109P1412M101      | —                 | —   | 140 × 140 × 38 mm | Yes | 198  |
| 109P1424H101                      | 109P1424H102  | 109P1424H101      | 109P1424H1D01     | —   | 140 × 140 × 38 mm | Yes | 198  |
| 109P1424M101                      | 109P1424M102  | 109P1424M101      | —                 | —   | 140 × 140 × 38 mm | Yes | 198  |
| 109P1448H101                      | 109P1448H102  | 109P1448H101      | —                 | —   | 140 × 140 × 38 mm | Yes | 198  |
| 109P1448M101                      | 109P1448M102  | 109P1448M101      | —                 | —   | 140 × 140 × 38 mm | Yes | 198  |
| 109R0605F401                      | ▶▶ 109R0605F402   | ▶▶ 109R0605F401   | ▶▶ 109R0605F4D01  | —   | 60 × 60 × 25 mm   | Yes | 74   |
| 109R0605F4011                     | 109R0605F4021   | 109R0605F4011     | —                 | —   | 60 × 60 × 25 mm   | No  | 74   |
| 109R0605H401                      | ▶▶ 109R0605H402   | ▶▶ 109R0605H401   | ▶▶ 109R0605H4D01  | —   | 60 × 60 × 25 mm   | Yes | 74   |
| 109R0605H4011                     | 109R0605H4021   | 109R0605H4011     | —                 | —   | 60 × 60 × 25 mm   | No  | 74   |
| 109R0605M401                      | ▶▶ 109R0605M402   | ▶▶ 109R0605M401   | ▶▶ 109R0605M4D01  | —   | 60 × 60 × 25 mm   | Yes | 74   |
| 109R0605M4011                     | 109R0605M4021   | 109R0605M4011     | —                 | —   | 60 × 60 × 25 mm   | No  | 74   |
| 109R0612D401                      | ▶▶ 109R0612D402   | ▶▶ 109R0612D401   | ▶▶ 109R0612D4D01  | —   | 60 × 60 × 25 mm   | Yes | 74   |
| 109R0612D4011                     | 109R0612D4021   | 109R0612D4011     | 109R0612D4D011    | —   | 60 × 60 × 25 mm   | No  | 74   |
| 109R0612F401                      | 109R0612F402  | ▶▶ 109R0612F401   | ▶▶ 109R0612F4D01  | —   | 60 × 60 × 25 mm   | Yes | 74   |
| 109R0612F4011                     | 109R0612F4021   | 109R0612F4011     | 109R0612F4D011    | —   | 60 × 60 × 25 mm   | No  | 74   |
| 109R0612G401                      | ▶▶ 109R0612G402   | ▶▶ 109R0612G401   | ▶▶ 109R0612G4D01  | —   | 60 × 60 × 25 mm   | Yes | 74   |
| 109R0612G4011                     | 109R0612G4021   | ▶▶ 109R0612G4011  | 109R0612G4D011    | —   | 60 × 60 × 25 mm   | No  | 74   |
| 109R0612H401                      | ▶▶ 109R0612H402   | ▶▶ 109R0612H401   | ▶▶ 109R0612H4D01  | —   | 60 × 60 × 25 mm   | Yes | 74   |
| 109R0612H4011                     | 109R0612H4021   | ▶▶ 109R0612H4011  | ▶▶ 109R0612H4D011 | —   | 60 × 60 × 25 mm   | No  | 74   |
| 109R0612J401                      | ▶▶ 109R0612J402   | ▶▶ 109R0612J401   | ▶▶ 109R0612J4D01  | 109R0612P4J03                                 | 60 × 60 × 25 mm   | Yes | 74   |
| 109R0612J4011                     | ▶▶ 109R0612J4021  | 109R0612J4011     | 109R0612J4D011    | 109R0612P4J061                                | 60 × 60 × 25 mm   | No  | 74   |
| 109R0612M401                      | ▶▶ 109R0612M402   | ▶▶ 109R0612M401   | ▶▶ 109R0612M4D01  | —   | 60 × 60 × 25 mm   | Yes | 74   |
| 109R0612M4011                     | 109R0612M4021   | 109R0612M4011     | 109R0612M4D011    | —   | 60 × 60 × 25 mm   | No  | 74   |
| 109R0612S401                      | ▶▶ 109R0612S402   | ▶▶ 109R0612S401   | ▶▶ 109R0612S4D01  | —   | 60 × 60 × 25 mm   | Yes | 74   |
| 109R0612S4011                     | 109R0612S4021   | 109R0612S4011     | ▶▶ 109R0612S4D011 | —   | 60 × 60 × 25 mm   | No  | 74   |
| 109R0624D401                      | ▶▶ 109R0624D402   | ▶▶ 109R0624D401   | ▶▶ 109R0624D4D01  | —   | 60 × 60 × 25 mm   | Yes | 74   |
| 109R0624D4011                     | 109R0624D4021   | 109R0624D4011     | —                 | —   | 60 × 60 × 25 mm   | No  | 74   |
| 109R0624F401                      | ▶▶ 109R0624F402   | ▶▶ 109R0624F401   | ▶▶ 109R0624F4D01  | —   | 60 × 60 × 25 mm   | Yes | 74   |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The ▶▶ mark indicates Short Lead Time Service applicable models. See p. 654 for details.


| Models listed in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "-" models.) |                   |                  |  | Frame size      | Rib | page |
|--------------------------------|---|-------------------|------------------|--|-----------------|-----|------|
|                                | Without sensor  | With pulse sensor | With lock sensor | With PWM control function and pulse sensor |                 |     |      |
|                                | 109R0624F4011   | 109R0624F4021     | 109R0624F4011    | 109R0624F4D011                             |                 |     |      |
| 109R0624G401                   | ☛ 109R0624G402  | ☛ 109R0624G401    | ☛ 109R0624G4D01  | —  | 60 × 60 × 25 mm | Yes | 74   |
| 109R0624G4011                  | ☛ 109R0624G4021   | 109R0624G4011     | 109R0624G4D011   | —  | 60 × 60 × 25 mm | No  | 74   |
| 109R0624H401                   | ☛ 109R0624H402  | ☛ 109R0624H401    | ☛ 109R0624H4D01  | —  | 60 × 60 × 25 mm | Yes | 74   |
| 109R0624H4011                  | ☛ 109R0624H4021   | 109R0624H4011     | ☛ 109R0624H4D011 | —  | 60 × 60 × 25 mm | No  | 74   |
| 109R0624J401                   | ☛ 109R0624J402  | ☛ 109R0624J401    | ☛ 109R0624J4D01  | 9RH0624P4J01                               | 60 × 60 × 25 mm | Yes | 74   |
| 109R0624J4011                  | 109R0624J4021   | 109R0624J4011     | 109R0624J4D011   | —  | 60 × 60 × 25 mm | No  | 74   |
| 109R0624M401                   | ☛ 109R0624M402  | ☛ 109R0624M401    | 109R0624M4D01    | —  | 60 × 60 × 25 mm | Yes | 74   |
| 109R0624M4011                  | 109R0624M4021   | 109R0624M4011     | 109R0624M4D011   | —  | 60 × 60 × 25 mm | No  | 74   |
| 109R0624S401                   | ☛ 109R0624S402  | ☛ 109R0624S401    | ☛ 109R0624S4D01  | —  | 60 × 60 × 25 mm | Yes | 74   |
| 109R0624S4011                  | ☛ 109R0624S4021   | 109R0624S4011     | 109R0624S4D011   | —  | 60 × 60 × 25 mm | No  | 74   |
| 109R0648G401                   | ☛ 109R0648G402  | ☛ 109R0648G401    | ☛ 109R0648G4D01  | —  | 60 × 60 × 25 mm | Yes | 74   |
| 109R0648G4011                  | 109R0648G4021   | 109R0648G4011     | 109R0648G4D011   | —  | 60 × 60 × 25 mm | No  | 74   |
| 109R0648H401                   | ☛ 109R0648H402  | ☛ 109R0648H401    | ☛ 109R0648H4D01  | —  | 60 × 60 × 25 mm | Yes | 74   |
| 109R0648H4011                  | 109R0648H4021   | 109R0648H4011     | 109R0648H4D011   | —  | 60 × 60 × 25 mm | No  | 74   |
| 109R0648J401                   | ☛ 109R0648J402  | ☛ 109R0648J401    | ☛ 109R0648J4D01  | —  | 60 × 60 × 25 mm | Yes | 74   |
| 109R0648J4011                  | 109R0648J4021   | 109R0648J4011     | —                | —  | 60 × 60 × 25 mm | No  | 74   |
| 109R0805F401                   | ☛ 109R0805F402  | ☛ 109R0805F401    | ☛ 109R0805F4D01  | —  | 80 × 80 × 25 mm | Yes | 109  |
| 109R0805F4011                  | ☛ 109R0805F4021   | 109R0805F4011     | —                | —  | 80 × 80 × 25 mm | No  | 109  |
| 109R0805M401                   | ☛ 109R0805M402  | ☛ 109R0805M401    | ☛ 109R0805M4D01  | —  | 80 × 80 × 25 mm | Yes | 109  |
| 109R0805M4011                  | ☛ 109R0805M4021   | 109R0805M4011     | —                | —  | 80 × 80 × 25 mm | No  | 109  |
| 109R0812E401                   | 109R0812E402  | ☛ 109R0812E401    | —                | —  | 80 × 80 × 25 mm | Yes | 109  |
| 109R0812E4011                  | —   | 109R0812E4011     | —                | —  | 80 × 80 × 25 mm | No  | 109  |
| 109R0812F401                   | ☛ 109R0812F402  | ☛ 109R0812F401    | ☛ 109R0812F4D01  | —  | 80 × 80 × 25 mm | Yes | 109  |
| 109R0812F4011                  | ☛ 109R0812F4021   | ☛ 109R0812F4011   | 109R0812F4D011   | —  | 80 × 80 × 25 mm | No  | 109  |
| 109R0812G401                   | ☛ 109R0812G402  | ☛ 109R0812G401    | ☛ 109R0812G4D01  | —  | 80 × 80 × 25 mm | Yes | 109  |
| 109R0812G4011                  | ☛ 109R0812G4021   | ☛ 109R0812G4011   | ☛ 109R0812G4D011 | —  | 80 × 80 × 25 mm | No  | 109  |
| 109R0812H401                   | ☛ 109R0812H402  | ☛ 109R0812H401    | ☛ 109R0812H4D01  | —  | 80 × 80 × 25 mm | Yes | 109  |
| 109R0812H4011                  | ☛ 109R0812H4021   | ☛ 109R0812H4011   | ☛ 109R0812H4D011 | —  | 80 × 80 × 25 mm | No  | 109  |
| 109R0812L401                   | ☛ 109R0812L402  | ☛ 109R0812L401    | ☛ 109R0812L4D01  | —  | 80 × 80 × 25 mm | Yes | 109  |
| 109R0812L4011                  | ☛ 109R0812L4021   | ☛ 109R0812L4011   | 109R0812L4D011   | —  | 80 × 80 × 25 mm | No  | 109  |
| 109R0812M401                   | ☛ 109R0812M402  | ☛ 109R0812M401    | ☛ 109R0812M4D01  | —  | 80 × 80 × 25 mm | Yes | 109  |
| 109R0812M4011                  | ☛ 109R0812M4021   | ☛ 109R0812M4011   | 109R0812M4D011   | —  | 80 × 80 × 25 mm | No  | 109  |
| 109R0812S401                   | ☛ 109R0812S402  | ☛ 109R0812S401    | ☛ 109R0812S4D01  | —  | 80 × 80 × 25 mm | Yes | 109  |
| 109R0812S4011                  | ☛ 109R0812S4021   | ☛ 109R0812S4011   | ☛ 109R0812S4D011 | —  | 80 × 80 × 25 mm | No  | 109  |
| 109R0824F401                   | ☛ 109R0824F402  | ☛ 109R0824F401    | ☛ 109R0824F4D01  | —  | 80 × 80 × 25 mm | Yes | 109  |
| 109R0824F4011                  | 109R0824F4021   | 109R0824F4011     | 109R0824F4D011   | —  | 80 × 80 × 25 mm | No  | 109  |
| 109R0824G401                   | ☛ 109R0824G402  | ☛ 109R0824G401    | ☛ 109R0824G4D01  | —  | 80 × 80 × 25 mm | Yes | 109  |
| 109R0824G4011                  | ☛ 109R0824G4021   | 109R0824G4011     | ☛ 109R0824G4D011 | —  | 80 × 80 × 25 mm | No  | 109  |
| 109R0824H401                   | ☛ 109R0824H402  | ☛ 109R0824H401    | ☛ 109R0824H4D01  | —  | 80 × 80 × 25 mm | Yes | 109  |
| 109R0824H4011                  | ☛ 109R0824H4021   | ☛ 109R0824H4011   | ☛ 109R0824H4D011 | —  | 80 × 80 × 25 mm | No  | 109  |
| 109R0824L401                   | ☛ 109R0824L402  | ☛ 109R0824L401    | ☛ 109R0824L4D01  | —  | 80 × 80 × 25 mm | Yes | 109  |
| 109R0824L4011                  | ☛ 109R0824L4021   | ☛ 109R0824L4011   | 109R0824L4D011   | —  | 80 × 80 × 25 mm | No  | 109  |
| 109R0824M401                   | ☛ 109R0824M402  | ☛ 109R0824M401    | ☛ 109R0824M4D01  | —  | 80 × 80 × 25 mm | Yes | 109  |
| 109R0824M4011                  | ☛ 109R0824M4021   | ☛ 109R0824M4011   | 109R0824M4D011   | —  | 80 × 80 × 25 mm | No  | 109  |
| 109R0824S401                   | ☛ 109R0824S402  | ☛ 109R0824S401    | ☛ 109R0824S4D01  | —  | 80 × 80 × 25 mm | Yes | 109  |
| 109R0824S4011                  | ☛ 109R0824S4021   | ☛ 109R0824S4011   | ☛ 109R0824S4D011 | —  | 80 × 80 × 25 mm | No  | 109  |
| 109R0848K401                   | ☛ 109R0848K402  | ☛ 109R0848K401    | ☛ 109R0848K4D01  | —  | 80 × 80 × 25 mm | Yes | 109  |
| 109R0848K4011                  | 109R0848K4021   | 109R0848K4011     | 109R0848K4D011   | —  | 80 × 80 × 25 mm | No  | 109  |
| 109R0848S401                   | ☛ 109R0848S402  | ☛ 109R0848S401    | ☛ 109R0848S4D01  | —  | 80 × 80 × 25 mm | Yes | 109  |
| 109R0848S4011                  | 109R0848S4021   | 109R0848S4011     | 109R0848S4D011   | —  | 80 × 80 × 25 mm | No  | 109  |
| 9A0612F401                     | 9A0612F402  | 9A0612F401        | 9A0612F4D01      | —  | 60 × 60 × 25 mm | Yes | 80   |
| 9A0612F4011                    | 9A0612F4021   | 9A0612F4011       | 9A0612F4D011     | —  | 60 × 60 × 25 mm | No  | 80   |
| 9A0612G401                     | ☛ 9A0612G402  | ☛ 9A0612G401      | 9A0612G4D01      | 9AH0612P4G03                               | 60 × 60 × 25 mm | Yes | 80   |
| 9A0612G4011                    | 9A0612G4021   | 9A0612G4011       | 9A0612G4D011     | —  | 60 × 60 × 25 mm | No  | 80   |
| 9A0612H401                     | ☛ 9A0612H402  | ☛ 9A0612H401      | 9A0612H4D01      | 9AH0612P4H05                               | 60 × 60 × 25 mm | Yes | 80   |
| 9A0612H4011                    | 9A0612H4021   | 9A0612H4011       | 9A0612H4D011     | —  | 60 × 60 × 25 mm | No  | 80   |
| 9A0612M401                     | 9A0612M402  | 9A0612M401        | 9A0612M4D01      | —  | 60 × 60 × 25 mm | Yes | 80   |
| 9A0612M4011                    | 9A0612M4021   | 9A0612M4011       | 9A0612M4D011     | —  | 60 × 60 × 25 mm | No  | 80   |
| 9A0612S401                     | ☛ 9A0612S402  | ☛ 9A0612S401      | 9A0612S4D01      | —  | 60 × 60 × 25 mm | Yes | 80   |
| 9A0612S4011                    | 9A0612S4021   | 9A0612S4011       | 9A0612S4D011     | 9AH0612P4S011                              | 60 × 60 × 25 mm | No  | 80   |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The ☛ mark indicates Short Lead Time Service applicable models. See p. 654 for details.

| Models listed<br>in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "—" models.) |                   |                  |   | Frame size        | Rib | page |
|-----------------------------------|---|-------------------|------------------|---|-------------------|-----|------|
|                                   | Without sensor  | With pulse sensor | With lock sensor | With PWM control function<br>and pulse sensor |                   |     |      |
|                                   | 9A0624F401  | 9A0624F402        | 9A0624F401       | 9A0624F4D01                                   |                   |     |      |
| 9A0624F4011                       | 9A0624F4021   | 9A0624F4011       | 9A0624F4D011     | —   | 60 × 60 × 25 mm   | No  | 80   |
| 9A0624G401                        | 9A0624G402  | 9A0624G401        | 9A0624G4D01      | —   | 60 × 60 × 25 mm   | Yes | 80   |
| 9A0624G4011                       | 9A0624G4021   | 9A0624G4011       | —                | —   | 60 × 60 × 25 mm   | No  | 80   |
| 9A0624H401                        | 9A0624H402  | 9A0624H401        | 9A0624H4D01      | —   | 60 × 60 × 25 mm   | Yes | 80   |
| 9A0624H4011                       | 9A0624H4021   | 9A0624H4011       | 9A0624H4D011     | —   | 60 × 60 × 25 mm   | No  | 80   |
| 9A0624M401                        | 9A0624M402  | 9A0624M401        | 9A0624M4D01      | —   | 60 × 60 × 25 mm   | Yes | 80   |
| 9A0624M4011                       | 9A0624M4021   | 9A0624M4011       | 9A0624M4D011     | —   | 60 × 60 × 25 mm   | No  | 80   |
| 9A0624S401                        | 9A0624S402  | 9A0624S401        | 9A0624S4D01      | —   | 60 × 60 × 25 mm   | Yes | 80   |
| 9A0624S4011                       | 9A0624S4021   | 9A0624S4011       | 9A0624S4D011     | —   | 60 × 60 × 25 mm   | No  | 80   |
| 9A0812F401                        | 9A0812F402  | 9A0812F401        | 9A0812F4D01      | —   | 80 × 80 × 25 mm   | Yes | 114  |
| 9A0812F4011                       | 9A0812F4021   | 9A0812F4011       | 9A0812F4D011     | —   | 80 × 80 × 25 mm   | No  | 114  |
| 9A0812G401                        | 9A0812G402  | 9A0812G401        | 9A0812G4D01      | 9AH0812P4G04                                  | 80 × 80 × 25 mm   | Yes | 114  |
| 9A0812G4011                       | 9A0812G4021   | 9A0812G4011       | 9A0812G4D011     | 9AH0812P4G011                                 | 80 × 80 × 25 mm   | No  | 114  |
| 9A0812H401                        | 9A0812H402  | 9A0812H401        | 9A0812H4D01      | 9AH0812P4H04                                  | 80 × 80 × 25 mm   | Yes | 114  |
| 9A0812H4011                       | 9A0812H4021   | 9A0812H4011       | 9A0812H4D011     | —   | 80 × 80 × 25 mm   | No  | 114  |
| 9A0812L401                        | 9A0812L402  | 9A0812L401        | 9A0812L4D01      | —   | 80 × 80 × 25 mm   | Yes | 114  |
| 9A0812L4011                       | 9A0812L4021   | 9A0812L4011       | 9A0812L4D011     | —   | 80 × 80 × 25 mm   | No  | 114  |
| 9A0812M401                        | 9A0812M402  | 9A0812M401        | 9A0812M4D01      | —   | 80 × 80 × 25 mm   | Yes | 114  |
| 9A0812M4011                       | 9A0812M4021   | 9A0812M4011       | 9A0812M4D011     | —   | 80 × 80 × 25 mm   | No  | 114  |
| 9A0812S401                        | 9A0812S402  | 9A0812S401        | 9A0812S4D01      | —   | 80 × 80 × 25 mm   | Yes | 114  |
| 9A0812S4011                       | 9A0812S4021   | 9A0812S4011       | 9A0812S4D011     | —   | 80 × 80 × 25 mm   | No  | 114  |
| 9A0824F401                        | 9A0824F402  | 9A0824F401        | 9A0824F4D01      | —   | 80 × 80 × 25 mm   | Yes | 114  |
| 9A0824F4011                       | 9A0824F4021   | 9A0824F4011       | 9A0824F4D011     | —   | 80 × 80 × 25 mm   | No  | 114  |
| 9A0824G401                        | 9A0824G402  | 9A0824G401        | 9A0824G4D01      | —   | 80 × 80 × 25 mm   | Yes | 114  |
| 9A0824G4011                       | 9A0824G4021   | 9A0824G4011       | 9A0824G4D011     | —   | 80 × 80 × 25 mm   | No  | 114  |
| 9A0824H401                        | 9A0824H402  | 9A0824H401        | 9A0824H4D01      | —   | 80 × 80 × 25 mm   | Yes | 114  |
| 9A0824H4011                       | 9A0824H4021   | 9A0824H4011       | 9A0824H4D011     | —   | 80 × 80 × 25 mm   | No  | 114  |
| 9A0824L401                        | 9A0824L402  | 9A0824L401        | 9A0824L4D01      | —   | 80 × 80 × 25 mm   | Yes | 114  |
| 9A0824L4011                       | 9A0824L4021   | 9A0824L4011       | 9A0824L4D011     | —   | 80 × 80 × 25 mm   | No  | 114  |
| 9A0824M401                        | 9A0824M402  | 9A0824M401        | 9A0824M4D01      | —   | 80 × 80 × 25 mm   | Yes | 114  |
| 9A0824M4011                       | 9A0824M4021   | 9A0824M4011       | 9A0824M4D011     | —   | 80 × 80 × 25 mm   | No  | 114  |
| 9A0824S401                        | 9A0824S402  | 9A0824S401        | 9A0824S4D01      | —   | 80 × 80 × 25 mm   | Yes | 114  |
| 9A0824S4011                       | 9A0824S4021   | 9A0824S4011       | 9A0824S4D011     | —   | 80 × 80 × 25 mm   | No  | 114  |
| 9A0912F401                        | 9A0912F402  | 9A0912F401        | 9A0912F4D01      | —   | 92 × 92 × 25 mm   | Yes | 147  |
| 9A0912F4011                       | 9A0912F4021   | 9A0912F4011       | 9A0912F4D011     | —   | 92 × 92 × 25 mm   | No  | 147  |
| 9A0912G401                        | 9A0912G402  | 9A0912G401        | 9A0912G4D01      | 9AH0912P4G03                                  | 92 × 92 × 25 mm   | Yes | 147  |
| 9A0912G4011                       | 9A0912G4021   | 9A0912G4011       | 9A0912G4D011     | —   | 92 × 92 × 25 mm   | No  | 147  |
| 9A0912H401                        | 9A0912H402  | 9A0912H401        | 9A0912H4D01      | 9AH0912P4H03                                  | 92 × 92 × 25 mm   | Yes | 147  |
| 9A0912H4011                       | 9A0912H4021   | 9A0912H4011       | 9A0912H4D011     | —   | 92 × 92 × 25 mm   | No  | 147  |
| 9A0912L401                        | 9A0912L402  | 9A0912L401        | 9A0912L4D01      | —   | 92 × 92 × 25 mm   | Yes | 147  |
| 9A0912L4011                       | 9A0912L4021   | 9A0912L4011       | 9A0912L4D011     | —   | 92 × 92 × 25 mm   | No  | 147  |
| 9A0912M401                        | 9A0912M402  | 9A0912M401        | 9A0912M4D01      | —   | 92 × 92 × 25 mm   | Yes | 147  |
| 9A0912M4011                       | 9A0912M4021   | 9A0912M4011       | 9A0912M4D011     | —   | 92 × 92 × 25 mm   | No  | 147  |
| 9A0912S401                        | 9A0912S402  | 9A0912S401        | 9A0912S4D01      | —   | 92 × 92 × 25 mm   | Yes | 147  |
| 9A0912S4011                       | 9A0912S4021   | 9A0912S4011       | 9A0912S4D011     | —   | 92 × 92 × 25 mm   | No  | 147  |
| 9A0924F401                        | 9A0924F402  | 9A0924F401        | 9A0924F4D01      | —   | 92 × 92 × 25 mm   | Yes | 147  |
| 9A0924F4011                       | 9A0924F4021   | 9A0924F4011       | 9A0924F4D011     | —   | 92 × 92 × 25 mm   | No  | 147  |
| 9A0924G401                        | 9A0924G402  | 9A0924G401        | 9A0924G4D01      | —   | 92 × 92 × 25 mm   | Yes | 147  |
| 9A0924G4011                       | 9A0924G4021   | 9A0924G4011       | —                | —   | 92 × 92 × 25 mm   | No  | 147  |
| 9A0924H401                        | 9A0924H402  | 9A0924H401        | 9A0924H4D01      | —   | 92 × 92 × 25 mm   | Yes | 147  |
| 9A0924H4011                       | 9A0924H4021   | 9A0924H4011       | 9A0924H4D011     | —   | 92 × 92 × 25 mm   | No  | 147  |
| 9A0924L401                        | 9A0924L402  | 9A0924L401        | 9A0924L4D01      | —   | 92 × 92 × 25 mm   | Yes | 147  |
| 9A0924L4011                       | 9A0924L4021   | 9A0924L4011       | 9A0924L4D011     | —   | 92 × 92 × 25 mm   | No  | 147  |
| 9A0924M401                        | 9A0924M402  | 9A0924M401        | 9A0924M4D01      | —   | 92 × 92 × 25 mm   | Yes | 147  |
| 9A0924M4011                       | 9A0924M4021   | 9A0924M4011       | 9A0924M4D011     | —   | 92 × 92 × 25 mm   | No  | 147  |
| 9A0924S401                        | 9A0924S402  | 9A0924S401        | 9A0924S4D01      | —   | 92 × 92 × 25 mm   | Yes | 147  |
| 9A0924S4011                       | 9A0924S4021   | 9A0924S4011       | 9A0924S4D011     | —   | 92 × 92 × 25 mm   | No  | 147  |
| 9A0948S401                        | 9A0948S402  | 9A0948S401        | 9A0948S4D01      | —   | 92 × 92 × 25 mm   | Yes | 147  |
| 9A0948S4011                       | 9A0948S4021   | 9A0948S4011       | —                | —   | 92 × 92 × 25 mm   | No  | 147  |
| 9B1TP24P0H001                     | —   | —                 | —                | 9B1TP24P0H001                                 | 270 × 270 × 99 mm | —   | 485  |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The  mark indicates Short Lead Time Service applicable models. See p. 654 for details.


| Models listed in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "–" models.) |                   |                  |  | Frame size          | Rib | page |
|--------------------------------|---|-------------------|------------------|--|---------------------|-----|------|
|                                | Without sensor  | With pulse sensor | With lock sensor | With PWM control function and pulse sensor |                     |     |      |
|                                | 9B1TP48P0G001   | –                 | –                | –  |                     |     |      |
| 9B1TP48P0H001                  | –   | –                 | –                | 9B1TP48P0H001                              | 270 × 270 × 99 mm   | –   | 485  |
| 9B1TS48P0G001                  | –   | –                 | –                | 9B1TS48P0G001                              | 270 × 270 × 119 mm  | –   | 488  |
| 9B1TS48P0H001                  | –   | –                 | –                | 9B1TS48P0H001                              | 270 × 270 × 119 mm  | –   | 488  |
| 9B1W2TP24P0H001                | –   | –                 | –                | 9B1W2TP24P0H001                            | 270 × 270 × 99 mm   | –   | 353  |
| 9B1W2TP48P0S001                | –   | –                 | –                | 9B1W2TP48P0S001                            | 270 × 270 × 99 mm   | –   | 353  |
| 9B1W2TS48P0S001                | –   | –                 | –                | 9B1W2TS48P0S001                            | 270 × 270 × 119 mm  | –   | 356  |
| 9BD12FC6-1                     | 9BD12FA6-1  | ↻ 9BD12FC6-1      | 9BD12FD6-1       | –  | 76 × 20 mm          | –   | 494  |
| 9BD12HC6-1                     | ↻ 9BD12HA6-1  | ↻ 9BD12HC6-1      | 9BD12HD6-1       | –  | 76 × 20 mm          | –   | 494  |
| 9BD12SC6-1                     | 9BD12SA6-1  | ↻ 9BD12SC6-1      | ↻ 9BD12SD6-1     | 9BD12P6S01                                 | 76 × 20 mm          | –   | 494  |
| 9BD24FC6-1                     | 9BD24FA6-1  | ↻ 9BD24FC6-1      | 9BD24FD6-1       | –  | 76 × 20 mm          | –   | 494  |
| 9BD24HC6-1                     | ↻ 9BD24HA6-1  | ↻ 9BD24HC6-1      | 9BD24HD6-1       | –  | 76 × 20 mm          | –   | 494  |
| 9BD24SC6-1                     | ↻ 9BD24SA6-1  | ↻ 9BD24SC6-1      | ↻ 9BD24SD6-1     | 9BD24P6S06                                 | 76 × 20 mm          | –   | 494  |
| 9BFB12P2H003                   | –   | –                 | –                | ↻ 9BFB12P2H003                             | 120 × 32 mm         | –   | 508  |
| 9BFB24P2H003                   | –   | –                 | 9BFB24H2D001     | ↻ 9BFB24P2H003                             | 120 × 32 mm         | –   | 508  |
| 9BMB12F201                     | 9BMB12F202  | ↻ 9BMB12F201      | 9BMB12F2D01      | ↻ 9BMB12P2F01                              | 97 × 33 mm          | –   | 500  |
| 9BMB12G201                     | 9BMB12G202  | ↻ 9BMB12G201      | 9BMB12G2D01      | ↻ 9BMB12P2G01                              | 97 × 33 mm          | –   | 500  |
| 9BMB12H201                     | ↻ 9BMB12H202  | ↻ 9BMB12H201      | ↻ 9BMB12H2D01    | ↻ 9BMB12P2H01                              | 97 × 33 mm          | –   | 500  |
| 9BMB12K201                     | ↻ 9BMB12K202  | ↻ 9BMB12K201      | –                | ↻ 9BMB12P2K01                              | 97 × 33 mm          | –   | 500  |
| 9BMB12P2F01                    | 9BMB12F202  | ↻ 9BMB12F201      | 9BMB12F2D01      | ↻ 9BMB12P2F01                              | 97 × 33 mm          | –   | 500  |
| 9BMB12P2G01                    | 9BMB12G202  | ↻ 9BMB12G201      | 9BMB12G2D01      | ↻ 9BMB12P2G01                              | 97 × 33 mm          | –   | 500  |
| 9BMB12P2H01                    | ↻ 9BMB12H202  | ↻ 9BMB12H201      | ↻ 9BMB12H2D01    | ↻ 9BMB12P2H01                              | 97 × 33 mm          | –   | 500  |
| 9BMB12P2K01                    | ↻ 9BMB12K202  | ↻ 9BMB12K201      | –                | ↻ 9BMB12P2K01                              | 97 × 33 mm          | –   | 500  |
| 9BMB12P2S01                    | 9BMB12S202  | ↻ 9BMB12S201      | –                | 9BMB12P2S01                                | 97 × 33 mm          | –   | 500  |
| 9BMB12S201                     | 9BMB12S202  | ↻ 9BMB12S201      | –                | 9BMB12P2S01                                | 97 × 33 mm          | –   | 500  |
| 9BMB24F201                     | 9BMB24F202  | ↻ 9BMB24F201      | 9BMB24F2D01      | ↻ 9BMB24P2F01                              | 97 × 33 mm          | –   | 500  |
| 9BMB24G201                     | ↻ 9BMB24G202  | ↻ 9BMB24G201      | ↻ 9BMB24G2D01    | ↻ 9BMB24P2G01                              | 97 × 33 mm          | –   | 500  |
| 9BMB24H201                     | ↻ 9BMB24H202  | ↻ 9BMB24H201      | ↻ 9BMB24H2D01    | 9BMB24P2H01                                | 97 × 33 mm          | –   | 500  |
| 9BMB24K201                     | 9BMB24K202  | 9BMB24K201        | 9BMB24K2D01      | ↻ 9BMB24P2K01                              | 97 × 33 mm          | –   | 500  |
| 9BMB24P2F01                    | 9BMB24F202  | ↻ 9BMB24F201      | 9BMB24F2D01      | ↻ 9BMB24P2F01                              | 97 × 33 mm          | –   | 500  |
| 9BMB24P2G01                    | ↻ 9BMB24G202  | ↻ 9BMB24G201      | ↻ 9BMB24G2D01    | ↻ 9BMB24P2G01                              | 97 × 33 mm          | –   | 500  |
| 9BMB24P2H01                    | ↻ 9BMB24H202  | ↻ 9BMB24H201      | ↻ 9BMB24H2D01    | 9BMB24P2H01                                | 97 × 33 mm          | –   | 500  |
| 9BMB24P2K01                    | 9BMB24K202  | 9BMB24K201        | –                | ↻ 9BMB24P2K01                              | 97 × 33 mm          | –   | 500  |
| 9BMB24P2S01                    | 9BMB24S202  | ↻ 9BMB24S201      | –                | 9BMB24P2S01                                | 97 × 33 mm          | –   | 500  |
| 9BMB24S201                     | 9BMB24S202  | ↻ 9BMB24S201      | –                | 9BMB24P2S01                                | 97 × 33 mm          | –   | 500  |
| 9BMC12P2G001                   | 9BMC12G2002   | –                 | –                | ↻ 9BMC12P2G001                             | 97 × 33 mm          | –   | 498  |
| 9BMC24P2G001                   | –   | –                 | –                | ↻ 9BMC24P2G001                             | 97 × 33 mm          | –   | 498  |
| 9CR0612P5G03                   | 9CR0612G502   | 9CR0612G501       | –                | 9CR0612P5G03                               | 60 × 60 × 51 mm     | –   | 240  |
| 9CR0612P5H03                   | –   | 9CR0612H501       | –                | 9CR0612P5H03                               | 60 × 60 × 51 mm     | –   | 240  |
| 9CR1212P0G03                   | 9CR1212G002   | 9CR1212G001       | –                | 9CR1212P0G03                               | 120 × 120 × 76 mm   | –   | 258  |
| 9CR5748P9G001                  | –   | –                 | –                | 9CR5748P9G001                              | ∅172 × 150 × 102 mm | –   | 260  |
| 9CRA0312P4J03                  | –   | 9CRA0312J401      | –                | 9CRA0312P4J03                              | 38 × 38 × 48 mm     | –   | 224  |
| 9CRA0312P4K03                  | 9CRA0312K402  | –                 | –                | 9CRA0312P4K03                              | 38 × 38 × 48 mm     | –   | 224  |
| 9CRA0412P4G03                  | 9CRA0412G402  | –                 | –                | 9CRA0412P4G03                              | 40 × 40 × 48 mm     | –   | 226  |
| 9CRA0412P4J03                  | 9CRA0412J402  | 9CRA0412J401      | –                | 9CRA0412P4J03                              | 40 × 40 × 48 mm     | –   | 226  |
| 9CRA0412P4K03                  | 9CRA0412K402  | 9CRA0412K401      | –                | 9CRA0412P4K03                              | 40 × 40 × 48 mm     | –   | 226  |
| 9CRA0612P0G001                 | –   | –                 | –                | ↻ 9CRA0612P0G001                           | 60 × 60 × 76 mm     | –   | 247  |
| 9CRA0612P0S001                 | –   | –                 | –                | 9CRA0612P0S001                             | 60 × 60 × 76 mm     | –   | 247  |
| 9CRA0612P6G001                 | –   | –                 | –                | 9CRA0612P6G001                             | 60 × 60 × 56 mm     | –   | 242  |
| 9CRA0612P6J001                 | –   | –                 | –                | 9CRA0612P6J001                             | 60 × 60 × 56 mm     | –   | 242  |
| 9CRA0612P6K001                 | –   | –                 | –                | ↻ 9CRA0612P6K001                           | 60 × 60 × 56 mm     | –   | 242  |
| 9CRA0812P8G001                 | –   | 9CRA0812G8001     | –                | ↻ 9CRA0812P8G001                           | 80 × 80 × 80 mm     | –   | 253  |
| 9CRA0824P8G001                 | –   | –                 | 9CRA0824G8D001   | 9CRA0824P8G001                             | 80 × 80 × 80 mm     | –   | 253  |
| 9CRA0848P8G001                 | –   | –                 | –                | ↻ 9CRA0848P8G001                           | 80 × 80 × 80 mm     | –   | 253  |
| 9CRA0912P0G001                 | –   | –                 | –                | ↻ 9CRA0912P0G001                           | 92 × 92 × 76 mm     | –   | 256  |
| 9CRA0948P0G601                 | –   | –                 | –                | ↻ 9CRA0948P0G601                           | 92 × 92 × 76 mm     | –   | 256  |
| 9CRB0812P8G001                 | –   | –                 | –                | ↻ 9CRB0812P8G001                           | 80 × 80 × 80 mm     | –   | 249  |
| 9CRD0412P5G03                  | –   | –                 | –                | 9CRD0412P5G03                              | 40 × 40 × 56 mm     | –   | 235  |
| 9CRD0412P5H03                  | –   | –                 | –                | 9CRD0412P5H03                              | 40 × 40 × 56 mm     | –   | 235  |
| 9CRD0412P5J03                  | –   | –                 | –                | 9CRD0412P5J03                              | 40 × 40 × 56 mm     | –   | 235  |
| 9CRD0412P5M03                  | –   | –                 | –                | 9CRD0412P5M03                              | 40 × 40 × 56 mm     | –   | 235  |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The ↻ mark indicates Short Lead Time Service applicable models. See p. 654 for details.


| Models listed in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "-" models.) |                   |                  |  | Frame size      | Rib | page |
|--------------------------------|---|-------------------|------------------|--|-----------------|-----|------|
|                                | Without sensor  | With pulse sensor | With lock sensor | With PWM control function and pulse sensor |                 |     |      |
|                                | 9CRE0412P5J03   | 9CRE0412J502      | —                | —  |                 |     |      |
| 9CRE0612P0G001                 | —   | —                 | —                | 9CRE0612P0G001                             | 60 × 60 × 76 mm | —   | 245  |
| 9CRE0812P8G001                 | —   | —                 | —                | 9CRE0812P8G001                             | 80 × 80 × 80 mm | —   | 251  |
| 9CRH0412P5J001                 | —   | —                 | —                | 9CRH0412P5J001                             | 40 × 40 × 56 mm | —   | 231  |
| 9CRJ0412P5J001                 | —   | —                 | —                | 9CRJ0412P5J001                             | 40 × 40 × 56 mm | —   | 229  |
| 9CRL0612P0G001                 | —   | —                 | —                | 9CRL0612P0G001                             | 60 × 60 × 76 mm | No  | 403  |
| 9CRL0812P8G001                 | —   | —                 | —                | 9CRL0812P8G001                             | 80 × 80 × 80 mm | No  | 410  |
| 9CRLA0612P0G001                | —   | —                 | —                | 9CRLA0612P0G001                            | 60 × 60 × 76 mm | No  | 401  |
| 9CRV0412P5J201                 | —   | —                 | —                | 9CRV0412P5J201                             | 40 × 40 × 56 mm | —   | 233  |
| 9EC2024H001                    | 9EC2024H002   | 9EC2024H001       | 9EC2024H0D01     | —  | ∅200 × 70 mm    | No  | 220  |
| 9EC2048A001                    | 9EC2048A002   | 9EC2048A001       | 9EC2048A0D01     | 9EC2048P0A01                               | ∅200 × 70 mm    | No  | 220  |
| 9EC2048H001                    | 9EC2048H002   | 9EC2048H001       | —                | —  | ∅200 × 70 mm    | No  | 220  |
| 9EC2048J001                    | 9EC2048J002   | 9EC2048J001       | —                | 9EC2048P0J01                               | ∅200 × 70 mm    | No  | 220  |
| 9G0612P4H001                   | 9G0612H4002   | —                 | 9G0612H4D001     | 9G0612P4H001                               | 60 × 60 × 25 mm | Yes | 71   |
| 9G0612P4H0011                  | 9G0612H40021  | 9G0612H40011      | 9G0612H4D0011    | 9G0612P4H0011                              | 60 × 60 × 25 mm | No  | 71   |
| 9G0612P4S001                   | 9G0612S4002   | 9G0612S4001       | —                | 9G0612P4S001                               | 60 × 60 × 25 mm | Yes | 71   |
| 9G0612P4S0011                  | 9G0612S40021  | —                 | —                | 9G0612P4S0011                              | 60 × 60 × 25 mm | No  | 71   |
| 9G0624P4F001                   | 9G0624F4002   | —                 | —                | 9G0624P4F001                               | 60 × 60 × 25 mm | Yes | 71   |
| 9G0624P4F0011                  | —   | —                 | —                | 9G0624P4F0011                              | 60 × 60 × 25 mm | No  | 71   |
| 9G0624P4H001                   | 9G0624H4002   | 9G0624H4001       | 9G0624H4D001     | 9G0624P4H001                               | 60 × 60 × 25 mm | Yes | 71   |
| 9G0624P4H0011                  | 9G0624H40021  | —                 | —                | 9G0624P4H0011                              | 60 × 60 × 25 mm | No  | 71   |
| 9G0624P4S001                   | 9G0624S4002   | —                 | 9G0624S4D001     | 9G0624P4S001                               | 60 × 60 × 25 mm | Yes | 71   |
| 9G0624P4S0011                  | 9G0624S40021  | —                 | —                | 9G0624P4S0011                              | 60 × 60 × 25 mm | No  | 71   |
| 9G0648P4S001                   | 9G0648S4002   | —                 | —                | 9G0648P4S001                               | 60 × 60 × 25 mm | Yes | 71   |
| 9G0648P4S0011                  | —   | —                 | —                | 9G0648P4S0011                              | 60 × 60 × 25 mm | No  | 71   |
| 9G0812G101                     | 9G0812G102  | 9G0812G101        | 9G0812G1D01      | 9G0812P1G04                                | 80 × 80 × 38 mm | Yes | 134  |
| 9G0812G1011                    | 9G0812G1021   | 9G0812G1011       | 9G0812G1D011     | 9G0812P1G081                               | 80 × 80 × 38 mm | No  | 134  |
| 9G0812H101                     | 9G0812H102  | 9G0812H101        | 9G0812H1D01      | 9G0812P1H03                                | 80 × 80 × 38 mm | Yes | 134  |
| 9G0812H1011                    | 9G0812H1021   | 9G0812H1011       | 9G0812H1D011     | 9G0812P1H051                               | 80 × 80 × 38 mm | No  | 134  |
| 9G0812K101                     | 9G0812K102  | 9G0812K101        | 9G0812K1D01      | 9G0812P1K08                                | 80 × 80 × 38 mm | Yes | 134  |
| 9G0812K1011                    | 9G0812K1021   | 9G0812K1011       | —                | 9G0812P1K081                               | 80 × 80 × 38 mm | No  | 134  |
| 9G0824G101                     | 9G0824G102  | 9G0824G101        | 9G0824G1D01      | 9G0824P1G04                                | 80 × 80 × 38 mm | Yes | 134  |
| 9G0824G1011                    | 9G0824G1021   | 9G0824G1011       | 9G0824G1D011     | —  | 80 × 80 × 38 mm | No  | 134  |
| 9G0824H101                     | 9G0824H102  | 9G0824H101        | 9G0824H1D01      | —  | 80 × 80 × 38 mm | Yes | 134  |
| 9G0824H1011                    | 9G0824H1021   | 9G0824H1011       | 9G0824H1D011     | —  | 80 × 80 × 38 mm | No  | 134  |
| 9G0848G101                     | 9G0848G102  | 9G0848G101        | 9G0848G1D01      | 9G0848P1G03                                | 80 × 80 × 38 mm | Yes | 134  |
| 9G0848G1011                    | 9G0848G1021   | 9G0848G1011       | 9G0848G1D011     | —  | 80 × 80 × 38 mm | No  | 134  |
| 9G0848H101                     | 9G0848H102  | 9G0848H101        | 9G0848H1D01      | 9G0848P1H04                                | 80 × 80 × 38 mm | Yes | 134  |
| 9G0848H1011                    | 9G0848H1021   | 9G0848H1011       | —                | —  | 80 × 80 × 38 mm | No  | 134  |
| 9G0912A201                     | 9G0912A202  | 9G0912A201        | 9G0912A2D01      | 9G0912P2A01                                | 92 × 92 × 32 mm | Yes | 150  |
| 9G0912A2011                    | 9G0912A2021   | 9G0912A2011       | 9G0912A2D011     | —  | 92 × 92 × 32 mm | No  | 150  |
| 9G0912G101                     | 9G0912G102  | 9G0912G101        | 9G0912G1D01      | 9G0912P1G03                                | 92 × 92 × 38 mm | Yes | 162  |
| 9G0912G1011                    | 9G0912G1021   | 9G0912G1011       | —                | 9G0912P1G031                               | 92 × 92 × 38 mm | No  | 162  |
| 9G0912H101                     | 9G0912H102  | 9G0912H101        | 9G0912H1D01      | 9G0912P1H05                                | 92 × 92 × 38 mm | Yes | 162  |
| 9G0912H1011                    | 9G0912H1021   | 9G0912H1011       | 9G0912H1D011     | —  | 92 × 92 × 38 mm | No  | 162  |
| 9G0912H201                     | 9G0912H202  | 9G0912H201        | 9G0912H2D01      | 9G0912P2H01                                | 92 × 92 × 32 mm | Yes | 150  |
| 9G0912H2011                    | 9G0912H2021   | 9G0912H2011       | 9G0912H2D011     | —  | 92 × 92 × 32 mm | No  | 150  |
| 9G0912M201                     | 9G0912M202  | 9G0912M201        | 9G0912M2D01      | —  | 92 × 92 × 32 mm | Yes | 150  |
| 9G0912M2011                    | 9G0912M2021   | 9G0912M2011       | 9G0912M2D011     | —  | 92 × 92 × 32 mm | No  | 150  |
| 9G0912S201                     | 9G0912S202  | 9G0912S201        | 9G0912S2D01      | 9G0912P2S01                                | 92 × 92 × 32 mm | Yes | 150  |
| 9G0912S2011                    | 9G0912S2021   | 9G0912S2011       | 9G0912S2D011     | —  | 92 × 92 × 32 mm | No  | 150  |
| 9G0924A201                     | 9G0924A202  | 9G0924A201        | 9G0924A2D01      | —  | 92 × 92 × 32 mm | Yes | 150  |
| 9G0924A2011                    | 9G0924A2021   | 9G0924A2011       | 9G0924A2D011     | —  | 92 × 92 × 32 mm | No  | 150  |
| 9G0924G101                     | 9G0924G102  | 9G0924G101        | 9G0924G1D01      | —  | 92 × 92 × 38 mm | Yes | 162  |
| 9G0924G1011                    | 9G0924G1021   | 9G0924G1011       | 9G0924G1D011     | —  | 92 × 92 × 38 mm | No  | 162  |
| 9G0924H101                     | 9G0924H102  | 9G0924H101        | 9G0924H1D01      | —  | 92 × 92 × 38 mm | Yes | 162  |
| 9G0924H1011                    | 9G0924H1021   | 9G0924H1011       | 9G0924H1D011     | —  | 92 × 92 × 38 mm | No  | 162  |
| 9G0924H201                     | 9G0924H202  | 9G0924H201        | 9G0924H2D01      | —  | 92 × 92 × 32 mm | Yes | 150  |
| 9G0924H2011                    | 9G0924H2021   | 9G0924H2011       | 9G0924H2D011     | —  | 92 × 92 × 32 mm | No  | 150  |
| 9G0924M201                     | 9G0924M202  | 9G0924M201        | 9G0924M2D01      | —  | 92 × 92 × 32 mm | Yes | 150  |
| 9G0924M2011                    | 9G0924M2021   | 9G0924M2011       | 9G0924M2D011     | —  | 92 × 92 × 32 mm | No  | 150  |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The  mark indicates Short Lead Time Service applicable models. See p. 654 for details.


| Models listed in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "-" models.) |                   |                  |  | Frame size        | Rib | page |
|--------------------------------|---|-------------------|------------------|--|-------------------|-----|------|
|                                | Without sensor  | With pulse sensor | With lock sensor | With PWM control function and pulse sensor |                   |     |      |
|                                | 9G0924S201  | 9G0924S202        | 9G0924S201       | 9G0924S2D01                                |                   |     |      |
| 9G0924S2011                    | 9G0924S2021   | 9G0924S2011       | 9G0924S2D011     | —  | 92 × 92 × 32 mm   | No  | 150  |
| 9G0948A201                     | 9G0948A202  | 9G0948A201        | 9G0948A2D01      | —  | 92 × 92 × 32 mm   | Yes | 150  |
| 9G0948A2011                    | 9G0948A2021   | 9G0948A2011       | 9G0948A2D011     | —  | 92 × 92 × 32 mm   | No  | 150  |
| 9G0948G101                     | 9G0948G102  | 9G0948G101        | 9G0948G1D01      | —  | 92 × 92 × 38 mm   | Yes | 162  |
| 9G0948G1011                    | 9G0948G1021   | 9G0948G1011       | —                | —  | 92 × 92 × 38 mm   | No  | 162  |
| 9G0948H101                     | 9G0948H102  | 9G0948H101        | 9G0948H1D01      | —  | 92 × 92 × 38 mm   | Yes | 162  |
| 9G0948H1011                    | —   | 9G0948H1011       | —                | —  | 92 × 92 × 38 mm   | No  | 162  |
| 9G0948H201                     | 9G0948H202  | 9G0948H201        | 9G0948H2D01      | —  | 92 × 92 × 32 mm   | Yes | 150  |
| 9G0948H2011                    | 9G0948H2021   | 9G0948H2011       | 9G0948H2D011     | —  | 92 × 92 × 32 mm   | No  | 150  |
| 9G0948J101                     | —   | 9G0948J101        | —                | —  | 92 × 92 × 38 mm   | Yes | 162  |
| 9G0948J1011                    | —   | 9G0948J1011       | —                | 9G0948P1J031                               | 92 × 92 × 38 mm   | No  | 162  |
| 9G0948M201                     | 9G0948M202  | 9G0948M201        | 9G0948M2D01      | —  | 92 × 92 × 32 mm   | Yes | 150  |
| 9G0948M2011                    | 9G0948M2021   | 9G0948M2011       | 9G0948M2D011     | —  | 92 × 92 × 32 mm   | No  | 150  |
| 9G0948S201                     | 9G0948S202  | 9G0948S201        | 9G0948S2D01      | —  | 92 × 92 × 32 mm   | Yes | 150  |
| 9G0948S2011                    | 9G0948S2021   | 9G0948S2011       | 9G0948S2D011     | —  | 92 × 92 × 32 mm   | No  | 150  |
| 9G1212A401                     | 9G1212A402  | 9G1212A401        | 9G1212A4D01      | —  | 120 × 120 × 25 mm | Yes | 172  |
| 9G1212A4011                    | 9G1212A4021   | 9G1212A4011       | 9G1212A4D011     | —  | 120 × 120 × 25 mm | No  | 172  |
| 9G1212B401                     | —   | 9G1212B401        | —                | —  | 120 × 120 × 25 mm | Yes | 172  |
| 9G1212B4011                    | —   | 9G1212B4011       | —                | —  | 120 × 120 × 25 mm | No  | 172  |
| 9G1212E101                     | 9G1212E102  | 9G1212E101        | 9G1212E1D01      | —  | 120 × 120 × 38 mm | Yes | 186  |
| 9G1212E1011                    | 9G1212E1021   | 9G1212E1011       | 9G1212E1D011     | —  | 120 × 120 × 38 mm | No  | 186  |
| 9G1212E401                     | 9G1212E402  | 9G1212E401        | 9G1212E4D01      | 9G1212P4E05                                | 120 × 120 × 25 mm | Yes | 172  |
| 9G1212E4011                    | 9G1212E4021   | 9G1212E4011       | 9G1212E4D011     | 9G1212P4E041                               | 120 × 120 × 25 mm | No  | 172  |
| 9G1212F101                     | 9G1212F102  | 9G1212F101        | 9G1212F1D01      | —  | 120 × 120 × 38 mm | Yes | 186  |
| 9G1212F1011                    | 9G1212F1021   | 9G1212F1011       | —                | —  | 120 × 120 × 38 mm | No  | 186  |
| 9G1212F401                     | 9G1212F402  | 9G1212F401        | 9G1212F4D01      | —  | 120 × 120 × 25 mm | Yes | 172  |
| 9G1212F4011                    | 9G1212F4021   | 9G1212F4011       | 9G1212F4D011     | —  | 120 × 120 × 25 mm | No  | 172  |
| 9G1212G101                     | 9G1212G102  | 9G1212G101        | 9G1212G1D01      | 9G1212P1G04                                | 120 × 120 × 38 mm | Yes | 186  |
| 9G1212G1011                    | 9G1212G1021   | 9G1212G1011       | 9G1212G1D011     | 9G1212P1G081                               | 120 × 120 × 38 mm | No  | 186  |
| 9G1212G401                     | 9G1212G402  | 9G1212G401        | 9G1212G4D01      | 9G1212P4G03                                | 120 × 120 × 25 mm | Yes | 172  |
| 9G1212G4011                    | 9G1212G4021   | 9G1212G4011       | 9G1212G4D011     | 9G1212P4G031                               | 120 × 120 × 25 mm | No  | 172  |
| 9G1212H101                     | 9G1212H102  | 9G1212H101        | 9G1212H1D01      | —  | 120 × 120 × 38 mm | Yes | 186  |
| 9G1212H1011                    | 9G1212H1021   | 9G1212H1011       | 9G1212H1D011     | —  | 120 × 120 × 38 mm | No  | 186  |
| 9G1212H401                     | 9G1212H402  | 9G1212H401        | 9G1212H4D01      | 9G1212P4H04                                | 120 × 120 × 25 mm | Yes | 172  |
| 9G1212H4011                    | 9G1212H4021   | 9G1212H4011       | 9G1212H4D011     | 9G1212P4H091                               | 120 × 120 × 25 mm | No  | 172  |
| 9G1212M101                     | 9G1212M102  | 9G1212M101        | 9G1212M1D01      | —  | 120 × 120 × 38 mm | Yes | 186  |
| 9G1212M1011                    | 9G1212M1021   | 9G1212M1011       | 9G1212M1D011     | —  | 120 × 120 × 38 mm | No  | 186  |
| 9G1212M401                     | 9G1212M402  | 9G1212M401        | 9G1212M4D01      | —  | 120 × 120 × 25 mm | Yes | 172  |
| 9G1212M4011                    | 9G1212M4021   | 9G1212M4011       | 9G1212M4D011     | —  | 120 × 120 × 25 mm | No  | 172  |
| 9G1224A401                     | 9G1224A402  | 9G1224A401        | 9G1224A4D01      | —  | 120 × 120 × 25 mm | Yes | 172  |
| 9G1224A4011                    | 9G1224A4021   | 9G1224A4011       | 9G1224A4D011     | —  | 120 × 120 × 25 mm | No  | 172  |
| 9G1224E101                     | 9G1224E102  | 9G1224E101        | 9G1224E1D01      | —  | 120 × 120 × 38 mm | Yes | 186  |
| 9G1224E1011                    | 9G1224E1021   | 9G1224E1011       | 9G1224E1D011     | —  | 120 × 120 × 38 mm | No  | 186  |
| 9G1224E401                     | 9G1224E402  | 9G1224E401        | 9G1224E4D01      | 9G1224P4E01                                | 120 × 120 × 25 mm | Yes | 172  |
| 9G1224E4011                    | 9G1224E4021   | 9G1224E4011       | 9G1224E4D011     | —  | 120 × 120 × 25 mm | No  | 172  |
| 9G1224F101                     | 9G1224F102  | 9G1224F101        | 9G1224F1D01      | —  | 120 × 120 × 38 mm | Yes | 186  |
| 9G1224F1011                    | 9G1224F1021   | 9G1224F1011       | —                | —  | 120 × 120 × 38 mm | No  | 186  |
| 9G1224F401                     | 9G1224F402  | 9G1224F401        | 9G1224F4D01      | —  | 120 × 120 × 25 mm | Yes | 172  |
| 9G1224F4011                    | 9G1224F4021   | 9G1224F4011       | 9G1224F4D011     | —  | 120 × 120 × 25 mm | No  | 172  |
| 9G1224G101                     | 9G1224G102  | 9G1224G101        | 9G1224G1D01      | 9G1224P1G01                                | 120 × 120 × 38 mm | Yes | 186  |
| 9G1224G1011                    | 9G1224G1021   | 9G1224G1011       | 9G1224G1D011     | —  | 120 × 120 × 38 mm | No  | 186  |
| 9G1224G401                     | 9G1224G402  | 9G1224G401        | 9G1224G4D01      | —  | 120 × 120 × 25 mm | Yes | 172  |
| 9G1224G4011                    | 9G1224G4021   | 9G1224G4011       | 9G1224G4D011     | —  | 120 × 120 × 25 mm | No  | 172  |
| 9G1224H101                     | 9G1224H102  | 9G1224H101        | 9G1224H1D01      | —  | 120 × 120 × 38 mm | Yes | 186  |
| 9G1224H1011                    | 9G1224H1021   | 9G1224H1011       | 9G1224H1D011     | —  | 120 × 120 × 38 mm | No  | 186  |
| 9G1224H401                     | 9G1224H402  | 9G1224H401        | 9G1224H4D01      | —  | 120 × 120 × 25 mm | Yes | 172  |
| 9G1224H4011                    | 9G1224H4021   | 9G1224H4011       | 9G1224H4D011     | —  | 120 × 120 × 25 mm | No  | 172  |
| 9G1224M101                     | 9G1224M102  | 9G1224M101        | 9G1224M1D01      | —  | 120 × 120 × 38 mm | Yes | 186  |
| 9G1224M1011                    | 9G1224M1021   | 9G1224M1011       | 9G1224M1D011     | —  | 120 × 120 × 38 mm | No  | 186  |
| 9G1224M401                     | 9G1224M402  | 9G1224M401        | 9G1224M4D01      | —  | 120 × 120 × 25 mm | Yes | 172  |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The  mark indicates Short Lead Time Service applicable models. See p. 654 for details.

| Models listed<br>in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "-" models.) |                   |                  |   | Frame size        | Rib | page |
|-----------------------------------|---|-------------------|------------------|---|-------------------|-----|------|
|                                   | Without sensor  | With pulse sensor | With lock sensor | With PWM control function<br>and pulse sensor |                   |     |      |
|                                   | 9G1224M4011   | 9G1224M4021       | 9G1224M4011      | 9G1224M4D011                                  |                   |     |      |
| 9G1248A401                        | 9G1248A402  | 9G1248A401        | 9G1248A4D01      | —   | 120 × 120 × 25 mm | Yes | 172  |
| 9G1248A4011                       | 9G1248A4021   | 9G1248A4011       | 9G1248A4D011     | —   | 120 × 120 × 25 mm | No  | 172  |
| 9G1248E101                        | 9G1248E102  | 9G1248E101        | 9G1248E1D01      | —   | 120 × 120 × 38 mm | Yes | 186  |
| 9G1248E1011                       | 9G1248E1021   | 9G1248E1011       | 9G1248E1D011     | —   | 120 × 120 × 38 mm | No  | 186  |
| 9G1248E401                        | 9G1248E402  | 9G1248E401        | 9G1248E4D01      | 9G1248P4E05                                   | 120 × 120 × 25 mm | Yes | 172  |
| 9G1248E4011                       | 9G1248E4021   | 9G1248E4011       | 9G1248E4D011     | —   | 120 × 120 × 25 mm | No  | 172  |
| 9G1248F101                        | 9G1248F102  | 9G1248F101        | 9G1248F1D01      | —   | 120 × 120 × 38 mm | Yes | 186  |
| 9G1248F1011                       | 9G1248F1021   | 9G1248F1011       | —                | —   | 120 × 120 × 38 mm | No  | 186  |
| 9G1248F401                        | 9G1248F402  | 9G1248F401        | 9G1248F4D01      | —   | 120 × 120 × 25 mm | Yes | 172  |
| 9G1248F4011                       | 9G1248F4021   | 9G1248F4011       | 9G1248F4D011     | —   | 120 × 120 × 25 mm | No  | 172  |
| 9G1248G101                        | 9G1248G102  | 9G1248G101        | 9G1248G1D01      | 9G1248P1G04                                   | 120 × 120 × 38 mm | Yes | 186  |
| 9G1248G1011                       | 9G1248G1021   | 9G1248G1011       | 9G1248G1D011     | 9G1248P1G041                                  | 120 × 120 × 38 mm | No  | 186  |
| 9G1248G401                        | 9G1248G402  | 9G1248G401        | 9G1248G4D01      | 9G1248P4G04                                   | 120 × 120 × 25 mm | Yes | 172  |
| 9G1248G4011                       | 9G1248G4021   | 9G1248G4011       | 9G1248G4D011     | —   | 120 × 120 × 25 mm | No  | 172  |
| 9G1248H101                        | 9G1248H102  | 9G1248H101        | 9G1248H1D01      | —   | 120 × 120 × 38 mm | Yes | 186  |
| 9G1248H1011                       | 9G1248H1021   | 9G1248H1011       | 9G1248H1D011     | —   | 120 × 120 × 38 mm | No  | 186  |
| 9G1248H401                        | 9G1248H402  | 9G1248H401        | 9G1248H4D01      | —   | 120 × 120 × 25 mm | Yes | 172  |
| 9G1248H4011                       | 9G1248H4021   | 9G1248H4011       | 9G1248H4D011     | —   | 120 × 120 × 25 mm | No  | 172  |
| 9G1248M101                        | 9G1248M102  | 9G1248M101        | 9G1248M1D01      | —   | 120 × 120 × 38 mm | Yes | 186  |
| 9G1248M1011                       | 9G1248M1021   | 9G1248M1011       | 9G1248M1D011     | —   | 120 × 120 × 38 mm | No  | 186  |
| 9G1248M401                        | 9G1248M402  | 9G1248M401        | 9G1248M4D01      | —   | 120 × 120 × 25 mm | Yes | 172  |
| 9G1248M4011                       | 9G1248M4021   | 9G1248M4011       | 9G1248M4D011     | —   | 120 × 120 × 25 mm | No  | 172  |
| 9GA0312P3G001                     | —   | 9GA0312G3001      | 9GA0312G3D001    | 9GA0312P3G001                                 | 38 × 38 × 28 mm   | Yes | 18   |
| 9GA0312P3G0011                    | —   | —                 | —                | 9GA0312P3G0011                                | 38 × 38 × 28 mm   | No  | 18   |
| 9GA0312P3J001                     | —   | 9GA0312J3001      | —                | 9GA0312P3J001                                 | 38 × 38 × 28 mm   | Yes | 18   |
| 9GA0312P3J0011                    | —   | —                 | —                | 9GA0312P3J0011                                | 38 × 38 × 28 mm   | No  | 18   |
| 9GA0312P3K001                     | —   | 9GA0312K3001      | 9GA0312K3D001    | 9GA0312P3K001                                 | 38 × 38 × 28 mm   | Yes | 18   |
| 9GA0312P3K0011                    | —   | —                 | 9GA0312K3D0011   | 9GA0312P3K0011                                | 38 × 38 × 28 mm   | No  | 18   |
| 9GA0405P6F001                     | 9GA0405F6002  | 9GA0405F6001      | —                | 9GA0405P6F001                                 | 40 × 40 × 20 mm   | Yes | 30   |
| 9GA0405P6H001                     | 9GA0405H6002  | 9GA0405H6001      | —                | 9GA0405P6H001                                 | 40 × 40 × 20 mm   | Yes | 30   |
| 9GA0412G7001                      | 9GA0412G7002  | 9GA0412G7001      | 9GA0412G7D001    | 9GA0412P7G001                                 | 40 × 40 × 15 mm   | Yes | 25   |
| 9GA0412H7001                      | 9GA0412H7002  | 9GA0412H7001      | 9GA0412H7D001    | —   | 40 × 40 × 15 mm   | Yes | 25   |
| 9GA0412P3G01                      | 9GA0412G302   | 9GA0412G301       | —                | 9GA0412P3G01                                  | 40 × 40 × 28 mm   | Yes | 44   |
| 9GA0412P3G011                     | 9GA0412G3021  | 9GA0412G3011      | —                | 9GA0412P3G011                                 | 40 × 40 × 28 mm   | No  | 44   |
| 9GA0412P3H01                      | 9GA0412H302   | 9GA0412H301       | 9GA0412H3D01     | 9GA0412P3H01                                  | 40 × 40 × 28 mm   | Yes | 44   |
| 9GA0412P3H011                     | 9GA0412H3021  | 9GA0412H3011      | 9GA0412H3D011    | 9GA0412P3H011                                 | 40 × 40 × 28 mm   | No  | 44   |
| 9GA0412P3J01                      | 9GA0412J302   | 9GA0412J301       | 9GA0412J3D01     | 9GA0412P3J01                                  | 40 × 40 × 28 mm   | Yes | 44   |
| 9GA0412P3J011                     | 9GA0412J3021  | 9GA0412J3011      | —                | 9GA0412P3J011                                 | 40 × 40 × 28 mm   | No  | 44   |
| 9GA0412P3K01                      | 9GA0412K302   | 9GA0412K301       | 9GA0412K3D01     | 9GA0412P3K01                                  | 40 × 40 × 28 mm   | Yes | 44   |
| 9GA0412P3K011                     | 9GA0412K3021  | 9GA0412K3011      | —                | 9GA0412P3K011                                 | 40 × 40 × 28 mm   | No  | 44   |
| 9GA0412P3M01                      | 9GA0412M302   | 9GA0412M301       | 9GA0412M3D01     | 9GA0412P3M01                                  | 40 × 40 × 28 mm   | Yes | 44   |
| 9GA0412P3M011                     | 9GA0412M3021  | 9GA0412M3011      | —                | 9GA0412P3M011                                 | 40 × 40 × 28 mm   | No  | 44   |
| 9GA0412P6F001                     | 9GA0412F6002  | 9GA0412F6001      | —                | 9GA0412P6F001                                 | 40 × 40 × 20 mm   | Yes | 30   |
| 9GA0412P6G001                     | 9GA0412G6002  | 9GA0412G6001      | —                | 9GA0412P6G001                                 | 40 × 40 × 20 mm   | Yes | 30   |
| 9GA0412P6H001                     | 9GA0412H6002  | 9GA0412H6001      | —                | 9GA0412P6H001                                 | 40 × 40 × 20 mm   | Yes | 30   |
| 9GA0412P7G001                     | 9GA0412G7002  | 9GA0412G7001      | 9GA0412G7D001    | 9GA0412P7G001                                 | 40 × 40 × 15 mm   | Yes | 25   |
| 9GA0424P3G001                     | 9GA0424G3002  | 9GA0424G3001      | 9GA0424G3D001    | 9GA0424P3G001                                 | 40 × 40 × 28 mm   | Yes | 44   |
| 9GA0424P3G0011                    | 9GA0424G30021   | 9GA0424G30011     | —                | 9GA0424P3G0011                                | 40 × 40 × 28 mm   | No  | 44   |
| 9GA0424P3H001                     | 9GA0424H3002  | 9GA0424H3001      | 9GA0424H3D001    | 9GA0424P3H001                                 | 40 × 40 × 28 mm   | Yes | 44   |
| 9GA0424P3H0011                    | 9GA0424H30021   | 9GA0424H30011     | —                | 9GA0424P3H0011                                | 40 × 40 × 28 mm   | No  | 44   |
| 9GA0424P3J001                     | 9GA0424J3002  | 9GA0424J3001      | 9GA0424J3D001    | 9GA0424P3J001                                 | 40 × 40 × 28 mm   | Yes | 44   |
| 9GA0424P3J0011                    | 9GA0424J30021   | 9GA0424J30011     | —                | 9GA0424P3J0011                                | 40 × 40 × 28 mm   | No  | 44   |
| 9GA0424P3M001                     | 9GA0424M3002  | 9GA0424M3001      | —                | 9GA0424P3M001                                 | 40 × 40 × 28 mm   | Yes | 44   |
| 9GA0424P3M0011                    | 9GA0424M30021   | 9GA0424M30011     | 9GA0424M3D001    | 9GA0424P3M0011                                | 40 × 40 × 28 mm   | No  | 44   |
| 9GA0424P6F001                     | 9GA0424F6002  | 9GA0424F6001      | 9GA0424F6D001    | 9GA0424P6F001                                 | 40 × 40 × 20 mm   | Yes | 30   |
| 9GA0424P6G001                     | 9GA0424G6002  | 9GA0424G6001      | 9GA0424G6D001    | 9GA0424P6G001                                 | 40 × 40 × 20 mm   | Yes | 30   |
| 9GA0424P6H001                     | 9GA0424H6002  | 9GA0424H6001      | 9GA0424H6D001    | 9GA0424P6H001                                 | 40 × 40 × 20 mm   | Yes | 30   |
| 9GA0512P7A001                     | 9GA0512A7002  | 9GA0512A7001      | —                | 9GA0512P7A001                                 | 52 × 52 × 15 mm   | Yes | 56   |
| 9GA0512P7G001                     | 9GA0512G7002  | 9GA0512G7001      | —                | 9GA0512P7G001                                 | 52 × 52 × 15 mm   | Yes | 56   |
| 9GA0512P7H001                     | 9GA0512H7002  | 9GA0512H7001      | 9GA0512H7D001    | 9GA0512P7H001                                 | 52 × 52 × 15 mm   | Yes | 56   |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The  mark indicates Short Lead Time Service applicable models. See p. 654 for details.



| Models listed in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "–" models.) |                   |                  |  | Frame size      | Rib | page |
|--------------------------------|---|-------------------|------------------|--|-----------------|-----|------|
|                                | Without sensor  | With pulse sensor | With lock sensor | With PWM control function and pulse sensor |                 |     |      |
|                                | 9GA0512P7M001   | 9GA0512M7002      | 9GA0512M7001     | –  |                 |     |      |
| 9GA0524P7A001                  | 9GA0524A7002  | 9GA0524A7001      | 9GA0524A7D001    | ☛ 9GA0524P7A001                            | 52 × 52 × 15 mm | Yes | 56   |
| 9GA0524P7G001                  | 9GA0524G7002  | 9GA0524G7001      | 9GA0524G7D001    | ☛ 9GA0524P7G001                            | 52 × 52 × 15 mm | Yes | 56   |
| 9GA0524P7H001                  | 9GA0524H7002  | 9GA0524H7001      | –                | ☛ 9GA0524P7H001                            | 52 × 52 × 15 mm | Yes | 56   |
| 9GA0524P7M001                  | 9GA0524M7002  | 9GA0524M7001      | –                | ☛ 9GA0524P7M001                            | 52 × 52 × 15 mm | Yes | 56   |
| 9GA0612G701                    | ☛ 9GA0612G702   | ☛ 9GA0612G701     | 9GA0612G7D01     | ☛ 9GA0612P7G01                             | 60 × 60 × 15 mm | Yes | 64   |
| 9GA0612G9001                   | 9GA0612G9002  | ☛ 9GA0612G9001    | 9GA0612G9D001    | 9GA0612P9G001                              | 60 × 60 × 10 mm | Yes | 62   |
| 9GA0612H6001                   | 9GA0612H6002  | ☛ 9GA0612H6001    | 9GA0612H6D001    | –  | 60 × 60 × 20 mm | Yes | 67   |
| 9GA0612H701                    | ☛ 9GA0612H702   | ☛ 9GA0612H701     | 9GA0612H7D01     | ☛ 9GA0612P7H01                             | 60 × 60 × 15 mm | Yes | 64   |
| 9GA0612H9001                   | 9GA0612H9002  | ☛ 9GA0612H9001    | 9GA0612H9D001    | –  | 60 × 60 × 10 mm | Yes | 62   |
| 9GA0612L701                    | ☛ 9GA0612L702   | ☛ 9GA0612L701     | 9GA0612L7D01     | –  | 60 × 60 × 15 mm | Yes | 64   |
| 9GA0612L9001                   | 9GA0612L9002  | ☛ 9GA0612L9001    | 9GA0612L9D001    | –  | 60 × 60 × 10 mm | Yes | 62   |
| 9GA0612M6001                   | ☛ 9GA0612M6002  | ☛ 9GA0612M6001    | 9GA0612M6D001    | –  | 60 × 60 × 20 mm | Yes | 67   |
| 9GA0612M701                    | ☛ 9GA0612M702   | ☛ 9GA0612M701     | –                | –  | 60 × 60 × 15 mm | Yes | 64   |
| 9GA0612P1H03                   | 9GA0612H102   | 9GA0612H101       | –                | ☛ 9GA0612P1H03                             | 60 × 60 × 38 mm | Yes | 85   |
| 9GA0612P1H031                  | 9GA0612H1021  | 9GA0612H1011      | –                | 9GA0612P1H031                              | 60 × 60 × 38 mm | No  | 85   |
| 9GA0612P1J03                   | 9GA0612J102   | 9GA0612J101       | 9GA0612J1D01     | ☛ 9GA0612P1J03                             | 60 × 60 × 38 mm | Yes | 85   |
| 9GA0612P1J031                  | 9GA0612J1021  | 9GA0612J1011      | –                | 9GA0612P1J031                              | 60 × 60 × 38 mm | No  | 85   |
| 9GA0612P1K03                   | 9GA0612K102   | 9GA0612K101       | 9GA0612K1D01     | ☛ 9GA0612P1K03                             | 60 × 60 × 38 mm | Yes | 85   |
| 9GA0612P1K031                  | 9GA0612K1021  | 9GA0612K1011      | 9GA0612K1D011    | ☛ 9GA0612P1K031                            | 60 × 60 × 38 mm | No  | 85   |
| 9GA0612P1K60                   | –   | –                 | –                | ☛ 9GA0612P1K60                             | 60 × 60 × 38 mm | Yes | 85   |
| 9GA0612P1K601                  | –   | –                 | –                | ☛ 9GA0612P1K601                            | 60 × 60 × 38 mm | No  | 85   |
| 9GA0612P6G001                  | 9GA0612G6002  | 9GA0612G6001      | –                | ☛ 9GA0612P6G001                            | 60 × 60 × 20 mm | Yes | 67   |
| 9GA0612P6S001                  | 9GA0612S6002  | 9GA0612S6001      | –                | ☛ 9GA0612P6S001                            | 60 × 60 × 20 mm | Yes | 67   |
| 9GA0612P7G01                   | ☛ 9GA0612G702   | ☛ 9GA0612G701     | 9GA0612G7D01     | ☛ 9GA0612P7G01                             | 60 × 60 × 15 mm | Yes | 64   |
| 9GA0612P7H01                   | ☛ 9GA0612H702   | ☛ 9GA0612H701     | 9GA0612H7D01     | ☛ 9GA0612P7H01                             | 60 × 60 × 15 mm | Yes | 64   |
| 9GA0624H6001                   | ☛ 9GA0624H6002  | ☛ 9GA0624H6001    | ☛ 9GA0624H6D001  | –  | 60 × 60 × 20 mm | Yes | 67   |
| 9GA0624M6001                   | ☛ 9GA0624M6002  | ☛ 9GA0624M6001    | 9GA0624M6D001    | –  | 60 × 60 × 20 mm | Yes | 67   |
| 9GA0624M701                    | 9GA0624M702   | 9GA0624M701       | –                | –  | 60 × 60 × 15 mm | Yes | 64   |
| 9GA0624P1J03                   | 9GA0624J102   | 9GA0624J101       | –                | ☛ 9GA0624P1J03                             | 60 × 60 × 38 mm | Yes | 85   |
| 9GA0624P1J031                  | 9GA0624J1021  | 9GA0624J1011      | –                | ☛ 9GA0624P1J031                            | 60 × 60 × 38 mm | No  | 85   |
| 9GA0624P1K03                   | 9GA0624K102   | –                 | 9GA0624K1D01     | 9GA0624P1K03                               | 60 × 60 × 38 mm | Yes | 85   |
| 9GA0624P1K031                  | –   | –                 | –                | 9GA0624P1K031                              | 60 × 60 × 38 mm | No  | 85   |
| 9GA0624P6G001                  | 9GA0624G6002  | 9GA0624G6001      | 9GA0624G6D001    | ☛ 9GA0624P6G001                            | 60 × 60 × 20 mm | Yes | 67   |
| 9GA0624P6S001                  | 9GA0624S6002  | 9GA0624S6001      | –                | ☛ 9GA0624P6S001                            | 60 × 60 × 20 mm | Yes | 67   |
| 9GA0624P7G01                   | 9GA0624G702   | –                 | –                | ☛ 9GA0624P7G01                             | 60 × 60 × 15 mm | Yes | 64   |
| 9GA0712P1G001                  | –   | –                 | –                | ☛ 9GA0712P1G001                            | 70 × 70 × 38 mm | Yes | 91   |
| 9GA0712P1G0011                 | –   | –                 | –                | 9GA0712P1G0011                             | 70 × 70 × 38 mm | No  | 91   |
| 9GA0712P1H001                  | –   | –                 | 9GA0712H1D001    | ☛ 9GA0712P1H001                            | 70 × 70 × 38 mm | Yes | 91   |
| 9GA0712P1H0011                 | –   | –                 | –                | 9GA0712P1H0011                             | 70 × 70 × 38 mm | No  | 91   |
| 9GA0812A2001                   | ☛ 9GA0812A2002  | ☛ 9GA0812A2001    | ☛ 9GA0812A2D001  | –  | 80 × 80 × 32 mm | Yes | 117  |
| 9GA0812A20011                  | ☛ 9GA0812A20021   | ☛ 9GA0812A20011   | ☛ 9GA0812A2D0011 | –  | 80 × 80 × 32 mm | No  | 117  |
| 9GA0812B2001                   | ☛ 9GA0812B2002  | ☛ 9GA0812B2001    | ☛ 9GA0812B2D001  | –  | 80 × 80 × 32 mm | Yes | 117  |
| 9GA0812B20011                  | ☛ 9GA0812B20021   | ☛ 9GA0812B20011   | ☛ 9GA0812B2D0011 | –  | 80 × 80 × 32 mm | No  | 117  |
| 9GA0812H7001                   | 9GA0812H7002  | ☛ 9GA0812H7001    | 9GA0812H7D001    | –  | 80 × 80 × 15 mm | Yes | 93   |
| 9GA0812L2001                   | ☛ 9GA0812L2002  | ☛ 9GA0812L2001    | ☛ 9GA0812L2D001  | –  | 80 × 80 × 32 mm | Yes | 117  |
| 9GA0812L20011                  | ☛ 9GA0812L20021   | ☛ 9GA0812L20011   | ☛ 9GA0812L2D0011 | –  | 80 × 80 × 32 mm | No  | 117  |
| 9GA0812P1G61                   | –   | –                 | –                | ☛ 9GA0812P1G61                             | 80 × 80 × 38 mm | Yes | 128  |
| 9GA0812P1G611                  | –   | –                 | –                | ☛ 9GA0812P1G611                            | 80 × 80 × 38 mm | No  | 128  |
| 9GA0812P1H61                   | 9GA0812H162   | 9GA0812H161       | 9GA0812H1D61     | ☛ 9GA0812P1H61                             | 80 × 80 × 38 mm | Yes | 128  |
| 9GA0812P1H611                  | 9GA0812H1621  | 9GA0812H1611      | –                | ☛ 9GA0812P1H611                            | 80 × 80 × 38 mm | No  | 128  |
| 9GA0812P1S61                   | 9GA0812S162   | 9GA0812S161       | 9GA0812S1D61     | ☛ 9GA0812P1S61                             | 80 × 80 × 38 mm | Yes | 128  |
| 9GA0812P1S611                  | 9GA0812S1621  | 9GA0812S1611      | –                | ☛ 9GA0812P1S611                            | 80 × 80 × 38 mm | No  | 128  |
| 9GA0812P2H001                  | –   | –                 | –                | ☛ 9GA0812P2H001                            | 80 × 80 × 32 mm | Yes | 117  |
| 9GA0812P2H0011                 | –   | –                 | –                | ☛ 9GA0812P2H0011                           | 80 × 80 × 32 mm | No  | 117  |
| 9GA0812P2M001                  | –   | –                 | –                | ☛ 9GA0812P2M001                            | 80 × 80 × 32 mm | Yes | 117  |
| 9GA0812P2M0011                 | –   | –                 | –                | ☛ 9GA0812P2M0011                           | 80 × 80 × 32 mm | No  | 117  |
| 9GA0812P2S001                  | –   | ☛ 9GA0812S2001    | –                | ☛ 9GA0812P2S001                            | 80 × 80 × 32 mm | Yes | 117  |
| 9GA0812P2S0011                 | –   | –                 | –                | ☛ 9GA0812P2S0011                           | 80 × 80 × 32 mm | No  | 117  |
| 9GA0812P4G001                  | 9GA0812G4002  | 9GA0812G4001      | 9GA0812G4D001    | ☛ 9GA0812P4G001                            | 80 × 80 × 25 mm | Yes | 104  |
| 9GA0812P4G0011                 | 9GA0812G40021   | 9GA0812G40011     | –                | ☛ 9GA0812P4G0011                           | 80 × 80 × 25 mm | No  | 104  |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The ☛ mark indicates Short Lead Time Service applicable models. See p. 654 for details.


| Models listed in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "-" models.) |                   |                  |  | Frame size      | Rib | page |
|--------------------------------|---|-------------------|------------------|--|-----------------|-----|------|
|                                | Without sensor  | With pulse sensor | With lock sensor | With PWM control function and pulse sensor |                 |     |      |
|                                | 9GA0812P4H001   | 9GA0812H4002      | 9GA0812H4001     | 9GA0812H4D001                              |                 |     |      |
| 9GA0812P4H0011                 | 9GA0812H40021   | 9GA0812H40011     | —                | ☛ 9GA0812P4H0011                           | 80 × 80 × 25 mm | No  | 104  |
| 9GA0812P4J001                  | 9GA0812J4002  | 9GA0812J4001      | 9GA0812J4D001    | ☛ 9GA0812P4J001                            | 80 × 80 × 25 mm | Yes | 104  |
| 9GA0812P4J0011                 | 9GA0812J40021   | 9GA0812J40011     | —                | ☛ 9GA0812P4J0011                           | 80 × 80 × 25 mm | No  | 104  |
| 9GA0812P6G001                  | 9GA0812G6002  | 9GA0812G6001      | —                | ☛ 9GA0812P6G001                            | 80 × 80 × 20 mm | Yes | 98   |
| 9GA0812P6M001                  | 9GA0812M6002  | 9GA0812M6001      | —                | ☛ 9GA0812P6M001                            | 80 × 80 × 20 mm | Yes | 98   |
| 9GA0812P7G001                  | 9GA0812G7002  | 9GA0812G7001      | 9GA0812G7D001    | ☛ 9GA0812P7G001                            | 80 × 80 × 15 mm | Yes | 93   |
| 9GA0812P7S001                  | —   | —                 | —                | ☛ 9GA0812P7S001                            | 80 × 80 × 15 mm | Yes | 93   |
| 9GA0824A2001                   | ☛ 9GA0824A2002  | ☛ 9GA0824A2001    | ☛ 9GA0824A2D001  | —  | 80 × 80 × 32 mm | Yes | 117  |
| 9GA0824A20011                  | ☛ 9GA0824A20021   | ☛ 9GA0824A20011   | 9GA0824A2D0011   | —  | 80 × 80 × 32 mm | No  | 117  |
| 9GA0824B2001                   | ☛ 9GA0824B2002  | ☛ 9GA0824B2001    | ☛ 9GA0824B2D001  | —  | 80 × 80 × 32 mm | Yes | 117  |
| 9GA0824B20011                  | ☛ 9GA0824B20021   | ☛ 9GA0824B20011   | ☛ 9GA0824B2D0011 | —  | 80 × 80 × 32 mm | No  | 117  |
| 9GA0824H7001                   | 9GA0824H7002  | ☛ 9GA0824H7001    | 9GA0824H7D001    | —  | 80 × 80 × 15 mm | Yes | 93   |
| 9GA0824L2001                   | ☛ 9GA0824L2002  | ☛ 9GA0824L2001    | ☛ 9GA0824L2D001  | —  | 80 × 80 × 32 mm | Yes | 117  |
| 9GA0824L20011                  | ☛ 9GA0824L20021   | ☛ 9GA0824L20011   | ☛ 9GA0824L2D0011 | —  | 80 × 80 × 32 mm | No  | 117  |
| 9GA0824P1H61                   | 9GA0824H162   | 9GA0824H161       | 9GA0824H1D61     | ☛ 9GA0824P1H61                             | 80 × 80 × 38 mm | Yes | 128  |
| 9GA0824P1H611                  | 9GA0824H1621  | 9GA0824H1611      | —                | ☛ 9GA0824P1H611                            | 80 × 80 × 38 mm | No  | 128  |
| 9GA0824P1S61                   | 9GA0824S162   | 9GA0824S161       | —                | ☛ 9GA0824P1S61                             | 80 × 80 × 38 mm | Yes | 128  |
| 9GA0824P1S611                  | 9GA0824S1621  | 9GA0824S1611      | —                | ☛ 9GA0824P1S611                            | 80 × 80 × 38 mm | No  | 128  |
| 9GA0824P2S001                  | 9GA0824S2002  | —                 | —                | ☛ 9GA0824P2S001                            | 80 × 80 × 32 mm | Yes | 117  |
| 9GA0824P2S0011                 | —   | —                 | —                | ☛ 9GA0824P2S0011                           | 80 × 80 × 32 mm | No  | 117  |
| 9GA0824P4G001                  | 9GA0824G4002  | 9GA0824G4001      | 9GA0824G4D001    | ☛ 9GA0824P4G001                            | 80 × 80 × 25 mm | Yes | 104  |
| 9GA0824P4G0011                 | 9GA0824G40021   | 9GA0824G40011     | —                | 9GA0824P4G0011                             | 80 × 80 × 25 mm | No  | 104  |
| 9GA0824P4H001                  | 9GA0824H4002  | 9GA0824H4001      | 9GA0824H4D001    | ☛ 9GA0824P4H001                            | 80 × 80 × 25 mm | Yes | 104  |
| 9GA0824P4H0011                 | 9GA0824H40021   | 9GA0824H40011     | —                | 9GA0824P4H0011                             | 80 × 80 × 25 mm | No  | 104  |
| 9GA0824P4J001                  | 9GA0824J4002  | 9GA0824J4001      | 9GA0824J4D001    | ☛ 9GA0824P4J001                            | 80 × 80 × 25 mm | Yes | 104  |
| 9GA0824P4J0011                 | 9GA0824J40021   | 9GA0824J40011     | 9GA0824J4D0011   | ☛ 9GA0824P4J0011                           | 80 × 80 × 25 mm | No  | 104  |
| 9GA0824P6G001                  | 9GA0824G6002  | 9GA0824G6001      | —                | ☛ 9GA0824P6G001                            | 80 × 80 × 20 mm | Yes | 98   |
| 9GA0824P6M001                  | 9GA0824M6002  | 9GA0824M6001      | —                | ☛ 9GA0824P6M001                            | 80 × 80 × 20 mm | Yes | 98   |
| 9GA0824P7G001                  | 9GA0824G7002  | —                 | 9GA0824G7D001    | ☛ 9GA0824P7G001                            | 80 × 80 × 15 mm | Yes | 93   |
| 9GA0824P7S001                  | 9GA0824S7002  | —                 | —                | ☛ 9GA0824P7S001                            | 80 × 80 × 15 mm | Yes | 93   |
| 9GA0848P1S61                   | —   | —                 | —                | 9GA0848P1S61                               | 80 × 80 × 38 mm | Yes | 128  |
| 9GA0848P1S611                  | —   | —                 | —                | 9GA0848P1S611                              | 80 × 80 × 38 mm | No  | 128  |
| 9GA0848P2S001                  | —   | —                 | —                | 9GA0848P2S001                              | 80 × 80 × 32 mm | Yes | 117  |
| 9GA0848P2S0011                 | —   | —                 | —                | 9GA0848P2S0011                             | 80 × 80 × 32 mm | No  | 117  |
| 9GA0912F401                    | ☛ 9GA0912F402   | ☛ 9GA0912F401     | ☛ 9GA0912F4D01   | —  | 92 × 92 × 25 mm | Yes | 140  |
| 9GA0912F4011                   | ☛ 9GA0912F4021  | ☛ 9GA0912F4011    | ☛ 9GA0912F4D011  | —  | 92 × 92 × 25 mm | No  | 140  |
| 9GA0912H401                    | ☛ 9GA0912H402   | ☛ 9GA0912H401     | ☛ 9GA0912H4D01   | —  | 92 × 92 × 25 mm | Yes | 140  |
| 9GA0912H4011                   | ☛ 9GA0912H4021  | ☛ 9GA0912H4011    | ☛ 9GA0912H4D011  | —  | 92 × 92 × 25 mm | No  | 140  |
| 9GA0912L401                    | ☛ 9GA0912L402   | ☛ 9GA0912L401     | ☛ 9GA0912L4D01   | —  | 92 × 92 × 25 mm | Yes | 140  |
| 9GA0912L4011                   | ☛ 9GA0912L4021  | ☛ 9GA0912L4011    | ☛ 9GA0912L4D011  | —  | 92 × 92 × 25 mm | No  | 140  |
| 9GA0912M401                    | ☛ 9GA0912M402   | ☛ 9GA0912M401     | ☛ 9GA0912M4D01   | —  | 92 × 92 × 25 mm | Yes | 140  |
| 9GA0912M4011                   | ☛ 9GA0912M4021  | ☛ 9GA0912M4011    | ☛ 9GA0912M4D011  | —  | 92 × 92 × 25 mm | No  | 140  |
| 9GA0912P1H03                   | 9GA0912H102   | 9GA0912H101       | 9GA0912H1D01     | ☛ 9GA0912P1H03                             | 92 × 92 × 38 mm | Yes | 156  |
| 9GA0912P1H031                  | 9GA0912H1021  | 9GA0912H1011      | —                | ☛ 9GA0912P1H031                            | 92 × 92 × 38 mm | No  | 156  |
| 9GA0912P4G03                   | 9GA0912G402   | 9GA0912G401       | 9GA0912G4D01     | ☛ 9GA0912P4G03                             | 92 × 92 × 25 mm | Yes | 140  |
| 9GA0912P4G031                  | 9GA0912G4021  | 9GA0912G4011      | —                | ☛ 9GA0912P4G031                            | 92 × 92 × 25 mm | No  | 140  |
| 9GA0912P4J03                   | ☛ 9GA0912J402   | ☛ 9GA0912J401     | ☛ 9GA0912J4D01   | ☛ 9GA0912P4J03                             | 92 × 92 × 25 mm | Yes | 140  |
| 9GA0912P4J031                  | ☛ 9GA0912J4021  | ☛ 9GA0912J4011    | ☛ 9GA0912J4D011  | ☛ 9GA0912P4J031                            | 92 × 92 × 25 mm | No  | 140  |
| 9GA0912P4S03                   | ☛ 9GA0912S402   | ☛ 9GA0912S401     | ☛ 9GA0912S4D01   | ☛ 9GA0912P4S03                             | 92 × 92 × 25 mm | Yes | 140  |
| 9GA0912P4S031                  | ☛ 9GA0912S4021  | ☛ 9GA0912S4011    | ☛ 9GA0912S4D011  | ☛ 9GA0912P4S031                            | 92 × 92 × 25 mm | No  | 140  |
| 9GA0912W401                    | ☛ 9GA0912W402   | ☛ 9GA0912W401     | ☛ 9GA0912W4D01   | —  | 92 × 92 × 25 mm | Yes | 140  |
| 9GA0912W4011                   | ☛ 9GA0912W4021  | ☛ 9GA0912W4011    | ☛ 9GA0912W4D011  | —  | 92 × 92 × 25 mm | No  | 140  |
| 9GA0924F401                    | ☛ 9GA0924F402   | ☛ 9GA0924F401     | ☛ 9GA0924F4D01   | —  | 92 × 92 × 25 mm | Yes | 140  |
| 9GA0924F4011                   | ☛ 9GA0924F4021  | ☛ 9GA0924F4011    | ☛ 9GA0924F4D011  | —  | 92 × 92 × 25 mm | No  | 140  |
| 9GA0924H401                    | ☛ 9GA0924H402   | ☛ 9GA0924H401     | ☛ 9GA0924H4D01   | —  | 92 × 92 × 25 mm | Yes | 140  |
| 9GA0924H4011                   | ☛ 9GA0924H4021  | ☛ 9GA0924H4011    | ☛ 9GA0924H4D011  | —  | 92 × 92 × 25 mm | No  | 140  |
| 9GA0924L401                    | ☛ 9GA0924L402   | ☛ 9GA0924L401     | ☛ 9GA0924L4D01   | —  | 92 × 92 × 25 mm | Yes | 140  |
| 9GA0924L4011                   | ☛ 9GA0924L4021  | ☛ 9GA0924L4011    | ☛ 9GA0924L4D011  | —  | 92 × 92 × 25 mm | No  | 140  |
| 9GA0924M401                    | ☛ 9GA0924M402   | ☛ 9GA0924M401     | ☛ 9GA0924M4D01   | —  | 92 × 92 × 25 mm | Yes | 140  |
| 9GA0924M4011                   | ☛ 9GA0924M4021  | ☛ 9GA0924M4011    | ☛ 9GA0924M4D011  | —  | 92 × 92 × 25 mm | No  | 140  |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The ☛ mark indicates Short Lead Time Service applicable models. See p. 654 for details.

| Models listed in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "-" models.) |                   |                  |  | Frame size        | Rib | page |
|--------------------------------|---|-------------------|------------------|--|-------------------|-----|------|
|                                | Without sensor  | With pulse sensor | With lock sensor | With PWM control function and pulse sensor |                   |     |      |
|                                | 9GA0924P1H01  | 9GA0924H102       | 9GA0924H101      | 9GA0924H1D01                               |                   |     |      |
| 9GA0924P1H011                  | —   | 9GA0924H1011      | 9GA0924H1D011    | 9GA0924P1H011                              | 92 × 92 × 38 mm   | No  | 156  |
| 9GA0924P4G03                   | 9GA0924G402   | 9GA0924G401       | 9GA0924G4D01     | 9GA0924P4G03                               | 92 × 92 × 25 mm   | Yes | 140  |
| 9GA0924P4G031                  | 9GA0924G4021  | 9GA0924G4011      | —                | 9GA0924P4G031                              | 92 × 92 × 25 mm   | No  | 140  |
| 9GA0924P4J03                   | 9GA0924J402   | 9GA0924J401       | 9GA0924J4D01     | 9GA0924P4J03                               | 92 × 92 × 25 mm   | Yes | 140  |
| 9GA0924P4J031                  | 9GA0924J4021  | 9GA0924J4011      | —                | 9GA0924P4J031                              | 92 × 92 × 25 mm   | No  | 140  |
| 9GA0924P4S03                   | 9GA0924S402   | 9GA0924S401       | 9GA0924S4D01     | 9GA0924P4S03                               | 92 × 92 × 25 mm   | Yes | 140  |
| 9GA0924P4S031                  | 9GA0924S4021  | 9GA0924S4011      | —                | 9GA0924P4S031                              | 92 × 92 × 25 mm   | No  | 140  |
| 9GA0924W401                    | 9GA0924W402   | 9GA0924W401       | 9GA0924W4D01     | —  | 92 × 92 × 25 mm   | Yes | 140  |
| 9GA0924W4011                   | 9GA0924W4021  | 9GA0924W4011      | 9GA0924W4D011    | —  | 92 × 92 × 25 mm   | No  | 140  |
| 9GA0948P1H03                   | 9GA0948H102   | 9GA0948H101       | —                | 9GA0948P1H03                               | 92 × 92 × 38 mm   | Yes | 156  |
| 9GA0948P1H031                  | —   | —                 | —                | 9GA0948P1H031                              | 92 × 92 × 38 mm   | No  | 156  |
| 9GA1212G4001                   | —   | 9GA1212G4001      | —                | 9GA1212P4G001                              | 120 × 120 × 25 mm | Yes | 165  |
| 9GA1212G40011                  | —   | 9GA1212G40011     | —                | 9GA1212P4G0011                             | 120 × 120 × 25 mm | No  | 165  |
| 9GA1212P4G001                  | —   | 9GA1212G4001      | —                | 9GA1212P4G001                              | 120 × 120 × 25 mm | Yes | 165  |
| 9GA1212P4G0011                 | —   | 9GA1212G40011     | —                | 9GA1212P4G0011                             | 120 × 120 × 25 mm | No  | 165  |
| 9GA1212P4S001                  | —   | 9GA1212S4001      | —                | 9GA1212P4S001                              | 120 × 120 × 25 mm | Yes | 165  |
| 9GA1212P4S0011                 | —   | 9GA1212S40011     | —                | 9GA1212P4S0011                             | 120 × 120 × 25 mm | No  | 165  |
| 9GA1212S4001                   | —   | 9GA1212S4001      | —                | 9GA1212P4S001                              | 120 × 120 × 25 mm | Yes | 165  |
| 9GA1212S40011                  | —   | 9GA1212S40011     | —                | 9GA1212P4S0011                             | 120 × 120 × 25 mm | No  | 165  |
| 9GA1224G4001                   | 9GA1224G4002  | 9GA1224G4001      | 9GA1224G4D001    | 9GA1224P4G001                              | 120 × 120 × 25 mm | Yes | 165  |
| 9GA1224G40011                  | —   | 9GA1224G40011     | —                | 9GA1224P4G0011                             | 120 × 120 × 25 mm | No  | 165  |
| 9GA1224P4G001                  | 9GA1224G4002  | 9GA1224G4001      | 9GA1224G4D001    | 9GA1224P4G001                              | 120 × 120 × 25 mm | Yes | 165  |
| 9GA1224P4G0011                 | —   | 9GA1224G40011     | —                | 9GA1224P4G0011                             | 120 × 120 × 25 mm | No  | 165  |
| 9GA1224P4S001                  | —   | 9GA1224S4001      | 9GA1224S4D001    | 9GA1224P4S001                              | 120 × 120 × 25 mm | Yes | 165  |
| 9GA1224P4S0011                 | —   | 9GA1224S40011     | —                | 9GA1224P4S0011                             | 120 × 120 × 25 mm | No  | 165  |
| 9GA1224S4001                   | 9GA1224S4002  | 9GA1224S4001      | —                | 9GA1224P4S001                              | 120 × 120 × 25 mm | Yes | 165  |
| 9GA1224S40011                  | —   | 9GA1224S40011     | —                | 9GA1224P4S0011                             | 120 × 120 × 25 mm | No  | 165  |
| 9GA1248G4001                   | —   | 9GA1248G4001      | —                | 9GA1248P4G001                              | 120 × 120 × 25 mm | Yes | 165  |
| 9GA1248G40011                  | —   | 9GA1248G40011     | —                | 9GA1248P4G0011                             | 120 × 120 × 25 mm | No  | 165  |
| 9GA1248P4G001                  | —   | 9GA1248G4001      | —                | 9GA1248P4G001                              | 120 × 120 × 25 mm | Yes | 165  |
| 9GA1248P4G0011                 | —   | 9GA1248G40011     | —                | 9GA1248P4G0011                             | 120 × 120 × 25 mm | No  | 165  |
| 9GA1248P4S001                  | —   | 9GA1248S4001      | —                | 9GA1248P4S001                              | 120 × 120 × 25 mm | Yes | 165  |
| 9GA1248P4S0011                 | —   | 9GA1248S40011     | —                | 9GA1248P4S0011                             | 120 × 120 × 25 mm | No  | 165  |
| 9GA1248S4001                   | —   | 9GA1248S4001      | —                | 9GA1248P4S001                              | 120 × 120 × 25 mm | Yes | 165  |
| 9GA1248S40011                  | —   | 9GA1248S40011     | —                | 9GA1248P4S0011                             | 120 × 120 × 25 mm | No  | 165  |
| 9GAX0412P3K001                 | —   | —                 | —                | 9GAX0412P3K001                             | 40 × 40 × 28 mm   | Yes | 39   |
| 9GAX0412P3K0011                | —   | —                 | —                | 9GAX0412P3K0011                            | 40 × 40 × 28 mm   | No  | 39   |
| 9GAX0412P3K003                 | —   | —                 | —                | 9GAX0412P3K003                             | 40 × 40 × 28 mm   | Yes | 39   |
| 9GAX0412P3K0031                | —   | —                 | —                | 9GAX0412P3K0031                            | 40 × 40 × 28 mm   | No  | 39   |
| 9GAX0412P3S001                 | —   | —                 | —                | 9GAX0412P3S001                             | 40 × 40 × 28 mm   | Yes | 39   |
| 9GAX0412P3S0011                | —   | —                 | —                | 9GAX0412P3S0011                            | 40 × 40 × 28 mm   | No  | 39   |
| 9GAX0412P3S003                 | —   | —                 | —                | 9GAX0412P3S003                             | 40 × 40 × 28 mm   | Yes | 39   |
| 9GAX0412P3S0031                | —   | —                 | —                | 9GAX0412P3S0031                            | 40 × 40 × 28 mm   | No  | 39   |
| 9GE0412P3G03                   | —   | —                 | 9GE0412G3D01     | 9GE0412P3G03                               | 40 × 40 × 28 mm   | No  | 48   |
| 9GE0412P3J03                   | 9GE0412J302   | 9GE0412J301       | 9GE0412J3D01     | 9GE0412P3J03                               | 40 × 40 × 28 mm   | No  | 48   |
| 9GE0412P3K03                   | —   | 9GE0412K301       | 9GE0412K3D01     | 9GE0412P3K03                               | 40 × 40 × 28 mm   | No  | 48   |
| 9GL1212E101                    | 9GL1212E102   | 9GL1212E101       | 9GL1212E1D01     | —  | 120 × 120 × 38 mm | No  | 425  |
| 9GL1212F101                    | 9GL1212F102   | 9GL1212F101       | 9GL1212F1D01     | —  | 120 × 120 × 38 mm | No  | 425  |
| 9GL1212G101                    | 9GL1212G102   | 9GL1212G101       | 9GL1212G1D01     | —  | 120 × 120 × 38 mm | No  | 425  |
| 9GL1212H101                    | 9GL1212H102   | 9GL1212H101       | 9GL1212H1D01     | —  | 120 × 120 × 38 mm | No  | 425  |
| 9GL1212M101                    | 9GL1212M102   | 9GL1212M101       | 9GL1212M1D01     | —  | 120 × 120 × 38 mm | No  | 425  |
| 9GL1224E101                    | 9GL1224E102   | 9GL1224E101       | 9GL1224E1D01     | —  | 120 × 120 × 38 mm | No  | 425  |
| 9GL1224F101                    | 9GL1224F102   | 9GL1224F101       | 9GL1224F1D01     | —  | 120 × 120 × 38 mm | No  | 425  |
| 9GL1224G101                    | 9GL1224G102   | 9GL1224G101       | 9GL1224G1D01     | —  | 120 × 120 × 38 mm | No  | 425  |
| 9GL1224H101                    | 9GL1224H102   | 9GL1224H101       | 9GL1224H1D01     | —  | 120 × 120 × 38 mm | No  | 425  |
| 9GL1224M101                    | 9GL1224M102   | 9GL1224M101       | 9GL1224M1D01     | —  | 120 × 120 × 38 mm | No  | 425  |
| 9GL1248E101                    | 9GL1248E102   | 9GL1248E101       | 9GL1248E1D01     | —  | 120 × 120 × 38 mm | No  | 425  |
| 9GL1248F101                    | 9GL1248F102   | 9GL1248F101       | 9GL1248F1D01     | —  | 120 × 120 × 38 mm | No  | 425  |
| 9GL1248G101                    | 9GL1248G102   | 9GL1248G101       | 9GL1248G1D01     | —  | 120 × 120 × 38 mm | No  | 425  |
| 9GL1248H101                    | 9GL1248H102   | 9GL1248H101       | 9GL1248H1D01     | —  | 120 × 120 × 38 mm | No  | 425  |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The  mark indicates Short Lead Time Service applicable models. See p. 654 for details.

| Models listed<br>in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "-" models.) |                   |                  |   | Frame size         | Rib | page |
|-----------------------------------|---|-------------------|------------------|---|--------------------|-----|------|
|                                   | Without sensor  | With pulse sensor | With lock sensor | With PWM control function<br>and pulse sensor |                    |     |      |
|                                   | 9GL1248M101   | 9GL1248M102       | 9GL1248M101      | 9GL1248M1D01                                  |                    |     |      |
| 9GP1224P1G001                     | 9GP1224G1002  | —                 | —                | 9GP1224P1G001                                 | 120 × 120 × 38 mm  | No  | 458  |
| 9GP1248P1G001                     | —   | —                 | —                | 9GP1248P1G001                                 | 120 × 120 × 38 mm  | No  | 458  |
| 9GP5724P5H001                     | —   | —                 | —                | 9GP5724P5H001                                 | ∅172 × 150 × 51 mm | No  | 460  |
| 9GP5748P5G001                     | —   | —                 | —                | 9GP5748P5G001                                 | ∅172 × 150 × 51 mm | No  | 460  |
| 9GT0412P3J001                     | 9GT0412J3002  | 9GT0412J3001      | 9GT0412J3D001    | ☺ 9GT0412P3J001                               | 40 × 40 × 28 mm    | No  | 444  |
| 9GT0424P3J001                     | 9GT0424J3002  | 9GT0424J3001      | 9GT0424J3D001    | ☺ 9GT0424P3J001                               | 40 × 40 × 28 mm    | No  | 444  |
| 9GT0612P4G001                     | 9GT0612G4002  | 9GT0612G4001      | 9GT0612G4D001    | ☺ 9GT0612P4G001                               | 60 × 60 × 25 mm    | No  | 446  |
| 9GT0624P4G001                     | 9GT0624G4002  | 9GT0624G4001      | —                | ☺ 9GT0624P4G001                               | 60 × 60 × 25 mm    | No  | 446  |
| 9GT0812P4S001                     | 9GT0812S4002  | 9GT0812S4001      | 9GT0812S4D001    | ☺ 9GT0812P4S001                               | 80 × 80 × 25 mm    | No  | 448  |
| 9GT0824P4S001                     | 9GT0824S4002  | 9GT0824S4001      | —                | ☺ 9GT0824P4S001                               | 80 × 80 × 25 mm    | No  | 448  |
| 9GT0912P1M001                     | 9GT0912M1002  | 9GT0912M1001      | 9GT0912M1D001    | ☺ 9GT0912P1M001                               | 92 × 92 × 38 mm    | No  | 452  |
| 9GT0912P4J001                     | 9GT0912J4002  | 9GT0912J4001      | 9GT0912J4D001    | ☺ 9GT0912P4J001                               | 92 × 92 × 25 mm    | No  | 450  |
| 9GT0924P1M001                     | 9GT0924M1002  | —                 | 9GT0924M1D001    | ☺ 9GT0924P1M001                               | 92 × 92 × 38 mm    | No  | 452  |
| 9GT0924P4J001                     | 9GT0924J4002  | 9GT0924J4001      | —                | ☺ 9GT0924P4J001                               | 92 × 92 × 25 mm    | No  | 450  |
| 9GT1212P1S001                     | —   | —                 | —                | ☺ 9GT1212P1S001                               | 120 × 120 × 38 mm  | No  | 454  |
| 9GT1224P1S001                     | 9GT1224S1002  | —                 | 9GT1224S1D001    | ☺ 9GT1224P1S001                               | 120 × 120 × 38 mm  | No  | 454  |
| 9GV0312E301                       | 9GV0312E302   | 9GV0312E301       | 9GV0312E3D01     | —   | 38 × 38 × 28 mm    | Yes | 21   |
| 9GV0312E3011                      | —   | 9GV0312E3011      | 9GV0312E3D011    | —   | 38 × 38 × 28 mm    | No  | 21   |
| 9GV0312G301                       | 9GV0312G302   | 9GV0312G301       | 9GV0312G3D01     | 9GV0312P3G03                                  | 38 × 38 × 28 mm    | Yes | 21   |
| 9GV0312G3011                      | 9GV0312G3021  | 9GV0312G3011      | —                | —   | 38 × 38 × 28 mm    | No  | 21   |
| 9GV0312H301                       | 9GV0312H302   | 9GV0312H301       | 9GV0312H3D01     | —   | 38 × 38 × 28 mm    | Yes | 21   |
| 9GV0312H3011                      | —   | 9GV0312H3011      | —                | —   | 38 × 38 × 28 mm    | No  | 21   |
| 9GV0312J301                       | 9GV0312J302   | 9GV0312J301       | 9GV0312J3D01     | 9GV0312P3J03                                  | 38 × 38 × 28 mm    | Yes | 21   |
| 9GV0312J3011                      | 9GV0312J3021  | 9GV0312J3011      | —                | 9GV0312P3J031                                 | 38 × 38 × 28 mm    | No  | 21   |
| 9GV0312K301                       | —   | 9GV0312K301       | 9GV0312K3D01     | 9GV0312P3K01                                  | 38 × 38 × 28 mm    | Yes | 21   |
| 9GV0312K3011                      | —   | 9GV0312K3011      | 9GV0312K3D011    | —   | 38 × 38 × 28 mm    | No  | 21   |
| 9GV0412C301                       | —   | 9GV0412C301       | 9GV0412C3D01     | —   | 40 × 40 × 28 mm    | Yes | 51   |
| 9GV0412C3011                      | —   | 9GV0412C3011      | 9GV0412C3D011    | —   | 40 × 40 × 28 mm    | No  | 51   |
| 9GV0412G301                       | 9GV0412G302   | 9GV0412G301       | 9GV0412G3D01     | 9GV0412P3G03                                  | 40 × 40 × 28 mm    | Yes | 51   |
| 9GV0412G3011                      | 9GV0412G3021  | 9GV0412G3011      | 9GV0412G3D011    | 9GV0412P3G031                                 | 40 × 40 × 28 mm    | No  | 51   |
| 9GV0412H301                       | —   | 9GV0412H301       | 9GV0412H3D01     | 9GV0412P3H01                                  | 40 × 40 × 28 mm    | Yes | 51   |
| 9GV0412H3011                      | —   | 9GV0412H3011      | —                | —   | 40 × 40 × 28 mm    | No  | 51   |
| 9GV0412J301                       | 9GV0412J302   | 9GV0412J301       | 9GV0412J3D01     | 9GV0412P3J03                                  | 40 × 40 × 28 mm    | Yes | 51   |
| 9GV0412J3011                      | 9GV0412J3021  | 9GV0412J3011      | 9GV0412J3D011    | 9GV0412P3J031                                 | 40 × 40 × 28 mm    | No  | 51   |
| 9GV0412K301                       | 9GV0412K302   | 9GV0412K301       | 9GV0412K3D01     | 9GV0412P3K03                                  | 40 × 40 × 28 mm    | Yes | 51   |
| 9GV0412K3011                      | —   | 9GV0412K3011      | —                | —   | 40 × 40 × 28 mm    | No  | 51   |
| 9GV0612P1G03                      | 9GV0612G102   | 9GV0612G101       | 9GV0612G1D01     | 9GV0612P1G03                                  | 60 × 60 × 38 mm    | Yes | 88   |
| 9GV0612P1G031                     | 9GV0612G1021  | 9GV0612G1011      | 9GV0612G1D011    | 9GV0612P1G031                                 | 60 × 60 × 38 mm    | No  | 88   |
| 9GV0624P1G03                      | 9GV0624G102   | —                 | 9GV0624G1D01     | 9GV0624P1G03                                  | 60 × 60 × 38 mm    | Yes | 88   |
| 9GV0624P1G031                     | 9GV0624G1021  | —                 | —                | 9GV0624P1G031                                 | 60 × 60 × 38 mm    | No  | 88   |
| 9GV0648P1H03                      | —   | —                 | —                | 9GV0648P1H03                                  | 60 × 60 × 38 mm    | Yes | 88   |
| 9GV0648P1H031                     | —   | —                 | —                | 9GV0648P1H031                                 | 60 × 60 × 38 mm    | No  | 88   |
| 9GV0812P1F03                      | —   | —                 | —                | 9GV0812P1F03                                  | 80 × 80 × 38 mm    | Yes | 131  |
| 9GV0812P1F031                     | —   | —                 | —                | 9GV0812P1F031                                 | 80 × 80 × 38 mm    | No  | 131  |
| 9GV0812P1G03                      | 9GV0812G102   | 9GV0812G101       | —                | 9GV0812P1G03                                  | 80 × 80 × 38 mm    | Yes | 131  |
| 9GV0812P1G031                     | 9GV0812G1021  | 9GV0812G1011      | —                | 9GV0812P1G031                                 | 80 × 80 × 38 mm    | No  | 131  |
| 9GV0812P1H03                      | 9GV0812H102   | 9GV0812H101       | —                | 9GV0812P1H03                                  | 80 × 80 × 38 mm    | Yes | 131  |
| 9GV0812P1H031                     | 9GV0812H1021  | 9GV0812H1011      | —                | 9GV0812P1H031                                 | 80 × 80 × 38 mm    | No  | 131  |
| 9GV0812P1M03                      | —   | —                 | —                | 9GV0812P1M03                                  | 80 × 80 × 38 mm    | Yes | 131  |
| 9GV0812P1M031                     | —   | —                 | —                | 9GV0812P1M031                                 | 80 × 80 × 38 mm    | No  | 131  |
| 9GV0824P1G03                      | 9GV0824G102   | 9GV0824G101       | 9GV0824G1D01     | 9GV0824P1G03                                  | 80 × 80 × 38 mm    | Yes | 131  |
| 9GV0824P1G031                     | —   | —                 | —                | 9GV0824P1G031                                 | 80 × 80 × 38 mm    | No  | 131  |
| 9GV0848P1G03                      | 9GV0848G102   | 9GV0848G101       | —                | 9GV0848P1G03                                  | 80 × 80 × 38 mm    | Yes | 131  |
| 9GV0848P1G031                     | —   | 9GV0848G1011      | —                | 9GV0848P1G031                                 | 80 × 80 × 38 mm    | No  | 131  |
| 9GV0848P4K03                      | —   | 9GV0848K401       | —                | ☺ 9GV0848P4K03                                | 80 × 80 × 25 mm    | Yes | 107  |
| 9GV0848P4K031                     | —   | —                 | —                | ☺ 9GV0848P4K031                               | 80 × 80 × 25 mm    | No  | 107  |
| 9GV0912P1F03                      | —   | —                 | —                | 9GV0912P1F03                                  | 92 × 92 × 38 mm    | Yes | 159  |
| 9GV0912P1F031                     | —   | —                 | —                | 9GV0912P1F031                                 | 92 × 92 × 38 mm    | No  | 159  |
| 9GV0912P1G03                      | 9GV0912G102   | —                 | 9GV0912G1D01     | 9GV0912P1G03                                  | 92 × 92 × 38 mm    | Yes | 159  |
| 9GV0912P1G031                     | —   | —                 | —                | 9GV0912P1G031                                 | 92 × 92 × 38 mm    | No  | 159  |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The ☺ mark indicates Short Lead Time Service applicable models. See p. 654 for details.

| Models listed in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "—" models.) |                   |                  |  | Frame size         | Rib | page |
|--------------------------------|---|-------------------|------------------|--|--------------------|-----|------|
|                                | Without sensor  | With pulse sensor | With lock sensor | With PWM control function and pulse sensor |                    |     |      |
|                                | 9GV0912P1H03  | 9GV0912H102       | 9GV0912H101      | 9GV0912H1D01                               |                    |     |      |
| 9GV0912P1H031                  | —   | —                 | —                | 9GV0912P1H031                              | 92 × 92 × 38 mm    | No  | 159  |
| 9GV0948P1F03                   | —   | —                 | —                | 9GV0948P1F03                               | 92 × 92 × 38 mm    | Yes | 159  |
| 9GV0948P1F031                  | —   | —                 | —                | 9GV0948P1F031                              | 92 × 92 × 38 mm    | No  | 159  |
| 9GV0948P1H03                   | 9GV0948H102   | 9GV0948H101       | —                | 9GV0948P1H03                               | 92 × 92 × 38 mm    | Yes | 159  |
| 9GV0948P1H031                  | 9GV0948H1021  | —                 | —                | 9GV0948P1H031                              | 92 × 92 × 38 mm    | No  | 159  |
| 9GV1212P1G01                   | —   | —                 | —                | 9GV1212P1G01                               | 120 × 120 × 38 mm  | Yes | 181  |
| 9GV1212P1G011                  | —   | 9GV1212G1011      | 9GV1212G1D011    | 9GV1212P1G011                              | 120 × 120 × 38 mm  | No  | 181  |
| 9GV1212P1J01                   | 9GV1212J102   | 9GV1212J101       | 9GV1212J1D01     | 9GV1212P1J01                               | 120 × 120 × 38 mm  | Yes | 181  |
| 9GV1212P1J011                  | 9GV1212J1021  | 9GV1212J1011      | —                | 9GV1212P1J011                              | 120 × 120 × 38 mm  | No  | 181  |
| 9GV1212P4G01                   | 9GV1212G402   | 9GV1212G401       | —                | 9GV1212P4G01                               | 120 × 120 × 25 mm  | Yes | 169  |
| 9GV1212P4G011                  | 9GV1212G4021  | 9GV1212G4011      | —                | 9GV1212P4G011                              | 120 × 120 × 25 mm  | No  | 169  |
| 9GV1224P1H01                   | 9GV1224H102   | 9GV1224H101       | 9GV1224H1D01     | 9GV1224P1H01                               | 120 × 120 × 38 mm  | Yes | 181  |
| 9GV1224P1H011                  | 9GV1224H1021  | 9GV1224H1011      | 9GV1224H1D011    | 9GV1224P1H011                              | 120 × 120 × 38 mm  | No  | 181  |
| 9GV1224P1J01                   | 9GV1224J102   | 9GV1224J101       | 9GV1224J1D01     | 9GV1224P1J01                               | 120 × 120 × 38 mm  | Yes | 181  |
| 9GV1224P1J011                  | 9GV1224J1021  | 9GV1224J1011      | 9GV1224J1D011    | 9GV1224P1J011                              | 120 × 120 × 38 mm  | No  | 181  |
| 9GV1224P4G01                   | 9GV1224G402   | 9GV1224G401       | 9GV1224G4D01     | 9GV1224P4G01                               | 120 × 120 × 25 mm  | Yes | 169  |
| 9GV1224P4G011                  | 9GV1224G4021  | —                 | —                | 9GV1224P4G011                              | 120 × 120 × 25 mm  | No  | 169  |
| 9GV1248P1J01                   | 9GV1248J102   | 9GV1248J101       | 9GV1248J1D01     | 9GV1248P1J01                               | 120 × 120 × 38 mm  | Yes | 181  |
| 9GV1248P1J011                  | 9GV1248J1021  | 9GV1248J1011      | —                | 9GV1248P1J011                              | 120 × 120 × 38 mm  | No  | 181  |
| 9GV1248P4G01                   | 9GV1248G402   | 9GV1248G401       | —                | 9GV1248P4G01                               | 120 × 120 × 25 mm  | Yes | 169  |
| 9GV1248P4G011                  | —   | 9GV1248G4011      | —                | 9GV1248P4G011                              | 120 × 120 × 25 mm  | No  | 169  |
| 9GV1248P4H01                   | 9GV1248H402   | 9GV1248H401       | 9GV1248H4D01     | 9GV1248P4H01                               | 120 × 120 × 25 mm  | Yes | 169  |
| 9GV1248P4H011                  | —   | —                 | —                | 9GV1248P4H011                              | 120 × 120 × 25 mm  | No  | 169  |
| 9GV1248P4J01                   | —   | —                 | —                | 9GV1248P4J01                               | 120 × 120 × 25 mm  | Yes | 169  |
| 9GV1248P4J011                  | —   | —                 | —                | 9GV1248P4J011                              | 120 × 120 × 25 mm  | No  | 169  |
| 9GV1412P1G001                  | —   | —                 | —                | 9GV1412P1G001                              | 140 × 140 × 38 mm  | No  | 194  |
| 9GV1412P1H001                  | 9GV1412H1002  | —                 | —                | 9GV1412P1H001                              | 140 × 140 × 38 mm  | No  | 194  |
| 9GV1412P1S001                  | —   | —                 | —                | 9GV1412P1S001                              | 140 × 140 × 38 mm  | No  | 194  |
| 9GV1424P1G001                  | —   | —                 | —                | 9GV1424P1G001                              | 140 × 140 × 38 mm  | No  | 194  |
| 9GV1424P1H001                  | 9GV1424H1002  | —                 | 9GV1424H1D001    | 9GV1424P1H001                              | 140 × 140 × 38 mm  | No  | 194  |
| 9GV1424P1S001                  | —   | —                 | —                | 9GV1424P1S001                              | 140 × 140 × 38 mm  | No  | 194  |
| 9GV1448P1G001                  | —   | —                 | —                | 9GV1448P1G001                              | 140 × 140 × 38 mm  | No  | 194  |
| 9GV1448P1H001                  | —   | —                 | —                | 9GV1448P1H001                              | 140 × 140 × 38 mm  | No  | 194  |
| 9GV1448P1S001                  | —   | —                 | —                | 9GV1448P1S001                              | 140 × 140 × 38 mm  | No  | 194  |
| 9GV1512H501                    | 9GV1512H502   | 9GV1512H501       | —                | 9GV1512P5H03                               | 150 × 150 × 50 mm  | Yes | 200  |
| 9GV1512H5011                   | 9GV1512H5021  | 9GV1512H5011      | —                | —  | 150 × 150 × 50 mm  | No  | 200  |
| 9GV1512M501                    | 9GV1512M502   | 9GV1512M501       | —                | 9GV1512P5M03                               | 150 × 150 × 50 mm  | Yes | 200  |
| 9GV1512M5011                   | 9GV1512M5021  | 9GV1512M5011      | —                | 9GV1512P5M011                              | 150 × 150 × 50 mm  | No  | 200  |
| 9GV1524M501                    | 9GV1524M502   | 9GV1524M501       | 9GV1524M5D01     | —  | 150 × 150 × 50 mm  | Yes | 200  |
| 9GV1524M5011                   | —   | 9GV1524M5011      | —                | —  | 150 × 150 × 50 mm  | No  | 200  |
| 9GV2048P0G201                  | 9GV2048G0202  | —                 | —                | 9GV2048P0G201                              | ∅200 × 70 mm       | No  | 218  |
| 9GV3612G301                    | 9GV3612G302   | 9GV3612G301       | 9GV3612G3D01     | 9GV3612P3G03                               | 36 × 36 × 28 mm    | Yes | 16   |
| 9GV3612J301                    | 9GV3612J302   | 9GV3612J301       | 9GV3612J3D01     | 9GV3612P3J03                               | 36 × 36 × 28 mm    | Yes | 16   |
| 9GV5724H501                    | 9GV5724H502   | 9GV5724H501       | —                | 9GV5724P5H03                               | ∅172 × 150 × 51 mm | No  | 210  |
| 9GV5748H501                    | 9GV5748H502   | 9GV5748H501       | —                | 9GV5748P5H01                               | ∅172 × 150 × 51 mm | No  | 210  |
| 9GX3612P3K001                  | 9GX3612K3002  | —                 | —                | 9GX3612P3K001                              | 36 × 36 × 28 mm    | Yes | 14   |
| 9HV0412P3K001                  | —   | —                 | —                | 9HV0412P3K001                              | 40 × 40 × 28 mm    | No  | 42   |
| 9HV0612P1J001                  | —   | —                 | —                | 9HV0612P1J001                              | 60 × 60 × 38 mm    | Yes | 83   |
| 9HV0612P1J0011                 | —   | —                 | —                | 9HV0612P1J0011                             | 60 × 60 × 38 mm    | No  | 83   |
| 9HV0812P1G601                  | 9HV0812G1002  | 9HV0812G1001      | —                | 9HV0812P1G601                              | 80 × 80 × 38 mm    | Yes | 125  |
| 9HV0812P1G6011                 | 9HV0812G10021   | 9HV0812G10011     | —                | 9HV0812P1G6011                             | 80 × 80 × 38 mm    | No  | 125  |
| 9HV0824P1G003                  | —   | —                 | 9HV0824G1D001    | 9HV0824P1G003                              | 80 × 80 × 38 mm    | Yes | 125  |
| 9HV0824P1G0011                 | —   | —                 | —                | 9HV0824P1G0011                             | 80 × 80 × 38 mm    | No  | 125  |
| 9HV0848P1G001                  | 9HV0848G1002  | 9HV0848G1001      | 9HV0848G1D001    | 9HV0848P1G001                              | 80 × 80 × 38 mm    | Yes | 125  |
| 9HV0848P1G0011                 | 9HV0848G10021   | 9HV0848G10011     | —                | 9HV0848P1G0011                             | 80 × 80 × 38 mm    | No  | 125  |
| 9HV0912P1G001                  | —   | —                 | —                | 9HV0912P1G001                              | 92 × 92 × 38 mm    | Yes | 153  |
| 9HV0912P1G0011                 | —   | —                 | —                | 9HV0912P1G0011                             | 92 × 92 × 38 mm    | No  | 153  |
| 9HV0924P1G001                  | —   | —                 | —                | 9HV0924P1G001                              | 92 × 92 × 38 mm    | Yes | 153  |
| 9HV0924P1G0011                 | —   | —                 | —                | 9HV0924P1G0011                             | 92 × 92 × 38 mm    | No  | 153  |
| 9HV0948P1G001                  | —   | —                 | —                | 9HV0948P1G001                              | 92 × 92 × 38 mm    | Yes | 153  |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The ⚡ mark indicates Short Lead Time Service applicable models. See p. 654 for details.


| Models listed<br>in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "-" models.) |                   |                  |   | Frame size         | Rib | page |
|-----------------------------------|---|-------------------|------------------|---|--------------------|-----|------|
|                                   | Without sensor  | With pulse sensor | With lock sensor | With PWM control function<br>and pulse sensor |                    |     |      |
|                                   | 9HV0948P1G0011  | —                 | —                | —   |                    |     |      |
| 9HV0912P4G001                     | —   | —                 | —                | ☞ 9HV0912P4G001                               | 92 × 92 × 25 mm    | Yes | 137  |
| 9HV0912P4G0011                    | —   | —                 | —                | ☞ 9HV0912P4G0011                              | 92 × 92 × 25 mm    | No  | 137  |
| 9HV0912P4H001                     | —   | —                 | —                | ☞ 9HV0912P4H001                               | 92 × 92 × 25 mm    | Yes | 137  |
| 9HV0912P4H0011                    | —   | —                 | —                | ☞ 9HV0912P4H0011                              | 92 × 92 × 25 mm    | No  | 137  |
| 9HV0924P4G001                     | —   | —                 | —                | ☞ 9HV0924P4G001                               | 92 × 92 × 25 mm    | Yes | 137  |
| 9HV0924P4G0011                    | —   | —                 | —                | ☞ 9HV0924P4G0011                              | 92 × 92 × 25 mm    | No  | 137  |
| 9HV0924P4H001                     | —   | —                 | —                | ☞ 9HV0924P4H001                               | 92 × 92 × 25 mm    | Yes | 137  |
| 9HV0924P4H0011                    | —   | —                 | —                | ☞ 9HV0924P4H0011                              | 92 × 92 × 25 mm    | No  | 137  |
| 9HV1224P1A001                     | —   | —                 | 9HV1224A1D001    | 9HV1224P1A001                                 | 120 × 120 × 38 mm  | No  | 178  |
| 9HV1248P1G001                     | 9HV1248G1002  | 9HV1248G1001      | 9HV1248G1D001    | ☞ 9HV1248P1G001                               | 120 × 120 × 38 mm  | No  | 178  |
| 9HV1248P1H001                     | 9HV1248H1002  | 9HV1248H1001      | —                | 9HV1248P1H001                                 | 120 × 120 × 38 mm  | No  | 178  |
| 9HV3612P3K001                     | —   | —                 | —                | ☞ 9HV3612P3K001                               | 36 × 36 × 28 mm    | Yes | 12   |
| 9HV5724P5H001                     | 9HV5724H5002  | 9HV5724H5001      | 9HV5724H5D001    | ☞ 9HV5724P5H001                               | ∅172 × 150 × 51 mm | No  | 205  |
| 9HV5748P5G001                     | —   | —                 | —                | ☞ 9HV5748P5G001                               | ∅172 × 150 × 51 mm | No  | 205  |
| 9HVA0412P3J001                    | —   | —                 | —                | ☞ 9HVA0412P3J001                              | 40 × 40 × 28 mm    | Yes | 37   |
| 9HVA0812P1G001                    | —   | —                 | —                | ☞ 9HVA0812P1G001                              | 80 × 80 × 38 mm    | Yes | 123  |
| 9HVA0812P1G0011                   | —   | —                 | —                | ☞ 9HVA0812P1G0011                             | 80 × 80 × 38 mm    | No  | 123  |
| 9HVA0848P1G601                    | —   | —                 | —                | 9HVA0848P1G601                                | 80 × 80 × 38 mm    | Yes | 123  |
| 9HVA0848P1G6011                   | —   | —                 | —                | 9HVA0848P1G6011                               | 80 × 80 × 38 mm    | No  | 123  |
| 9HVB0812P1G001                    | —   | —                 | —                | ☞ 9HVB0812P1G001                              | 80 × 80 × 38 mm    | Yes | 121  |
| 9HVB0812P1G0011                   | —   | —                 | —                | ☞ 9HVB0812P1G0011                             | 80 × 80 × 38 mm    | No  | 121  |
| 9L0412H301                        | 9L0412H302  | 9L0412H301        | 9L0412H3D01      | —   | 40 × 40 × 28 mm    | No  | 394  |
| 9L0412J301                        | 9L0412J302  | 9L0412J301        | 9L0412J3D01      | 9L0412P3J01                                   | 40 × 40 × 28 mm    | No  | 394  |
| 9L0412M301                        | 9L0412M302  | 9L0412M301        | 9L0412M3D01      | —   | 40 × 40 × 28 mm    | No  | 394  |
| 9LG0612P4H001                     | 9LG0612H4002  | 9LG0612H4001      | 9LG0612H4D001    | ☞ 9LG0612P4H001                               | 60 × 60 × 25 mm    | No  | 396  |
| 9LG0612P4J001                     | —   | —                 | 9LG0612J4D001    | ☞ 9LG0612P4J001                               | 60 × 60 × 25 mm    | No  | 396  |
| 9LG0612P4M001                     | —   | —                 | 9LG0612M4D001    | ☞ 9LG0612P4M001                               | 60 × 60 × 25 mm    | No  | 396  |
| 9LG0612P4S001                     | —   | 9LG0612S4001      | 9LG0612S4D001    | ☞ 9LG0612P4S001                               | 60 × 60 × 25 mm    | No  | 396  |
| 9LG0624P4H001                     | 9LG0624H4002  | 9LG0624H4001      | 9LG0624H4D001    | ☞ 9LG0624P4H001                               | 60 × 60 × 25 mm    | No  | 396  |
| 9LG0624P4J001                     | —   | —                 | —                | ☞ 9LG0624P4J001                               | 60 × 60 × 25 mm    | No  | 396  |
| 9LG0624P4M001                     | 9LG0624M4002  | 9LG0624M4001      | —                | ☞ 9LG0624P4M001                               | 60 × 60 × 25 mm    | No  | 396  |
| 9LG0624P4S001                     | 9LG0624S4002  | —                 | —                | ☞ 9LG0624P4S001                               | 60 × 60 × 25 mm    | No  | 396  |
| 9LG0648P4H001                     | —   | —                 | —                | ☞ 9LG0648P4H001                               | 60 × 60 × 25 mm    | No  | 396  |
| 9LG0648P4J001                     | —   | —                 | —                | ☞ 9LG0648P4J001                               | 60 × 60 × 25 mm    | No  | 396  |
| 9LG0648P4M001                     | —   | —                 | —                | ☞ 9LG0648P4M001                               | 60 × 60 × 25 mm    | No  | 396  |
| 9LG0648P4S001                     | —   | —                 | —                | ☞ 9LG0648P4S001                               | 60 × 60 × 25 mm    | No  | 396  |
| 9LG0812F4001                      | ☞ 9LG0812F4002  | ☞ 9LG0812F4001    | ☞ 9LG0812F4D001  | —   | 80 × 80 × 25 mm    | No  | 405  |
| 9LG0812L4001                      | ☞ 9LG0812L4002  | ☞ 9LG0812L4001    | ☞ 9LG0812L4D001  | —   | 80 × 80 × 25 mm    | No  | 405  |
| 9LG0812M4001                      | ☞ 9LG0812M4002  | ☞ 9LG0812M4001    | ☞ 9LG0812M4D001  | —   | 80 × 80 × 25 mm    | No  | 405  |
| 9LG0812P4G001                     | —   | 9LG0812G4001      | 9LG0812G4D001    | ☞ 9LG0812P4G001                               | 80 × 80 × 25 mm    | No  | 405  |
| 9LG0812P4H001                     | ☞ 9LG0812H4002  | ☞ 9LG0812H4001    | ☞ 9LG0812H4D001  | ☞ 9LG0812P4H001                               | 80 × 80 × 25 mm    | No  | 405  |
| 9LG0812P4J001                     | 9LG0812J4002  | —                 | 9LG0812J4D001    | ☞ 9LG0812P4J001                               | 80 × 80 × 25 mm    | No  | 405  |
| 9LG0812S4001                      | ☞ 9LG0812S4002  | ☞ 9LG0812S4001    | ☞ 9LG0812S4D001  | —   | 80 × 80 × 25 mm    | No  | 405  |
| 9LG0824F4001                      | ☞ 9LG0824F4002  | ☞ 9LG0824F4001    | ☞ 9LG0824F4D001  | —   | 80 × 80 × 25 mm    | No  | 405  |
| 9LG0824L4001                      | ☞ 9LG0824L4002  | ☞ 9LG0824L4001    | ☞ 9LG0824L4D001  | —   | 80 × 80 × 25 mm    | No  | 405  |
| 9LG0824M4001                      | ☞ 9LG0824M4002  | ☞ 9LG0824M4001    | ☞ 9LG0824M4D001  | —   | 80 × 80 × 25 mm    | No  | 405  |
| 9LG0824P4G001                     | 9LG0824G4002  | 9LG0824G4001      | 9LG0824G4D001    | ☞ 9LG0824P4G001                               | 80 × 80 × 25 mm    | No  | 405  |
| 9LG0824P4H001                     | ☞ 9LG0824H4002  | ☞ 9LG0824H4001    | ☞ 9LG0824H4D001  | ☞ 9LG0824P4H001                               | 80 × 80 × 25 mm    | No  | 405  |
| 9LG0824P4J001                     | —   | —                 | 9LG0824J4D001    | ☞ 9LG0824P4J001                               | 80 × 80 × 25 mm    | No  | 405  |
| 9LG0824S4001                      | ☞ 9LG0824S4002  | ☞ 9LG0824S4001    | ☞ 9LG0824S4D001  | —   | 80 × 80 × 25 mm    | No  | 405  |
| 9LG0912F4001                      | ☞ 9LG0912F4002  | ☞ 9LG0912F4001    | ☞ 9LG0912F4D001  | —   | 92 × 92 × 25 mm    | No  | 412  |
| 9LG0912L4001                      | ☞ 9LG0912L4002  | ☞ 9LG0912L4001    | ☞ 9LG0912L4D001  | —   | 92 × 92 × 25 mm    | No  | 412  |
| 9LG0912M4001                      | ☞ 9LG0912M4002  | ☞ 9LG0912M4001    | ☞ 9LG0912M4D001  | —   | 92 × 92 × 25 mm    | No  | 412  |
| 9LG0912P1F001                     | —   | —                 | —                | ☞ 9LG0912P1F001                               | 92 × 92 × 38 mm    | No  | 417  |
| 9LG0912P1H001                     | —   | —                 | 9LG0912H1D001    | ☞ 9LG0912P1H001                               | 92 × 92 × 38 mm    | No  | 417  |
| 9LG0912P4G001                     | 9LG0912G4002  | —                 | —                | ☞ 9LG0912P4G001                               | 92 × 92 × 25 mm    | No  | 412  |
| 9LG0912P4H001                     | ☞ 9LG0912H4002  | ☞ 9LG0912H4001    | ☞ 9LG0912H4D001  | ☞ 9LG0912P4H001                               | 92 × 92 × 25 mm    | No  | 412  |
| 9LG0912P4J001                     | —   | —                 | 9LG0912J4D001    | ☞ 9LG0912P4J001                               | 92 × 92 × 25 mm    | No  | 412  |
| 9LG0912P4S001                     | ☞ 9LG0912S4002  | ☞ 9LG0912S4001    | ☞ 9LG0912S4D001  | ☞ 9LG0912P4S001                               | 92 × 92 × 25 mm    | No  | 412  |
| 9LG0924F4001                      | ☞ 9LG0924F4002  | ☞ 9LG0924F4001    | ☞ 9LG0924F4D001  | —   | 92 × 92 × 25 mm    | No  | 412  |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The ☞ mark indicates Short Lead Time Service applicable models. See p. 654 for details.

| Models listed in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "—" models.) |                   |                  |  | Frame size        | Rib | page |
|--------------------------------|---|-------------------|------------------|--|-------------------|-----|------|
|                                | Without sensor  | With pulse sensor | With lock sensor | With PWM control function and pulse sensor |                   |     |      |
|                                | 9LG0924L4001  | 9LG0924L4002      | 9LG0924L4001     | 9LG0924L4D001                              |                   |     |      |
| 9LG0924M4001                   | 9LG0924M4002  | 9LG0924M4001      | 9LG0924M4D001    | —  | 92 × 92 × 25 mm   | No  | 412  |
| 9LG0924P1F001                  | —   | —                 | —                | 9LG0924P1F001                              | 92 × 92 × 38 mm   | No  | 417  |
| 9LG0924P1H001                  | —   | —                 | —                | 9LG0924P1H001                              | 92 × 92 × 38 mm   | No  | 417  |
| 9LG0924P4G001                  | —   | —                 | —                | 9LG0924P4G001                              | 92 × 92 × 25 mm   | No  | 412  |
| 9LG0924P4H001                  | 9LG0924H4002  | 9LG0924H4001      | 9LG0924H4D001    | 9LG0924P4H001                              | 92 × 92 × 25 mm   | No  | 412  |
| 9LG0924P4J001                  | —   | —                 | 9LG0924J4D001    | 9LG0924P4J001                              | 92 × 92 × 25 mm   | No  | 412  |
| 9LG0924P4S001                  | —   | —                 | 9LG0924S4D001    | 9LG0924P4S001                              | 92 × 92 × 25 mm   | No  | 412  |
| 9LG1212F1001                   | 9LG1212F1002  | 9LG1212F1001      | 9LG1212F1D001    | —  | 120 × 120 × 38 mm | No  | 420  |
| 9LG1212M1001                   | 9LG1212M1002  | 9LG1212M1001      | 9LG1212M1D001    | —  | 120 × 120 × 38 mm | No  | 420  |
| 9LG1212P1G001                  | —   | —                 | —                | 9LG1212P1G001                              | 120 × 120 × 38 mm | No  | 420  |
| 9LG1212P1H001                  | —   | —                 | 9LG1212H1D001    | 9LG1212P1H001                              | 120 × 120 × 38 mm | No  | 420  |
| 9LG1212P1S001                  | —   | —                 | —                | 9LG1212P1S001                              | 120 × 120 × 38 mm | No  | 420  |
| 9LG1224A1001                   | 9LG1224A1002  | 9LG1224A1001      | 9LG1224A1D001    | —  | 120 × 120 × 38 mm | No  | 420  |
| 9LG1224F1001                   | 9LG1224F1002  | 9LG1224F1001      | 9LG1224F1D001    | —  | 120 × 120 × 38 mm | No  | 420  |
| 9LG1224M1001                   | 9LG1224M1002  | 9LG1224M1001      | 9LG1224M1D001    | —  | 120 × 120 × 38 mm | No  | 420  |
| 9LG1224P1G001                  | —   | —                 | 9LG1224G1D001    | 9LG1224P1G001                              | 120 × 120 × 38 mm | No  | 420  |
| 9LG1224P1H001                  | —   | 9LG1224H1001      | 9LG1224H1D001    | 9LG1224P1H001                              | 120 × 120 × 38 mm | No  | 420  |
| 9LG1224P1S001                  | —   | 9LG1224S1001      | 9LG1224S1D001    | 9LG1224P1S001                              | 120 × 120 × 38 mm | No  | 420  |
| 9LG1248F1001                   | 9LG1248F1002  | 9LG1248F1001      | 9LG1248F1D001    | —  | 120 × 120 × 38 mm | No  | 420  |
| 9LG1248M1001                   | 9LG1248M1002  | 9LG1248M1001      | 9LG1248M1D001    | —  | 120 × 120 × 38 mm | No  | 420  |
| 9LG1248P1G001                  | 9LG1248G1002  | —                 | —                | 9LG1248P1G001                              | 120 × 120 × 38 mm | No  | 420  |
| 9LG1248P1H001                  | —   | —                 | —                | 9LG1248P1H001                              | 120 × 120 × 38 mm | No  | 420  |
| 9LG1248P1S001                  | —   | —                 | —                | 9LG1248P1S001                              | 120 × 120 × 38 mm | No  | 420  |
| 9LG1412A5001                   | 9LG1412A5002  | 9LG1412A5001      | 9LG1412A5D001    | —  | 140 × 140 × 51 mm | No  | 433  |
| 9LG1412H5001                   | 9LG1412H5002  | 9LG1412H5001      | 9LG1412H5D001    | —  | 140 × 140 × 51 mm | No  | 433  |
| 9LG1412L1001                   | 9LG1412L1002  | 9LG1412L1001      | —                | —  | 140 × 140 × 38 mm | No  | 428  |
| 9LG1412M5001                   | 9LG1412M5002  | 9LG1412M5001      | 9LG1412M5D001    | —  | 140 × 140 × 51 mm | No  | 433  |
| 9LG1412P1A001                  | —   | —                 | —                | 9LG1412P1A001                              | 140 × 140 × 38 mm | No  | 428  |
| 9LG1412P1H001                  | —   | —                 | —                | 9LG1412P1H001                              | 140 × 140 × 38 mm | No  | 428  |
| 9LG1412P1M001                  | 9LG1412M1002  | 9LG1412M1001      | 9LG1412M1D001    | 9LG1412P1M001                              | 140 × 140 × 38 mm | No  | 428  |
| 9LG1412P5G001                  | —   | —                 | —                | 9LG1412P5G001                              | 140 × 140 × 51 mm | No  | 433  |
| 9LG1412P5S001                  | 9LG1412S5001  | —                 | —                | 9LG1412P5S001                              | 140 × 140 × 51 mm | No  | 433  |
| 9LG1424A5001                   | 9LG1424A5002  | 9LG1424A5001      | 9LG1424A5D001    | —  | 140 × 140 × 51 mm | No  | 433  |
| 9LG1424H5001                   | 9LG1424H5002  | 9LG1424H5001      | 9LG1424H5D001    | —  | 140 × 140 × 51 mm | No  | 433  |
| 9LG1424L1001                   | 9LG1424L1002  | 9LG1424L1001      | 9LG1424L1D001    | —  | 140 × 140 × 38 mm | No  | 428  |
| 9LG1424M5001                   | 9LG1424M5002  | 9LG1424M5001      | 9LG1424M5D001    | —  | 140 × 140 × 51 mm | No  | 433  |
| 9LG1424P1A001                  | —   | —                 | —                | 9LG1424P1A001                              | 140 × 140 × 38 mm | No  | 428  |
| 9LG1424P1H001                  | —   | —                 | —                | 9LG1424P1H001                              | 140 × 140 × 38 mm | No  | 428  |
| 9LG1424P1M001                  | 9LG1424M1002  | 9LG1424M1001      | 9LG1424M1D001    | 9LG1424P1M001                              | 140 × 140 × 38 mm | No  | 428  |
| 9LG1424P5G001                  | —   | —                 | —                | 9LG1424P5G001                              | 140 × 140 × 51 mm | No  | 433  |
| 9LG1424P5S001                  | 9LG1424S5002  | 9LG1424S5001      | 9LG1424S5D001    | 9LG1424P5S001                              | 140 × 140 × 51 mm | No  | 433  |
| 9LG1448A5001                   | 9LG1448A5002  | 9LG1448A5001      | 9LG1448A5D001    | —  | 140 × 140 × 51 mm | No  | 433  |
| 9LG1448H5001                   | 9LG1448H5002  | 9LG1448H5001      | 9LG1448H5D001    | —  | 140 × 140 × 51 mm | No  | 433  |
| 9LG1448L1001                   | 9LG1448L1002  | 9LG1448L1001      | 9LG1448L1D001    | —  | 140 × 140 × 38 mm | No  | 428  |
| 9LG1448M5001                   | 9LG1448M5002  | 9LG1448M5001      | 9LG1448M5D001    | —  | 140 × 140 × 51 mm | No  | 433  |
| 9LG1448P1A001                  | —   | —                 | —                | 9LG1448P1A001                              | 140 × 140 × 38 mm | No  | 428  |
| 9LG1448P1H001                  | —   | —                 | —                | 9LG1448P1H001                              | 140 × 140 × 38 mm | No  | 428  |
| 9LG1448P1M001                  | 9LG1448M1002  | 9LG1448M1001      | 9LG1448M1D001    | 9LG1448P1M001                              | 140 × 140 × 38 mm | No  | 428  |
| 9LG1448P5G001                  | —   | —                 | —                | 9LG1448P5G001                              | 140 × 140 × 51 mm | No  | 433  |
| 9LG1448P5S001                  | —   | —                 | —                | 9LG1448P5S001                              | 140 × 140 × 51 mm | No  | 433  |
| 9RF0912P1H001                  | —   | —                 | —                | 9RF0912P1H001                              | 92 × 38 mm        | No  | 264  |
| 9RF0924P1H001                  | —   | —                 | —                | 9RF0924P1H001                              | 92 × 38 mm        | No  | 264  |
| 9RF1312P3H001                  | —   | —                 | —                | 9RF1312P3H001                              | 136 × 28 mm       | No  | 267  |
| 9RF1324P3H001                  | —   | —                 | —                | 9RF1324P3H001                              | 136 × 28 mm       | No  | 267  |
| 9S0612F401                     | 9S0612F402  | 9S0612F401        | 9S0612F4D01      | 9S0612P4F01                                | 60 × 60 × 25 mm   | Yes | 78   |
| 9S0612F4011                    | 9S0612F4021   | 9S0612F4011       | 9S0612F4D011     | 9S0612P4F011                               | 60 × 60 × 25 mm   | No  | 78   |
| 9S0612H401                     | 9S0612H402  | 9S0612H401        | 9S0612H4D01      | 9S0612P4H01                                | 60 × 60 × 25 mm   | Yes | 78   |
| 9S0612H4011                    | 9S0612H4021   | 9S0612H4011       | 9S0612H4D011     | 9S0612P4H011                               | 60 × 60 × 25 mm   | No  | 78   |
| 9S0612M401                     | 9S0612M402  | 9S0612M401        | 9S0612M4D01      | 9S0612P4M01                                | 60 × 60 × 25 mm   | Yes | 78   |
| 9S0612M4011                    | 9S0612M4021   | 9S0612M4011       | 9S0612M4D011     | —  | 60 × 60 × 25 mm   | No  | 78   |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The  mark indicates Short Lead Time Service applicable models. See p. 654 for details.

| Models listed<br>in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "—" models.) |                   |                  |   | Frame size         | Rib | page |
|-----------------------------------|---|-------------------|------------------|---|--------------------|-----|------|
|                                   | Without sensor  | With pulse sensor | With lock sensor | With PWM control function<br>and pulse sensor |                    |     |      |
|                                   | 9S0612S401  | 9S0612S402        | ➤ 9S0612S401     | 9S0612S4D01                                   |                    |     |      |
| 9S0612S4011                       | —   | 9S0612S4011       | —                | 9S0612P4S011                                  | 60 × 60 × 25 mm    | No  | 78   |
| 9S0812F401                        | 9S0812F402  | ➤ 9S0812F401      | 9S0812F4D01      | ➤ 9S0812P4F01                                 | 80 × 80 × 25 mm    | Yes | 112  |
| 9S0812F4011                       | 9S0812F4021   | 9S0812F4011       | 9S0812F4D011     | 9S0812P4F011                                  | 80 × 80 × 25 mm    | No  | 112  |
| 9S0812H401                        | 9S0812H402  | ➤ 9S0812H401      | 9S0812H4D01      | —   | 80 × 80 × 25 mm    | Yes | 112  |
| 9S0812H4011                       | —   | 9S0812H4011       | 9S0812H4D011     | —   | 80 × 80 × 25 mm    | No  | 112  |
| 9S0812L401                        | 9S0812L402  | ➤ 9S0812L401      | 9S0812L4D01      | —   | 80 × 80 × 25 mm    | Yes | 112  |
| 9S0812L4011                       | 9S0812L4021   | 9S0812L4011       | 9S0812L4D011     | —   | 80 × 80 × 25 mm    | No  | 112  |
| 9S0812M401                        | 9S0812M402  | ➤ 9S0812M401      | 9S0812M4D01      | 9S0812P4M01                                   | 80 × 80 × 25 mm    | Yes | 112  |
| 9S0812M4011                       | 9S0812M4021   | 9S0812M4011       | 9S0812M4D011     | 9S0812P4M011                                  | 80 × 80 × 25 mm    | No  | 112  |
| 9S0824L401                        | ➤ 9S0824L402  | ➤ 9S0824L401      | 9S0824L4D01      | —   | 80 × 80 × 25 mm    | Yes | 112  |
| 9S0824L4011                       | 9S0824L4021   | 9S0824L4011       | 9S0824L4D011     | —   | 80 × 80 × 25 mm    | No  | 112  |
| 9S0824M401                        | 9S0824M402  | ➤ 9S0824M401      | 9S0824M4D01      | —   | 80 × 80 × 25 mm    | Yes | 112  |
| 9S0824M4011                       | 9S0824M4021   | 9S0824M4011       | 9S0824M4D011     | —   | 80 × 80 × 25 mm    | No  | 112  |
| 9S0912F401                        | 9S0912F402  | ➤ 9S0912F401      | 9S0912F4D01      | ➤ 9S0912P4F01                                 | 92 × 92 × 25 mm    | Yes | 145  |
| 9S0912F4011                       | 9S0912F4021   | 9S0912F4011       | 9S0912F4D011     | 9S0912P4F011                                  | 92 × 92 × 25 mm    | No  | 145  |
| 9S0912L401                        | 9S0912L402  | ➤ 9S0912L401      | 9S0912L4D01      | —   | 92 × 92 × 25 mm    | Yes | 145  |
| 9S0912L4011                       | 9S0912L4021   | 9S0912L4011       | 9S0912L4D011     | —   | 92 × 92 × 25 mm    | No  | 145  |
| 9S0912M401                        | 9S0912M402  | ➤ 9S0912M401      | 9S0912M4D01      | 9S0912P4M01                                   | 92 × 92 × 25 mm    | Yes | 145  |
| 9S0912M4011                       | 9S0912M4021   | 9S0912M4011       | 9S0912M4D011     | 9S0912P4M011                                  | 92 × 92 × 25 mm    | No  | 145  |
| 9S0924F401                        | 9S0924F402  | ➤ 9S0924F401      | 9S0924F4D01      | —   | 92 × 92 × 25 mm    | Yes | 145  |
| 9S0924F4011                       | 9S0924F4021   | 9S0924F4011       | —                | —   | 92 × 92 × 25 mm    | No  | 145  |
| 9S0924L401                        | 9S0924L402  | ➤ 9S0924L401      | 9S0924L4D01      | —   | 92 × 92 × 25 mm    | Yes | 145  |
| 9S0924L4011                       | 9S0924L4021   | 9S0924L4011       | —                | —   | 92 × 92 × 25 mm    | No  | 145  |
| 9S0924M401                        | 9S0924M402  | ➤ 9S0924M401      | 9S0924M4D01      | —   | 92 × 92 × 25 mm    | Yes | 145  |
| 9S0924M4011                       | 9S0924M4021   | 9S0924M4011       | —                | —   | 92 × 92 × 25 mm    | No  | 145  |
| 9S1212F401                        | 9S1212F402  | ➤ 9S1212F401      | 9S1212F4D01      | 9S1212P4F01                                   | 120 × 120 × 25 mm  | Yes | 176  |
| 9S1212F4011                       | 9S1212F4021   | 9S1212F4011       | 9S1212F4D011     | 9S1212P4F011                                  | 120 × 120 × 25 mm  | No  | 176  |
| 9S1212H401                        | 9S1212H402  | ➤ 9S1212H401      | 9S1212H4D01      | ➤ 9S1212P4H01                                 | 120 × 120 × 25 mm  | Yes | 176  |
| 9S1212H4011                       | 9S1212H4021   | 9S1212H4011       | —                | 9S1212P4H011                                  | 120 × 120 × 25 mm  | No  | 176  |
| 9S1212L401                        | 9S1212L402  | ➤ 9S1212L401      | 9S1212L4D01      | —   | 120 × 120 × 25 mm  | Yes | 176  |
| 9S1212L4011                       | 9S1212L4021   | 9S1212L4011       | 9S1212L4D011     | 9S1212P4L011                                  | 120 × 120 × 25 mm  | No  | 176  |
| 9S1212M401                        | 9S1212M402  | ➤ 9S1212M401      | 9S1212M4D01      | 9S1212P4M01                                   | 120 × 120 × 25 mm  | Yes | 176  |
| 9S1212M4011                       | 9S1212M4021   | 9S1212M4011       | 9S1212M4D011     | 9S1212P4M011                                  | 120 × 120 × 25 mm  | No  | 176  |
| 9S1224M401                        | ➤ 9S1224M402  | ➤ 9S1224M401      | 9S1224M4D01      | —   | 120 × 120 × 25 mm  | Yes | 176  |
| 9S1224M4011                       | 9S1224M4021   | 9S1224M4011       | 9S1224M4D011     | —   | 120 × 120 × 25 mm  | No  | 176  |
| 9SG1212G101                       | ➤ 9SG1212G102   | ➤ 9SG1212G101     | 9SG1212G1D01     | ➤ 9SG1212P1G01                                | 120 × 120 × 38 mm  | No  | 184  |
| 9SG1224G101                       | ➤ 9SG1224G102   | ➤ 9SG1224G101     | ➤ 9SG1224G1D01   | ➤ 9SG1224P1G01                                | 120 × 120 × 38 mm  | No  | 184  |
| 9SG1224H101                       | 9SG1224H102   | 9SG1224H101       | 9SG1224H1D01     | —   | 120 × 120 × 38 mm  | No  | 184  |
| 9SG1248G101                       | 9SG1248G102   | ➤ 9SG1248G101     | —                | ➤ 9SG1248P1G01                                | 120 × 120 × 38 mm  | No  | 184  |
| 9SG5724P5H61                      | 9SG5724H562   | —                 | —                | ➤ 9SG5724P5H61                                | ∅172 × 150 × 31 mm | No  | 207  |
| 9SG5748P5G01                      | —   | —                 | —                | ➤ 9SG5748P5G01                                | ∅172 × 150 × 51 mm | No  | 207  |
| 9SG5748P5H01                      | —   | —                 | —                | ➤ 9SG5748P5H01                                | ∅172 × 150 × 51 mm | No  | 207  |
| 9TD12P6G001                       | —   | —                 | —                | 9TD12P6G001                                   | ∅70 × 20 mm        | No  | 464  |
| 9TG24P0G01                        | 9TG24G002   | 9TG24G001         | —                | 9TG24P0G01                                    | ∅175 × 69 mm       | —   | 476  |
| 9TG24P0S01                        | 9TG24S002   | 9TG24S001         | —                | 9TG24P0S01                                    | ∅175 × 69 mm       | —   | 476  |
| 9TG48P0G01                        | —   | —                 | —                | 9TG48P0G01                                    | ∅175 × 69 mm       | —   | 476  |
| 9TGA24P0H001                      | —   | —                 | —                | 9TGA24P0H001                                  | ∅175 × 69 mm       | —   | 473  |
| 9TGA48P0G001                      | —   | —                 | —                | 9TGA48P0G001                                  | ∅175 × 69 mm       | —   | 473  |
| 9TJ24P0H61                        | —   | —                 | —                | 9TJ24P0H61                                    | ∅133 × 91 mm       | —   | 469  |
| 9TJ48P0H01                        | —   | —                 | —                | 9TJ48P0H01                                    | ∅133 × 91 mm       | —   | 469  |
| 9TM24P4H01                        | —   | —                 | —                | 9TM24P4H01                                    | ∅100 × 25 mm       | —   | 466  |
| 9TM48P4H01                        | 9TM48H402   | —                 | —                | 9TM48P4H01                                    | ∅100 × 25 mm       | —   | 466  |
| 9TN24P1H01                        | —   | —                 | —                | 9TN24P1H01                                    | ∅150 × 35 mm       | —   | 471  |
| 9TN48P1H01                        | —   | —                 | —                | 9TN48P1H01                                    | ∅150 × 35 mm       | —   | 471  |
| 9TP24P0H001                       | —   | —                 | —                | 9TP24P0H001                                   | ∅221 × 71 mm       | —   | 479  |
| 9TP48P0G001                       | 9TP48G0002  | —                 | —                | 9TP48P0G001                                   | ∅221 × 71 mm       | —   | 479  |
| 9TP48P0H001                       | —   | —                 | —                | 9TP48P0H001                                   | ∅221 × 71 mm       | —   | 479  |
| 9TS48P0G001                       | —   | —                 | —                | 9TS48P0G001                                   | ∅225 × 99 mm       | —   | 482  |
| 9TS48P0H001                       | —   | —                 | —                | 9TS48P0H001                                   | ∅225 × 99 mm       | —   | 482  |
| 9W1BM12P2H001                     | —   | —                 | —                | 9W1BM12P2H001                                 | 97 × 33 mm         | —   | 360  |


Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The ➤ mark indicates Short Lead Time Service applicable models. See p. 654 for details.




| Models listed in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "-" models.) |                   |                  |  | Frame size         | Rib | page |
|--------------------------------|---|-------------------|------------------|--|--------------------|-----|------|
|                                | Without sensor  | With pulse sensor | With lock sensor | With PWM control function and pulse sensor |                    |     |      |
|                                | 9W1BM12P2M001   | —                 | —                | —  |                    |     |      |
| 9W1BM24P2H001                  | —   | —                 | —                | 9W1BM24P2H001                              | 97 × 33 mm         | —   | 360  |
| 9W1BM24P2M001                  | —   | —                 | —                | 9W1BM24P2M001                              | 97 × 33 mm         | —   | 360  |
| 9W1TG48P0H61                   | —   | —                 | —                | 9W1TG48P0H61                               | ∅175 × 69 mm       | —   | 346  |
| 9W1TJ24P0H61                   | —   | —                 | —                | 9W1TJ24P0H61                               | ∅133 × 91 mm       | —   | 337  |
| 9W1TJ48P0H61                   | —   | —                 | —                | 9W1TJ48P0H61                               | ∅133 × 91 mm       | —   | 337  |
| 9W1TM48P4G01                   | —   | —                 | —                | 9W1TM48P4G01                               | ∅100 × 25 mm       | —   | 334  |
| 9W1TM48P4H01                   | —   | —                 | —                | 9W1TM48P4H01                               | ∅100 × 25 mm       | —   | 334  |
| 9W1TN48P1H01                   | —   | —                 | —                | 9W1TN48P1H01                               | ∅150 × 35 mm       | —   | 342  |
| 9W2TGA48P0G001                 | —   | —                 | —                | 9W2TGA48P0G001                             | ∅175 × 69 mm       | —   | 344  |
| 9W2TN24P1H001                  | —   | —                 | —                | 9W2TN24P1H001                              | ∅150 × 35 mm       | —   | 339  |
| 9W2TN48P1H001                  | —   | —                 | —                | 9W2TN48P1H001                              | ∅150 × 35 mm       | —   | 339  |
| 9W2TP24P0H001                  | —   | —                 | —                | 9W2TP24P0H001                              | ∅221 × 71 mm       | —   | 348  |
| 9W2TP48P0S001                  | —   | —                 | —                | 9W2TP48P0S001                              | ∅221 × 71 mm       | —   | 348  |
| 9W2TS48P0S001                  | —   | —                 | —                | 9W2TS48P0S001                              | ∅225 × 99 mm       | —   | 351  |
| 9WE1724K501                    | 9WE1724K502   | 9WE1724K501       | —                | —  | ∅172 × 51 mm       | No  | 330  |
| 9WE5724K501                    | 9WE5724K502   | 9WE5724K501       | —                | —  | ∅172 × 150 × 51 mm | No  | 328  |
| 9WE5748K501                    | 9WE5748K502   | 9WE5748K501       | 9WE5748K5D01     | 9WE5748P5K01                               | ∅172 × 150 × 51 mm | No  | 328  |
| 9WF0424F601                    | 9WF0424F602   | 9WF0424F601       | 9WF0424F6D01     | —  | 40 × 40 × 20 mm    | Yes | 368  |
| 9WF0424H601                    | 9WF0424H602   | 9WF0424H601       | 9WF0424H6D01     | —  | 40 × 40 × 20 mm    | Yes | 368  |
| 9WF0424H701                    | 9WF0424H702   | 9WF0424H701       | 9WF0424H7D01     | —  | 40 × 40 × 15 mm    | Yes | 364  |
| 9WF0624H401                    | 9WF0624H402   | 9WF0624H401       | 9WF0624H4D01     | —  | 60 × 60 × 25 mm    | Yes | 376  |
| 9WF0624H601                    | —   | 9WF0624H601       | 9WF0624H6D01     | —  | 60 × 60 × 20 mm    | Yes | 374  |
| 9WF0624H701                    | 9WF0624H702   | 9WF0624H701       | 9WF0624H7D01     | —  | 60 × 60 × 15 mm    | Yes | 370  |
| 9WF0824S401                    | 9WF0824S402   | 9WF0824S401       | 9WF0824S4D01     | —  | 80 × 80 × 25 mm    | Yes | 380  |
| 9WF0924H201                    | 9WF0924H202   | 9WF0924H201       | 9WF0924H2D01     | —  | 92 × 92 × 32 mm    | Yes | 388  |
| 9WF0924H2011                   | —   | 9WF0924H2011      | —                | —  | 92 × 92 × 32 mm    | No  | 388  |
| 9WF0924H401                    | 9WF0924H402   | 9WF0924H401       | 9WF0924H4D01     | —  | 92 × 92 × 25 mm    | Yes | 384  |
| 9WF0924H4011                   | —   | 9WF0924H4011      | 9WF0924H4D011    | —  | 92 × 92 × 25 mm    | No  | 384  |
| 9WF0924S201                    | 9WF0924S202   | 9WF0924S201       | 9WF0924S2D01     | —  | 92 × 92 × 32 mm    | Yes | 388  |
| 9WF0924S2011                   | —   | 9WF0924S2011      | —                | —  | 92 × 92 × 32 mm    | No  | 388  |
| 9WF1224H101                    | 9WF1224H102   | 9WF1224H101       | 9WF1224H1D01     | —  | 120 × 120 × 38 mm  | Yes | 390  |
| 9WFA0424G6001                  | 9WFA0424G6002   | 9WFA0424G6001     | 9WFA0424G6D001   | 9WFA0424P6G001                             | 40 × 40 × 20 mm    | Yes | 366  |
| 9WFA0624G6001                  | 9WFA0624G6002   | 9WFA0624G6001     | 9WFA0624G6D001   | 9WFA0624P6G001                             | 60 × 60 × 20 mm    | Yes | 372  |
| 9WFA0824G6001                  | 9WFA0824G6002   | 9WFA0824G6001     | 9WFA0824G6D001   | 9WFA0824P6G001                             | 80 × 80 × 20 mm    | Yes | 378  |
| 9WFA0924G2001                  | 9WFA0924G2002   | 9WFA0924G2001     | 9WFA0924G2D001   | 9WFA0924P2G001                             | 92 × 92 × 32 mm    | Yes | 386  |
| 9WFA0924G4001                  | —   | 9WFA0924G4001     | —                | 9WFA0924P4G001                             | 92 × 92 × 25 mm    | Yes | 382  |
| 9WFA0924G40011                 | —   | 9WFA0924G40011    | —                | 9WFA0924P4G0011                            | 92 × 92 × 25 mm    | No  | 382  |
| 9WFA0924H4001                  | —   | 9WFA0924H4001     | —                | 9WFA0924P4H001                             | 92 × 92 × 25 mm    | Yes | 382  |
| 9WFA0924H40011                 | —   | 9WFA0924H40011    | —                | 9WFA0924P4H0011                            | 92 × 92 × 25 mm    | No  | 382  |
| 9WG1212E101-E                  | 9WG1212E102-E   | 9WG1212E101-E     | 9WG1212E1D01-E   | —  | 120 × 120 × 38 mm  | No  | 310  |
| 9WG1212F101-E                  | 9WG1212F102-E   | 9WG1212F101-E     | 9WG1212F1D01-E   | —  | 120 × 120 × 38 mm  | No  | 310  |
| 9WG1212G101-E                  | 9WG1212G102-E   | 9WG1212G101-E     | 9WG1212G1D01-E   | —  | 120 × 120 × 38 mm  | No  | 310  |
| 9WG1212H101-E                  | 9WG1212H102-E   | 9WG1212H101-E     | 9WG1212H1D01-E   | —  | 120 × 120 × 38 mm  | No  | 310  |
| 9WG1212M101-E                  | 9WG1212M102-E   | 9WG1212M101-E     | 9WG1212M1D01-E   | —  | 120 × 120 × 38 mm  | No  | 310  |
| 9WG1224E101-E                  | 9WG1224E102-E   | 9WG1224E101-E     | 9WG1224E1D01-E   | —  | 120 × 120 × 38 mm  | No  | 310  |
| 9WG1224F101-E                  | 9WG1224F102-E   | 9WG1224F101-E     | 9WG1224F1D01-E   | —  | 120 × 120 × 38 mm  | No  | 310  |
| 9WG1224G101-E                  | 9WG1224G102-E   | 9WG1224G101-E     | 9WG1224G1D01-E   | —  | 120 × 120 × 38 mm  | No  | 310  |
| 9WG1224H101-E                  | 9WG1224H102-E   | 9WG1224H101-E     | 9WG1224H1D01-E   | —  | 120 × 120 × 38 mm  | No  | 310  |
| 9WG1224M101-E                  | 9WG1224M102-E   | 9WG1224M101-E     | 9WG1224M1D01-E   | —  | 120 × 120 × 38 mm  | No  | 310  |
| 9WG1248E101-E                  | 9WG1248E102-E   | 9WG1248E101-E     | 9WG1248E1D01-E   | —  | 120 × 120 × 38 mm  | No  | 310  |
| 9WG1248F101-E                  | 9WG1248F102-E   | 9WG1248F101-E     | 9WG1248F1D01-E   | —  | 120 × 120 × 38 mm  | No  | 310  |
| 9WG1248G101-E                  | 9WG1248G102-E   | 9WG1248G101-E     | 9WG1248G1D01-E   | —  | 120 × 120 × 38 mm  | No  | 310  |
| 9WG1248H101-E                  | 9WG1248H102-E   | 9WG1248H101-E     | 9WG1248H1D01-E   | —  | 120 × 120 × 38 mm  | No  | 310  |
| 9WG1248M101-E                  | 9WG1248M102-E   | 9WG1248M101-E     | 9WG1248M1D01-E   | —  | 120 × 120 × 38 mm  | No  | 310  |
| 9WG5748P5G001                  | 9WG5748G5002  | —                 | —                | 9WG5748P5G001                              | ∅172 × 150 × 51 mm | No  | 326  |
| 9WG5748P5H001                  | 9WG5748H5002  | 9WG5748H5001      | 9WG5748H5D001    | 9WG5748P5H001                              | ∅172 × 150 × 51 mm | No  | 326  |
| 9WL0412P3G001                  | 9WL0412G3002  | 9WL0412G3001      | 9WL0412G3D001    | 9WL0412P3G001                              | 40 × 40 × 28 mm    | No  | 272  |
| 9WL0412P3J001                  | 9WL0412J3002  | 9WL0412J3001      | —                | 9WL0412P3J001                              | 40 × 40 × 28 mm    | No  | 272  |
| 9WL0424P3G001                  | 9WL0424G3002  | 9WL0424G3001      | —                | 9WL0424P3G001                              | 40 × 40 × 28 mm    | No  | 272  |
| 9WL0424P3J001                  | 9WL0424J3002  | 9WL0424J3001      | —                | 9WL0424P3J001                              | 40 × 40 × 28 mm    | No  | 272  |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The  mark indicates Short Lead Time Service applicable models. See p. 654 for details.


| Models listed in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "-" models.) |                   |                  |  | Frame size        | Rib | page |
|--------------------------------|---|-------------------|------------------|--|-------------------|-----|------|
|                                | Without sensor  | With pulse sensor | With lock sensor | With PWM control function and pulse sensor |                   |     |      |
|                                | 9WL0612P4H001   | 9WL0612H4002      | —                | —  |                   |     |      |
| 9WL0612P4J001                  | 9WL0612J4002  | —                 | 9WL0612J4D001    | 9WL0612P4J001                              | 60 × 60 × 25 mm   | No  | 277  |
| 9WL0612P4S001                  | 9WL0612S4002  | —                 | 9WL0612S4D001    | 9WL0612P4S001                              | 60 × 60 × 25 mm   | No  | 277  |
| 9WL0624P4H001                  | —   | 9WL0624H4001      | —                | 9WL0624P4H001                              | 60 × 60 × 25 mm   | No  | 277  |
| 9WL0624P4J001                  | —   | —                 | 9WL0624J4D001    | 9WL0624P4J001                              | 60 × 60 × 25 mm   | No  | 277  |
| 9WL0624P4S001                  | 9WL0624S4002  | 9WL0624S4001      | —                | 9WL0624P4S001                              | 60 × 60 × 25 mm   | No  | 277  |
| 9WL0812L4001                   | 9WL0812L4002  | 9WL0812L4001      | —                | —  | 80 × 80 × 25 mm   | No  | 285  |
| 9WL0812P4G001                  | —   | —                 | 9WL0812G4D001    | 9WL0812P4G001                              | 80 × 80 × 25 mm   | No  | 285  |
| 9WL0812P4H001                  | 9WL0812H4002  | 9WL0812H4001      | 9WL0812H4D001    | 9WL0812P4H001                              | 80 × 80 × 25 mm   | No  | 285  |
| 9WL0812P4J001                  | —   | —                 | —                | 9WL0812P4J001                              | 80 × 80 × 25 mm   | No  | 285  |
| 9WL0824F4001                   | 9WL0824F4002  | 9WL0824F4001      | —                | —  | 80 × 80 × 25 mm   | No  | 285  |
| 9WL0824L4001                   | 9WL0824L4002  | 9WL0824L4001      | —                | —  | 80 × 80 × 25 mm   | No  | 285  |
| 9WL0824P4G001                  | —   | —                 | —                | 9WL0824P4G001                              | 80 × 80 × 25 mm   | No  | 285  |
| 9WL0824P4H001                  | 9WL0824H4002  | 9WL0824H4001      | 9WL0824H4D001    | 9WL0824P4H001                              | 80 × 80 × 25 mm   | No  | 285  |
| 9WL0824P4J001                  | 9WL0824J4002  | —                 | —                | 9WL0824P4J001                              | 80 × 80 × 25 mm   | No  | 285  |
| 9WL0912M4001                   | 9WL0912M4002  | 9WL0912M4001      | —                | —  | 92 × 92 × 25 mm   | No  | 295  |
| 9WL0912P1F001                  | —   | —                 | —                | 9WL0912P1F001                              | 92 × 92 × 38 mm   | No  | 302  |
| 9WL0912P1H001                  | —   | —                 | —                | 9WL0912P1H001                              | 92 × 92 × 38 mm   | No  | 302  |
| 9WL0912P4G001                  | —   | —                 | —                | 9WL0912P4G001                              | 92 × 92 × 25 mm   | No  | 295  |
| 9WL0912P4H001                  | 9WL0912H4002  | 9WL0912H4001      | 9WL0912H4D001    | 9WL0912P4H001                              | 92 × 92 × 25 mm   | No  | 295  |
| 9WL0912P4J001                  | 9WL0912J4002  | —                 | —                | 9WL0912P4J001                              | 92 × 92 × 25 mm   | No  | 295  |
| 9WL0912P4S001                  | —   | —                 | —                | 9WL0912P4S001                              | 92 × 92 × 25 mm   | No  | 295  |
| 9WL0924F4001                   | 9WL0924F4002  | 9WL0924F4001      | —                | —  | 92 × 92 × 25 mm   | No  | 295  |
| 9WL0924M4001                   | 9WL0924M4002  | 9WL0924M4001      | 9WL0924M4D001    | —  | 92 × 92 × 25 mm   | No  | 295  |
| 9WL0924P1F001                  | 9WL0924F1002  | —                 | —                | 9WL0924P1F001                              | 92 × 92 × 38 mm   | No  | 302  |
| 9WL0924P1H001                  | —   | —                 | —                | 9WL0924P1H001                              | 92 × 92 × 38 mm   | No  | 302  |
| 9WL0924P4H001                  | 9WL0924H4002  | 9WL0924H4001      | 9WL0924H4D001    | 9WL0924P4H001                              | 92 × 92 × 25 mm   | No  | 295  |
| 9WL0924P4J001                  | —   | —                 | —                | 9WL0924P4J001                              | 92 × 92 × 25 mm   | No  | 295  |
| 9WL0924P4S001                  | —   | —                 | —                | 9WL0924P4S001                              | 92 × 92 × 25 mm   | No  | 295  |
| 9WL0948P1F601                  | —   | —                 | —                | 9WL0948P1F601                              | 92 × 92 × 38 mm   | No  | 302  |
| 9WL0948P1H601                  | —   | —                 | —                | 9WL0948P1H601                              | 92 × 92 × 38 mm   | No  | 302  |
| 9WL1412P1A001                  | —   | —                 | —                | 9WL1412P1A001                              | 140 × 140 × 38 mm | No  | 316  |
| 9WL1412P1H001                  | —   | —                 | —                | 9WL1412P1H001                              | 140 × 140 × 38 mm | No  | 316  |
| 9WL1412P1M001                  | 9WL1412M1002  | 9WL1412M1001      | 9WL1412M1D001    | 9WL1412P1M001                              | 140 × 140 × 38 mm | No  | 316  |
| 9WL1412A5001                   | 9WL1412A5002  | 9WL1412A5001      | 9WL1412A5D001    | —  | 140 × 140 × 51 mm | No  | 321  |
| 9WL1412H5001                   | 9WL1412H5002  | 9WL1412H5001      | 9WL1412H5D001    | —  | 140 × 140 × 51 mm | No  | 321  |
| 9WL1412M5001                   | 9WL1412M5002  | 9WL1412M5001      | 9WL1412M5D001    | —  | 140 × 140 × 51 mm | No  | 321  |
| 9WL1412P5G001                  | —   | —                 | 9WL1412G5D001    | 9WL1412P5G001                              | 140 × 140 × 51 mm | No  | 321  |
| 9WL1412P5S001                  | —   | —                 | —                | 9WL1412P5S001                              | 140 × 140 × 51 mm | No  | 321  |
| 9WL1424P1A001                  | —   | —                 | —                | 9WL1424P1A001                              | 140 × 140 × 38 mm | No  | 316  |
| 9WL1424P1H001                  | —   | —                 | —                | 9WL1424P1H001                              | 140 × 140 × 38 mm | No  | 316  |
| 9WL1424P1M001                  | 9WL1424M1002  | 9WL1424M1001      | 9WL1424M1D001    | 9WL1424P1M001                              | 140 × 140 × 38 mm | No  | 316  |
| 9WL1424A5001                   | 9WL1424A5002  | 9WL1424A5001      | 9WL1424A5D001    | —  | 140 × 140 × 51 mm | No  | 321  |
| 9WL1424H5001                   | 9WL1424H5002  | 9WL1424H5001      | 9WL1424H5D001    | —  | 140 × 140 × 51 mm | No  | 321  |
| 9WL1424M5001                   | 9WL1424M5002  | 9WL1424M5001      | 9WL1424M5D001    | —  | 140 × 140 × 51 mm | No  | 321  |
| 9WL1424P5G001                  | —   | 9WL1424G5001      | —                | 9WL1424P5G001                              | 140 × 140 × 51 mm | No  | 321  |
| 9WL1424P5S001                  | —   | —                 | —                | 9WL1424P5S001                              | 140 × 140 × 51 mm | No  | 321  |
| 9WL1448A5001                   | 9WL1448A5002  | 9WL1448A5001      | 9WL1448A5D001    | —  | 140 × 140 × 51 mm | No  | 321  |
| 9WL1448H5001                   | 9WL1448H5002  | 9WL1448H5001      | 9WL1448H5D001    | —  | 140 × 140 × 51 mm | No  | 321  |
| 9WL1448L1001                   | 9WL1448L1002  | 9WL1448L1001      | 9WL1448L1D001    | —  | 140 × 140 × 38 mm | No  | 316  |
| 9WL1448M5001                   | 9WL1448M5002  | 9WL1448M5001      | 9WL1448M5D001    | —  | 140 × 140 × 51 mm | No  | 321  |
| 9WL1448P1A001                  | —   | —                 | —                | 9WL1448P1A001                              | 140 × 140 × 38 mm | No  | 316  |
| 9WL1448P1H001                  | —   | —                 | —                | 9WL1448P1H001                              | 140 × 140 × 38 mm | No  | 316  |
| 9WL1448P1M001                  | 9WL1448M1002  | 9WL1448M1001      | 9WL1448M1D001    | 9WL1448P1M001                              | 140 × 140 × 38 mm | No  | 316  |
| 9WL1448P5G001                  | —   | —                 | —                | 9WL1448P5G001                              | 140 × 140 × 51 mm | No  | 321  |
| 9WL1448P5S001                  | —   | —                 | —                | 9WL1448P5S001                              | 140 × 140 × 51 mm | No  | 321  |
| 9WP0412F6001                   | 9WP0412F6002  | 9WP0412F6001      | 9WP0412F6D001    | —  | 40 × 40 × 20 mm   | Yes | 270  |
| 9WP0412H6001                   | 9WP0412H6002  | 9WP0412H6001      | —                | —  | 40 × 40 × 20 mm   | Yes | 270  |
| 9WP0612D401                    | 9WP0612D402   | 9WP0612D401       | 9WP0612D4D01     | —  | 60 × 60 × 25 mm   | Yes | 280  |
| 9WP0612D4011                   | —   | 9WP0612D4011      | 9WP0612D4D011    | —  | 60 × 60 × 25 mm   | No  | 280  |
| 9WP0612G401                    | 9WP0612G402   | 9WP0612G401       | 9WP0612G4D01     | 9WP0612P4G01                               | 60 × 60 × 25 mm   | Yes | 280  |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The  mark indicates Short Lead Time Service applicable models. See p. 654 for details.

| Models listed in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "—" models.) |                   |                  |  | Frame size        | Rib | page |
|--------------------------------|---|-------------------|------------------|--|-------------------|-----|------|
|                                | Without sensor  | With pulse sensor | With lock sensor | With PWM control function and pulse sensor |                   |     |      |
|                                | 9WP0612G4011  | 9WP0612G4021      | 9WP0612G4011     | —  |                   |     |      |
| 9WP0612H401                    | 9WP0612H402   | 9WP0612H401       | 9WP0612H4D01     | —  | 60 × 60 × 25 mm   | Yes | 280  |
| 9WP0612H4011                   | 9WP0612H4021  | 9WP0612H4011      | 9WP0612H4D011    | —  | 60 × 60 × 25 mm   | No  | 280  |
| 9WP0624G401                    | 9WP0624G402   | 9WP0624G401       | 9WP0624G4D01     | —  | 60 × 60 × 25 mm   | Yes | 280  |
| 9WP0624G4011                   | —   | 9WP0624G4011      | —                | —  | 60 × 60 × 25 mm   | No  | 280  |
| 9WP0624H401                    | 9WP0624H402   | 9WP0624H401       | 9WP0624H4D01     | —  | 60 × 60 × 25 mm   | Yes | 280  |
| 9WP0624H4011                   | 9WP0624H4021  | 9WP0624H4011      | 9WP0624H4D011    | —  | 60 × 60 × 25 mm   | No  | 280  |
| 9WP0624J401                    | 9WP0624J402   | 9WP0624J401       | —                | —  | 60 × 60 × 25 mm   | Yes | 280  |
| 9WP0624J4011                   | —   | 9WP0624J4011      | —                | —  | 60 × 60 × 25 mm   | No  | 280  |
| 9WP0648H401                    | 9WP0648H402   | 9WP0648H401       | 9WP0648H4D01     | —  | 60 × 60 × 25 mm   | Yes | 280  |
| 9WP0648H4011                   | 9WP0648H4021  | 9WP0648H4011      | 9WP0648H4D011    | —  | 60 × 60 × 25 mm   | No  | 280  |
| 9WP0812G401                    | 9WP0812G402   | 9WP0812G401       | 9WP0812G4D01     | 9WP0812P4G01                               | 80 × 80 × 25 mm   | Yes | 289  |
| 9WP0812G4011                   | 9WP0812G4021  | 9WP0812G4011      | 9WP0812G4D011    | —  | 80 × 80 × 25 mm   | No  | 289  |
| 9WP0812H401                    | 9WP0812H402   | 9WP0812H401       | 9WP0812H4D01     | —  | 80 × 80 × 25 mm   | Yes | 289  |
| 9WP0812H4011                   | 9WP0812H4021  | 9WP0812H4011      | 9WP0812H4D011    | —  | 80 × 80 × 25 mm   | No  | 289  |
| 9WP0824H401                    | 9WP0824H402   | 9WP0824H401       | 9WP0824H4D01     | —  | 80 × 80 × 25 mm   | Yes | 289  |
| 9WP0824H4011                   | 9WP0824H4021  | 9WP0824H4011      | 9WP0824H4D011    | —  | 80 × 80 × 25 mm   | No  | 289  |
| 9WP0824S401                    | 9WP0824S402   | 9WP0824S401       | 9WP0824S4D01     | —  | 80 × 80 × 25 mm   | Yes | 289  |
| 9WP0824S4011                   | 9WP0824S4021  | 9WP0824S4011      | —                | —  | 80 × 80 × 25 mm   | No  | 289  |
| 9WP0848S401                    | 9WP0848S402   | 9WP0848S401       | 9WP0848S4D01     | —  | 80 × 80 × 25 mm   | Yes | 289  |
| 9WP0848S4011                   | 9WP0848S4021  | 9WP0848S4011      | 9WP0848S4D011    | —  | 80 × 80 × 25 mm   | No  | 289  |
| 9WP0912F401                    | 9WP0912F402   | 9WP0912F401       | 9WP0912F4D01     | —  | 92 × 92 × 25 mm   | Yes | 299  |
| 9WP0912F4011                   | —   | 9WP0912F4011      | 9WP0912F4D011    | —  | 92 × 92 × 25 mm   | No  | 299  |
| 9WP0912S401                    | 9WP0912S402   | 9WP0912S401       | 9WP0912S4D01     | —  | 92 × 92 × 25 mm   | Yes | 299  |
| 9WP0912S4011                   | —   | 9WP0912S4011      | —                | —  | 92 × 92 × 25 mm   | No  | 299  |
| 9WP0924B401                    | 9WP0924B402   | 9WP0924B401       | 9WP0924B4D01     | —  | 92 × 92 × 25 mm   | Yes | 299  |
| 9WP0924B4011                   | 9WP0924B4021  | 9WP0924B4011      | 9WP0924B4D011    | —  | 92 × 92 × 25 mm   | No  | 299  |
| 9WP0924F401                    | 9WP0924F402   | 9WP0924F401       | 9WP0924F4D01     | —  | 92 × 92 × 25 mm   | Yes | 299  |
| 9WP0924F4011                   | 9WP0924F4021  | 9WP0924F4011      | 9WP0924F4D011    | —  | 92 × 92 × 25 mm   | No  | 299  |
| 9WP0924G401                    | 9WP0924G402   | 9WP0924G401       | 9WP0924G4D01     | —  | 92 × 92 × 25 mm   | Yes | 299  |
| 9WP0924G4011                   | —   | 9WP0924G4011      | —                | —  | 92 × 92 × 25 mm   | No  | 299  |
| 9WP0924H401                    | 9WP0924H402   | 9WP0924H401       | 9WP0924H4D01     | —  | 92 × 92 × 25 mm   | Yes | 299  |
| 9WP0924H4011                   | —   | 9WP0924H4011      | —                | —  | 92 × 92 × 25 mm   | No  | 299  |
| 9WP0924S401                    | 9WP0924S402   | 9WP0924S401       | 9WP0924S4D01     | —  | 92 × 92 × 25 mm   | Yes | 299  |
| 9WP0924S4011                   | —   | 9WP0924S4011      | —                | —  | 92 × 92 × 25 mm   | No  | 299  |
| 9WP1212H101                    | 9WP1212H102   | 9WP1212H101       | 9WP1212H1D01     | —  | 120 × 120 × 38 mm | Yes | 313  |
| 9WP1212H1011                   | 9WP1212H1021  | 9WP1212H1011      | 9WP1212H1D011    | —  | 120 × 120 × 38 mm | No  | 313  |
| 9WP1212L101                    | 9WP1212L102   | 9WP1212L101       | —                | —  | 120 × 120 × 38 mm | Yes | 313  |
| 9WP1212L1011                   | —   | 9WP1212L1011      | —                | —  | 120 × 120 × 38 mm | No  | 313  |
| 9WP1212M101                    | 9WP1212M102   | 9WP1212M101       | —                | —  | 120 × 120 × 38 mm | Yes | 313  |
| 9WP1212M1011                   | 9WP1212M1021  | 9WP1212M1011      | —                | —  | 120 × 120 × 38 mm | No  | 313  |
| 9WP1224H101                    | 9WP1224H102   | 9WP1224H101       | 9WP1224H1D01     | —  | 120 × 120 × 38 mm | Yes | 313  |
| 9WP1224H1011                   | 9WP1224H1021  | 9WP1224H1011      | 9WP1224H1D011    | —  | 120 × 120 × 38 mm | No  | 313  |
| 9WP1224M101                    | 9WP1224M102   | 9WP1224M101       | —                | —  | 120 × 120 × 38 mm | Yes | 313  |
| 9WP1224M1011                   | 9WP1224M1021  | 9WP1224M1011      | —                | —  | 120 × 120 × 38 mm | No  | 313  |
| 9WP1248H101                    | 9WP1248H102   | 9WP1248H101       | 9WP1248H1D01     | —  | 120 × 120 × 38 mm | Yes | 313  |
| 9WP1248H1011                   | 9WP1248H1021  | 9WP1248H1011      | 9WP1248H1D011    | —  | 120 × 120 × 38 mm | No  | 313  |
| 9WP1248M101                    | 9WP1248M102   | 9WP1248M101       | 9WP1248M1D01     | —  | 120 × 120 × 38 mm | Yes | 313  |
| 9WP1248M1011                   | 9WP1248M1021  | 9WP1248M1011      | 9WP1248M1D011    | —  | 120 × 120 × 38 mm | No  | 313  |
| 9WPA0612P4G001                 | 9WPA0612G4002   | 9WPA0612G4001     | 9WPA0612G4D001   | 9WPA0612P4G001                             | 60 × 60 × 25 mm   | Yes | 275  |
| 9WPA0612P4G0011                | —   | —                 | —                | 9WPA0612P4G0011                            | 60 × 60 × 25 mm   | No  | 275  |
| 9WPA0624P4G001                 | 9WPA0624G4002   | 9WPA0624G4001     | 9WPA0624G4D001   | 9WPA0624P4G001                             | 60 × 60 × 25 mm   | Yes | 275  |
| 9WPA0624P4G0011                | —   | —                 | —                | 9WPA0624P4G0011                            | 60 × 60 × 25 mm   | No  | 275  |
| 9WPA0812P4G001                 | 9WPA0812G4002   | 9WPA0812G4001     | 9WPA0812G4D001   | 9WPA0812P4G001                             | 80 × 80 × 25 mm   | Yes | 283  |
| 9WPA0812P4G0011                | —   | —                 | —                | 9WPA0812P4G0011                            | 80 × 80 × 25 mm   | No  | 283  |
| 9WPA0824P4G001                 | 9WPA0824G4002   | 9WPA0824G4001     | 9WPA0824G4D001   | 9WPA0824P4G001                             | 80 × 80 × 25 mm   | Yes | 283  |
| 9WPA0824P4G0011                | —   | —                 | —                | 9WPA0824P4G0011                            | 80 × 80 × 25 mm   | No  | 283  |
| 9WPA0912P4G001                 | —   | —                 | —                | 9WPA0912P4G001                             | 92 × 92 × 25 mm   | Yes | 293  |
| 9WPA0912P4G0011                | —   | —                 | —                | 9WPA0912P4G0011                            | 92 × 92 × 25 mm   | No  | 293  |
| 9WPA0924P4G001                 | —   | —                 | —                | 9WPA0924P4G001                             | 92 × 92 × 25 mm   | Yes | 293  |
| 9WPA0924P4G0011                | —   | —                 | —                | 9WPA0924P4G0011                            | 92 × 92 × 25 mm   | No  | 293  |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The  mark indicates Short Lead Time Service applicable models. See p. 654 for details.

| Models listed<br>in product pages | List of models<br>(Below are optional models and not listed in product pages.<br>Standard compliance of these optional models may differ from that of the models listed in product pages.<br>Contact us for details of "—" models.) |                   |                  |   | Frame size        | Rib | page |
|-----------------------------------|---|-------------------|------------------|---|-------------------|-----|------|
|                                   | Without sensor  | With pulse sensor | With lock sensor | With PWM control function<br>and pulse sensor |                   |     |      |
|                                   | 9WV0812P1M001   | —                 | 9WV0812M1001     | 9WV0812M1D001                                 |                   |     |      |
| 9WV0812P1M0011                    | —   | —                 | —                | 9WV0812P1M0011                                | 80 × 80 × 38 mm   | No  | 291  |
| 9WV0848P1H001                     | —   | —                 | —                | 9WV0848P1H001                                 | 80 × 80 × 38 mm   | Yes | 291  |
| 9WV0848P1H0011                    | —   | —                 | —                | 9WV0848P1H0011                                | 80 × 80 × 38 mm   | No  | 291  |
| 9WV0924P1H001                     | 9WV0924H1002  | —                 | —                | 9WV0924P1H001                                 | 92 × 92 × 38 mm   | Yes | 305  |
| 9WV0948P1H001                     | —   | —                 | —                | 9WV0948P1H001                                 | 92 × 92 × 38 mm   | Yes | 305  |
| 9WV1212P1J001                     | 9WV1212J1002  | —                 | 9WV1212J1D001    | 9WV1212P1J001                                 | 120 × 120 × 38 mm | No  | 307  |
| 9WV1224P1H001                     | 9WV1224H102   | 9WV1224H101       | 9WV1224H1D001    | 9WV1224P1H001                                 | 120 × 120 × 38 mm | No  | 307  |
| 9WV1224P1J601                     | 9WV1224J1002  | 9WV1224J1001      | —                | 9WV1224P1J601                                 | 120 × 120 × 38 mm | No  | 307  |
| 9WV1248P1J001                     | 9WV1248J1002  | 9WV1248J1001      | 9WV1248J1D001    | 9WV1248P1J001                                 | 120 × 120 × 38 mm | No  | 307  |

Note 1: For compliance with standards, see individual product pages. Please contact your point of sale regarding low-speed sensors.

Note 2: The ☺ mark indicates Short Lead Time Service applicable models. See p. 654 for details.

# Index by Model No./Safety Standards List - ACDC Fans

| Models listed<br>in product pages | Option       | Frame size         | Model         | Rated voltage<br>[V] | Rib | Standard<br>(certification status is for the models listed in this catalog,<br>and standards for optional model numbers may differ.) |              |     |    |     | page |
|-----------------------------------|--------------|--------------------|---------------|----------------------|-----|--|--------------|-----|----|-----|------|
|                                   | Pulse sensor |                    |               |                      |     | UL<br>(cUL)  | CSA<br>(cUL) | TÜV | CE | PSE |      |
| ▶ 9AD0901H12                      | 9AD0901H11   | 92 × 92 × 38 mm    | San Ace 92AD  | 100 to 240           | Yes | ✓  | ✓            | ✓   | ✓  | ✓   | 516  |
| ▶ 9AD0901H121                     | 9AD0901H111  | 92 × 92 × 38 mm    | San Ace 92AD  | 100 to 240           | No  | ✓  | ✓            | ✓   | ✓  | ✓   | 516  |
| ▶ 9AD0901H1H                      | 9AD0901H11   | 92 × 92 × 38 mm    | San Ace 92AD  | 100 to 240           | Yes | ✓  | ✓            | ✓   | ✓  | ✓   | 516  |
| ▶ 9AD0901H1H1                     | 9AD0901H111  | 92 × 92 × 38 mm    | San Ace 92AD  | 100 to 240           | No  | ✓  | ✓            | ✓   | ✓  | ✓   | 516  |
| ▶ 9AD0901M12                      | 9AD0901M11   | 92 × 92 × 38 mm    | San Ace 92AD  | 100 to 240           | Yes | ✓  | ✓            | ✓   | ✓  | ✓   | 516  |
| ▶ 9AD0901M121                     | 9AD0901M111  | 92 × 92 × 38 mm    | San Ace 92AD  | 100 to 240           | No  | ✓  | ✓            | ✓   | ✓  | ✓   | 516  |
| ▶ 9AD0901M1H                      | 9AD0901M11   | 92 × 92 × 38 mm    | San Ace 92AD  | 100 to 240           | Yes | ✓  | ✓            | ✓   | ✓  | ✓   | 516  |
| ▶ 9AD0901M1H1                     | 9AD0901M111  | 92 × 92 × 38 mm    | San Ace 92AD  | 100 to 240           | No  | ✓  | ✓            | ✓   | ✓  | ✓   | 516  |
| ▶ 9AD1201H12                      | 9AD1201H11   | 120 × 120 × 38 mm  | San Ace 120AD | 100 to 240           | Yes | ✓  | ✓            | ✓   | ✓  | ✓   | 519  |
| ▶ 9AD1201H121                     | 9AD1201H111  | 120 × 120 × 38 mm  | San Ace 120AD | 100 to 240           | No  | ✓  | ✓            | ✓   | ✓  | ✓   | 519  |
| ▶ 9AD1201H1H                      | 9AD1201H11   | 120 × 120 × 38 mm  | San Ace 120AD | 100 to 240           | Yes | ✓  | ✓            | ✓   | ✓  | ✓   | 519  |
| ▶ 9AD1201H1H1                     | 9AD1201H111  | 120 × 120 × 38 mm  | San Ace 120AD | 100 to 240           | No  | ✓  | ✓            | ✓   | ✓  | ✓   | 519  |
| 9ADTS11P0F001                     | —            | ∅225 × 99 mm       | San Ace 225AD | 115                  | —   | ✓  | ✓            | ✓   | ✓  | —   | 522  |
| 9ADTS11P0G001                     | —            | ∅225 × 99 mm       | San Ace 225AD | 115                  | —   | ✓  | ✓            | ✓   | ✓  | —   | 522  |
| 9ADTS23P0F001                     | —            | ∅225 × 99 mm       | San Ace 225AD | 230                  | —   | ✓  | ✓            | ✓   | ✓  | —   | 522  |
| 9ADTS23P0G001                     | —            | ∅225 × 99 mm       | San Ace 225AD | 230                  | —   | ✓  | ✓            | ✓   | ✓  | —   | 522  |
| 9ADW1TS11P0H001                   | —            | ∅225 × 99 mm       | San Ace 225AD | 115                  | —   | ✓  | ✓            | ✓   | ✓  | —   | 525  |
| 9ADW1TS11P0M001                   | —            | ∅225 × 99 mm       | San Ace 225AD | 115                  | —   | ✓  | ✓            | ✓   | ✓  | —   | 525  |
| 9ADW1TS23P0H001                   | —            | ∅225 × 99 mm       | San Ace 225AD | 230                  | —   | ✓  | ✓            | ✓   | ✓  | —   | 525  |
| 9ADW1TS23P0M001                   | —            | ∅225 × 99 mm       | San Ace 225AD | 230                  | —   | ✓  | ✓            | ✓   | ✓  | —   | 525  |
| 9ADB1TS11P0F001                   | —            | 270 × 270 × 119 mm | San Ace 225AD | 115                  | —   | ✓  | ✓            | ✓   | ✓  | —   | 528  |
| 9ADB1TS11P0G001                   | —            | 270 × 270 × 119 mm | San Ace 225AD | 115                  | —   | ✓  | ✓            | ✓   | ✓  | —   | 528  |
| 9ADB1TS23P0F001                   | —            | 270 × 270 × 119 mm | San Ace 225AD | 230                  | —   | ✓  | ✓            | ✓   | ✓  | —   | 528  |
| 9ADB1TS23P0G001                   | —            | 270 × 270 × 119 mm | San Ace 225AD | 230                  | —   | ✓  | ✓            | ✓   | ✓  | —   | 528  |
| 9ADB1W1TS11P0H001                 | —            | 270 × 270 × 119 mm | San Ace 225AD | 115                  | —   | ✓  | ✓            | ✓   | ✓  | —   | 531  |
| 9ADB1W1TS11P0M001                 | —            | 270 × 270 × 119 mm | San Ace 225AD | 115                  | —   | ✓  | ✓            | ✓   | ✓  | —   | 531  |
| 9ADB1W1TS23P0H001                 | —            | 270 × 270 × 119 mm | San Ace 225AD | 230                  | —   | ✓  | ✓            | ✓   | ✓  | —   | 531  |
| 9ADB1W1TS23P0M001                 | —            | 270 × 270 × 119 mm | San Ace 225AD | 230                  | —   | ✓  | ✓            | ✓   | ✓  | —   | 531  |

Note 1: Please contact your point of sale for pulse sensors and lock sensors.

Note 2: The ▶ mark indicates Short Lead Time Service applicable models. See p. 654 for details.

# Index by Model No./Safety Standards List - AC Fans

| Models listed in product pages | Frame size                  | Model       | Rated voltage [V] | UL | CSA | TÜV | CE | PSE | Note | page |
|--------------------------------|-----------------------------|-------------|-------------------|----|-----|-----|----|-----|------|------|
| 109-033UL                      | 80×80×42 mm                 | San Ace 80  | 115               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 546  |
| 109-040UL                      | 80×80×42 mm                 | San Ace 80  | 100               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 546  |
| 109-041UL                      | 80×80×42 mm                 | San Ace 80  | 200               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 546  |
| 109-043UL                      | 80×80×42 mm                 | San Ace 80  | 115               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 546  |
| 109-044UL                      | 80×80×42 mm                 | San Ace 80  | 230               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 546  |
| 109-047UL                      | 80×80×42 mm                 | San Ace 80  | 100               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 546  |
| 109-130                        | 60×60×38 mm                 | San Ace 60  | 100               | ✓  | —   | ✓   | ✓  | —   |      | 538  |
| 109-133                        | 60×60×38 mm                 | San Ace 60  | 115               | ✓  | —   | ✓   | ✓  | —   |      | 538  |
| 109-150                        | 80×80×38 mm                 | San Ace 80  | 100               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 544  |
| 109-151                        | 80×80×38 mm                 | San Ace 80  | 200               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 544  |
| 109-153                        | 80×80×38 mm                 | San Ace 80  | 115               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 544  |
| 109-154                        | 80×80×38 mm                 | San Ace 80  | 230               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 544  |
| 109-180                        | 60×60×28 mm                 | San Ace 60  | 100               | ✓  | —   | ✓   | ✓  | —   |      | 536  |
| 109-183                        | 60×60×28 mm                 | San Ace 60  | 115               | ✓  | —   | ✓   | ✓  | —   |      | 536  |
| 109-210                        | 80×80×20 mm                 | San Ace 80  | 100               | ✓  | ✓   | ✓   | ✓  | —   |      | 540  |
| 109-213                        | 80×80×20 mm                 | San Ace 80  | 115               | ✓  | ✓   | ✓   | ✓  | —   |      | 540  |
| 109-311                        | ∅172×51 mm (Round type)     | San Ace 172 | 100               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 566  |
| 109-312                        | ∅172×51 mm (Round type)     | San Ace 172 | 200               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 566  |
| 109-313                        | ∅172×51 mm (Round type)     | San Ace 172 | 230               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 566  |
| 109-314                        | ∅172×51 mm (Round type)     | San Ace 172 | 115               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 566  |
| 109-371                        | ∅172×51 mm (with sensor)    | San Ace 172 | 100               | ✓  | —   | ✓   | ✓  | ✓   |      | 566  |
| 109-372                        | ∅172×51 mm (with sensor)    | San Ace 172 | 200               | ✓  | —   | ✓   | ✓  | ✓   |      | 566  |
| 109-373                        | ∅172×51 mm (with sensor)    | San Ace 172 | 230               | ✓  | —   | ✓   | ✓  | ✓   |      | 566  |
| 109-374                        | ∅172×51 mm (with sensor)    | San Ace 172 | 115               | ✓  | —   | ✓   | ✓  | ✓   |      | 566  |
| 109-601                        | 160×160×51 mm               | San Ace 160 | 100               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 561  |
| 109-602                        | 160×160×51 mm               | San Ace 160 | 200               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 561  |
| 109-603                        | 160×160×51 mm               | San Ace 160 | 230               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 561  |
| 109-604                        | 160×160×51 mm               | San Ace 160 | 115               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 561  |
| 109-641                        | 160×160×51 mm (with sensor) | San Ace 160 | 100               | ✓  | —   | ✓   | ✓  | ✓   |      | 561  |
| 109-642                        | 160×160×51 mm (with sensor) | San Ace 160 | 200               | ✓  | —   | ✓   | ✓  | ✓   |      | 561  |
| 109-643                        | 160×160×51 mm (with sensor) | San Ace 160 | 230               | ✓  | —   | ✓   | ✓  | ✓   |      | 561  |
| 109-644                        | 160×160×51 mm (with sensor) | San Ace 160 | 115               | ✓  | —   | ✓   | ✓  | ✓   |      | 561  |
| 109S005                        | 120×120×38 mm               | San Ace 120 | 100               | —  | —   | —   | —  | ✓   |      | 556  |
| 109S005UL                      | 120×120×38 mm               | San Ace 120 | 100               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 556  |
| 109S006                        | 120×120×38 mm               | San Ace 120 | 100               | —  | —   | —   | —  | ✓   |      | 556  |
| 109S006UL                      | 120×120×38 mm               | San Ace 120 | 100/115           | ✓  | ✓   | ✓   | ✓  | ✓   |      | 556  |
| 109S008                        | 120×120×38 mm               | San Ace 120 | 200               | —  | —   | —   | —  | ✓   |      | 556  |
| 109S008UL                      | 120×120×38 mm               | San Ace 120 | 200               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 556  |
| 109S010                        | 120×120×38 mm               | San Ace 120 | 200               | —  | —   | —   | —  | ✓   |      | 556  |
| 109S010UL                      | 120×120×38 mm               | San Ace 120 | 200/240           | ✓  | ✓   | ✓   | ✓  | ✓   |      | 556  |
| 109S013                        | 120×120×38 mm               | San Ace 120 | 100               | —  | —   | —   | —  | ✓   |      | 556  |
| 109S013UL                      | 120×120×38 mm               | San Ace 120 | 100               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 556  |
| 109S024                        | 120×120×38 mm               | San Ace 120 | 120               | —  | —   | —   | —  | ✓   |      | 556  |
| 109S024UL                      | 120×120×38 mm               | San Ace 120 | 115               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 556  |
| 109S025                        | 120×120×38 mm               | San Ace 120 | 230               | —  | —   | —   | —  | ✓   |      | 556  |
| 109S025UL                      | 120×120×38 mm               | San Ace 120 | 230               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 556  |
| 109S029UL                      | 120×120×38 mm               | San Ace 120 | 100               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 556  |
| 109S030                        | 80×80×25 mm                 | San Ace 80  | 100               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 542  |
| 109S031                        | 80×80×25 mm                 | San Ace 80  | 200               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 542  |
| 109S033                        | 80×80×25 mm                 | San Ace 80  | 115               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 542  |
| 109S034                        | 80×80×25 mm                 | San Ace 80  | 230               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 542  |
| 109S050                        | 80×80×25 mm                 | San Ace 80  | 100               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 542  |
| 109S051                        | 80×80×25 mm                 | San Ace 80  | 200               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 542  |
| 109S053                        | 80×80×25 mm                 | San Ace 80  | 115               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 542  |
| 109S054                        | 80×80×25 mm                 | San Ace 80  | 230               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 542  |
| 109S072UL                      | 120×120×38 mm               | San Ace 120 | 230               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 556  |
| 109S074UL                      | 120×120×38 mm               | San Ace 120 | 115               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 556  |
| 109S075UL                      | 120×120×38 mm               | San Ace 120 | 100               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 556  |
| 109S078UL                      | 120×120×38 mm               | San Ace 120 | 200               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 556  |
| 109S081                        | 120×120×25 mm               | San Ace 120 | 100               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 552  |
| 109S082                        | 120×120×25 mm               | San Ace 120 | 200               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 552  |
| 109S083                        | 120×120×25 mm               | San Ace 120 | 115               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 552  |
| 109S084                        | 120×120×25 mm               | San Ace 120 | 115               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 552  |
| 109S085                        | 120×120×25 mm               | San Ace 120 | 100               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 552  |

| Models listed in product pages | Frame size                        | Model       | Rated voltage [V] | UL | CSA | TÜV | CE | PSE | Note | page |
|--------------------------------|-----------------------------------|-------------|-------------------|----|-----|-----|----|-----|------|------|
| 109S086                        | 120 × 120 × 25 mm                 | San Ace 120 | 100               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 552  |
| 109S087                        | 120 × 120 × 25 mm                 | San Ace 120 | 230               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 552  |
| 109S088                        | 120 × 120 × 25 mm                 | San Ace 120 | 200               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 552  |
| 109S089                        | 120 × 120 × 25 mm                 | San Ace 120 | 230               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 552  |
| 109S091                        | 92 × 92 × 25 mm                   | San Ace 92  | 100               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 548  |
| 109S092                        | 92 × 92 × 25 mm                   | San Ace 92  | 200               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 548  |
| 109S093                        | 92 × 92 × 25 mm                   | San Ace 92  | 115               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 548  |
| 109S094                        | 92 × 92 × 25 mm                   | San Ace 92  | 230               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 548  |
| 109S095                        | 92 × 92 × 25 mm                   | San Ace 92  | 100               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 548  |
| 109S096                        | 92 × 92 × 25 mm                   | San Ace 92  | 100               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 548  |
| 109S192                        | 92 × 92 × 25 mm                   | San Ace 92  | 200               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 548  |
| 109S193                        | 92 × 92 × 25 mm                   | San Ace 92  | 115               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 548  |
| 109S194                        | 92 × 92 × 25 mm                   | San Ace 92  | 230               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 548  |
| 109S301                        | ∅172 × 150 × 51 mm (Sidecut type) | San Ace 172 | 100               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 564  |
| 109S302                        | ∅172 × 150 × 51 mm (Sidecut type) | San Ace 172 | 200               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 564  |
| 109S303                        | ∅172 × 150 × 51 mm (Sidecut type) | San Ace 172 | 230               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 564  |
| 109S304                        | ∅172 × 150 × 51 mm (Sidecut type) | San Ace 172 | 115               | ✓  | ✓   | ✓   | ✓  | ✓   |      | 564  |
| 109S405UL                      | 120 × 120 × 38 mm (with sensor)   | San Ace 120 | 100               | ✓  | —   | ✓   | ✓  | ✓   |      | 557  |
| 109S406UL                      | 120 × 120 × 38 mm (with sensor)   | San Ace 120 | 100               | ✓  | —   | ✓   | ✓  | ✓   |      | 557  |
| 109S408UL                      | 120 × 120 × 38 mm (with sensor)   | San Ace 120 | 200               | ✓  | —   | ✓   | ✓  | ✓   |      | 557  |
| 109S424UL                      | 120 × 120 × 38 mm (with sensor)   | San Ace 120 | 115               | ✓  | —   | ✓   | ✓  | ✓   |      | 557  |
| 109S425UL                      | 120 × 120 × 38 mm (with sensor)   | San Ace 120 | 230               | ✓  | —   | ✓   | ✓  | ✓   |      | 557  |
| 109S429UL                      | 120 × 120 × 38 mm (with sensor)   | San Ace 120 | 100               | ✓  | —   | ✓   | ✓  | ✓   |      | 557  |
| 109S472UL                      | 120 × 120 × 38 mm (with sensor)   | San Ace 120 | 230               | ✓  | —   | ✓   | ✓  | ✓   |      | 557  |
| 109S474UL                      | 120 × 120 × 38 mm (with sensor)   | San Ace 120 | 115               | ✓  | —   | ✓   | ✓  | ✓   |      | 557  |
| 109S475UL                      | 120 × 120 × 38 mm (with sensor)   | San Ace 120 | 100               | ✓  | —   | ✓   | ✓  | ✓   |      | 557  |
| 109S478UL                      | 120 × 120 × 38 mm (with sensor)   | San Ace 120 | 200               | ✓  | —   | ✓   | ✓  | ✓   |      | 557  |
| 109S484                        | 120 × 120 × 25 mm (with sensor)   | San Ace 120 | 115               | ✓  | —   | ✓   | ✓  | ✓   |      | 552  |
| 109S485                        | 120 × 120 × 25 mm (with sensor)   | San Ace 120 | 100               | ✓  | —   | ✓   | ✓  | ✓   |      | 552  |
| 109S486                        | 120 × 120 × 25 mm (with sensor)   | San Ace 120 | 100               | ✓  | —   | ✓   | ✓  | ✓   |      | 552  |
| 109S487                        | 120 × 120 × 25 mm (with sensor)   | San Ace 120 | 230               | ✓  | —   | ✓   | ✓  | ✓   |      | 552  |
| 109S488                        | 120 × 120 × 25 mm (with sensor)   | San Ace 120 | 200               | ✓  | —   | ✓   | ✓  | ✓   |      | 552  |
| 109S491                        | 92 × 92 × 25 mm (with sensor)     | San Ace 92  | 100               | ✓  | —   | ✓   | ✓  | ✓   |      | 548  |
| 109S492                        | 92 × 92 × 25 mm (with sensor)     | San Ace 92  | 200               | ✓  | —   | ✓   | ✓  | ✓   |      | 548  |
| 109S493                        | 92 × 92 × 25 mm (with sensor)     | San Ace 92  | 115               | ✓  | —   | ✓   | ✓  | ✓   |      | 548  |
| 109S494                        | 92 × 92 × 25 mm (with sensor)     | San Ace 92  | 230               | ✓  | —   | ✓   | ✓  | ✓   |      | 548  |
| 109S495                        | 92 × 92 × 25 mm (with sensor)     | San Ace 92  | 100               | ✓  | —   | ✓   | ✓  | ✓   |      | 548  |
| 109S496                        | 92 × 92 × 25 mm (with sensor)     | San Ace 92  | 100               | ✓  | —   | ✓   | ✓  | ✓   |      | 548  |

# Index by Model No. - Options

## ■ Finger Guards

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| 109-049C  | Finger Guards | 80 mm sq. type                 | 584  |
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| 109-059H  | Finger Guards | 40 mm sq. type                 | 584  |
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| 109-1147  | Finger Guards | $\phi$ 92 mm type              | 584  |
| 109-139E  | Finger Guards | 60 mm sq. type                 | 584  |
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## ■ Resin Finger Guards/Resin Filter Kits

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| 109-1002F30 | Resin Filter Kits   | 80 mm sq. type    | 592  |
| 109-1002F40 | Resin Filter Kits   | 80 mm sq. type    | 592  |
| 109-1003F13 | Resin Filter Kits   | 60 mm sq. type    | 592  |
| 109-1003F20 | Resin Filter Kits   | 60 mm sq. type    | 592  |
| 109-1003F30 | Resin Filter Kits   | 60 mm sq. type    | 592  |
| 109-1003F40 | Resin Filter Kits   | 60 mm sq. type    | 592  |
| 109-1000G   | Resin Finger Guards | 120 mm sq. type   | 591  |
| 109-1001G   | Resin Finger Guards | 92 mm sq. type    | 591  |
| 109-1002G   | Resin Finger Guards | 80 mm sq. type    | 591  |
| 109-1003G   | Resin Finger Guards | 60 mm sq. type    | 591  |

## ■ Replacement filter

| Model no.   | Category           | Matching fan size | page |
|-------------|--------------------|-------------------|------|
| 109-1000M13 | Replacement filter | 120 mm sq. type   | 592  |
| 109-1000M20 | Replacement filter | 120 mm sq. type   | 592  |
| 109-1000M30 | Replacement filter | 120 mm sq. type   | 592  |
| 109-1000M40 | Replacement filter | 120 mm sq. type   | 592  |
| 109-1001M13 | Replacement filter | 92 mm sq. type    | 592  |
| 109-1001M20 | Replacement filter | 92 mm sq. type    | 592  |
| 109-1001M30 | Replacement filter | 92 mm sq. type    | 592  |
| 109-1001M40 | Replacement filter | 92 mm sq. type    | 592  |
| 109-1002M13 | Replacement filter | 80 mm sq. type    | 592  |
| 109-1002M20 | Replacement filter | 80 mm sq. type    | 592  |
| 109-1002M30 | Replacement filter | 80 mm sq. type    | 592  |
| 109-1002M40 | Replacement filter | 80 mm sq. type    | 592  |
| 109-1003M13 | Replacement filter | 60 mm sq. type    | 592  |
| 109-1003M20 | Replacement filter | 60 mm sq. type    | 592  |
| 109-1003M30 | Replacement filter | 60 mm sq. type    | 592  |
| 109-1003M40 | Replacement filter | 60 mm sq. type    | 592  |



## ■ EMC guards/Inlet nozzle for centrifugal fan and splash proof centrifugal fan

| Model no. | Category  | Matching fan size | page |
|-----------|---|-------------------|------|
| 109-1036  | EMC guards  | ∅172 mm type      | 590  |
| 109-1037  | EMC guards  | 120 mm sq. type   | 590  |
| 109-1038  | EMC guards  | 80 mm sq. type    | 590  |
| 109-1039  | EMC guards  | 80 mm sq. type    | 590  |
| 109-1040  | EMC guards  | 92 mm sq. type    | 590  |
| 109-1069  | Inlet nozzle for centrifugal fan and splash proof centrifugal fan | ∅133 mm type      | 589  |
| 109-1069H | Inlet nozzle for centrifugal fan and splash proof centrifugal fan | ∅133 mm type      | 589  |
| 109-1073  | Inlet nozzle for centrifugal fan and splash proof centrifugal fan | ∅175 mm type      | 589  |
| 109-1073H | Inlet nozzle for centrifugal fan and splash proof centrifugal fan | ∅175 mm type      | 589  |
| 109-1080  | Inlet nozzle for centrifugal fan and splash proof centrifugal fan | ∅100 mm type      | 589  |
| 109-1080H | Inlet nozzle for centrifugal fan and splash proof centrifugal fan | ∅100 mm type      | 589  |
| 109-1081  | Inlet nozzle for centrifugal fan and splash proof centrifugal fan | ∅150 mm type      | 589  |
| 109-1081H | Inlet nozzle for centrifugal fan and splash proof centrifugal fan | ∅150 mm type      | 589  |
| 109-1106  | Inlet nozzle for centrifugal fan and splash proof centrifugal fan | ∅70 mm type       | 589  |
| 109-1134  | Inlet nozzle for centrifugal fan and splash proof centrifugal fan | ∅225 mm type      | 589  |
| 109-1134H | Inlet nozzle for centrifugal fan and splash proof centrifugal fan | ∅225 mm type      | 589  |
| 109-1135  | Inlet nozzle for centrifugal fan and splash proof centrifugal fan | ∅221 mm type      | 589  |
| 109-1135H | Inlet nozzle for centrifugal fan and splash proof centrifugal fan | ∅221 mm type      | 589  |

## ■ Filter kits/Screen kits

| Model no. | Category    | Matching fan size | Note   | page |
|-----------|-------------|-------------------|--|------|
| 109-018   | Filter kits | 120 × 120 × 38 mm | Not mountable on AC fans with a sensor or ACDC fans. | 593  |
| 109-020   | Screen kits | 120 × 120 × 38 mm |  | 593  |

## ■ Plug Cord

| Model no.    | UL | CSA | PSE | Applicable model   | page |
|--------------|----|-----|-----|--|------|
| 489-006-L10  |    |     | ✓   | 120 × 120 × 38 mm  | 594  |
| 489-006-L21  |    |     | ✓   | 120 × 120 × 38 mm  | 594  |
| 489-006-L35  |    |     | ✓   | 120 × 120 × 38 mm  | 594  |
| 489-007-L10  | ✓  | ✓   |     | 120 × 120 × 38 mm  | 595  |
| 489-007-L21  | ✓  | ✓   |     | 120 × 120 × 38 mm  | 595  |
| 489-008-L10  |    |     | ✓   | 80 × 80 × 42 mm  | 594  |
| 489-008-L21  |    |     | ✓   | 80 × 80 × 42 mm  | 594  |
| 489-008-L35  |    |     | ✓   | 80 × 80 × 42 mm  | 594  |
| 489-016-L10  |    |     | ✓   | 120 × 120 × 25 mm<br>92 × 92 × 25 mm<br>80 × 80 × 25 mm<br>80 × 80 × 38 mm | 594  |
| 489-016-L21  |    |     | ✓   | 120 × 120 × 25 mm<br>92 × 92 × 25 mm<br>80 × 80 × 25 mm<br>80 × 80 × 38 mm | 594  |
| 489-037-L10  |    |     | ✓   | 120 × 120 × 38 mm  | 594  |
| 489-037-L21  |    |     | ✓   | 120 × 120 × 38 mm  | 594  |
| 489-037-L35  |    |     | ✓   | 120 × 120 × 38 mm  | 594  |
| 489-047-L10  | ✓  | ✓   |     | 120 × 120 × 25 mm<br>92 × 92 × 25 mm<br>80 × 80 × 25 mm<br>80 × 80 × 38 mm | 595  |
| 489-047-L21  | ✓  | ✓   |     | 120 × 120 × 25 mm<br>92 × 92 × 25 mm<br>80 × 80 × 25 mm<br>80 × 80 × 38 mm | 595  |
| 489-084-L10  | ✓  | ✓   |     | ∅172 × 51 mm<br>∅172 × 150 × 51 mm<br>160 × 160 × 51 mm                    | 595  |
| 489-084-L21  | ✓  | ✓   |     | ∅172 × 51 mm<br>∅172 × 150 × 51 mm<br>160 × 160 × 51 mm                    | 595  |
| 489-086-L10  | ✓  | ✓   |     | 160 × 160 × 51 mm  | 595  |
| 489-086-L21  | ✓  | ✓   |     | 160 × 160 × 51 mm  | 595  |
| 489-1618-L10 |    |     | ✓   | 160 × 160 × 51 mm  | 594  |
| 489-1618-L21 |    |     | ✓   | 160 × 160 × 51 mm  | 594  |
| 489-1618-L28 |    |     | ✓   | 160 × 160 × 51 mm  | 594  |
| 489-1619-L10 |    |     | ✓   | ∅172 × 51 mm<br>∅172 × 150 × 51 mm<br>160 × 160 × 51 mm                    | 594  |
| 489-1619-L21 |    |     | ✓   | ∅172 × 51 mm<br>∅172 × 150 × 51 mm<br>160 × 160 × 51 mm                    | 594  |
| 489-1635-L10 | ✓  | ✓   | ✓   | ACDC Fan   | 595  |
| 489-1635-L21 | ✓  | ✓   | ✓   |  | 595  |

Typical Connectors for DC Fans ..... page 596

# Deleted Models in this Catalog

Following models were deleted in this latest version of catalog. However, these models are not discontinued product. Please contact us for further assistance if necessary.

## DC Fan

| Size            | Model no.     | Frame material | Rated voltage [V] | Operating voltage range [V] | Rated current [A] | Rated input [W] | Rated speed [min <sup>-1</sup> ] | Max. airflow [m <sup>3</sup> /min] [CFM] |       | Max. static pressure [Pa] [inchH <sub>2</sub> O] |       | SPL [dB (A)] | Operating temperature [°C] | Expected life [h] |
|-----------------|---------------|----------------|-------------------|-----------------------------|-------------------|-----------------|----------------------------------|--|-------|--|-------|--------------|----------------------------|-------------------|
| 52 × 52 × 15 mm | 109P0512A701  | Plastics       | 12                | 10.2 to 13.8                | 0.21              | 2.52            | 6800                             | 0.375                                    | 13.25 | 69.7   | 0.28  | 36           | -20 to +70                 | 40000/60°C        |
| 52 × 52 × 15 mm | 109P0512H701  | Plastics       | 12                | 7 to 13.8                   | 0.1               | 1.2             | 4600                             | 0.255                                    | 9.0   | 31.9   | 0.128 | 27           | -20 to +70                 | 60000/60°C        |
| 52 × 52 × 15 mm | 109P0512M701  | Plastics       | 12                | 7 to 13.8                   | 0.07              | 0.84            | 3700                             | 0.205                                    | 7.24  | 21.4   | 0.086 | 22           | -20 to +70                 | 60000/60°C        |
| 52 × 52 × 15 mm | 109P0524A701  | Plastics       | 24                | 14 to 27.6                  | 0.11              | 2.64            | 6800                             | 0.375                                    | 13.24 | 69.7   | 0.28  | 36           | -20 to +60                 | 40000/60°C        |
| 52 × 52 × 15 mm | 109P0524H701  | Plastics       | 24                | 14 to 27.6                  | 0.05              | 1.2             | 4600                             | 0.255                                    | 9.0   | 31.9   | 0.128 | 27           | -20 to +70                 | 60000/60°C        |
| 52 × 52 × 15 mm | 109P0524M701  | Plastics       | 24                | 14 to 27.6                  | 0.04              | 0.96            | 3700                             | 0.205                                    | 7.24  | 21.4   | 0.086 | 22           | -20 to +70                 | 60000/60°C        |
| 60 × 60 × 15 mm | 109P0605H701  | Plastics       | 5                 | 4.5 to 5.5                  | 0.26              | 1.3             | 4100                             | 0.4                                      | 14.1  | 38.2   | 0.153 | 32           | -20 to +70                 | 60000/60°C        |
| 60 × 60 × 15 mm | 109P0605M701  | Plastics       | 5                 | 4.5 to 5.5                  | 0.15              | 0.75            | 3100                             | 0.3                                      | 10.6  | 22.6   | 0.091 | 25           | -20 to +70                 | 60000/60°C        |
| 60 × 60 × 15 mm | 109P0612K701  | Plastics       | 12                | 10.2 to 13.8                | 0.26              | 3.12            | 6500                             | 0.62                                     | 21.9  | 99.3   | 0.399 | 45           | -20 to +60                 | 40000/60°C        |
| 60 × 60 × 15 mm | 109P0612S701  | Plastics       | 12                | 10.2 to 13.8                | 0.15              | 1.8             | 5000                             | 0.48                                     | 17    | 58.8   | 0.236 | 36           | -20 to +70                 | 40000/60°C        |
| 60 × 60 × 15 mm | 109P0612H701  | Plastics       | 12                | 7 to 13.8                   | 0.09              | 1.08            | 4100                             | 0.4                                      | 14.1  | 38.2   | 0.153 | 32           | -20 to +70                 | 60000/60°C        |
| 60 × 60 × 15 mm | 109P0612M701  | Plastics       | 12                | 10.2 to 13.8                | 0.07              | 0.84            | 3100                             | 0.3                                      | 10.6  | 22.6   | 0.091 | 25           | -20 to +70                 | 60000/60°C        |
| 60 × 60 × 15 mm | 109P0612B701  | Plastics       | 12                | 10.2 to 13.8                | 0.05              | 0.6             | 2200                             | 0.21                                     | 7.42  | 11.7   | 0.047 | 21           | -20 to +70                 | 60000/60°C        |
| 60 × 60 × 15 mm | 109P0624J701  | Plastics       | 24                | 14 to 27.6                  | 0.14              | 3.36            | 6200                             | 0.61                                     | 21.5  | 86.5   | 0.347 | 44           | -20 to +60                 | 40000/60°C        |
| 60 × 60 × 15 mm | 109P0624S701  | Plastics       | 24                | 14 to 27.6                  | 0.08              | 1.92            | 5000                             | 0.48                                     | 16.9  | 58.8   | 0.236 | 36           | -20 to +70                 | 40000/60°C        |
| 60 × 60 × 15 mm | 109P0624H701  | Plastics       | 24                | 14 to 27.6                  | 0.06              | 1.44            | 4100                             | 0.4                                      | 14.1  | 38.2   | 0.153 | 32           | -20 to +70                 | 60000/60°C        |
| 60 × 60 × 15 mm | 109P0624M701  | Plastics       | 24                | 20.4 to 27.6                | 0.04              | 0.96            | 3100                             | 0.3                                      | 10.6  | 22.6   | 0.091 | 25           | -20 to +70                 | 60000/60°C        |
| 60 × 60 × 20 mm | 109P0612W601  | Plastics       | 12                | 6 to 16                     | 0.13              | 1.56            | 4200                             | 0.42                                     | 14.8  | 31.8   | 0.128 | 31           | -20 to +70                 | 60000/60°C        |
| 60 × 60 × 20 mm | 109P0612H601  | Plastics       | 12                | 10.2 to 13.8                | 0.13              | 1.56            | 4200                             | 0.42                                     | 14.8  | 31.8   | 0.128 | 31           | -20 to +70                 | 60000/60°C        |
| 60 × 60 × 20 mm | 109P0612M601  | Plastics       | 12                | 10.2 to 13.8                | 0.09              | 1.08            | 3200                             | 0.3                                      | 10.6  | 18.8   | 0.076 | 25           | -20 to +70                 | 60000/60°C        |
| 60 × 60 × 20 mm | 109P0624W601  | Plastics       | 24                | 12 to 30                    | 0.07              | 1.68            | 4200                             | 0.42                                     | 14.8  | 31.8   | 0.128 | 31           | -20 to +70                 | 60000/60°C        |
| 60 × 60 × 20 mm | 109P0624H601  | Plastics       | 24                | 20.4 to 27.6                | 0.07              | 1.68            | 4200                             | 0.42                                     | 14.8  | 31.8   | 0.128 | 31           | -20 to +70                 | 60000/60°C        |
| 60 × 60 × 20 mm | 109P0624M601  | Plastics       | 24                | 20.4 to 27.6                | 0.05              | 1.2             | 3200                             | 0.3                                      | 10.6  | 18.8   | 0.076 | 25           | -20 to +70                 | 60000/60°C        |
| 60 × 60 × 20 mm | 109P0648H601  | Plastics       | 48                | 43 to 53                    | 0.07              | 3.36            | 5600                             | 0.55                                     | 19.4  | 52.9   | 0.212 | 41           | -20 to +70                 | 40000/60°C        |
| 60 × 60 × 38 mm | 9G0612G101    | Plastics       | 12                | 7.0 to 13.8                 | 1.54              | 18.5            | 11800                            | 1.84                                     | 65    | 435  | 1.747 | 58           | -20 to +70                 | 40000/60°C        |
| 60 × 60 × 38 mm | 9G0612S101    | Plastics       | 12                | 7.0 to 13.8                 | 1.36              | 16.3            | 10800                            | 1.7                                      | 60    | 370  | 1.486 | 56           | -20 to +70                 | 40000/60°C        |
| 60 × 60 × 38 mm | 9G0624G101    | Plastics       | 24                | 14.0 to 27.6                | 0.85              | 20.4            | 11800                            | 1.84                                     | 65    | 435  | 1.747 | 58           | -20 to +70                 | 40000/60°C        |
| 60 × 60 × 38 mm | 9G0624S101    | Plastics       | 24                | 14.0 to 27.6                | 0.7               | 16.8            | 10800                            | 1.7                                      | 60    | 370  | 1.486 | 56           | -20 to +70                 | 40000/60°C        |
| 60 × 60 × 38 mm | 9G0624H101    | Plastics       | 24                | 14.0 to 27.6                | 0.57              | 13.68           | 9800                             | 1.54                                     | 54.4  | 304.6  | 1.223 | 54           | -20 to +70                 | 40000/60°C        |
| 60 × 60 × 38 mm | 9G0648G101    | Plastics       | 48                | 28 to 55.2                  | 0.35              | 16.8            | 11800                            | 1.84                                     | 65    | 435  | 1.747 | 58           | -20 to +70                 | 40000/60°C        |
| 60 × 60 × 38 mm | 9G0648S101    | Plastics       | 48                | 28 to 55.2                  | 0.29              | 13.9            | 10800                            | 1.7                                      | 60    | 370  | 1.486 | 56           | -20 to +70                 | 40000/60°C        |
| ∅200 × 70 mm    | 109E2024S001  | Aluminum       | 24                | 21.6 to 26.4                | 1.9               | 45.6            | 3200                             | 10.45                                    | 369   | 287.1  | 1.153 | 57           | -10 to +70                 | 40000             |
| ∅200 × 70 mm    | 109E2024H001  | Aluminum       | 24                | 20.4 to 27.6                | 1.0               | 24              | 2600                             | 8.2                                      | 289.5 | 192  | 0.771 | 51           | -10 to +70                 | 40000             |
| ∅200 × 70 mm    | 109E2024AS001 | Aluminum       | 24                | 21.6 to 26.4                | 1.9               | 45.6            | 3200                             | 10.45                                    | 369   | 287.1  | 1.153 | 57           | -10 to +70                 | 40000             |
| ∅200 × 70 mm    | 109E2024AS001 | Aluminum       | 24                | 21.6 to 26.4                | 1.45              | 34.8            | 2800                             | 9  | 317.8 | 215.6  | 0.865 | 54           | -10 to +70                 | 40000             |
| ∅200 × 70 mm    | 109E2024MH001 | Aluminum       | 24                | 20.4 to 27.6                | 1.0               | 24              | 2600                             | 8.2                                      | 289.5 | 192  | 0.771 | 51           | -10 to +70                 | 40000             |
| ∅200 × 70 mm    | 109E2024MH001 | Aluminum       | 24                | 20.4 to 27.6                | 0.63              | 15.12           | 2100                             | 6.7                                      | 236.6 | 115.4  | 0.463 | 45           | -10 to +70                 | 40000             |

| Size            | Model no.    | Frame material | Rated voltage [V] | Operating voltage range [V] | PWM duty cycle* [%] | Rated current [A] | Rated input [W] | Rated speed [min <sup>-1</sup> ] | Max. airflow [m <sup>3</sup> /min] [CFM] |      | Max. static pressure [Pa] [inchH <sub>2</sub> O] |      | SPL [dB (A)] | Operating temperature [°C] | Expected life [h] |
|-----------------|--------------|----------------|-------------------|-----------------------------|---------------------|-------------------|-----------------|----------------------------------|--|------|--|------|--------------|----------------------------|-------------------|
| 60 × 60 × 38 mm | 9GV0612P1H03 | Plastics       | 12                | 8.0 to 13.8                 | 100                 | 2.0               | 24.0            | 14500                            | 2.15                                     | 76   | 617  | 2.48 | 63           | -20 to +70                 | 40000/60°C        |
|                 |              |                |                   |                             | 0                   | 0.1               | 1.2             | 2700                             | 0.4                                      | 14   | 21   | 0.09 | 22           |                            |                   |
| 60 × 60 × 38 mm | 9GV0612P1M03 | Plastics       | 12                | 8.0 to 13.8                 | 100                 | 1.5               | 18.0            | 13000                            | 1.93                                     | 68   | 496  | 1.99 | 60           | -20 to +70                 | 40000/60°C        |
|                 |              |                |                   |                             | 0                   | 0.08              | 1.0             | 2500                             | 0.38                                     | 13   | 18   | 0.07 | 19           |                            |                   |
| 60 × 60 × 38 mm | 9GV0612P1L01 | Plastics       | 12                | 8.0 to 13.8                 | 100                 | 0.7               | 8.4             | 10000                            | 1.49                                     | 52.6 | 293  | 1.17 | 52           | -20 to +70                 | 40000/60°C        |
| 60 × 60 × 38 mm | 9GV0624P1M03 | Plastics       | 24                | 20.4 to 27.6                | 100                 | 0.73              | 17.52           | 13000                            | 1.93                                     | 68.0 | 496  | 1.99 | 60           | -20 to +70                 | 40000/60°C        |

\* PWM frequency: 25 kHz

## Counter Rotating Fan

| Size            | Model no.    | Frame material | Rated voltage [V] | Operating voltage range [V] | Rated current [A] | Rated input [W] | Rated speed [min <sup>-1</sup> ]<br>Inlet Outlet | Max. airflow [m <sup>3</sup> /min] [CFM] | Max. static pressure [Pa] [inchH <sub>2</sub> O] | SPL [dB (A)] | Operating temperature [°C] | Expected life [h] |
|-----------------|--------------|----------------|-------------------|-----------------------------|-------------------|-----------------|--|--|--|--------------|----------------------------|-------------------|
| 40 × 40 × 56 mm | 9CRA0412K501 | Plastic        | 12                | 10.8 to 12.6                | 1.8               | 21.6            | 17000 13000                                      | 0.95 33.5                                | 650 2.61   | 65           | -20 to +60                 | 40000             |
| 80 × 80 × 80 mm | 9CR0812S801  | Plastic        | 12                | 10.8 to 13.2                | 5.5               | 66.0            | 8000 5300  | 4.53 160                                 | 520 2.09   | 71           | -10 to +60                 | 40000             |
| 80 × 80 × 80 mm | 9CR0812H801  | Plastic        | 12                | 10.8 to 13.2                | 3.6               | 43.2            | 7000 4600  | 3.97 140                                 | 400 1.61   | 68           | -10 to +60                 | 40000             |

| Size            | Model no.    | Frame material | Rated voltage [V] | PWM frequency [kHz] | Rated current [A] | Rated speed [min <sup>-1</sup> ] |                              | Max. airflow [m <sup>3</sup> /min] [CFM] | Max. static pressure [Pa] [inchH <sub>2</sub> O] | SPL [dB (A)] | Expected Life [h] |
|-----------------|--------------|----------------|-------------------|---------------------|-------------------|----------------------------------|------------------------------|--|--|--------------|-------------------|
|                 |              |                |                   |                     |                   | Duty cycle 0%                    | Duty cycle 100%              |  |  |              |                   |
| 60 × 60 × 76 mm | 9CR0612P0S03 | Plastic        | 12                | 25.0                | 3.2               | Inlet: 1300<br>Outlet: 800       | Inlet: 11500<br>Outlet: 7000 | 2.26 79.8                                | 550 2.21   | 66           | 40000             |
|                 | 9CR0612P0H03 | Plastic        | 12                | 25.0                | 2.7               | Inlet: 1200<br>Outlet: 800       | Inlet: 10300<br>Outlet: 6500 | 1.98 69.91                               | 450 1.81   | 64           | 40000             |
| 80 × 80 × 80 mm | 9CR0848P8S03 | Plastic        | 48                | 25.0                | 1.29              | Inlet: 2000<br>Outlet: 1300      | Inlet: 8000<br>Outlet: 5300  | 4.53 159.95                              | 520 2.09   | 71           | 40000             |

| Size            | Model no.      | Frame material | Rated voltage [V] | Operating voltage range [V] | PWM duty cycle* [%] | Rated current [A] | Rated input [W] | Rated speed [min <sup>-1</sup> ] |        | Max. airflow [m <sup>3</sup> /min] [CFM] | Max. static pressure [Pa] [inchH <sub>2</sub> O] | SPL [dB (A)] | Operating temperature [°C] | Expected life [h] |
|-----------------|----------------|----------------|-------------------|-----------------------------|---------------------|-------------------|-----------------|----------------------------------|--------|--|--|--------------|----------------------------|-------------------|
|                 |                |                |                   |                             |                     |                   |                 | Inlet                            | Outlet |  |  |              |                            |                   |
| 40 × 40 × 56 mm | 9CRB0412P5S201 | Plastic        | 12                | 10.8 to 13.2                | 100                 | 1.4               | 16.8            | 22000                            | 19700  | 0.9 31.8                                 | 1045 4.197                                       | 68           | -20 to +70                 | 40000             |
|                 |                |                |                   |                             |                     |                   |                 | 0                                | 0.09   |  |  |              |                            |                   |
| 40 × 40 × 56 mm | 9CRB0412P5K001 | Plastic        | 12                | 10.8 to 13.2                | 100                 | 0.88              | 10.56           | 19000                            | 17000  | 0.76 26.83                               | 730 2.93   | 62           | -20 to +70                 | 40000             |
|                 |                |                |                   |                             |                     |                   |                 | 0                                | 0.11   |  |  |              |                            |                   |
| 40 × 40 × 56 mm | 9CRB0412P5J201 | Plastic        | 12                | 10.8 to 13.2                | 100                 | 0.72              | 8.64            | 17300                            | 16000  | 0.71 25.1                                | 650 2.61   | 61           | -20 to +70                 | 40000             |
|                 |                |                |                   |                             |                     |                   |                 | 0                                | 0.07   |  |  |              |                            |                   |

\* PWM frequency: 25 kHz

## Splash Proof Fan

| Size            | Model no.   | Frame material | Rated voltage [V] | Operating voltage range [V] | Rated current [A] | Rated input [W] | Rated speed [min <sup>-1</sup> ] | Max. airflow [m <sup>3</sup> /min] [CFM] | Max. static pressure [Pa] [inchH <sub>2</sub> O] | SPL [dB (A)] | Operating temperature [°C] | Expected life [h] |
|-----------------|-------------|----------------|-------------------|-----------------------------|-------------------|-----------------|----------------------------------|--|--|--------------|----------------------------|-------------------|
| 80 × 80 × 25 mm | 9WS0812H401 | Plastics       | 12                | 10.2 to 13.8                | 0.16              | 1.92            | 3100                             | 0.94 33.2                                | 45.1 0.181                                       | 32           | -20 to +70                 | 40000/60°C        |
| 80 × 80 × 25 mm | 9WS0812F401 | Plastics       | 12                | 10.2 to 13.8                | 0.13              | 1.56            | 2700                             | 0.83 29.3                                | 34.3 0.138                                       | 28           | -20 to +70                 | 40000/60°C        |
| 80 × 80 × 25 mm | 9WS0812M401 | Plastics       | 12                | 10.2 to 13.8                | 0.1               | 1.2             | 2200                             | 0.65 23.0                                | 23.5 0.094                                       | 23           | -20 to +70                 | 40000/60°C        |
| 80 × 80 × 25 mm | 9WS0824H401 | Plastics       | 24                | 20.4 to 27.6                | 0.09              | 2.16            | 3100                             | 0.94 33.2                                | 45.1 0.181                                       | 32           | -20 to +70                 | 40000/60°C        |
| 80 × 80 × 25 mm | 9WS0824F401 | Plastics       | 24                | 20.4 to 27.6                | 0.07              | 1.68            | 2700                             | 0.83 29.3                                | 34.3 0.138                                       | 28           | -20 to +70                 | 40000/60°C        |
| 80 × 80 × 25 mm | 9WS0824M401 | Plastics       | 24                | 20.4 to 27.6                | 0.05              | 1.2             | 2200                             | 0.65 23.0                                | 23.5 0.094                                       | 23           | -20 to +70                 | 40000/60°C        |
| 92 × 92 × 25 mm | 9WS0912H401 | Plastics       | 12                | 10.2 to 13.8                | 0.17              | 2.04            | 2850                             | 1.38 48.7                                | 45.1 0.181                                       | 33           | -20 to +70                 | 40000/60°C        |
| 92 × 92 × 25 mm | 9WS0912F401 | Plastics       | 12                | 10.2 to 13.8                | 0.13              | 1.56            | 2450                             | 1.18 41.7                                | 32.3 0.13  | 30           | -20 to +70                 | 40000/60°C        |
| 92 × 92 × 25 mm | 9WS0912M401 | Plastics       | 12                | 10.2 to 13.8                | 0.1               | 1.2             | 2100                             | 1.01 35.7                                | 23.5 0.094                                       | 27           | -20 to +70                 | 40000/60°C        |
| 92 × 92 × 25 mm | 9WS0912L401 | Plastics       | 12                | 10.2 to 13.8                | 0.06              | 0.72            | 1700                             | 0.8 28.2                                 | 16.7 0.067                                       | 23           | -20 to +70                 | 40000/60°C        |
| 92 × 92 × 25 mm | 9WS0924H401 | Plastics       | 24                | 20.4 to 27.6                | 0.1               | 2.4             | 2850                             | 1.38 48.7                                | 45.1 0.181                                       | 33           | -20 to +70                 | 40000/60°C        |
| 92 × 92 × 25 mm | 9WS0924F401 | Plastics       | 24                | 20.4 to 27.6                | 0.07              | 1.68            | 2450                             | 1.18 41.7                                | 32.3 0.13  | 30           | -20 to +70                 | 40000/60°C        |
| 92 × 92 × 25 mm | 9WS0924M401 | Plastics       | 24                | 20.4 to 27.6                | 0.06              | 1.44            | 2100                             | 1.01 35.7                                | 23.5 0.094                                       | 27           | -20 to +70                 | 40000/60°C        |
| 92 × 92 × 25 mm | 9WS0924L401 | Plastics       | 24                | 20.4 to 27.6                | 0.05              | 1.2             | 1700                             | 0.8 28.2                                 | 16.7 0.067                                       | 23           | -20 to +70                 | 40000/60°C        |

## Long Life Fan

| Size            | Model no.    | Frame material | Rated voltage [V] | Operating voltage range [V] | Rated current [A] | Rated input [W] | Rated speed [min <sup>-1</sup> ] | Max. airflow [m <sup>3</sup> /min] [CFM] | Max. static pressure [Pa] [inchH <sub>2</sub> O] | SPL [dB (A)] | Operating temperature [°C] | Expected life [h] |
|-----------------|--------------|----------------|-------------------|-----------------------------|-------------------|-----------------|----------------------------------|--|--|--------------|----------------------------|-------------------|
| 60 × 60 × 25 mm | 109L0612G401 | Aluminum       | 12                | 10.2 to 13.8                | 0.24              | 2.88            | 5600                             | 0.78 27.5                                | 87.3 0.35  | 39           | -20 to +70                 | 100000            |
| 60 × 60 × 25 mm | 109L0612S401 | Aluminum       | 12                | 10.2 to 13.8                | 0.17              | 2.04            | 4600                             | 0.65 23.0                                | 56.8 0.228                                       | 33           | -20 to +70                 | 100000            |
| 60 × 60 × 25 mm | 109L0612H401 | Aluminum       | 12                | 10.2 to 13.8                | 0.11              | 1.32            | 3800                             | 0.53 18.7                                | 40.2 0.161                                       | 28           | -20 to +70                 | 100000            |
| 60 × 60 × 25 mm | 109L0612F401 | Aluminum       | 12                | 10.2 to 13.8                | 0.09              | 1.08            | 3200                             | 0.44 15.5                                | 29.4 0.118                                       | 24           | -20 to +70                 | 100000            |
| 60 × 60 × 25 mm | 109L0612M401 | Aluminum       | 12                | 10.2 to 13.8                | 0.06              | 0.72            | 2600                             | 0.36 12.7                                | 19.6 0.079                                       | 20           | -20 to +70                 | 100000            |
| 60 × 60 × 25 mm | 109L0624D401 | Aluminum       | 24                | 20.4 to 27.6                | 0.12              | 2.88            | 5150                             | 0.72 25.4                                | 73.8 0.296                                       | 37           | -20 to +70                 | 100000            |
| 60 × 60 × 25 mm | 109L0624S401 | Aluminum       | 24                | 20.4 to 27.6                | 0.08              | 1.92            | 4600                             | 0.65 23.0                                | 56.8 0.23  | 33           | -20 to +70                 | 100000            |
| 60 × 60 × 25 mm | 109L0624H401 | Aluminum       | 24                | 20.4 to 27.6                | 0.06              | 1.44            | 3800                             | 0.53 18.7                                | 40.2 0.161                                       | 28           | -20 to +70                 | 100000            |
| 60 × 60 × 25 mm | 109L0624F401 | Aluminum       | 24                | 20.4 to 27.6                | 0.05              | 1.2             | 3200                             | 0.44 15.5                                | 29.4 0.118                                       | 24           | -20 to +70                 | 100000            |
| 60 × 60 × 25 mm | 109L0624M401 | Aluminum       | 24                | 20.4 to 27.6                | 0.04              | 0.96            | 2600                             | 0.36 12.7                                | 19.6 0.079                                       | 20           | -20 to +70                 | 100000            |
| 60 × 60 × 25 mm | 109L0648G401 | Aluminum       | 48                | 40.8 to 55.2                | 0.07              | 3.36            | 5600                             | 0.78 27.5                                | 87.3 0.35  | 39           | -20 to +60                 | 80000             |
| 60 × 60 × 25 mm | 109L0648H401 | Aluminum       | 48                | 40 to 53                    | 0.04              | 1.92            | 3800                             | 0.53 18.7                                | 40.2 0.161                                       | 28           | -20 to +70                 | 100000            |

## Blower

| Size        | Model no.  | Frame material | Rated voltage [V] | Operating voltage range [V] | Rated current [A] | Rated input [W] | Rated speed [min <sup>-1</sup> ] | Max. airflow [m <sup>3</sup> /min] [CFM] | Max. static pressure [Pa] [inchH <sub>2</sub> O] | SPL [dB (A)] | Operating temperature [°C] | Expected life [h] |
|-------------|------------|----------------|-------------------|-----------------------------|-------------------|-----------------|----------------------------------|--|--|--------------|----------------------------|-------------------|
| 120 × 32 mm | 109BF12HC2 | Plastic        | 12                | 10.2 to 13.8                | 0.6               | 7.2             | 2400                             | 0.78 27.5                                | 175.4 0.704                                      | 52           | -20 to +60                 | 40000             |
| 120 × 32 mm | 109BF12MC2 | Plastic        | 12                | 10.2 to 13.8                | 0.32              | 3.84            | 1900                             | 0.61 21.5                                | 109.8 0.441                                      | 44           | -20 to +60                 | 40000             |
| 120 × 32 mm | 109BF24HC2 | Plastic        | 24                | 20.4 to 27.6                | 0.3               | 7.2             | 2400                             | 0.78 27.5                                | 175.4 0.704                                      | 52           | -20 to +60                 | 40000             |
| 120 × 32 mm | 109BF24MC2 | Plastic        | 24                | 20.4 to 27.6                | 0.16              | 3.84            | 1900                             | 0.61 21.5                                | 109.8 0.441                                      | 44           | -20 to +60                 | 40000             |

Note: Storage temperature is -30 to +70°C.