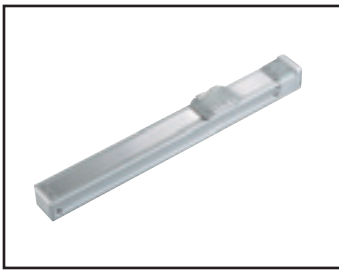


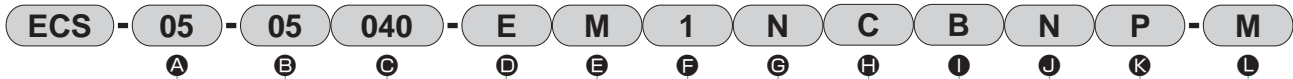
ECS-05 Series

Straight motor mounting

● Servo motor capacity: 100 W



How to order



A Body size

| | |
|----|------------------|
| 05 | Body width 51 mm |
|----|------------------|

D Motor mounting direction

| | |
|---|-------------------|
| E | Straight mounting |
|---|-------------------|

G Brake

| | |
|---|------|
| N | None |
|---|------|

K Positioning pin hole

| | |
|---|------|
| N | None |
| P | Yes |

E Screw lead

| | |
|----|-------|
| 02 | 2 mm |
| 05 | 5 mm |
| 10 | 10 mm |

E Mounted motor specification

| | |
|---|--|
| M | Select the mounted motor specification from the table below. |
| Y | |
| P | |
| F | |
| | |

H Origin sensor (1 pc) *1 *2

| | |
|---|-----------------------------|
| N | None |
| C | Outside motor side |
| D | Outside motor opposite side |

L Magnet slider method

| | |
|---|-----|
| M | Yes |
|---|-----|

C Stroke length

| | |
|-----|-----------------------|
| 005 | 50 mm |
| to | (In 50 mm increments) |
| 080 | 800 mm |

F Motor capacity

| | |
|---|-------|
| 1 | 100 W |
|---|-------|

I Limit sensor (2 pcs) *1 *2

| | |
|---|---------|
| N | None |
| B | Outside |

J Grease nipple *3

| | |
|---|--|
| N | None (Body mounting direction: Standard) |
|---|--|

| Manufacturer | 100 W |
|---------------------------------|-------|
| Mitsubishi Electric Corporation | M |
| Delta Electronics Co., Ltd. | M |
| Sanyo Denki Co., Ltd. | M |
| YASKAWA Electric Corporation | Y |
| Keyence Corporation | Y |
| Panasonic Corporation | P |
| OMRON Corporation | M |
| Fuji Electric Co., Ltd. | M |
| FANUC CORPORATION | F |
| Bosch Rexroth AG | P |
| Rockwell Automation, Inc. | M |
| SIEMENS AG | M |

*1: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

*2: The user can adjust the sensor position. (Included at shipment)

*3: "Body mounting direction: Standard" here refers to mounting from the bottom side.

*Refer to page 275 for the motor model No.

Specifications

| | | | |
|---|--|---------------------------|-----|
| Applicable motor capacity | 100 W servo motor | | |
| Drive method | Ball screw $\phi 12$ | | |
| Ball screw accuracy grade | C7 | | |
| Stroke length | 50 to 800 | | |
| Screw lead | mm | 2 | 5 |
| Max. load capacity *1 | Horizontal kg | 10 | 5 |
| | Vertical kg | 7 | 1.5 |
| Max. speed | mm/s | 100 | 500 |
| Rated thrust *1 | N | 825 | 165 |
| Repeatability | mm | ± 0.01 | |
| Lost motion | mm | 0.1 or less | |
| Dynamic allowable load | N | 551 | |
| Static allowable moment | N·m | MP: 20, MY: 16, MR: 19 | |
| Dynamic allowable moment | N·m | MP: 2.8, MY: 2.8, MR: 6.8 | |
| Operating ambient temperature, humidity | 0 to 40 °C (no freezing) | | |
| | 35 to 80% RH (no condensation) | | |
| Storage ambient temperature, humidity | -10 to 50°C (no freezing) | | |
| | 35 to 80% RH (no condensation) | | |
| Atmosphere | No corrosive gas, explosive gas, or dust | | |

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

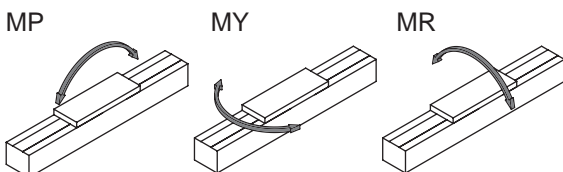
| Stroke length \ Screw lead | (mm) | | | | |
|----------------------------|------------|-----|-----|-----|-----|
| | 100 to 600 | 650 | 700 | 750 | 800 |
| 2 | 100 | 90 | 80 | 70 | 60 |
| 5 | 250 | 225 | 200 | 175 | 150 |
| 10 | 500 | 450 | 400 | 350 | 300 |

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable overhang length

*Refer to page 330 for details.

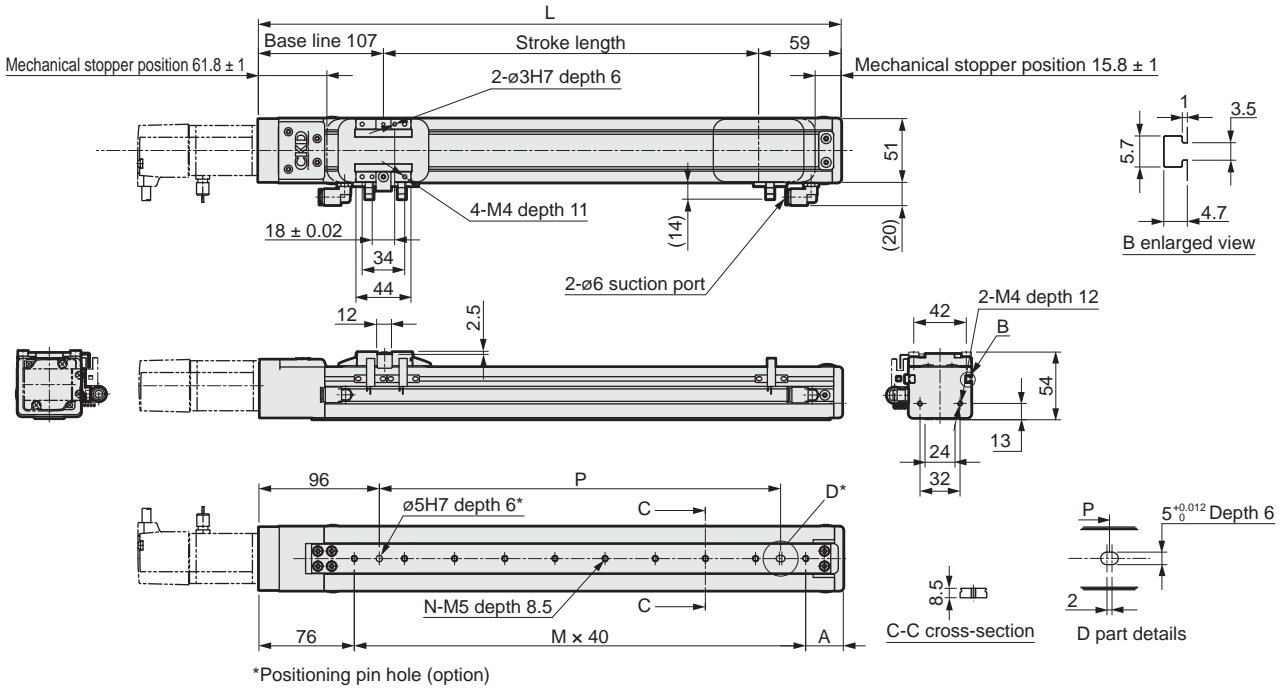
Moment direction



Safety precautions

Dimensions Straight motor mounting

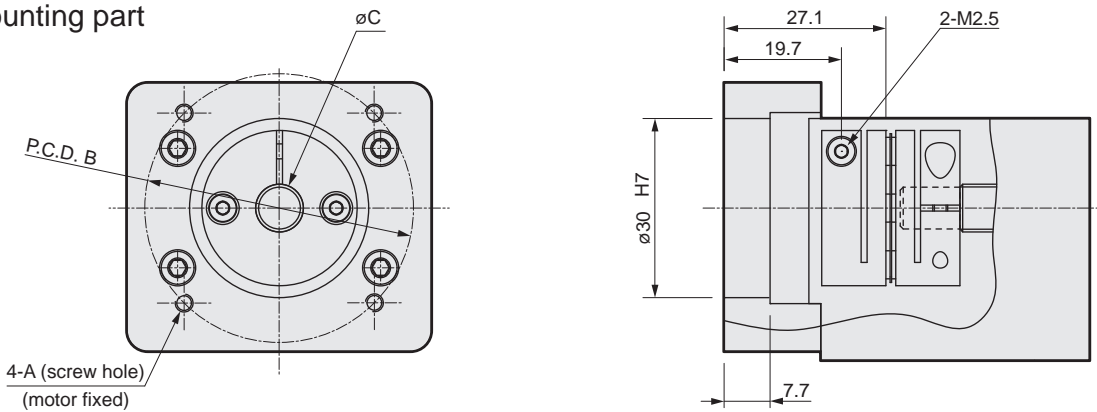
● ECS-05-*****-E



*Positioning pin hole (option)

| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L | 216 | 266 | 316 | 366 | 416 | 466 | 516 | 566 | 616 | 666 | 716 | 766 | 816 | 866 | 916 | 966 |
| A | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 |
| M | 2 | 4 | 5 | 6 | 7 | 9 | 10 | 11 | 12 | 14 | 15 | 16 | 17 | 19 | 20 | 21 |
| N | 3 | 5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 | 15 | 16 | 17 | 18 | 20 | 21 | 22 |
| P | 40 | 120 | 160 | 200 | 240 | 320 | 360 | 400 | 440 | 520 | 560 | 600 | 640 | 720 | 760 | 800 |
| Weight (kg) | 1.5 | 1.7 | 1.9 | 2.0 | 2.2 | 2.3 | 2.5 | 2.6 | 2.8 | 2.9 | 3.1 | 3.2 | 3.4 | 3.5 | 3.6 | 3.8 |

Motor mounting part



| Mounted motor specification | | A | B | C | Motor mounting bolt |
|-----------------------------|-------|----|-----|----|---------------------|
| M | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |
| Y | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |
| P | 100 W | M3 | ø45 | ø8 | 4-M3 x L12 |
| F | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Coupling | Fitting | Motor capacity | Motor mounting bolt | |
|-----------------------------|-----------------------|-----------------------|----------------|---------------------|----------|
| | | | | Size | Quantity |
| M | Assembled at shipment | Assembled at shipment | 100 W | M4 | 2 |
| Y | | | | M4 | 2 |
| P | | | | M3 | 4 |
| F | | | | M4 | 2 |

*Refer to page 338 for fitting details.

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 334 for sensor specifications.

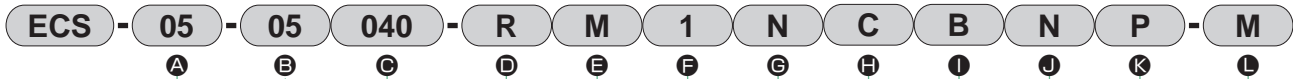
ECS-05 Series

Motor side mounting (left, right, bottom)

● Servo motor capacity: 100 W



How to order



A Body size

| | |
|----|------------------|
| 05 | Body width 51 mm |
|----|------------------|

B Screw lead

| | |
|----|-------|
| 02 | 2 mm |
| 05 | 5 mm |
| 10 | 10 mm |

C Stroke length

| | |
|-----|-----------------------|
| 005 | 50 mm |
| to | (In 50 mm increments) |
| 080 | 800 mm |

D Motor mounting direction

| | |
|---|-----------------|
| R | Right mounting |
| D | Bottom mounting |
| L | Left mounting |

E Mounted motor specification

| | |
|---|--|
| M | Select the mounted motor specification from the table below. |
| Y | |
| P | |
| F | |

F Motor capacity

| | |
|---|-------|
| 1 | 100 W |
|---|-------|

G Brake

| | |
|---|------|
| N | None |
|---|------|

H Origin sensor (1 pc) *1 *2

| | |
|---|-----------------------------|
| N | None |
| C | Outside motor side |
| D | Outside motor opposite side |

I Limit sensor (2 pcs) *1 *2

| | |
|---|---------|
| N | None |
| B | Outside |

J Grease nipple *3

| | |
|---|--|
| N | None (Body mounting direction: Standard) |
|---|--|

K Positioning pin hole

| | |
|---|------|
| N | None |
| P | Yes |

L Magnet slider method

| | |
|---|-----|
| M | Yes |
|---|-----|

| Manufacturer | 100 W |
|---------------------------------|-------|
| Mitsubishi Electric Corporation | M |
| Delta Electronics Co., Ltd. | M |
| Sanyo Denki Co., Ltd. | M |
| YASKAWA Electric Corporation | Y |
| Keyence Corporation | Y |
| Panasonic Corporation | P |
| OMRON Corporation | M |
| Fuji Electric Co., Ltd. | M |
| FANUC CORPORATION | F |
| Bosch Rexroth AG | P |
| Rockwell Automation, Inc. | M |
| SIEMENS AG | M |

*1: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

*2: The user can adjust the sensor position. (Included at shipment)

*3: "Body mounting direction: Standard" here refers to mounting from the bottom side.

*Refer to page 275 for the motor model No.

Specifications

| | | | |
|---|--|---------------------------|-----|
| Applicable motor capacity | 100 W servo motor | | |
| Drive method | Ball screw $\phi 12$ | | |
| Ball screw accuracy grade | C7 | | |
| Stroke length | 50 to 800 | | |
| Screw lead | mm | 2 | 5 |
| Max. load capacity *1 | Horizontal kg | 10 | 5 |
| | Vertical kg | 7 | 1.5 |
| Max. speed | mm/s | 100 | 500 |
| Rated thrust *1 | N | 825 | 165 |
| Repeatability | mm | ± 0.01 | |
| Lost motion | mm | 0.1 or less | |
| Dynamic allowable load | N | 551 | |
| Static allowable moment | N·m | MP: 20, MY: 16, MR: 19 | |
| Dynamic allowable moment | N·m | MP: 2.8, MY: 2.8, MR: 6.8 | |
| Operating ambient temperature, humidity | 0 to 40°C (no freezing) | | |
| | 35 to 80% RH (no condensation) | | |
| Storage ambient temperature, humidity | -10 to 50°C (no freezing) | | |
| | 35 to 80% RH (no condensation) | | |
| Atmosphere | No corrosive gas, explosive gas, or dust | | |

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

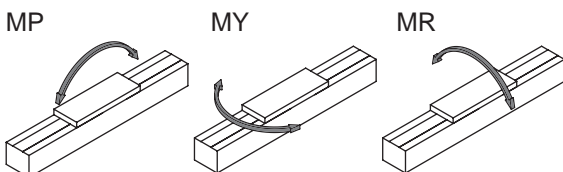
| Stroke length \ Screw lead | (mm/s) | | | | |
|----------------------------|------------|-----|-----|-----|-----|
| | 100 to 600 | 650 | 700 | 750 | 800 |
| 2 | 100 | 90 | 80 | 70 | 60 |
| 5 | 250 | 225 | 200 | 175 | 150 |
| 10 | 500 | 450 | 400 | 350 | 300 |

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable overhang length

*Refer to page 330 for details.

Moment direction



Safety precautions

EBS

EBR

ETS

ETS Multi-Axis

ECS

ETV

ECV

EKS

EBS

EBR

ETS

ECS

EBS

EBR

ETS

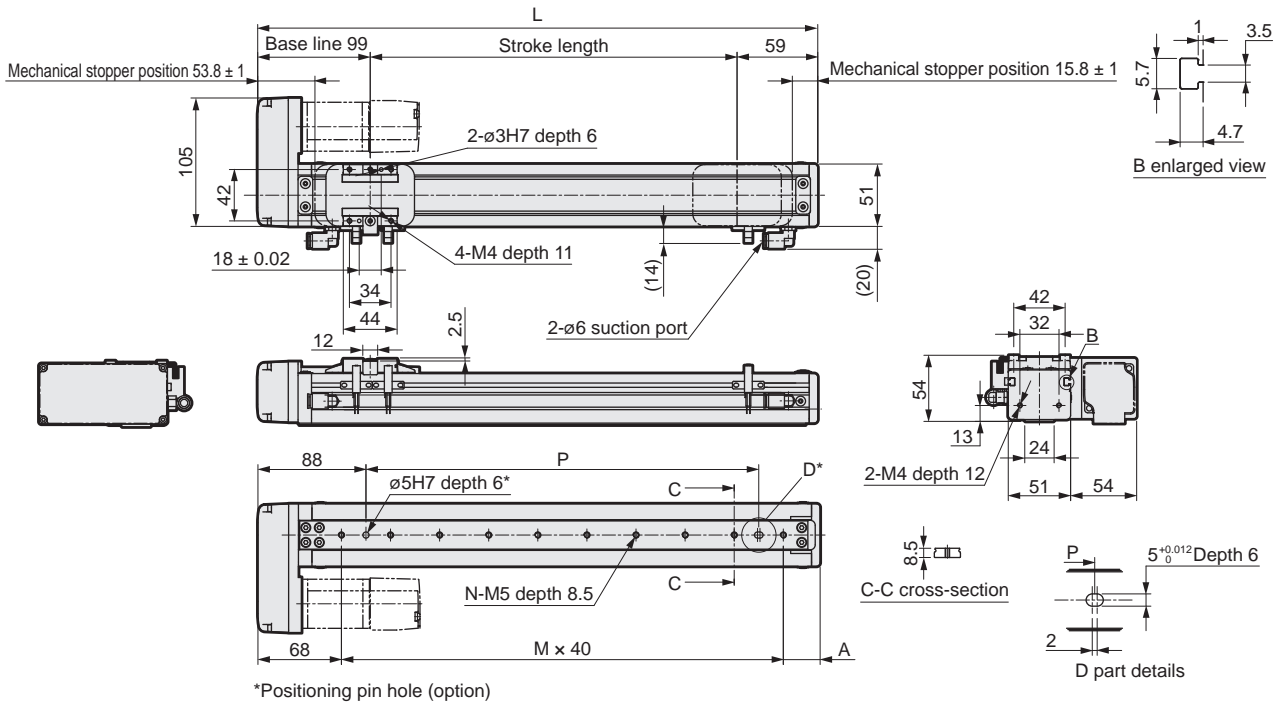
ECS

Safety

Precautions

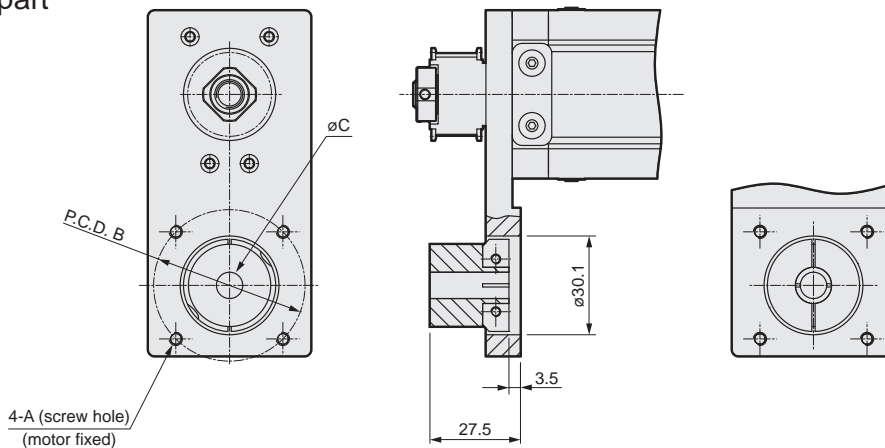
Dimensions Motor right-side mounting

● ECS-05-****-R



| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L | 208 | 258 | 308 | 358 | 408 | 458 | 508 | 558 | 608 | 658 | 708 | 758 | 808 | 858 | 908 | 958 |
| A | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 |
| M | 2 | 4 | 5 | 6 | 7 | 9 | 10 | 11 | 12 | 14 | 15 | 16 | 17 | 19 | 20 | 21 |
| N | 3 | 5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 | 15 | 16 | 17 | 18 | 20 | 21 | 22 |
| P | 40 | 120 | 160 | 200 | 240 | 320 | 360 | 400 | 440 | 520 | 560 | 600 | 640 | 720 | 760 | 800 |
| Weight (kg) | 1.7 | 1.9 | 2.0 | 2.1 | 2.3 | 2.4 | 2.6 | 2.7 | 2.9 | 3.0 | 3.2 | 3.3 | 3.5 | 3.6 | 3.7 | 3.9 |

Motor mounting part



| Mounted motor specification | | A | B | C | Motor mounting bolt |
|-----------------------------|-------|----|-----|----|---------------------|
| M | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |
| Y | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |
| P | 100 W | M3 | ø45 | ø8 | 4-M3 x L12 |
| F | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor capacity | Motor mounting bolt | |
|-----------------------------|----------------------|-----------------------|----------------|---------------------|----------|
| | | | | Size | Quantity |
| M | Included at shipment | Assembled at shipment | 100 W | M4 | 2 |
| Y | | | | M4 | 2 |
| P | | | | M3 | 4 |
| F | | | | M4 | 2 |

*Refer to page 338 for fitting details.

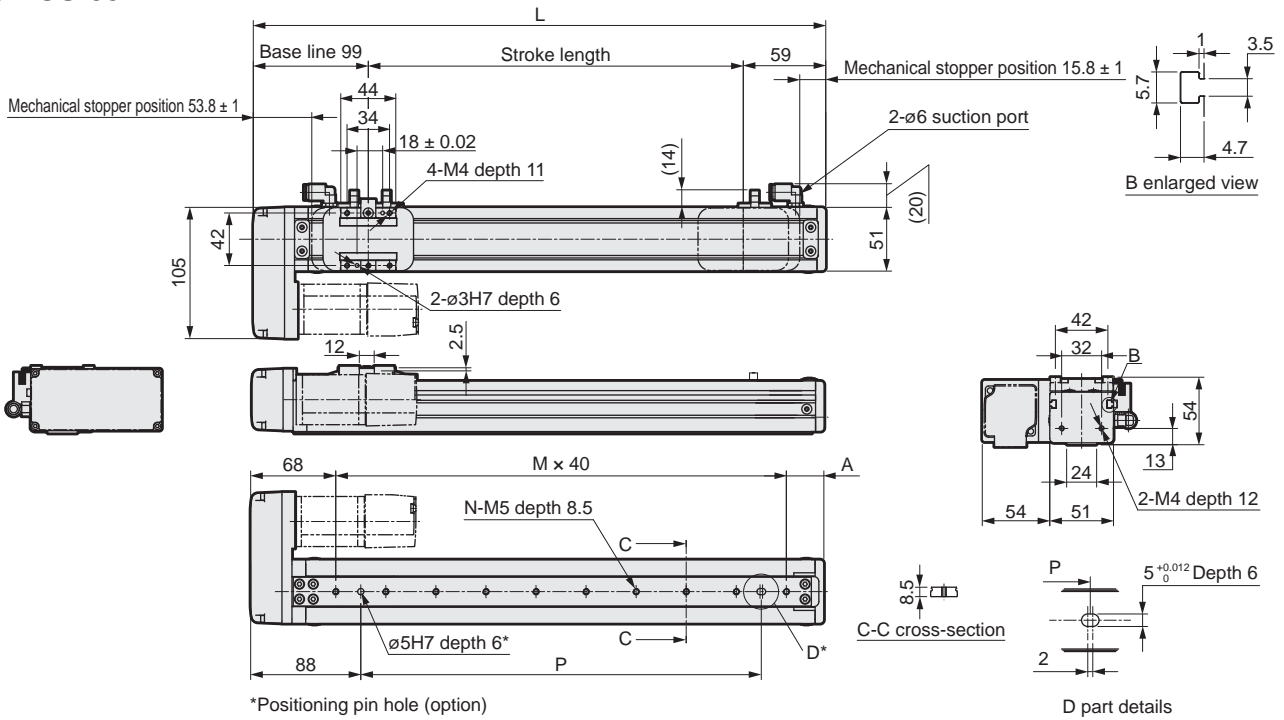
[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 334 for sensor specifications.

Dimensions Motor left-side mounting

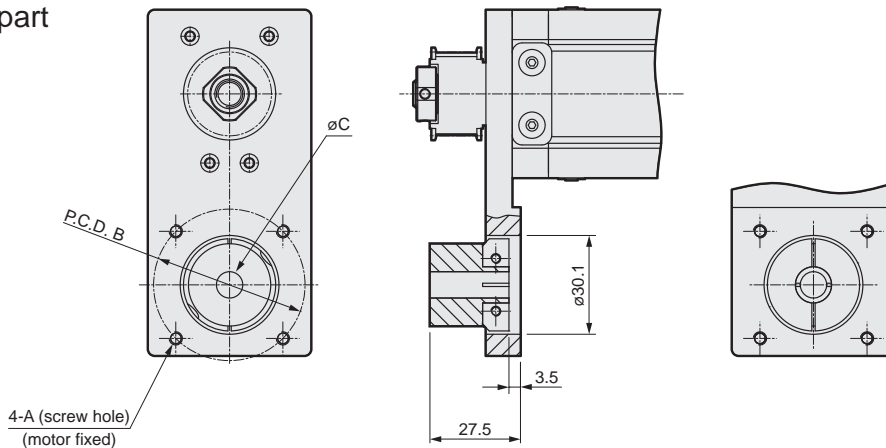
● ECS-05-****-L



*Positioning pin hole (option)

| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L | 208 | 258 | 308 | 358 | 408 | 458 | 508 | 558 | 608 | 658 | 708 | 758 | 808 | 858 | 908 | 958 |
| A | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 |
| M | 2 | 4 | 5 | 6 | 7 | 9 | 10 | 11 | 12 | 14 | 15 | 16 | 17 | 19 | 20 | 21 |
| N | 3 | 5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 | 15 | 16 | 17 | 18 | 20 | 21 | 22 |
| P | 40 | 120 | 160 | 200 | 240 | 320 | 360 | 400 | 440 | 520 | 560 | 600 | 640 | 720 | 760 | 800 |
| Weight (kg) | 1.7 | 1.9 | 2.0 | 2.1 | 2.3 | 2.4 | 2.6 | 2.7 | 2.9 | 3.0 | 3.2 | 3.3 | 3.5 | 3.6 | 3.7 | 3.9 |

Motor mounting part



| Mounted motor specification | | A | B | C | Motor mounting bolt |
|-----------------------------|-------|----|-----|----|---------------------|
| M | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |
| Y | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |
| P | 100 W | M3 | ø45 | ø8 | 4-M3 x L12 |
| F | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor capacity | Motor mounting bolt | |
|-----------------------------|----------------------|-----------------------|----------------|---------------------|----------|
| | | | | Size | Quantity |
| M | Included at shipment | Assembled at shipment | 100 W | M4 | 2 |
| Y | | | | M4 | 2 |
| P | | | | M3 | 4 |
| F | | | | M4 | 2 |

*Refer to page 338 for fitting details.

[Origin sensor/Limit sensor]

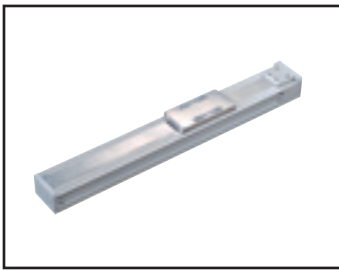
| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 334 for sensor specifications.

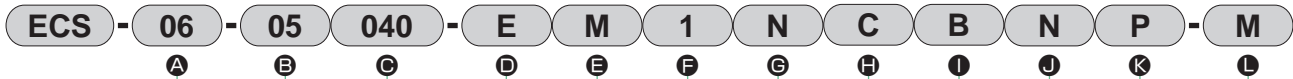
ECS-06 Series

Straight motor mounting

● Servo motor capacity: 100 W



How to order



A Body size

| | |
|----|------------------|
| 06 | Body width 65 mm |
|----|------------------|

D Motor mounting direction

| | |
|---|-------------------|
| E | Straight mounting |
|---|-------------------|

G Brake

| | |
|---|------|
| N | None |
|---|------|

K Positioning pin hole

| | |
|---|------|
| N | None |
| P | Yes |

B Screw lead

| | |
|----|-------|
| 02 | 2 mm |
| 05 | 5 mm |
| 10 | 10 mm |

E Mounted motor specification

| | |
|---|--|
| M | Select the mounted motor specification from the table below. |
| Y | |
| P | |
| F | |

H Origin sensor (1 pc) *1 *2

| | |
|---|-----------------------------|
| N | None |
| C | Outside motor side |
| D | Outside motor opposite side |

L Magnet slider method

| | |
|---|-----|
| M | Yes |
|---|-----|

C Stroke length

| | |
|-----|-----------------------|
| 005 | 50 mm |
| to | (In 50 mm increments) |
| 080 | 800 mm |

F Motor capacity

| | |
|---|-------|
| 1 | 100 W |
|---|-------|

I Limit sensor (2 pcs) *1 *2

| | |
|---|---------|
| N | None |
| B | Outside |

| Manufacturer | 100 W |
|---------------------------------|-------|
| Mitsubishi Electric Corporation | M |
| Delta Electronics Co., Ltd. | M |
| Sanyo Denki Co., Ltd. | M |
| YASKAWA Electric Corporation | Y |
| Keyence Corporation | Y |
| Panasonic Corporation | P |
| OMRON Corporation | M |
| Fuji Electric Co., Ltd. | M |
| FANUC CORPORATION | F |
| Bosch Rexroth AG | P |
| Rockwell Automation, Inc. | M |
| SIEMENS AG | M |

J Grease nipple *3

| | |
|---|--|
| N | None (Body mounting direction: Standard) |
|---|--|

*1: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

*2: The user can adjust the sensor position. (Included at shipment)

*3: "Body mounting direction: Standard" here refers to mounting from the bottom side.

*Refer to page 275 for the motor model No.

Specifications

| | | | |
|---|--|----------------------------|-----|
| Applicable motor capacity | 100 W servo motor | | |
| Drive method | Ball screw $\phi 12$ | | |
| Ball screw accuracy grade | C7 | | |
| Stroke length | 50 to 800 | | |
| Screw lead | 2 | 5 | 10 |
| Max. load capacity *1 | Horizontal kg | 30 | 15 |
| | Vertical kg | 15 | 5 |
| Max. speed | mm/s | 100 | 500 |
| Rated thrust *1 | N | 854 | 170 |
| Max. speed | mm/s | 100 | 500 |
| Repeatability | mm | ± 0.01 | |
| Lost motion | mm | 0.1 or less | |
| Dynamic allowable load | N | 1209 | |
| Static allowable moment | N·m | MP: 80, MY: 70, MR: 75 | |
| Dynamic allowable moment | N·m | MP: 8.9, MY: 8.9, MR: 24.8 | |
| Operating ambient temperature, humidity | 0 to 40°C (no freezing) | | |
| | 35 to 80% RH (no condensation) | | |
| Storage ambient temperature, humidity | -10 to 50°C (no freezing) | | |
| | 35 to 80% RH (no condensation) | | |
| Atmosphere | No corrosive gas, explosive gas, or dust | | |

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

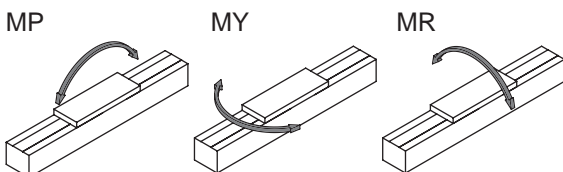
| Stroke length \ Screw lead | (mm/s) | | | | |
|----------------------------|------------|-----|-----|-----|-----|
| | 100 to 600 | 650 | 700 | 750 | 800 |
| 2 | 100 | 90 | 80 | 70 | 60 |
| 5 | 250 | 225 | 200 | 175 | 150 |
| 10 | 500 | 450 | 400 | 350 | 300 |

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable overhang length

*Refer to page 330 for details.

Moment direction



Safety precautions

EBS

EBR

ETS

ETS Multi-Axis

ECS

ETV

ECV

EKS

EBS

EBR

ETS

ECS

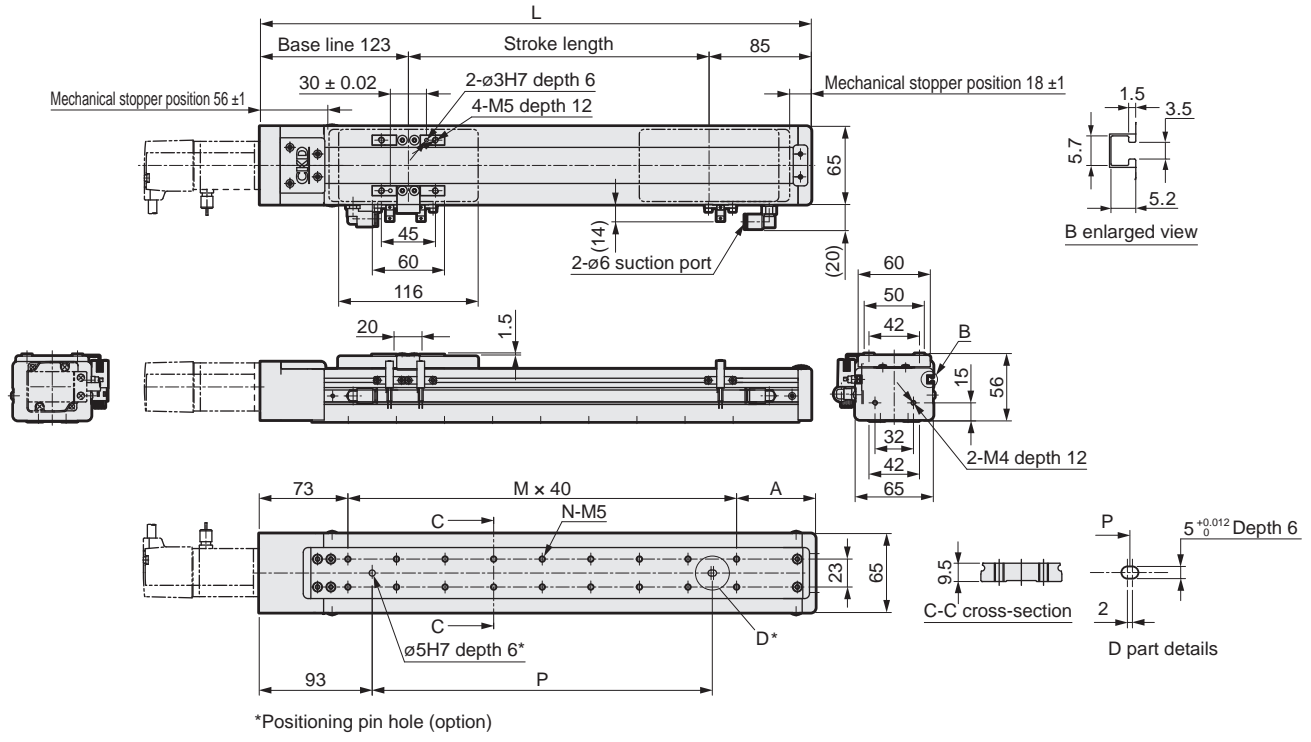
Safety Precautions

Servo motor compatible

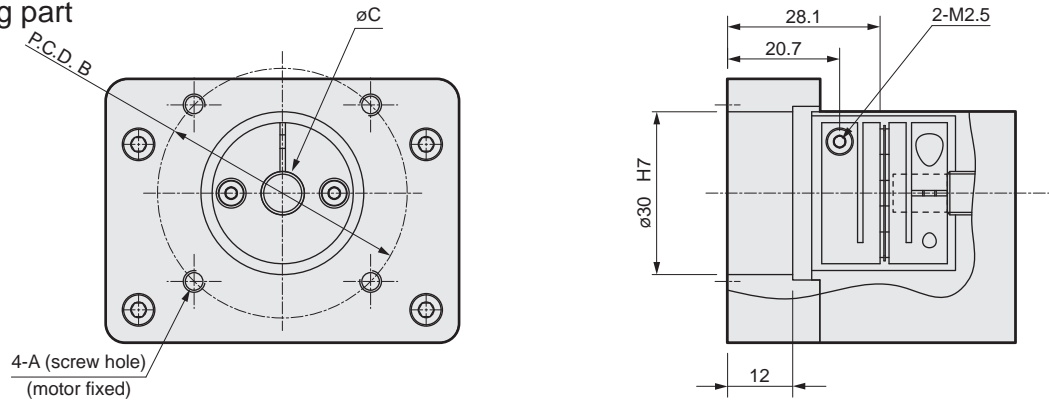
Stepper motor compatible

Dimensions Straight motor mounting

● ECS-06-****-E



Motor mounting part



| Mounted motor specification | | A | B | C | Motor mounting bolt |
|-----------------------------|-------|----|-----|----|---------------------|
| M | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |
| Y | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |
| P | 100 W | M3 | ø45 | ø8 | 4-M3 x L12 |
| F | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Coupling | Fitting | Motor capacity | Motor mounting bolt | |
|-----------------------------|-----------------------|-----------------------|----------------|---------------------|----------|
| | | | | Size | Quantity |
| M | Assembled at shipment | Assembled at shipment | 100 W | M4 | 2 |
| Y | | | | M4 | 2 |
| P | | | | M3 | 4 |
| F | | | | M4 | 2 |

*Refer to page 338 for fitting details.

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 334 for sensor specifications.

ECS-06 Series

Motor side mounting (left, right, bottom)

● Servo motor capacity: 100 W



How to order

ECS - 06 - 05 040 - R M 1 N C B N P - M

A Body size

| | |
|----|------------------|
| 06 | Body width 65 mm |
|----|------------------|

B Screw lead

| | |
|----|-------|
| 02 | 2 mm |
| 05 | 5 mm |
| 10 | 10 mm |

C Stroke length

| | |
|-----|-----------------------|
| 005 | 50 mm |
| to | (In 50 mm increments) |
| 080 | 800 mm |

D Motor mounting direction

| | |
|---|-----------------|
| R | Right mounting |
| D | Bottom mounting |
| L | Left mounting |

E Mounted motor specification

| | |
|---|--|
| M | Select the mounted motor specification from the table below. |
| Y | |
| P | |
| F | |
| | |

F Motor capacity

| | |
|---|-------|
| 1 | 100 W |
|---|-------|

G Brake

| | |
|---|------|
| N | None |
|---|------|

H Origin sensor (1 pc) *1 *2

| | |
|---|-----------------------------|
| N | None |
| C | Outside motor side |
| D | Outside motor opposite side |

I Limit sensor (2 pcs) *1 *2

| | |
|---|---------|
| N | None |
| B | Outside |

J Grease nipple *3

| | |
|---|--|
| N | None (Body mounting direction: Standard) |
|---|--|

K Positioning pin hole

| | |
|---|------|
| N | None |
| P | Yes |

L Magnet slider method

| | |
|---|-----|
| M | Yes |
|---|-----|

| Manufacturer | 100 W |
|---------------------------------|-------|
| Mitsubishi Electric Corporation | M |
| Delta Electronics Co., Ltd. | M |
| Sanyo Denki Co., Ltd. | M |
| YASKAWA Electric Corporation | Y |
| Keyence Corporation | Y |
| Panasonic Corporation | P |
| OMRON Corporation | M |
| Fuji Electric Co., Ltd. | M |
| FANUC CORPORATION | F |
| Bosch Rexroth AG | P |
| Rockwell Automation, Inc. | M |
| SIEMENS AG | M |

*1: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

*2: The user can adjust the sensor position. (Included at shipment)

*3: "Body mounting direction: Standard" here refers to mounting from the bottom side.

*Refer to page 275 for the motor model No.

Specifications

| | | | |
|---|---|----------------------------|-----|
| Applicable motor capacity | 100 W servo motor | | |
| Drive method | Ball screw $\phi 12$ | | |
| Ball screw accuracy grade | C7 | | |
| Stroke length | 50 to 800 | | |
| Screw lead | 2 | 5 | 10 |
| Max. load capacity | Horizontal kg | 30 | 30 |
| | Vertical kg | 15 | 5 |
| Max. speed | mm/s | 100 | 500 |
| Rated thrust *1 | N | 854 | 170 |
| Max. speed | mm/s | 100 | 500 |
| Repeatability | mm | ± 0.01 | |
| Lost motion | mm | 0.1 or less | |
| Dynamic allowable load | N | 1209 | |
| Static allowable moment | N-m | MP: 80, MY: 70, MR: 75 | |
| Dynamic allowable moment | N-m | MP: 8.9, MY: 8.9, MR: 24.8 | |
| Operating ambient temperature, humidity | 0 to 40°C (no freezing) 35 to 80% RH (no condensation) | | |
| Storage ambient temperature, humidity | -10 to 50°C (no freezing) 35 to 80% RH (no condensation) | | |
| Atmosphere | No corrosive gas, explosive gas, or dust | | |

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

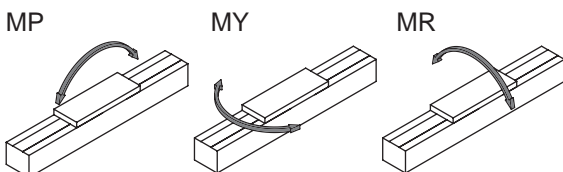
| Stroke length \ Screw lead | (mm/s) | | | | |
|----------------------------|------------|-----|-----|-----|-----|
| | 100 to 600 | 650 | 700 | 750 | 800 |
| 2 | 100 | 90 | 80 | 70 | 60 |
| 5 | 250 | 225 | 200 | 175 | 150 |
| 10 | 500 | 450 | 400 | 350 | 300 |

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable overhang length

*Refer to page 330 for details.

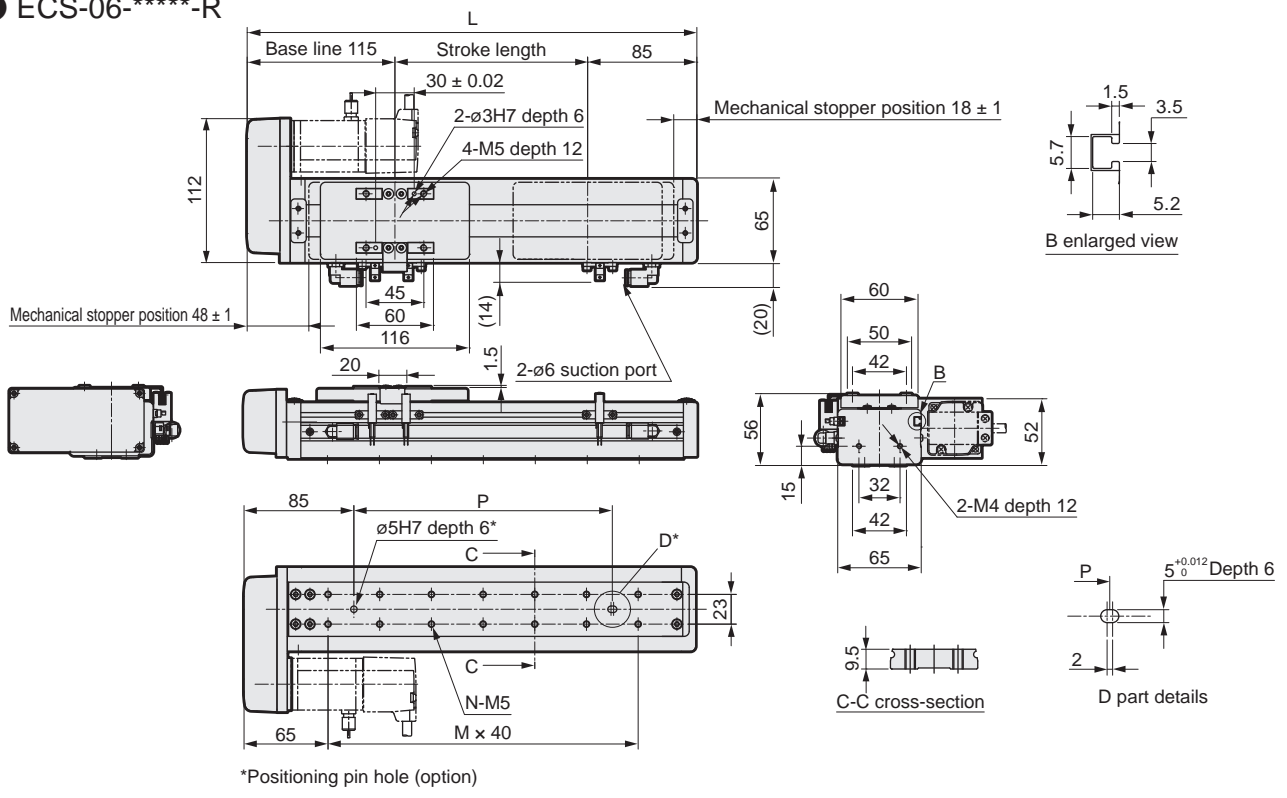
Moment direction



Safety precautions

Dimensions Motor right-side mounting

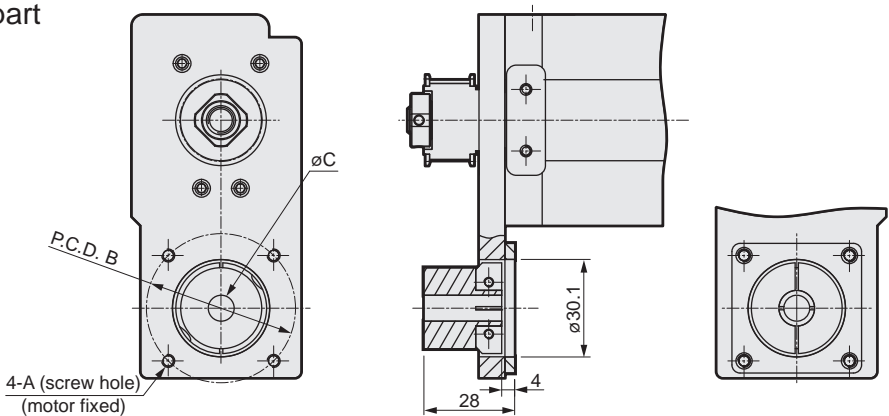
● ECS-06-****-R



*Positioning pin hole (option)

| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| L | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 |
| A | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 |
| M | 3 | 5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 | 15 | 16 | 17 | 18 | 20 | 21 | 22 |
| N | 8 | 12 | 14 | 16 | 18 | 22 | 24 | 26 | 28 | 32 | 34 | 36 | 38 | 42 | 44 | 46 |
| P | 80 | 160 | 200 | 240 | 280 | 360 | 400 | 440 | 480 | 560 | 600 | 640 | 680 | 760 | 800 | 840 |
| Weight (kg) | 2.4 | 2.9 | 3.1 | 3.4 | 3.6 | 3.8 | 4.0 | 4.3 | 4.5 | 4.7 | 4.9 | 5.2 | 5.4 | 5.6 | 5.8 | 6.0 |

Motor mounting part



| Mounted motor specification | | A | B | C | Motor mounting bolt |
|-----------------------------|-------|----|-----|----|---------------------|
| M | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |
| Y | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |
| P | 100 W | M3 | ø45 | ø8 | 4-M3 x L12 |
| F | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor capacity | Motor mounting bolt | |
|-----------------------------|----------------------|-----------------------|----------------|---------------------|----------|
| | | | | Size | Quantity |
| M | Included at shipment | Assembled at shipment | 100 W | M4 | 2 |
| Y | | | | M4 | 2 |
| P | | | | M3 | 4 |
| F | | | | M4 | 2 |

*Refer to page 338 for fitting details.

[Origin sensor/Limit sensor]

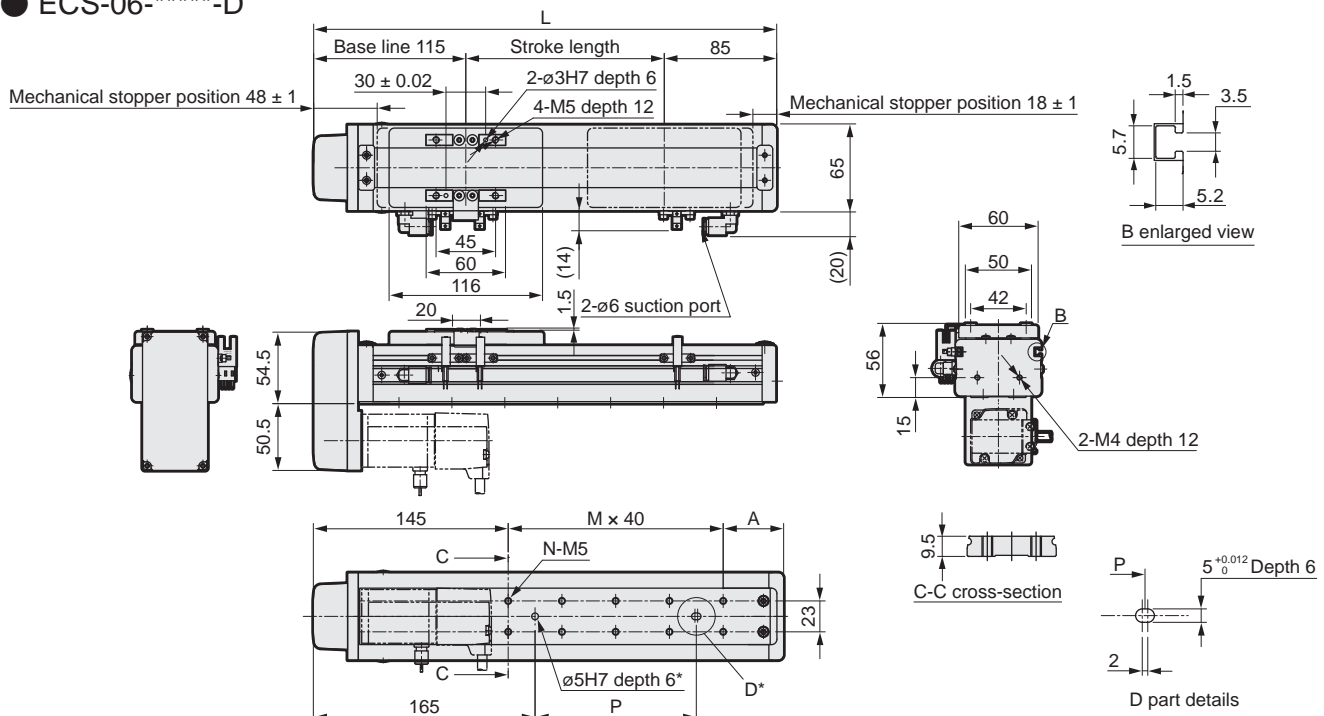
| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 334 for sensor specifications.

ECS-06 Series

Dimensions Motor bottom mounting

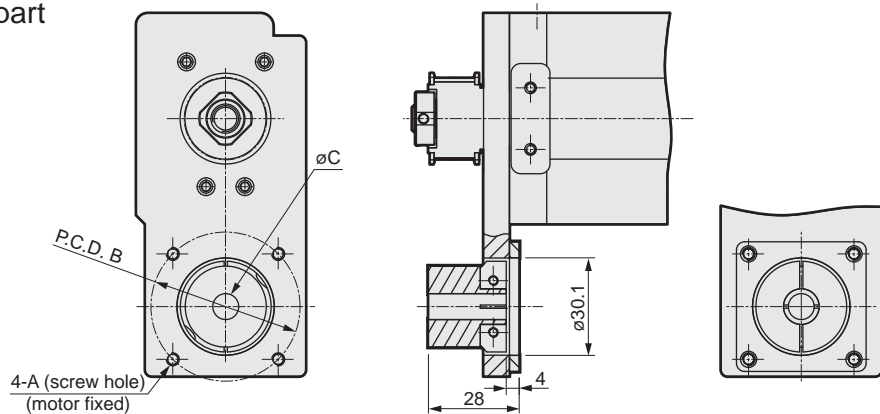
● ECS-06-****-D



*Positioning pin hole (option)

| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| L | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 |
| A | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 |
| M | 1 | 3 | 4 | 5 | 6 | 8 | 9 | 10 | 11 | 13 | 14 | 15 | 16 | 18 | 19 | 20 |
| N | 4 | 8 | 10 | 12 | 14 | 18 | 20 | 22 | 24 | 28 | 30 | 32 | 34 | 38 | 40 | 42 |
| P | 0 | 80 | 120 | 160 | 200 | 280 | 320 | 360 | 400 | 480 | 520 | 560 | 600 | 680 | 720 | 760 |
| Weight (kg) | 2.4 | 2.9 | 3.1 | 3.4 | 3.6 | 3.8 | 4.0 | 4.3 | 4.5 | 4.7 | 5.0 | 5.2 | 5.4 | 5.6 | 5.8 | 6.0 |

Motor mounting part



| Mounted motor specification | | A | B | C | Motor mounting bolt |
|-----------------------------|-------|----|-----|----|---------------------|
| M | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |
| Y | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |
| P | 100 W | M3 | ø45 | ø8 | 4-M3 x L12 |
| F | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor capacity | Motor mounting bolt | |
|-----------------------------|----------------------|-----------------------|----------------|---------------------|----------|
| | | | | Size | Quantity |
| M | Included at shipment | Assembled at shipment | 100 W | M4 | 2 |
| Y | | | | M4 | 2 |
| P | | | | M3 | 4 |
| F | | | | M4 | 2 |

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 334 for sensor specifications.

*Refer to page 338 for fitting details.

EBS

EBR

ETS

ETS Multi-Axis

ECS

ETV

ECV

EKS

EBS

EBR

ETS

ECS

ETS Multi-Axis

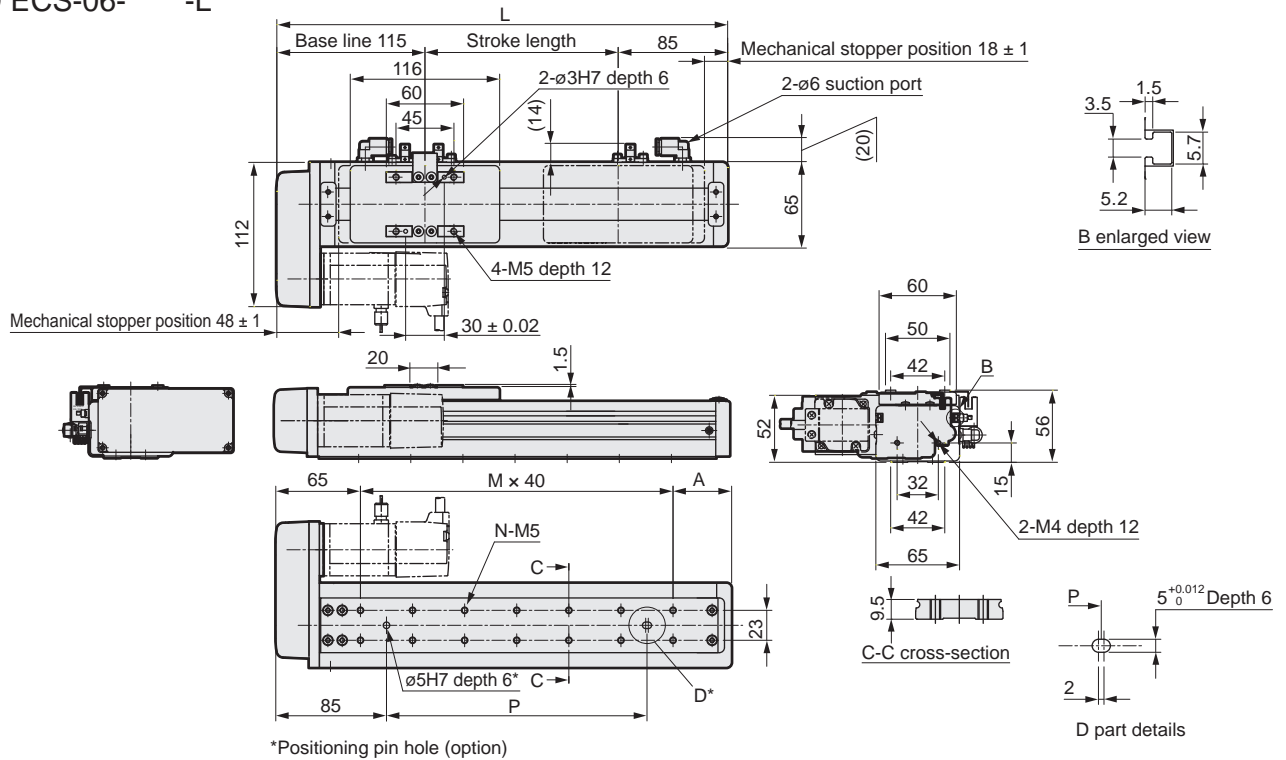
Safety Precautions

Servo motor compatible

Stepper motor compatible

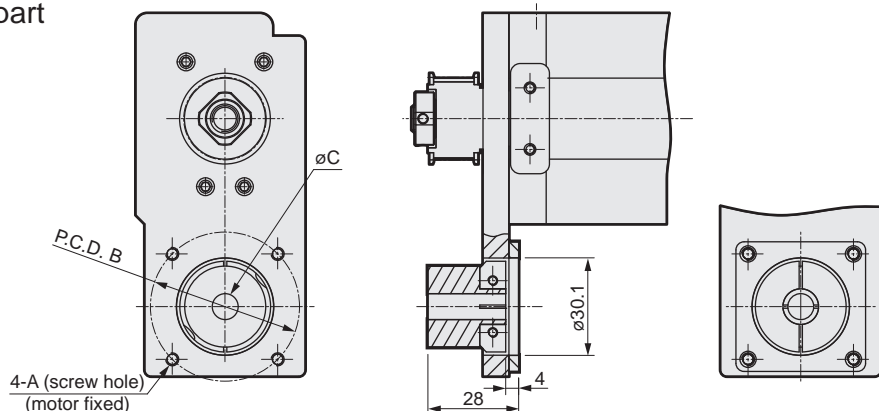
Dimensions Motor left-side mounting

● ECS-06-*****-L



| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| L | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 |
| A | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 |
| M | 3 | 5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 | 15 | 16 | 17 | 18 | 20 | 21 | 22 |
| N | 8 | 12 | 14 | 16 | 18 | 22 | 24 | 26 | 28 | 32 | 34 | 36 | 38 | 42 | 44 | 46 |
| P | 80 | 160 | 200 | 240 | 280 | 360 | 400 | 440 | 480 | 560 | 600 | 640 | 680 | 760 | 800 | 840 |
| Weight (kg) | 2.4 | 2.9 | 3.1 | 3.4 | 3.6 | 3.8 | 4.0 | 4.3 | 4.5 | 4.7 | 4.9 | 5.2 | 5.4 | 5.6 | 5.8 | 6.0 |

Motor mounting part



| Mounted motor specification | | A | B | C | Motor mounting bolt |
|-----------------------------|-------|----|-----|----|---------------------|
| M | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |
| Y | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |
| P | 100 W | M3 | ø45 | ø8 | 4-M3 x L12 |
| F | 100 W | M4 | ø46 | ø8 | 4-M4 x L12 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor capacity | Motor mounting bolt | |
|-----------------------------|----------------------|-----------------------|----------------|---------------------|----------|
| | | | | Size | Quantity |
| M | Included at shipment | Assembled at shipment | 100 W | M4 | 2 |
| Y | | | | M4 | 2 |
| P | | | | M3 | 4 |
| F | | | | M4 | 2 |

*Refer to page 338 for fitting details.

[Origin sensor/Limit sensor]

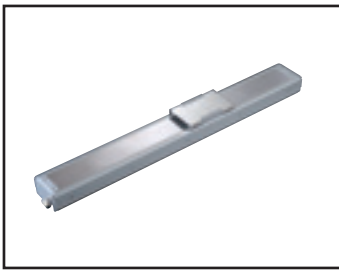
| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 334 for sensor specifications.

ECS-10 Series

Straight motor mounting, built-in mounting

● Servo motor capacity: 100 W



How to order

ECS - 10 - 05 040 - E M 1 N C B N P

A Body size

| | |
|----|-------------------|
| 10 | Body width 102 mm |
|----|-------------------|

D Motor mounting direction *1

| | |
|---|-------------------|
| E | Straight mounting |
| B | Built-in mounting |

E Screw lead

| | |
|----|-------|
| 05 | 5 mm |
| 10 | 10 mm |
| 16 | 16 mm |
| 20 | 20 mm |

E Mounted motor specification

| | |
|---|--|
| M | Select the mounted motor specification from the table below. |
| Y | |
| P | |
| F | |
| F | |

C Stroke length

| | |
|-----|-----------------------|
| 005 | 50 mm |
| to | (In 50 mm increments) |
| 105 | 1050 mm |

F Motor capacity

| | |
|---|-------|
| 1 | 100 W |
|---|-------|

G Brake *1

| | |
|---|------|
| N | None |
| B | Yes |

H Origin sensor (1 pc)
*2 *3 *4 *5 *7

| | |
|---|-----------------------------|
| N | None |
| A | Inside motor side |
| B | Inside motor opposite side |
| C | Outside motor side |
| D | Outside motor opposite side |

I Limit sensor (2 pcs)
*2 *3 *4 *5 *7

| | |
|---|---------|
| N | None |
| A | Inside |
| B | Outside |

K Positioning pin hole

| | |
|---|------|
| N | None |
| P | Yes |

J Grease nipple *5 *6 *7

| | |
|---|--|
| N | None (Body mounting direction: Standard) |
| R | Right |
| L | Left |

| Manufacturer | 100 W |
|---------------------------------|-------|
| Mitsubishi Electric Corporation | M |
| Delta Electronics Co., Ltd. | M |
| Sanyo Denki Co., Ltd. | M |
| YASKAWA Electric Corporation | Y |
| Keyence Corporation | Y |
| Panasonic Corporation | P |
| OMRON Corporation | M |
| Fuji Electric Co., Ltd. | M |
| FANUC CORPORATION | F |
| Bosch Rexroth AG | P |
| Rockwell Automation, Inc. | M |
| SIEMENS AG | M |

- *1: "Yes" to the Brake can be selected only when the motor mounting direction is built-in mounting.
- *2: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.
- *3: Origin sensor B and limit sensor A cannot be combined.
- *4: For sensor inside mounting, the user cannot adjust the position. (Assembled at shipment)
For sensor outside mounting, the user can adjust the position. (Included at shipment)
- *5: Contact CKD to use the origin sensor, limit sensor and grease nipple in the same direction.
- *6: "Body mounting direction: Standard" here refers to mounting from the bottom side.
- *7: For sensor inside mounting, select "None" for the grease nipple.

*Refer to page 275 for the motor model No.

Specifications

| | | | | | |
|---|---|------------------------------|-----|-----|------|
| Applicable motor capacity | 100 W servo motor | | | | |
| Drive method | Ball screw $\phi 16$ | | | | |
| Ball screw accuracy grade | C7 | | | | |
| Stroke length | 50 to 1050 | | | | |
| Screw lead | 5 | 10 | 16 | 20 | |
| Max. load capacity *1 | Horizontal kg | 50 | 30 | 22 | 18 |
| | Vertical kg | 12 | 8 | 5 | 3 |
| Max. speed | mm/s | 250 | 500 | 800 | 1000 |
| Rated thrust *1 | N | 341 | 170 | 106 | 85 |
| Repeatability | mm | ±0.01 | | | |
| Lost motion | mm | 0.1 or less | | | |
| Dynamic allowable load | N | 2651 | | | |
| Static allowable moment | N·m | MP: 110, MY: 110, MR: 120 | | | |
| Dynamic allowable moment | N·m | MP: 24.1, MY: 24.1, MR: 24.8 | | | |
| Operating ambient temperature, humidity | 0 to 40°C (no freezing) 35 to 80% RH (no condensation) | | | | |
| Storage ambient temperature, humidity | -10 to 50°C (no freezing) 35 to 80% RH (no condensation) | | | | |
| Atmosphere | No corrosive gas, explosive gas, or dust | | | | |

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

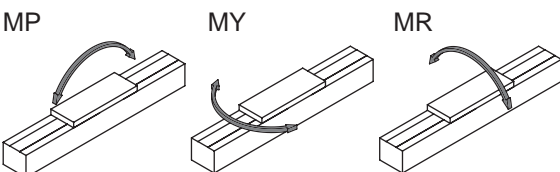
| Screw lead | Stroke length | 100 to 750 | | | | | 800 | | 850 | | 900 | | 950 | | 1050 | |
|------------|---------------|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|--|
| | | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | |
| 5 | | 250 | 225 | 200 | 175 | 150 | 125 | | | | | | | | | |
| 10 | | 500 | 450 | 400 | 350 | 300 | 250 | | | | | | | | | |
| 16 | | 800 | 720 | 640 | 560 | 480 | 400 | | | | | | | | | |
| 20 | | 1000 | 900 | 800 | 700 | 600 | 500 | | | | | | | | | |

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable overhang length

*Refer to page 330 for details.

Moment direction

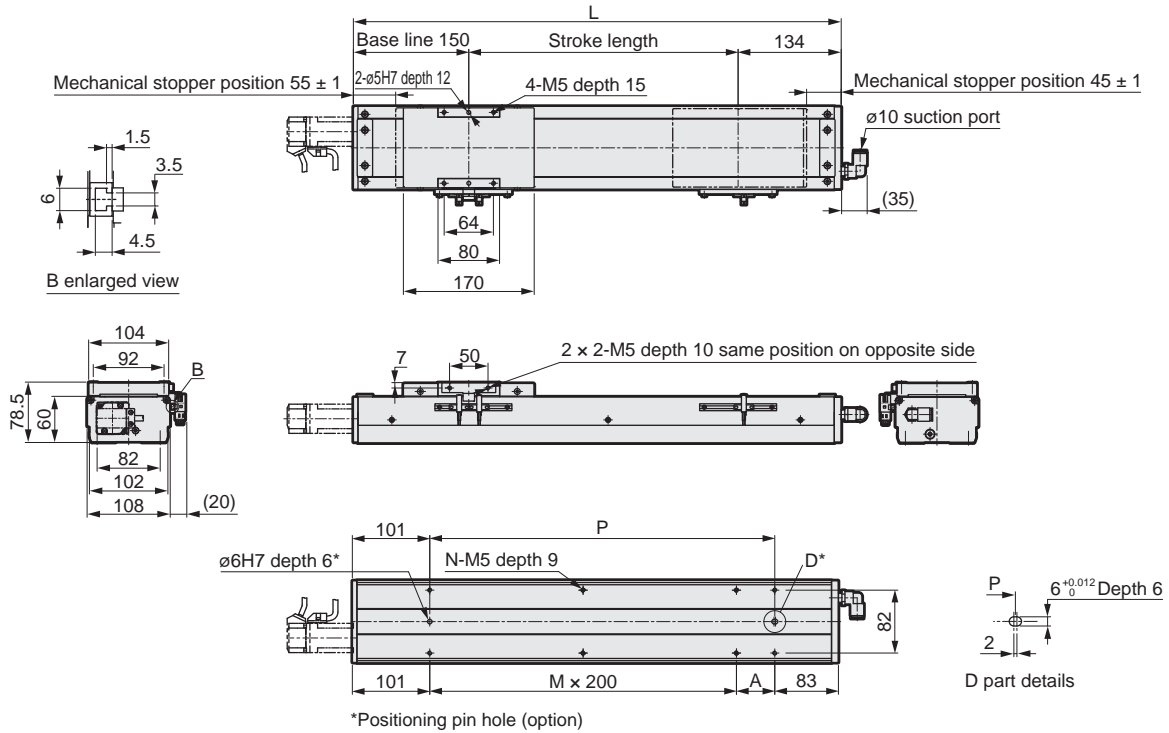


Safety precautions

Dimensions Straight motor mounting

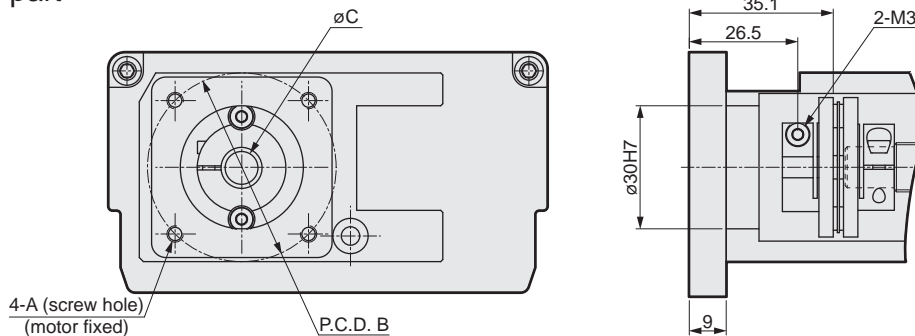
● ECS-10-****-E

Refer to page 336 for grease nipple dimensions.



| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 |
|--------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|
| L | 334 | 384 | 434 | 484 | 534 | 584 | 634 | 684 | 734 | 784 | 834 | 884 | 934 | 984 | 1034 | 1084 | 1134 | 1184 | 1234 | 1284 | 1334 |
| A | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 |
| M | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 |
| N | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 |
| P | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 |
| Weight (kg) | 5.07 | 5.5 | 6.0 | 6.4 | 6.8 | 7.2 | 7.6 | 8.1 | 8.5 | 8.9 | 9.3 | 9.7 | 10.2 | 10.6 | 11.0 | 11.4 | 11.8 | 12.3 | 12.7 | 13.1 | 13.5 |

Motor mounting part



| Mounted motor specification | | A | B | C | Motor mounting bolt |
|-----------------------------|-------|----|-----|----|---------------------|
| M | 100 W | M4 | ø46 | ø8 | 4-M4 x L10 |
| Y | 100 W | M4 | ø46 | ø8 | 4-M4 x L10 |
| P | 100 W | M3 | ø45 | ø8 | 4-M3 x L10 |
| F | 100 W | M4 | ø46 | ø8 | 4-M4 x L10 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Coupling | Fitting | Motor capacity | Motor mounting bolt | |
|-----------------------------|-----------------------|----------------------|----------------|---------------------|----------|
| | | | | Size | Quantity |
| M | Assembled at shipment | Included at shipment | 100 W | M4 | 2 |
| Y | | | | M4 | 2 |
| P | | | | M3 | 4 |
| F | | | | M4 | 2 |

*Refer to page 338 for fitting details.

[Origin sensor/Limit sensor]

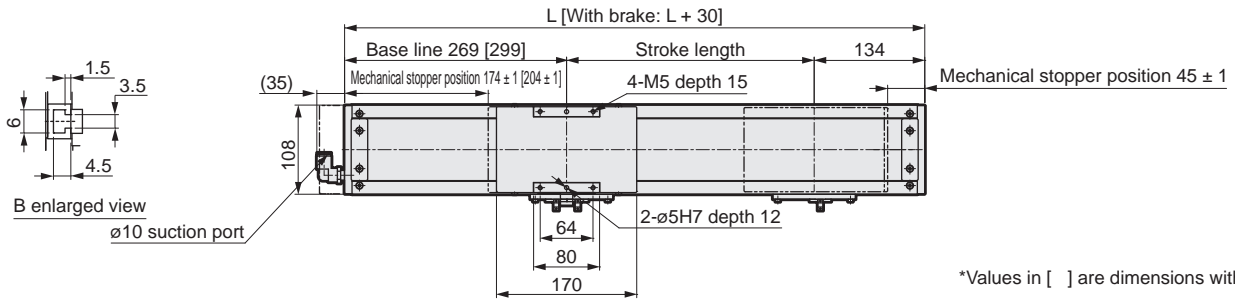
| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 334 for sensor specifications.

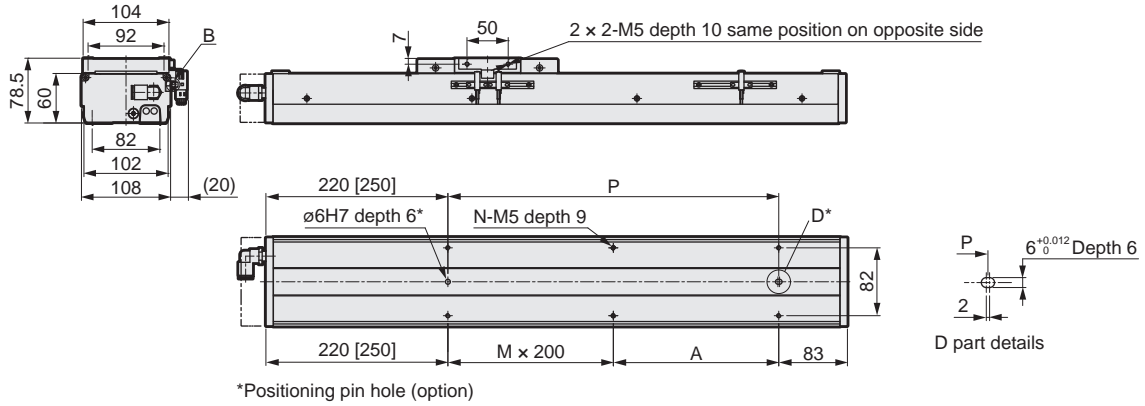
Dimensions Motor built-in mounting

● ECS-10-****-B

Refer to page 336 for grease nipple dimensions.



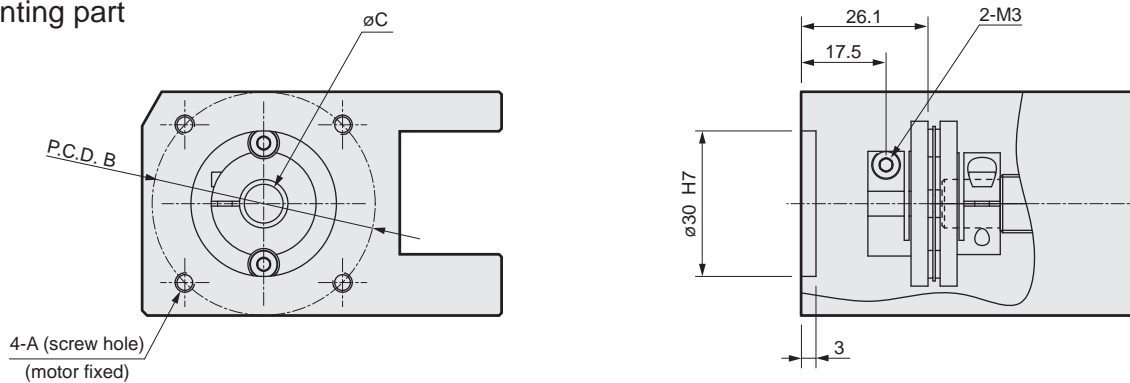
*Values in [] are dimensions with brake.



*Positioning pin hole (option)

| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|
| L | 453 | 503 | 553 | 603 | 653 | 703 | 753 | 803 | 853 | 903 | 953 | 1003 | 1053 | 1103 | 1153 | 1203 | 1253 | 1303 | 1353 | 1403 | 1453 |
| A | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 |
| M | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 |
| N | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 |
| P | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 |
| Weight (kg) | 5.4 | 6.0 | 6.4 | 6.9 | 7.3 | 7.7 | 8.1 | 8.5 | 8.9 | 9.3 | 9.7 | 10.2 | 10.6 | 11.0 | 11.4 | 11.8 | 12.2 | 12.6 | 13.0 | 13.5 | 13.9 |

Motor mounting part



| Mounted motor specification | | A | B | C | Motor mounting bolt |
|-----------------------------|-------|----|-----|----|---------------------|
| M | 100 W | M4 | ø46 | ø8 | 4-M4 x L10 |
| Y | 100 W | M4 | ø46 | ø8 | 4-M4 x L10 |
| P | 100 W | M3 | ø45 | ø8 | 4-M3 x L10 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Coupling | Fitting | Motor capacity | Motor mounting bolt | |
|-----------------------------|-----------------------|----------------------|----------------|---------------------|----------|
| | | | | Size | Quantity |
| M | Assembled at shipment | Included at shipment | 100 W | M4 | 2 |
| Y | | | | M4 | 2 |
| P | | | | M3 | 4 |

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 334 for sensor specifications.

*Refer to page 338 for fitting details.

MEMO

| Servo motor compatible | | | | | Stepper motor compatible | | | | | | |
|------------------------|-----|-----|----------------|------------|--------------------------|-----|-----|-----|-----|-----|-----|
| EBS | EBR | ETS | ETS Multi-Axis | ECS | ETV | ECV | EKS | EBS | EBR | ETS | ECS |

Safety precautions

ECS-10 Series

Motor side mounting (left, right, bottom)

● Servo motor capacity: 100 W



How to order

ECS - 10 - 05 040 - R M 1 N C B N P

A Body size

| | |
|----|-------------------|
| 10 | Body width 102 mm |
|----|-------------------|

E Screw lead

| | |
|----|-------|
| 05 | 5 mm |
| 10 | 10 mm |
| 16 | 16 mm |
| 20 | 20 mm |

C Stroke length

| | |
|-----|-----------------------|
| 005 | 50 mm |
| to | (In 50 mm increments) |
| 105 | 1050 mm |

D Motor mounting direction *7

| | |
|---|-----------------|
| R | Right mounting |
| D | Bottom mounting |
| L | Left mounting |

E Mounted motor specification

| | |
|---|--|
| M | Select the mounted motor specification from the table below. |
| Y | |
| P | |
| F | |
| | |

F Motor capacity

| | |
|---|-------|
| 1 | 100 W |
|---|-------|

G Brake

| | |
|---|------|
| N | None |
|---|------|

H Origin sensor (1 pc)
*1 *2 *3 *4 *7

| | |
|---|-----------------------------|
| N | None |
| A | Inside motor side |
| B | Inside motor opposite side |
| C | Outside motor side |
| D | Outside motor opposite side |

I Limit sensor (2 pcs)
*1 *2 *3 *4 *7

| | |
|---|---------|
| N | None |
| A | Inside |
| B | Outside |

K Positioning pin hole

| | |
|---|------|
| N | None |
| P | Yes |

J Grease nipple *4 *5 *6 *7

| | |
|---|--|
| N | None (Body mounting direction: Standard) |
| R | Right |
| L | Left |

| Manufacturer | 100 W |
|---------------------------------|-------|
| Mitsubishi Electric Corporation | M |
| Delta Electronics Co., Ltd. | M |
| Sanyo Denki Co., Ltd. | M |
| YASKAWA Electric Corporation | Y |
| Keyence Corporation | Y |
| Panasonic Corporation | P |
| OMRON Corporation | M |
| Fuji Electric Co., Ltd. | M |
| FANUC CORPORATION | F |
| Bosch Rexroth AG | P |
| Rockwell Automation, Inc. | M |
| SIEMENS AG | M |

- *1: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.
- *2: Origin sensor B and limit sensor A cannot be combined.
- *3: For sensor inside mounting, the user cannot adjust the position. (Assembled at shipment)
For sensor outside mounting, the user can adjust the position. (Included at shipment)
- *4: Contact CKD to use the origin sensor, limit sensor and grease nipple in the same direction.
- *5: "Body mounting direction: Standard" here refers to mounting from the bottom side.
- *6: When selecting motor mounting direction R, grease nipple R cannot be selected.
When selecting L, grease nipple L cannot be selected.
- *7: For sensor inside mounting, select "None" for the grease nipple.

*Refer to page 275 for the motor model No.

Specifications

| | | | | | |
|---|--|--------------------------------|-----|-----|------|
| Applicable motor capacity | 100 W servo motor | | | | |
| Drive method | Ball screw $\phi 16$ | | | | |
| Ball screw accuracy grade | C7 | | | | |
| Stroke length | 50 to 1050 | | | | |
| Screw lead | mm | 5 | 10 | 16 | 20 |
| Max. load capacity *1 | Horizontal kg | 50 | 30 | 22 | 18 |
| | Vertical kg | 12 | 8 | 5 | 3 |
| Max. speed | mm/s | 250 | 500 | 800 | 1000 |
| Rated thrust *1 | N | 341 | 170 | 106 | 85 |
| Repeatability | mm | ± 0.01 | | | |
| Lost motion | mm | 0.1 or less | | | |
| Dynamic allowable load | N | 2651 | | | |
| Static allowable moment | N·m | MP: 110, MY: 110, MR: 120 | | | |
| Dynamic allowable moment | N·m | MP: 24.1, MY: 24.1, MR: 24.8 | | | |
| Operating ambient temperature, humidity | | 0 to 40°C (no freezing) | | | |
| | | 35 to 80% RH (no condensation) | | | |
| Storage ambient temperature, humidity | | -10 to 50°C (no freezing) | | | |
| | | 35 to 80% RH (no condensation) | | | |
| Atmosphere | No corrosive gas, explosive gas, or dust | | | | |

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

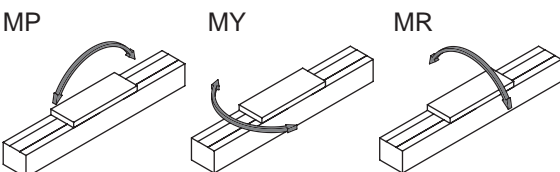
| | | (mm/s) | | | | | |
|------------|---------------|------------|-----|-----|-----|-----|------|
| Screw lead | Stroke length | 100 to 750 | 800 | 850 | 900 | 950 | 1050 |
| | 5 | | 250 | 225 | 200 | 175 | 150 |
| 10 | | 500 | 450 | 400 | 350 | 300 | 250 |
| 16 | | 800 | 720 | 640 | 560 | 480 | 400 |
| 20 | | 1000 | 900 | 800 | 700 | 600 | 500 |

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable overhang length

*Refer to page 330 for details.

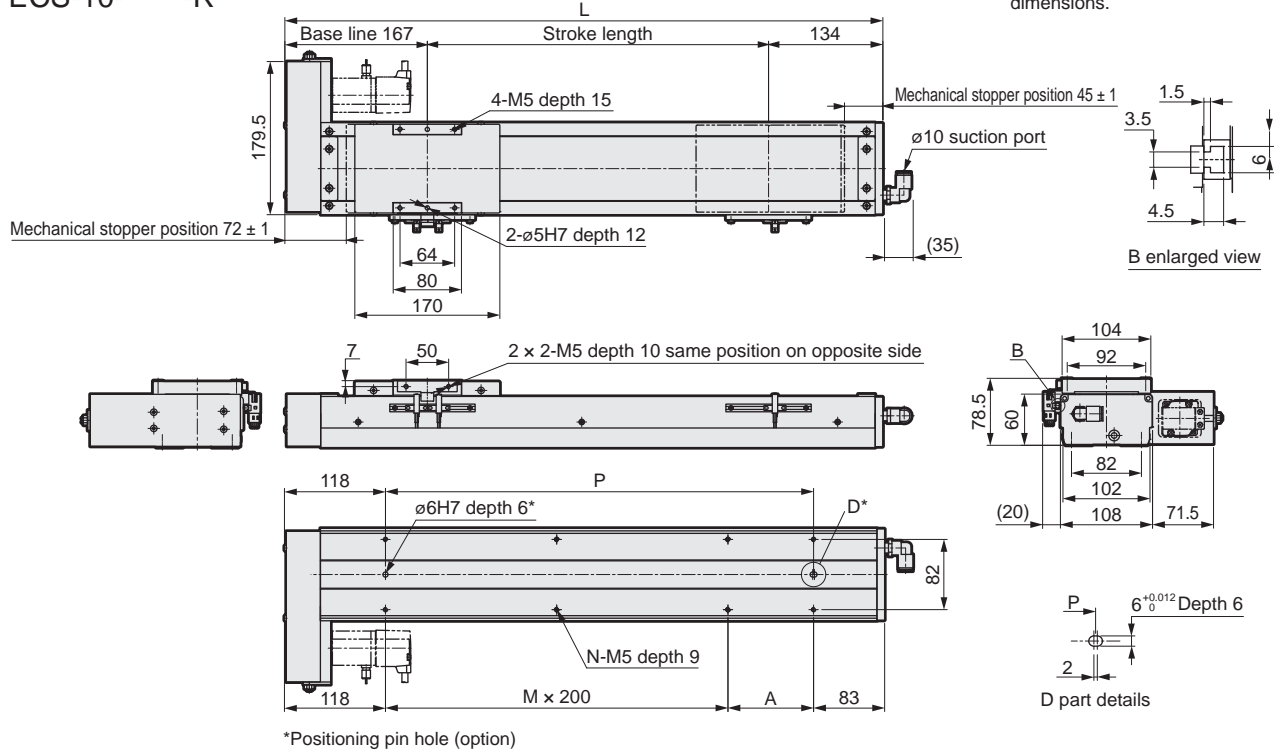
Moment direction



Dimensions Motor right-side mounting

● ECS-10-****-R

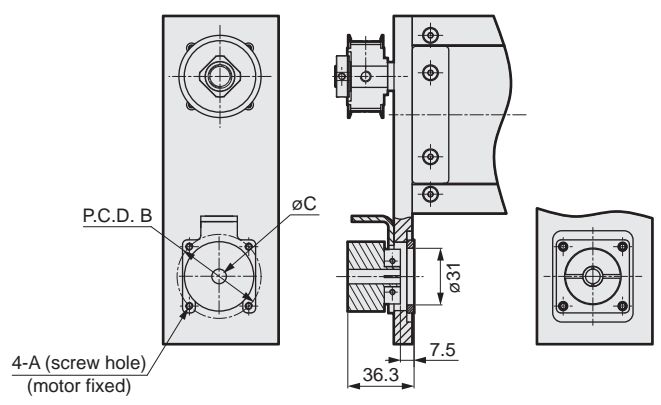
Refer to page 336 for grease nipple dimensions.



*Positioning pin hole (option)

| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|
| L | 351 | 401 | 451 | 501 | 551 | 601 | 651 | 701 | 751 | 801 | 851 | 901 | 951 | 1001 | 1051 | 1101 | 1151 | 1201 | 1251 | 1301 | 1351 |
| A | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 |
| M | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 |
| N | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 |
| P | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 |
| Weight (kg) | 5.5 | 5.9 | 6.4 | 6.8 | 7.2 | 7.6 | 8.0 | 8.4 | 8.8 | 9.2 | 9.7 | 10.1 | 10.5 | 10.9 | 11.3 | 11.7 | 12.1 | 12.5 | 13.0 | 13.4 | 13.8 |

Motor mounting part



| Mounted motor specification | | A | B | C | Motor mounting bolt |
|-----------------------------|-------|----|-----|----|---------------------|
| M | 100 W | M4 | ø46 | ø8 | 4-M4 x L16 |
| Y | 100 W | M4 | ø46 | ø8 | 4-M4 x L16 |
| P | 100 W | M3 | ø45 | ø8 | 4-M3 x L16 |
| F | 100 W | M4 | ø46 | ø8 | 4-M4 x L16 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor capacity | Motor mounting bolt | |
|-----------------------------|----------------------|----------------------|----------------|---------------------|----------|
| | | | | Size | Quantity |
| M | Included at shipment | Included at shipment | 100 W | M4 | 2 |
| Y | | | | M4 | 2 |
| P | | | | M3 | 4 |
| F | | | | M4 | 2 |

*Refer to page 338 for fitting details.

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

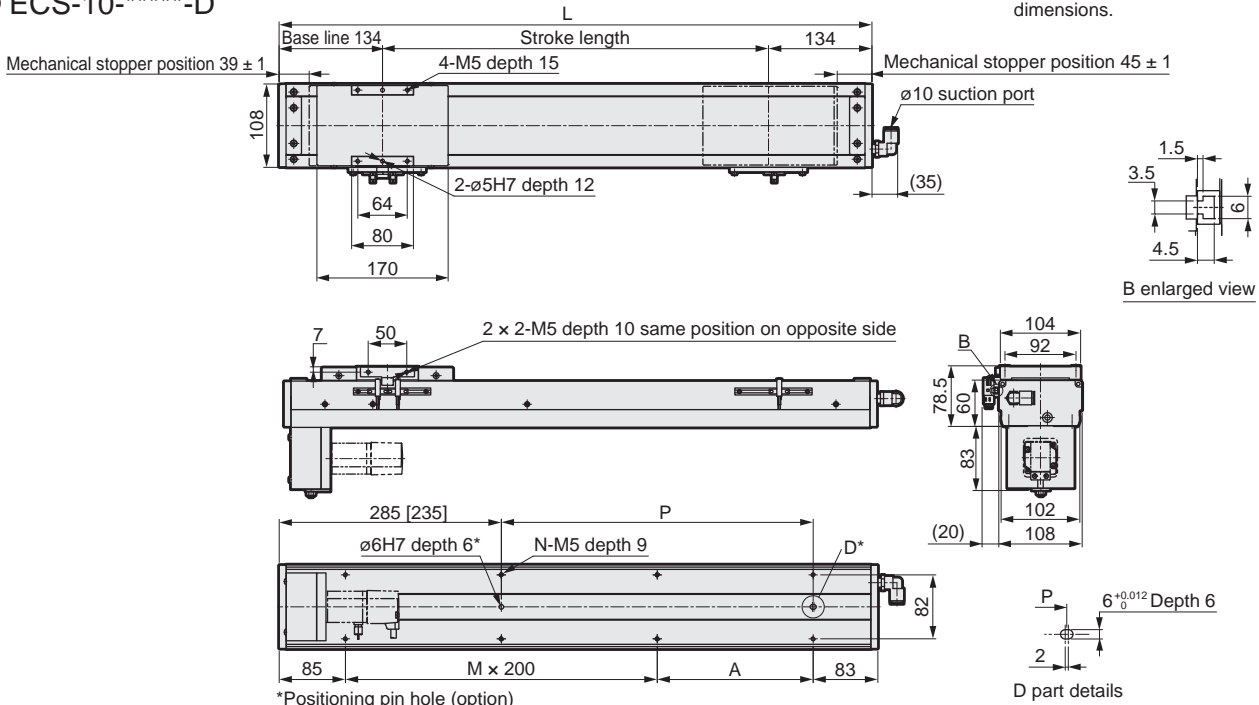
*Refer to page 334 for sensor specifications.

ECS-10 Series

Dimensions Motor bottom mounting

● ECS-10-*****-D

Refer to page 336 for grease nipple dimensions.



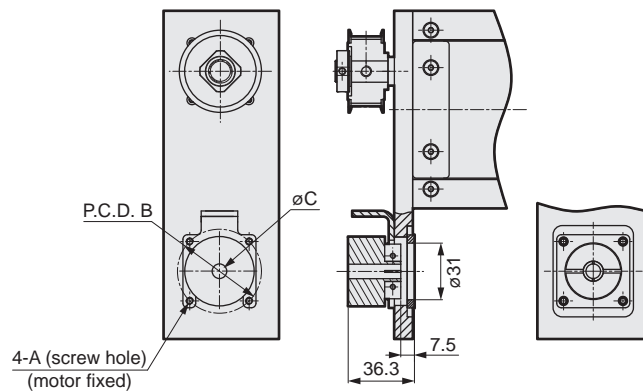
*Positioning pin hole (option)

** 50 stroke only

Round positioning pin holes are available only for stroke 50 and 100.

| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|
| L | 318 | 368 | 418 | 468 | 518 | 568 | 618 | 668 | 718 | 768 | 818 | 868 | 918 | 968 | 1018 | 1068 | 1118 | 1168 | 1218 | 1268 | 1318 |
| A | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 |
| M | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 |
| N | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 |
| P | 0 | 0 | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 |
| Weight (kg) | 5.5 | 5.9 | 6.4 | 6.8 | 7.2 | 7.6 | 8.0 | 8.4 | 8.8 | 9.2 | 9.7 | 10.1 | 10.5 | 10.9 | 11.3 | 11.7 | 12.1 | 12.5 | 13.0 | 13.4 | 13.8 |

Motor mounting part



| Mounted motor specification | | A | | B | | C | Motor mounting bolt |
|-----------------------------|-------|----|--|-----------|--|----------|---------------------|
| M | 100 W | M4 | | $\phi 46$ | | $\phi 8$ | 4-M4 x L16 |
| Y | 100 W | M4 | | $\phi 46$ | | $\phi 8$ | 4-M4 x L16 |
| P | 100 W | M3 | | $\phi 45$ | | $\phi 8$ | 4-M3 x L16 |
| F | 100 W | M4 | | $\phi 46$ | | $\phi 8$ | 4-M4 x L16 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor capacity | Motor mounting bolt | |
|-----------------------------|----------------------|----------------------|----------------|---------------------|----------|
| | | | | Size | Quantity |
| M | Included at shipment | Included at shipment | 100 W | M4 | 2 |
| Y | | | | M4 | 2 |
| P | | | | M3 | 4 |
| F | | | | M4 | 2 |

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

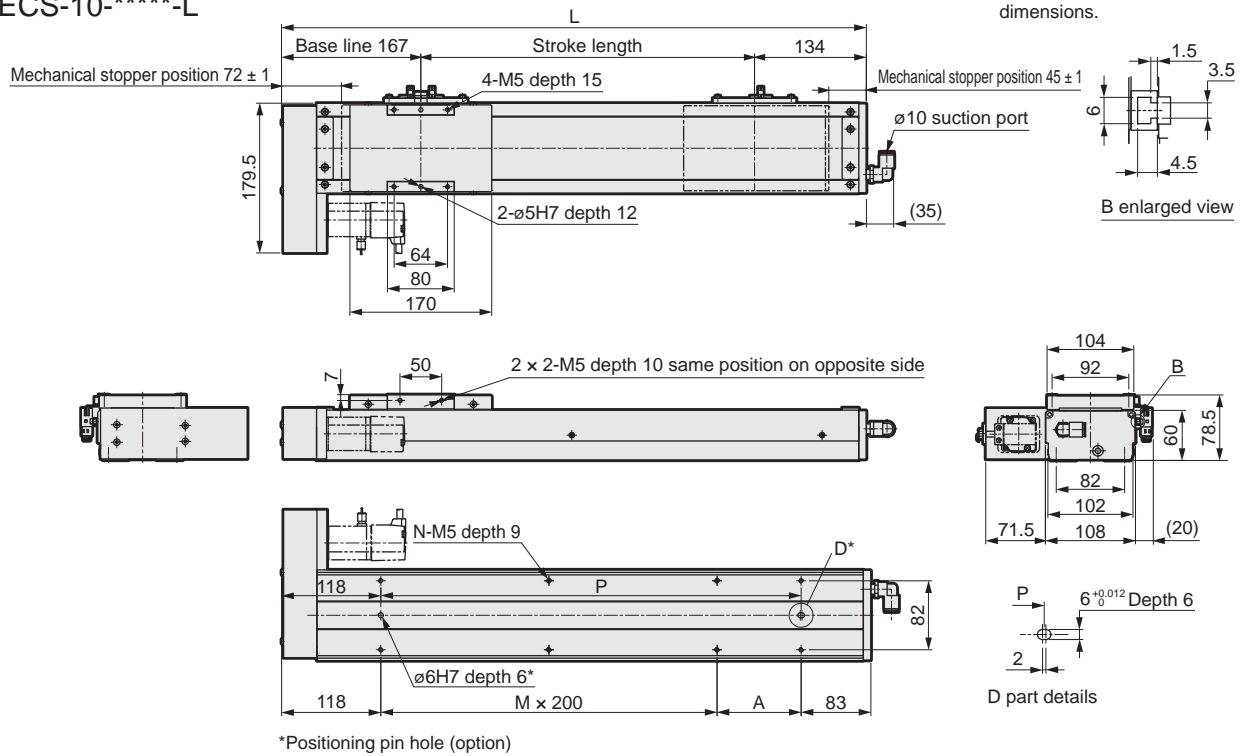
*Refer to page 334 for sensor specifications.

*Refer to page 338 for fitting details.

Dimensions Motor left-side mounting

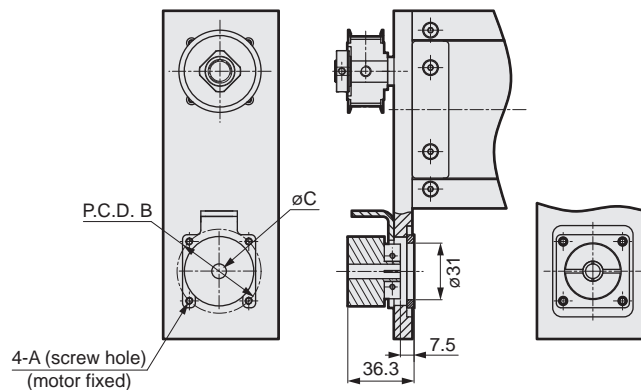
● ECS-10-*****-L

· Refer to page 336 for grease nipple dimensions.



| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|
| L | 351 | 401 | 451 | 501 | 551 | 601 | 651 | 701 | 751 | 801 | 851 | 901 | 951 | 1001 | 1051 | 1101 | 1151 | 1201 | 1251 | 1301 | 1351 |
| A | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 |
| M | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 |
| N | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 |
| P | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 |
| Weight (kg) | 5.5 | 5.9 | 6.4 | 6.8 | 7.2 | 7.6 | 8.0 | 8.4 | 8.8 | 9.2 | 9.7 | 10.1 | 10.5 | 10.9 | 11.3 | 11.7 | 12.1 | 12.5 | 13.0 | 13.4 | 13.8 |

Motor mounting part



| Mounted motor specification | | A | B | C | Motor mounting bolt |
|-----------------------------|-------|----|-----|----|---------------------|
| M | 100 W | M4 | ø46 | ø8 | 4-M4 x L16 |
| Y | 100 W | M4 | ø46 | ø8 | 4-M4 x L16 |
| P | 100 W | M3 | ø45 | ø8 | 4-M3 x L16 |
| F | 100 W | M4 | ø46 | ø8 | 4-M4 x L16 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor capacity | Motor mounting bolt | |
|-----------------------------|----------------------|----------------------|----------------|---------------------|----------|
| | | | | Size | Quantity |
| M | Included at shipment | Included at shipment | 100 W | M4 | 2 |
| Y | | | | M4 | 2 |
| P | | | | M3 | 4 |
| F | | | | M4 | 2 |

*Refer to page 338 for fitting details.

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 334 for sensor specifications.

EBS

EBR

ETS

ETS Multi-Axis

ECS

ETV

ECV

EKS

EBS

Stepper motor compatible

EBR

ETS

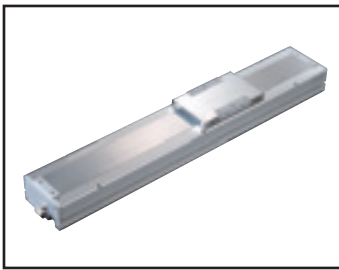
ECS

Safety
Precautions

ECS-12 Series

Straight motor mounting, built-in mounting

● Servo motor capacity: 100 W



How to order

ECS - 12 - 05 040 - E M 1 N N N N P

A Body size
12 Body width 102 mm

B Screw lead

| | |
|----|-------|
| 05 | 5 mm |
| 10 | 10 mm |
| 16 | 16 mm |
| 20 | 20 mm |

C Stroke length

| | |
|-----|-----------------------|
| 005 | 50 mm |
| to | (In 50 mm increments) |
| 105 | 1050 mm |

D Motor mounting direction
*1 *2

| | |
|---|-------------------|
| E | Straight mounting |
| B | Built-in mounting |

E Mounted motor specification

| | |
|---|--|
| M | Select the mounted motor specification from the table below. |
| Y | |
| P | |
| F | |

F Motor capacity

| | |
|---|-------|
| 1 | 100 W |
|---|-------|

G Brake *2

| | |
|---|------|
| N | None |
| B | Yes |

H Origin sensor (1 pc)
*3 *4 *5

| | |
|---|-----------------------------|
| N | None |
| A | Inside motor side |
| B | Inside motor opposite side |
| C | Outside motor side |
| D | Outside motor opposite side |

I Limit sensor (2 pcs)
*3 *4 *5

| | |
|---|---------|
| N | None |
| A | Inside |
| B | Outside |

K Positioning pin hole

| | |
|---|------|
| N | None |
| P | Yes |

J Grease nipple *5 *6

| | |
|---|--|
| N | None (Body mounting direction: Standard) |
| R | Right |
| L | Left |

| Manufacturer | 100 W |
|---------------------------------|-------|
| Mitsubishi Electric Corporation | M |
| Delta Electronics Co., Ltd. | M |
| Sanyo Denki Co., Ltd. | M |
| YASKAWA Electric Corporation | Y |
| Keyence Corporation | Y |
| Panasonic Corporation | P |
| OMRON Corporation | M |
| Fuji Electric Co., Ltd. | M |
| FANUC CORPORATION | F |
| Bosch Rexroth AG | P |
| Rockwell Automation, Inc. | M |
| SIEMENS AG | M |

*Refer to page 275 for the motor model No.

- *1: Contact CKD when using an OMRON motor.
- *2: "Yes" to the Brake can be selected only when the motor mounting direction is built-in mounting.
- *3: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.
- *4: For sensor inside mounting, the user cannot adjust the position. (Assembled at shipment)
For sensor outside mounting, the user can adjust the position. (Included at shipment)
- *5: Contact CKD to use the origin sensor, limit sensor and grease nipple in the same direction.
- *6: "Body mounting direction: Standard" here refers to mounting from the bottom side.

Specifications

| | | | | | |
|---|----------------------|---|-----|-----|------|
| Applicable motor capacity | 100 W servo motor | | | | |
| Drive method | Ball screw $\phi 16$ | | | | |
| Ball screw accuracy grade | C7 | | | | |
| Stroke length | 50 to 1050 | | | | |
| Screw lead | mm | 5 | 10 | 16 | 20 |
| Max. load capacity *1 | Horizontal kg | 50 | 30 | 22 | 18 |
| | Vertical kg | 12 | 8 | 5 | 3 |
| Max. speed | mm/s | 250 | 500 | 800 | 1000 |
| Rated thrust *1 | N | 341 | 170 | 106 | 85 |
| Repeatability | mm | ± 0.01 | | | |
| Lost motion | mm | 0.1 or less | | | |
| Dynamic allowable load | N | 1660 | | | |
| Static allowable moment | N·m | MP: 150, MY: 150, MR: 130 | | | |
| Dynamic allowable moment | N·m | MP: 42.3, MY: 42.3, MR: 53.1 | | | |
| Operating ambient temperature, humidity | | 0 to 40°C (no freezing) 35 to 80% RH (no condensation) | | | |
| Storage ambient temperature, humidity | | -10 to 50°C (no freezing) 35 to 80% RH (no condensation) | | | |
| Atmosphere | | No corrosive gas, explosive gas, or dust | | | |

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

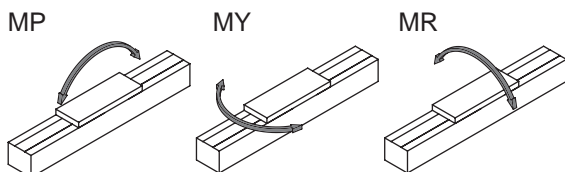
| | | (mm/s) | | | | | |
|------------|---------------|------------|-----|-----|-----|-----|------|
| Screw lead | Stroke length | 100 to 750 | 800 | 850 | 900 | 950 | 1050 |
| | 5 | | 250 | 225 | 200 | 175 | 150 |
| 10 | | 500 | 450 | 400 | 350 | 300 | 250 |
| 16 | | 800 | 720 | 640 | 560 | 480 | 400 |
| 20 | | 1000 | 900 | 800 | 700 | 600 | 500 |

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable overhang length

*Refer to page 330 for details.

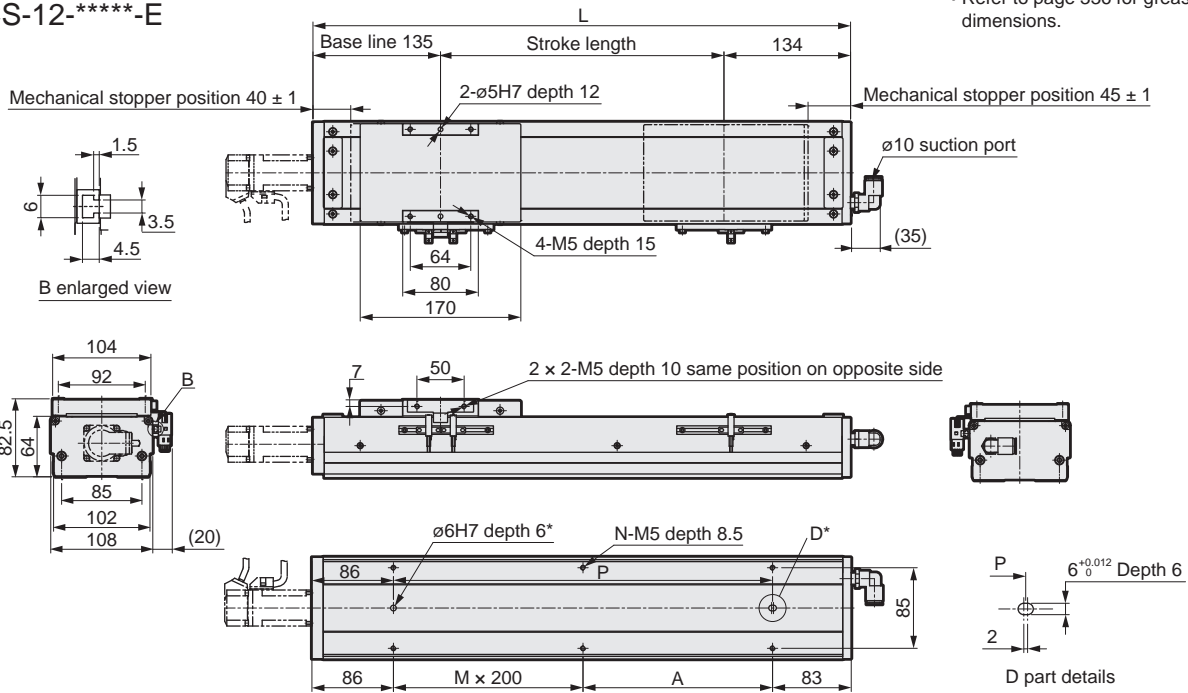
Moment direction



Dimensions Straight motor mounting

● ECS-12-****-E

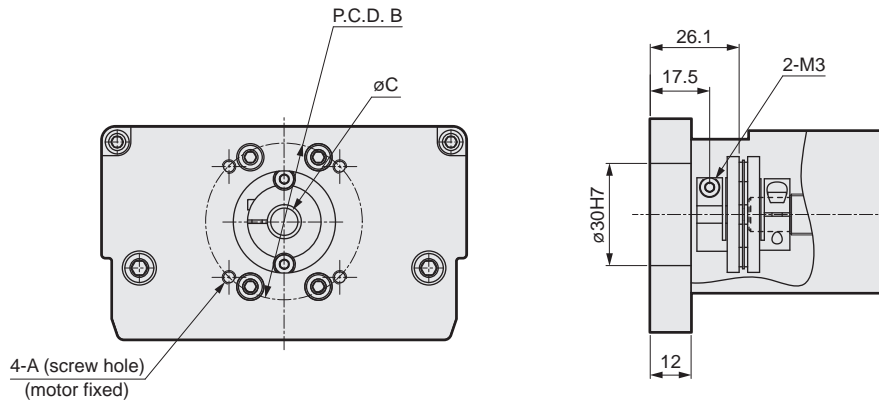
· Refer to page 336 for grease nipple dimensions.



*Positioning pin hole (option)

| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|
| L | 319 | 369 | 419 | 469 | 519 | 569 | 619 | 669 | 719 | 769 | 819 | 869 | 919 | 969 | 1019 | 1069 | 1119 | 1169 | 1219 | 1269 | 1319 |
| A | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 |
| M | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 |
| N | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 |
| P | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 |
| Weight (kg) | 5.6 | 6.1 | 6.5 | 6.9 | 7.3 | 7.8 | 8.2 | 8.6 | 9.0 | 9.5 | 9.9 | 10.3 | 10.7 | 11.2 | 11.6 | 12.0 | 12.4 | 12.9 | 13.3 | 13.7 | 14.1 |

Motor mounting part



| Mounted motor specification | | A | B | C | Motor mounting bolt |
|-----------------------------|-------|----|-----|----|---------------------|
| M | 100 W | M4 | ø46 | ø8 | 4-M4 x L16 |
| Y | 100 W | M4 | ø46 | ø8 | 4-M4 x L16 |
| P | 100 W | M3 | ø45 | ø8 | 4-M3 x L16 |
| F | 100 W | M4 | ø46 | ø8 | 4-M4 x L16 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Coupling | Fitting | Motor capacity | Motor mounting bolt | |
|-----------------------------|-----------------------|----------------------|----------------|---------------------|----------|
| | | | | Size | Quantity |
| M | Assembled at shipment | Included at shipment | 100 W | M4 | 2 |
| Y | | | | M4 | 2 |
| P | | | | M3 | 4 |
| F | | | | M4 | 2 |

*Refer to page 338 for fitting details.

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

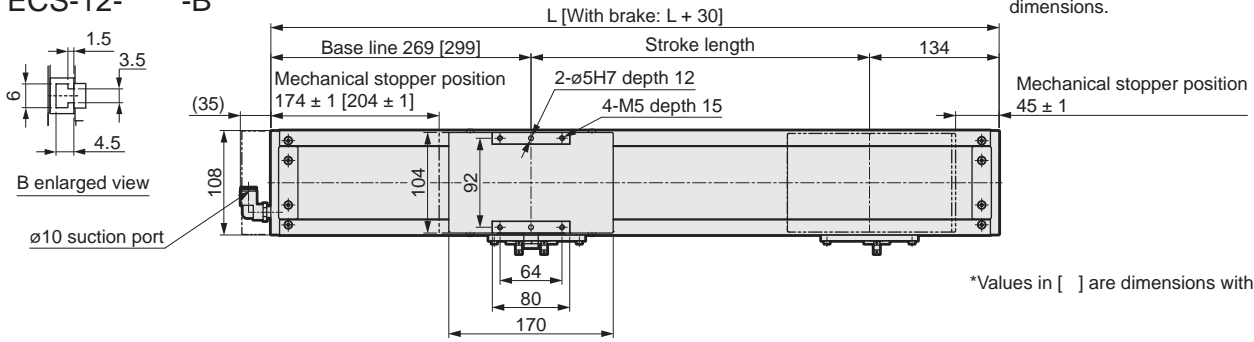
*Refer to page 334 for sensor specifications.

ECS-12 Series

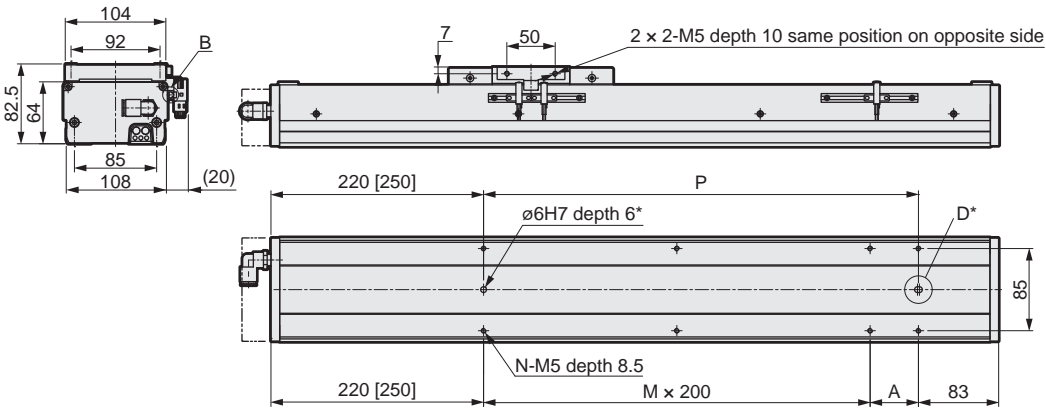
Dimensions Motor built-in mounting

● ECS-12-*****-B

· Refer to page 336 for grease nipple dimensions.



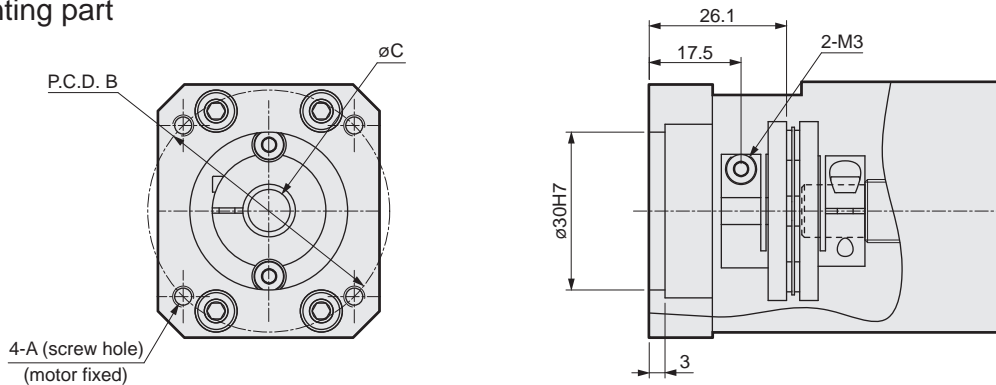
*Values in [] are dimensions with brake.



*Positioning pin hole (option)

| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|
| L | 453 | 503 | 553 | 603 | 653 | 703 | 753 | 803 | 853 | 903 | 953 | 1003 | 1053 | 1103 | 1153 | 1203 | 1253 | 1303 | 1353 | 1403 | 1453 |
| A | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 |
| M | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 |
| N | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 |
| P | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 |
| Weight (kg) | 5.6 | 6.0 | 6.4 | 6.9 | 7.3 | 7.7 | 8.1 | 8.5 | 8.9 | 9.3 | 9.7 | 10.2 | 10.6 | 11.0 | 11.4 | 11.8 | 12.2 | 12.6 | 13.0 | 13.5 | 13.9 |

Motor mounting part



| Mounted motor specification | | A | B | C | Motor mounting bolt |
|-----------------------------|-------|----|-----|----|---------------------|
| M | 100 W | M4 | ø46 | ø8 | 4-M4 × L16 |
| Y | 100 W | M4 | ø46 | ø8 | 4-M4 × L16 |
| P | 100 W | M3 | ø45 | ø8 | 4-M3 × L16 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Coupling | Fitting | Motor capacity | Motor mounting bolt | |
|-----------------------------|-----------------------|----------------------|----------------|---------------------|----------|
| | | | | Size | Quantity |
| M | Assembled at shipment | Included at shipment | 100 W | M4 | 2 |
| Y | | | | M4 | 2 |
| P | | | | M3 | 4 |

*Refer to page 338 for fitting details.

[Origin sensor/Limit sensor]

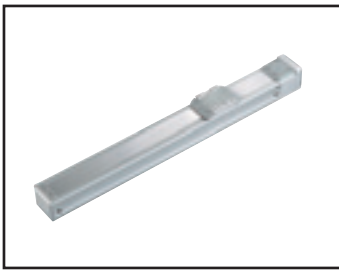
| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 334 for sensor specifications.

ECS-05 Series

Straight motor mounting

● Stepper motor size: 42



How to order

ECS - 05 - 05 040 - E A A N C B N P - M

A Body size
05 Body width 51 mm

B Screw lead
02 2 mm
05 5 mm
10 10 mm

C Stroke length
005 50 mm
to (In 50 mm increments)
080 800 mm

D Motor mounting direction
E Straight mounting

E Mounted motor specification
A Select the mounted motor specification from the table below.
B

F Motor size
A 42

G Brake
N None

H Origin sensor (1 pc) *1*2
N None
C Outside motor side
D Outside motor opposite side

I Limit sensor (2 pcs) *1*2
N None
B Outside

J Grease nipple *3
N None (Body mounting direction: Standard)

K Positioning pin hole
N None
P Yes

L Magnet slider method
M Yes

Manufacturer 42
Oriental Motor Co., Ltd. A
MinebeaMitsumi Inc. B
Dyadic Systems Co., Ltd. B

*1: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

*2: The user can adjust the sensor position. (Included at shipment)

*3: "Body mounting direction: Standard" here refers to mounting from the bottom side.

*Refer to page 641 for the motor model No.

Specifications

| | | | |
|---|---|--|-----|
| Applicable motor sizes | <input type="checkbox"/> 42 Stepper motor | | |
| Drive method | Ball screw ϕ 12 | | |
| Ball screw accuracy grade | C7 | | |
| Stroke length | mm 50 to 800 | | |
| Screw lead | mm 2, 5, 10 | | |
| Max. load capacity *1 | Horizontal kg | 10 | 5 |
| | Vertical kg | 7 | 1.5 |
| Max. speed | mm/s | 100 | 500 |
| Rated thrust *1 | N | 825 | 165 |
| Repeatability | mm | \pm 0.01 | |
| Lost motion | mm | 0.1 or less | |
| Drive system weight | kg | 0.3 | |
| Other inertia | kg·cm ² | 0.024 | |
| Coefficient of friction | | 0.05 | |
| Mechanical efficiency | | 0.8 | |
| Ball screw length | | Stroke + 200 | |
| Dynamic allowable load | N | 551 | |
| Static allowable moment | N·m | MP: 20, MY: 16, MR: 19 | |
| Dynamic allowable moment | N·m | MP: 2.8, MY: 2.8, MR: 6.8 | |
| Operating ambient temperature, humidity | | 0 to 40°C (no freezing) | |
| | | 35 to 80% RH (no condensation) | |
| Storage ambient temperature, humidity | | -10 to 50°C (no freezing) | |
| | | 35 to 80% RH (no condensation) | |
| Atmosphere | | No corrosive gas, explosive gas, or dust | |

*1 The rated thrust and max. load capacity values are the allowable values for the actuator body; the actual thrust and load capacity are limited by the motor used.

Stroke and max. speed

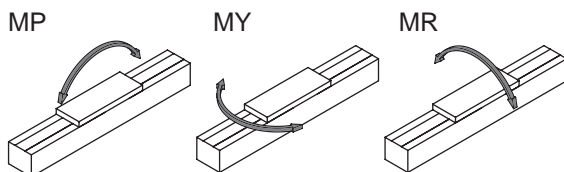
| Stroke length Screw lead | (mm) | | | | |
|-----------------------------|------------|-----|-----|-----|-----|
| | 100 to 600 | 650 | 700 | 750 | 800 |
| 2 | 100 | 90 | 80 | 70 | 60 |
| 5 | 250 | 225 | 200 | 175 | 150 |
| 10 | 500 | 450 | 400 | 350 | 300 |

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable overhang length

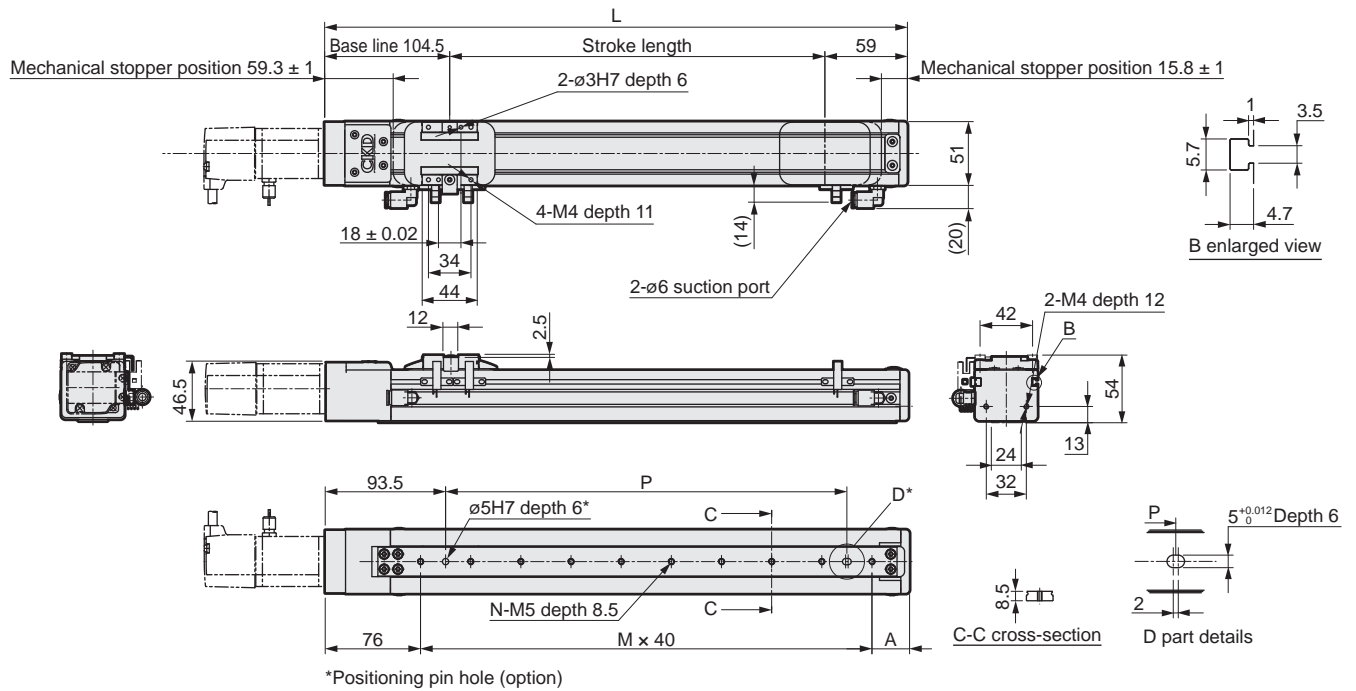
*Refer to page 674 for details.

Moment direction



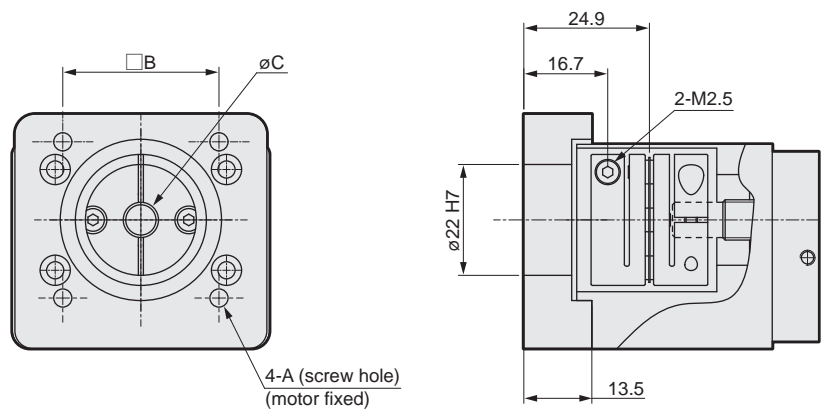
Dimensions Straight motor mounting

● ECS-05-****-E



| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L | 213.5 | 263.5 | 313.5 | 363.5 | 413.5 | 463.5 | 513.5 | 563.5 | 613.5 | 663.5 | 713.5 | 763.5 | 813.5 | 863.5 | 913.5 | 963.5 |
| A | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 |
| M | 2 | 4 | 5 | 6 | 7 | 9 | 10 | 11 | 12 | 14 | 15 | 16 | 17 | 19 | 20 | 21 |
| N | 3 | 5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 | 15 | 16 | 17 | 18 | 20 | 21 | 22 |
| P | 40 | 120 | 160 | 200 | 240 | 320 | 360 | 400 | 440 | 520 | 560 | 600 | 640 | 720 | 760 | 800 |
| Weight (kg) | 1.5 | 1.7 | 1.9 | 2.0 | 2.2 | 2.3 | 2.5 | 2.6 | 2.8 | 2.9 | 3.1 | 3.2 | 3.4 | 3.5 | 3.6 | 3.8 |

Motor mounting part



| Mounted motor specification | A | B | C | Motor mounting bolt |
|-----------------------------|-----|----|---|---------------------|
| A | 3.6 | 31 | 6 | 4-M3 × L16 |
| B | 3.6 | 31 | 5 | 4-M3 × L16 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Coupling | Fitting | Motor size | Motor mounting bolt | |
|-----------------------------|-----------------------|-----------------------|------------|---------------------|----------|
| | | | | Size | Quantity |
| A | Assembled at shipment | Assembled at shipment | □ 42 | M3 | 4 |
| B | | | | M3 | 4 |

*Refer to page 682 for fitting details.

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 678 for sensor specifications.

ECS-05 Series

Motor side mounting (left, right, bottom)

● Stepper motor size: 42



How to order

ECS - 05 - 05 040 - R A A N C B N P - M

A Body size
05 Body width 51 mm

B Screw lead
02 2 mm
05 5 mm
10 10 mm

C Stroke length
005 50 mm
to (In 50 mm increments)
080 800 mm

D Motor mounting direction
R Right mounting
D Bottom mounting
L Left mounting

E Mounted motor specification
A Select the mounted motor specification from the table below.
B

F Motor size
A 42

G Brake
N None

H Origin sensor (1 pc) *1*2
N None
C Outside motor side
D Outside motor opposite side

I Limit sensor (2 pcs) *1*2
N None
B Outside

J Grease nipple *3
N None (Body mounting direction: Standard)

K Positioning pin hole
N None
P Yes

L Magnet slider method
M Yes

| | |
|--------------------------|-----------------------------|
| Manufacturer | <input type="checkbox"/> 42 |
| Oriental Motor Co., Ltd. | A |
| MinebeaMitsumi Inc. | B |
| Dyadic Systems Co., Ltd. | B |

*1: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

*2: The user can adjust the sensor position. (Included at shipment)

*3: "Body mounting direction: Standard" here refers to mounting from the bottom side.

*Refer to page 641 for the motor model No.

Specifications

| | | | |
|---|---|--|---------|
| Applicable motor sizes | <input type="checkbox"/> 42 Stepper motor | | |
| Drive method | Ball screw ϕ 12 | | |
| Ball screw accuracy grade | C7 | | |
| Stroke length | mm 50 to 800 | | |
| Screw lead | mm | 2 | 5 10 |
| Max. load capacity *1 | Horizontal kg | 10 | 10 5 |
| | Vertical kg | 7 | 3 1.5 |
| Max. speed | mm/s | 100 | 250 500 |
| Rated thrust *1 | N | 825 | 330 165 |
| Repeatability | mm | \pm 0.01 | |
| Lost motion | mm | 0.1 or less | |
| Drive system weight | kg | 0.3 | |
| Other inertia | kg·cm ² | 0.120 | |
| Coefficient of friction | | 0.05 | |
| Mechanical efficiency | | 0.8 | |
| Ball screw length | | Stroke + 200 | |
| Dynamic allowable load | N | 551 | |
| Static allowable moment | N·m | MP: 20, MY: 16, MR: 19 | |
| Dynamic allowable moment | N·m | MP: 2.8, MY: 2.8, MR: 6.8 | |
| Operating ambient temperature, humidity | | 0 to 40°C (no freezing) | |
| | | 35 to 80% RH (no condensation) | |
| Storage ambient temperature, humidity | | -10 to 50°C (no freezing) | |
| | | 35 to 80% RH (no condensation) | |
| Atmosphere | | No corrosive gas, explosive gas, or dust | |

*1 The rated thrust and max. load capacity values are the allowable values for the actuator body; the actual thrust and load capacity are limited by the motor used.

Stroke and max. speed

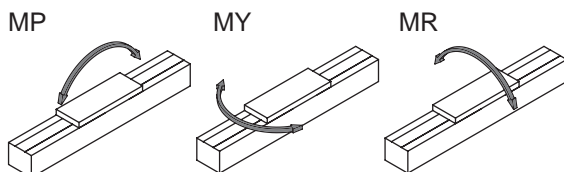
| Stroke length Screw lead | (mm/s) | | | | |
|-----------------------------|------------|-----|-----|-----|-----|
| | 100 to 600 | 650 | 700 | 750 | 800 |
| 2 | 100 | 90 | 80 | 70 | 60 |
| 5 | 250 | 225 | 200 | 175 | 150 |
| 10 | 500 | 450 | 400 | 350 | 300 |

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable overhang length

*Refer to page 674 for details.

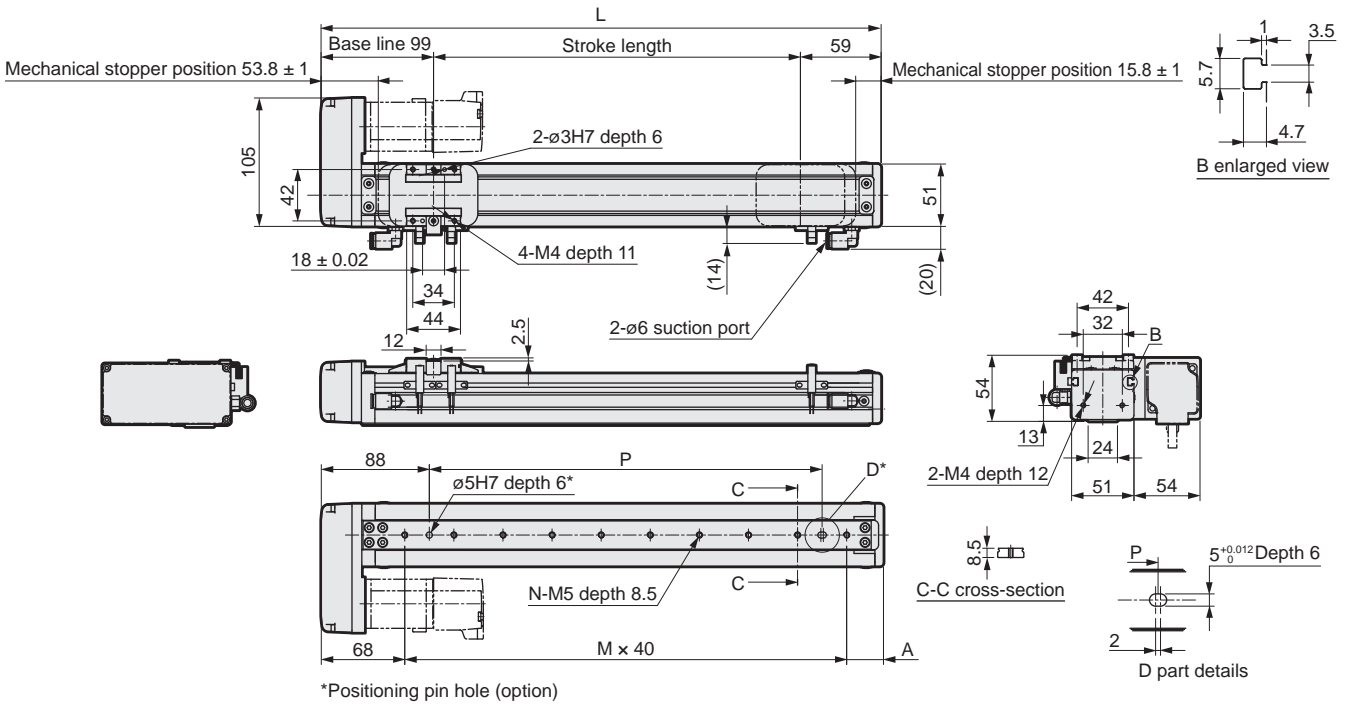
Moment direction



EBS
 EBR
 ETS
 ETS Multi-Axis
 ECS
 ETV
 ECV
 EKS
 EBS
 EBR
 ETS
 ECS
 Stepper motor compatible
 Stepper motor compatible
 Safety precautions

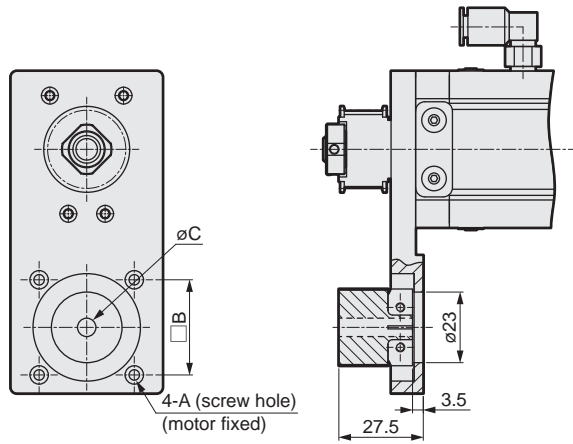
Dimensions Motor right-side mounting

● ECS-05-*****-R



| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L | 208 | 258 | 308 | 358 | 408 | 458 | 508 | 558 | 608 | 658 | 708 | 758 | 808 | 858 | 908 | 958 |
| A | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 |
| M | 2 | 4 | 5 | 6 | 7 | 9 | 10 | 11 | 12 | 14 | 15 | 16 | 17 | 19 | 20 | 21 |
| N | 3 | 5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 | 15 | 16 | 17 | 18 | 20 | 21 | 22 |
| P | 40 | 120 | 160 | 200 | 240 | 320 | 360 | 400 | 440 | 520 | 560 | 600 | 640 | 720 | 760 | 800 |
| Weight (kg) | 1.7 | 1.9 | 2.0 | 2.1 | 2.3 | 2.4 | 2.6 | 2.7 | 2.9 | 3.0 | 3.2 | 3.3 | 3.5 | 3.6 | 3.7 | 3.9 |

Motor mounting part



| Mounted motor specification | A | B | C | Motor mounting bolt |
|-----------------------------|-----|----|---|---------------------|
| A | 3.4 | 31 | 6 | 4-M3 x L14 |
| B | 3.4 | 31 | 5 | 4-M3 x L14 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor size | Motor mounting bolt | |
|-----------------------------|----------------------|-----------------------|------------|---------------------|----------|
| | | | | Size | Quantity |
| A | Included at shipment | Assembled at shipment | □42 | M3 | 4 |
| B | | | | M3 | 4 |

*Refer to page 682 for fitting details.

[Origin sensor/Limit sensor]

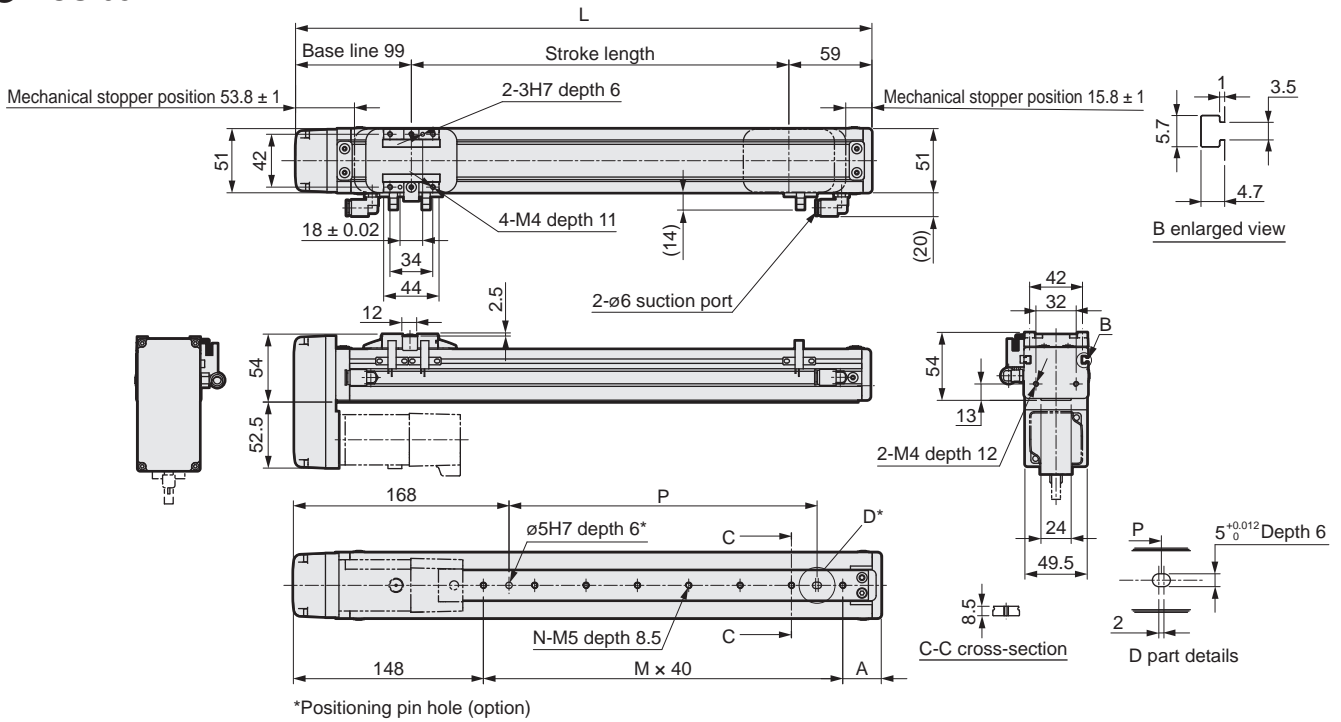
| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 678 for sensor specifications.

ECS-05 Series

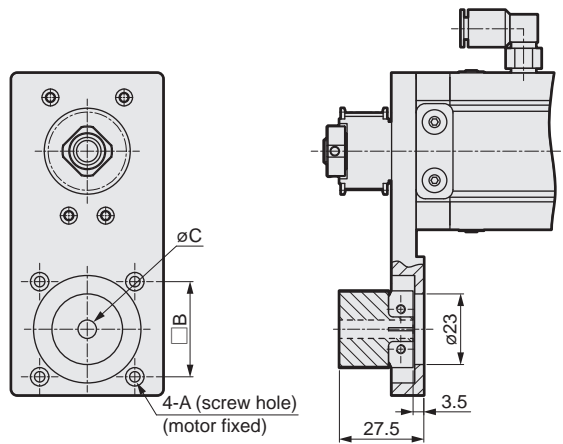
Dimensions Motor bottom mounting

● ECS-05-*****-D



| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L | 208 | 258 | 308 | 358 | 408 | 458 | 508 | 558 | 608 | 658 | 708 | 758 | 808 | 858 | 908 | 958 |
| A | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 |
| M | 0 | 2 | 3 | 4 | 5 | 7 | 8 | 9 | 10 | 12 | 13 | 14 | 15 | 17 | 18 | 19 |
| N | 1 | 3 | 4 | 5 | 6 | 8 | 9 | 10 | 11 | 13 | 14 | 15 | 16 | 18 | 19 | 20 |
| P | 0 | 40 | 80 | 120 | 160 | 240 | 280 | 320 | 360 | 440 | 480 | 520 | 560 | 640 | 680 | 720 |
| Weight (kg) | 1.7 | 1.9 | 2.0 | 2.1 | 2.3 | 2.4 | 2.6 | 2.7 | 2.9 | 3.0 | 3.2 | 3.3 | 3.5 | 3.6 | 3.7 | 3.9 |

Motor mounting part



| Mounted motor specification | A | B | C | Motor mounting bolt |
|-----------------------------|-----|----|---|---------------------|
| A | 3.4 | 31 | 6 | 4-M3 x L14 |
| B | 3.4 | 31 | 5 | 4-M3 x L14 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor size | Motor mounting bolt | |
|-----------------------------|----------------------|-----------------------|-----------------------------|---------------------|----------|
| | | | | Size | Quantity |
| A | Included at shipment | Assembled at shipment | <input type="checkbox"/> 42 | M3 | 4 |
| B | | | | M3 | 4 |

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

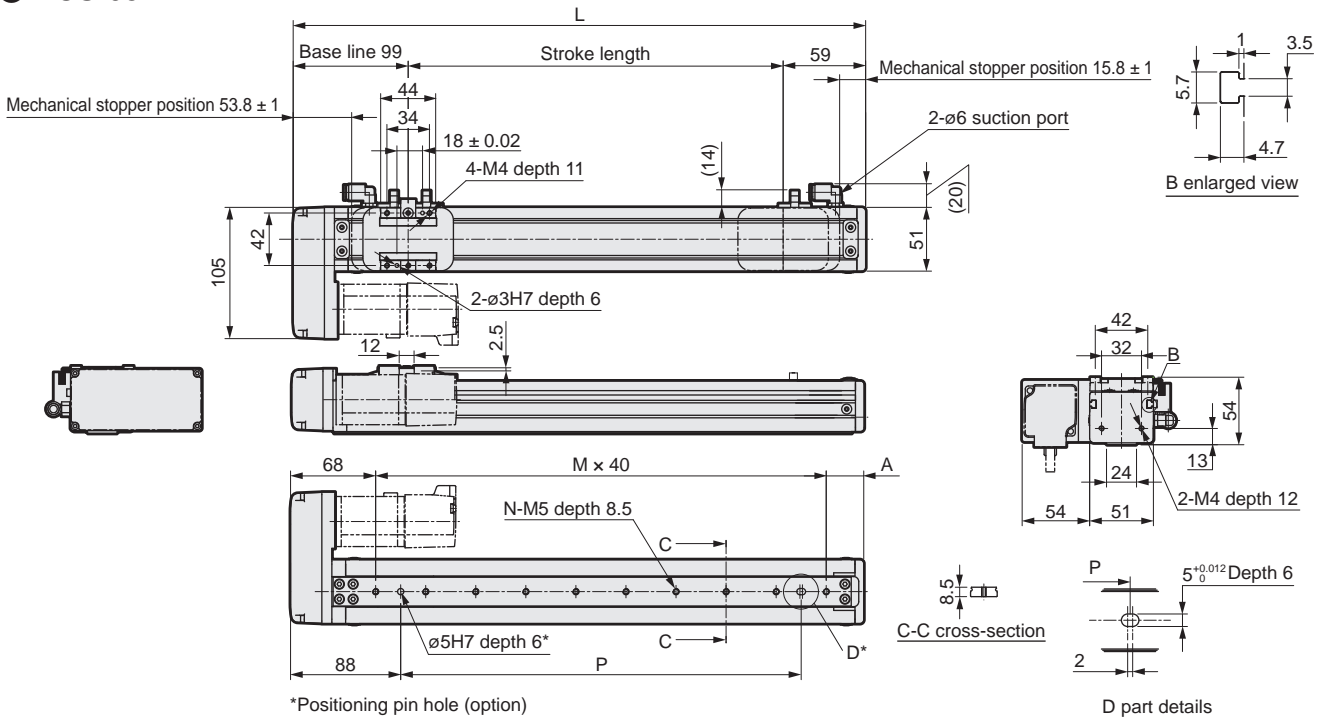
*Refer to page 678 for sensor specifications.

*Refer to page 682 for fitting details.

EBS
EBR
ETS
ETS Multi-Axis
ECS
ETV
ECV
EKS
EBS
EBR
ETS
ECS
Stepper motor compatible
Safety Precautions

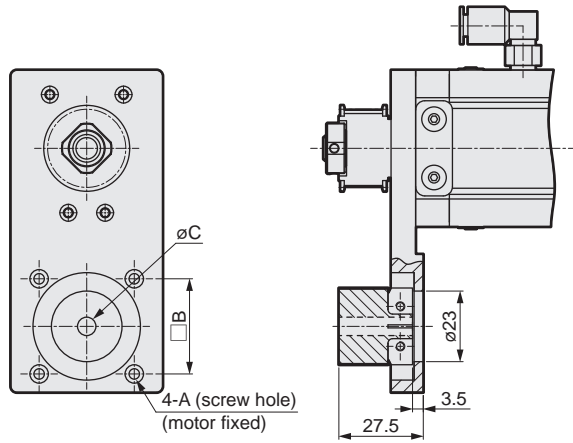
Dimensions Motor left-side mounting

● ECS-05-****-L



| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L | 208 | 258 | 308 | 358 | 408 | 458 | 508 | 558 | 608 | 658 | 708 | 758 | 808 | 858 | 908 | 958 |
| A | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 | 60 | 30 | 40 | 50 |
| M | 2 | 4 | 5 | 6 | 7 | 9 | 10 | 11 | 12 | 14 | 15 | 16 | 17 | 19 | 20 | 21 |
| N | 3 | 5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 | 15 | 16 | 17 | 18 | 20 | 21 | 22 |
| P | 40 | 120 | 160 | 200 | 240 | 320 | 360 | 400 | 440 | 520 | 560 | 600 | 640 | 720 | 760 | 800 |
| Weight (kg) | 1.7 | 1.9 | 2.0 | 2.1 | 2.3 | 2.4 | 2.6 | 2.7 | 2.9 | 3.0 | 3.2 | 3.3 | 3.5 | 3.6 | 3.7 | 3.9 |

Motor mounting part



| Mounted motor specification | A | B | C | Motor mounting bolt |
|-----------------------------|-----|----|---|---------------------|
| A | 3.4 | 31 | 6 | 4-M3 x L14 |
| B | 3.4 | 31 | 5 | 4-M3 x L14 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor size | Motor mounting bolt | |
|-----------------------------|----------------------|-----------------------|-----------------------------|---------------------|----------|
| | | | | Size | Quantity |
| A | Included at shipment | Assembled at shipment | <input type="checkbox"/> 42 | M3 | 4 |
| B | | | | M3 | 4 |

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

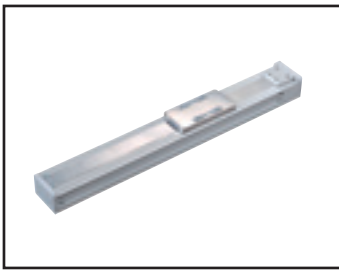
*Refer to page 678 for sensor specifications.

*Refer to page 682 for fitting details.

ECS-06 Series

Straight motor mounting

● Stepper motor size: 42



How to order

ECS - 06 - 05 040 - E A A N C B N P - M

A Body size
06 Body width 65 mm

B Screw lead
02 2 mm
05 5 mm
10 10 mm

C Stroke length
005 50 mm
to (In 50 mm increments)
080 800 mm

D Motor mounting direction
E Straight mounting

E Mounted motor specification
A Select the mounted motor specification from the table below.
B

F Motor size
A 42

G Brake
N None

H Origin sensor (1 pc) *1*2
N None
C Outside motor side
D Outside motor opposite side

I Limit sensor (2 pcs) *1*2
N None
B Outside

J Grease nipple *3
N None (Body mounting direction: Standard)

K Positioning pin hole
N None
P Yes

L Magnet slider method
M Yes

| | |
|--------------------------|-----------------------------|
| Manufacturer | <input type="checkbox"/> 42 |
| Oriental Motor Co., Ltd. | A |
| MinebeaMitsumi Inc. | B |
| Dyadic Systems Co., Ltd. | B |

*1: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

*2: The user can adjust the sensor position. (Included at shipment)

*3: "Body mounting direction: Standard" here refers to mounting from the bottom side.

| | |
|--------------------------|-----------------------------|
| Manufacturer | <input type="checkbox"/> 42 |
| Oriental Motor Co., Ltd. | A |
| MinebeaMitsumi Inc. | B |
| Dyadic Systems Co., Ltd. | B |

*Refer to page 641 for the motor model No.

Specifications

| | | | |
|---|--|-----|-----|
| Applicable motor sizes | <input type="checkbox"/> 42 Stepper | | |
| Drive method | Ball screw ϕ 12 | | |
| Ball screw accuracy grade | C7 | | |
| Stroke length mm | 50 to 800 | | |
| Screw lead mm | 2 | 5 | 10 |
| Max. load capacity *1 | Horizontal kg | 30 | 15 |
| | Vertical kg | 15 | 5 |
| Max. speed mm/s | 100 | 250 | 500 |
| Rated thrust *1 N | 854 | 341 | 170 |
| Max. speed mm/s | 100 | 250 | 500 |
| Repeatability mm | ± 0.01 | | |
| Lost motion mm | 0.1 or less | | |
| Drive system weight kg | 0.5 | | |
| Other inertia $\text{kg}\cdot\text{cm}^2$ | 0.024 | | |
| Coefficient of friction | 0.05 | | |
| Mechanical efficiency | 0.8 | | |
| Ball screw length | Stroke + 200 | | |
| Dynamic allowable load N | 1209 | | |
| Static allowable moment N·m | MP: 80, MY: 70, MR: 75 | | |
| Dynamic allowable moment N·m | MP: 8.9, MY: 8.9, MR: 24.8 | | |
| Operating ambient temperature, humidity | 0 to 40°C (no freezing) | | |
| | 35 to 80% RH (no condensation) | | |
| Storage ambient temperature, humidity | -10 to 50°C (no freezing) | | |
| | 35 to 80% RH (no condensation) | | |
| Atmosphere | No corrosive gas, explosive gas, or dust | | |

*1 The rated thrust and max. load capacity values are the allowable values for the actuator body; the actual thrust and load capacity are limited by the motor used.

Stroke and max. speed

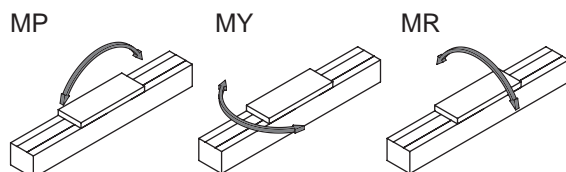
| | | (mm/s) | | | | |
|------------|---------------|------------|-----|-----|-----|-----|
| Screw lead | Stroke length | 100 to 600 | 650 | 700 | 750 | 800 |
| | 2 | | 100 | 90 | 80 | 70 |
| 5 | | 250 | 225 | 200 | 175 | 150 |
| 10 | | 500 | 450 | 400 | 350 | 300 |

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable overhang length

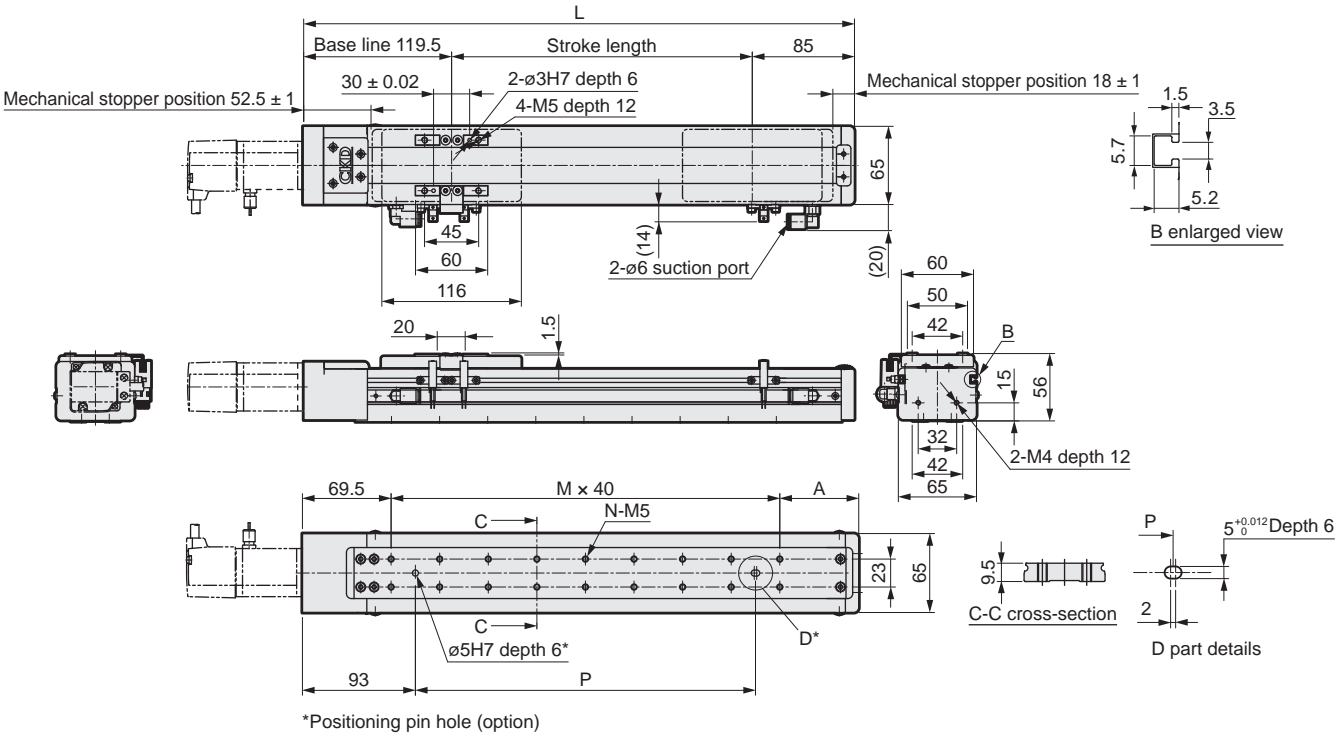
*Refer to page 674 for details.

Moment direction



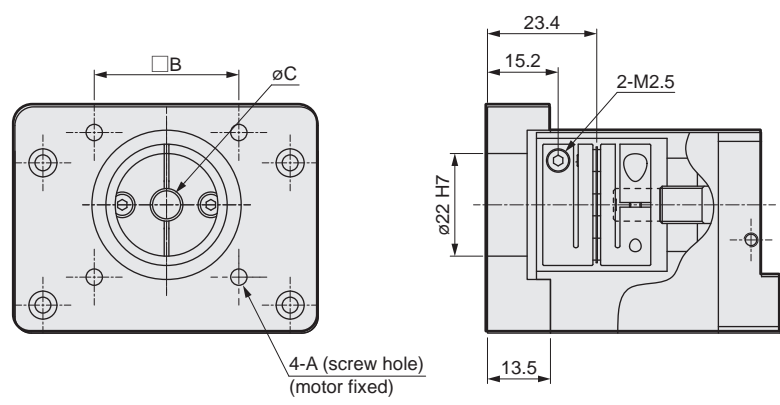
Dimensions Straight motor mounting

● ECS-06-****-E



| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| L | 254.5 | 304.5 | 354.5 | 404.5 | 454.5 | 504.5 | 554.5 | 604.5 | 654.5 | 704.5 | 754.5 | 804.5 | 854.5 | 904.5 | 954.5 | 1004.5 |
| A | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 |
| M | 3 | 5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 | 15 | 16 | 17 | 18 | 20 | 21 | 22 |
| N | 8 | 12 | 14 | 16 | 18 | 22 | 24 | 26 | 28 | 32 | 34 | 36 | 38 | 42 | 44 | 46 |
| P | 80 | 160 | 200 | 240 | 280 | 360 | 400 | 440 | 480 | 560 | 600 | 640 | 680 | 760 | 800 | 840 |
| Weight (kg) | 2.9 | 2.9 | 3.1 | 3.3 | 3.5 | 3.8 | 4.0 | 4.2 | 4.4 | 4.7 | 4.9 | 5.1 | 5.3 | 5.6 | 5.8 | 6.0 |

Motor mounting part



| Mounted motor specification | A | B | C | Motor mounting bolt |
|-----------------------------|-----|----|---|---------------------|
| A | 3.5 | 31 | 6 | 4-M3 x L16 |
| B | 3.5 | 31 | 5 | 4-M3 x L16 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Coupling | Fitting | Motor size | Motor mounting bolt | |
|-----------------------------|-----------------------|-----------------------|------------|---------------------|----------|
| | | | | Size | Quantity |
| A | Assembled at shipment | Assembled at shipment | □ 42 | M3 | 4 |
| B | | | | M3 | 4 |

*Refer to page 682 for fitting details.

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 678 for sensor specifications.

ECS-06 Series

Motor side mounting (left, right, bottom)

● Stepper motor size: 42



How to order

ECS - 06 - 05 040 - R A A N C B N P - M

A Body size
06 Body width 65 mm

B Screw lead
02 2 mm
05 5 mm
10 10 mm

C Stroke length
005 50 mm to (In 50 mm increments)
080 800 mm

D Motor mounting direction
R Right mounting
D Bottom mounting
L Left mounting

E Mounted motor specification
A Select the mounted motor specification from the table below.
B

F Motor size
A 42

G Brake
N None

H Origin sensor (1 pc) *1 *2
N None
C Outside motor side
D Outside motor opposite side

I Limit sensor (2 pcs) *1 *2
N None
B Outside

J Grease nipple *3
N None (Body mounting direction: Standard)

K Positioning pin hole
N None
P Yes

L Magnet slider method
M Yes

Manufacturer 42
Oriental Motor Co., Ltd. A
MinebeaMitsumi Inc. B
Dyadic Systems Co., Ltd. B

*1: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

*2: The user can adjust the sensor position. (Included at shipment)

*3: "Body mounting direction: Standard" here refers to mounting from the bottom side.

*Refer to page 641 for the motor model No.

Specifications

| | | | |
|---|---|-----|-----|
| Applicable motor sizes | <input type="checkbox"/> 42 Stepper motor | | |
| Drive method | Ball screw ϕ 12 | | |
| Ball screw accuracy grade | C7 | | |
| Stroke length mm | 50 to 800 | | |
| Screw lead mm | 2 | 5 | 10 |
| Max. load capacity *1 | Horizontal kg | 30 | 15 |
| | Vertical kg | 15 | 5 |
| Max. speed mm/s | 100 | 250 | 500 |
| Rated thrust *1 N | 854 | 341 | 170 |
| Max. speed mm/s | 100 | 250 | 500 |
| Repeatability mm | \pm 0.01 | | |
| Lost motion mm | 0.1 or less | | |
| Drive system weight kg | 0.5 | | |
| Other inertia kg·cm ² | 0.120 | | |
| Coefficient of friction | 0.05 | | |
| Mechanical efficiency | 0.8 | | |
| Ball screw length | Stroke + 200 | | |
| Dynamic allowable load N | 1209 | | |
| Static allowable moment N·m | MP: 80, MY: 70, MR: 75 | | |
| Dynamic allowable moment N·m | MP: 8.9, MY: 8.9, MR: 24.8 | | |
| Operating ambient temperature, humidity | 0 to 40°C (no freezing) | | |
| | 35 to 80% RH (no condensation) | | |
| Storage ambient temperature, humidity | -10 to 50°C (no freezing) | | |
| | 35 to 80% RH (no condensation) | | |
| Atmosphere | No corrosive gas, explosive gas, or dust | | |

*1 The rated thrust and max. load capacity values are the allowable values for the actuator body; the actual thrust and load capacity are limited by the motor used.

Stroke and max. speed

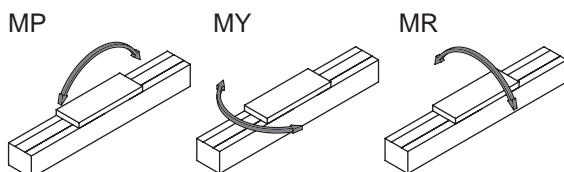
| Screw lead \ Stroke length | (mm/s) | | | | |
|----------------------------|------------|-----|-----|-----|-----|
| | 100 to 600 | 650 | 700 | 750 | 800 |
| 2 | 100 | 90 | 80 | 70 | 60 |
| 5 | 250 | 225 | 200 | 175 | 150 |
| 10 | 500 | 450 | 400 | 350 | 300 |

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable overhang length

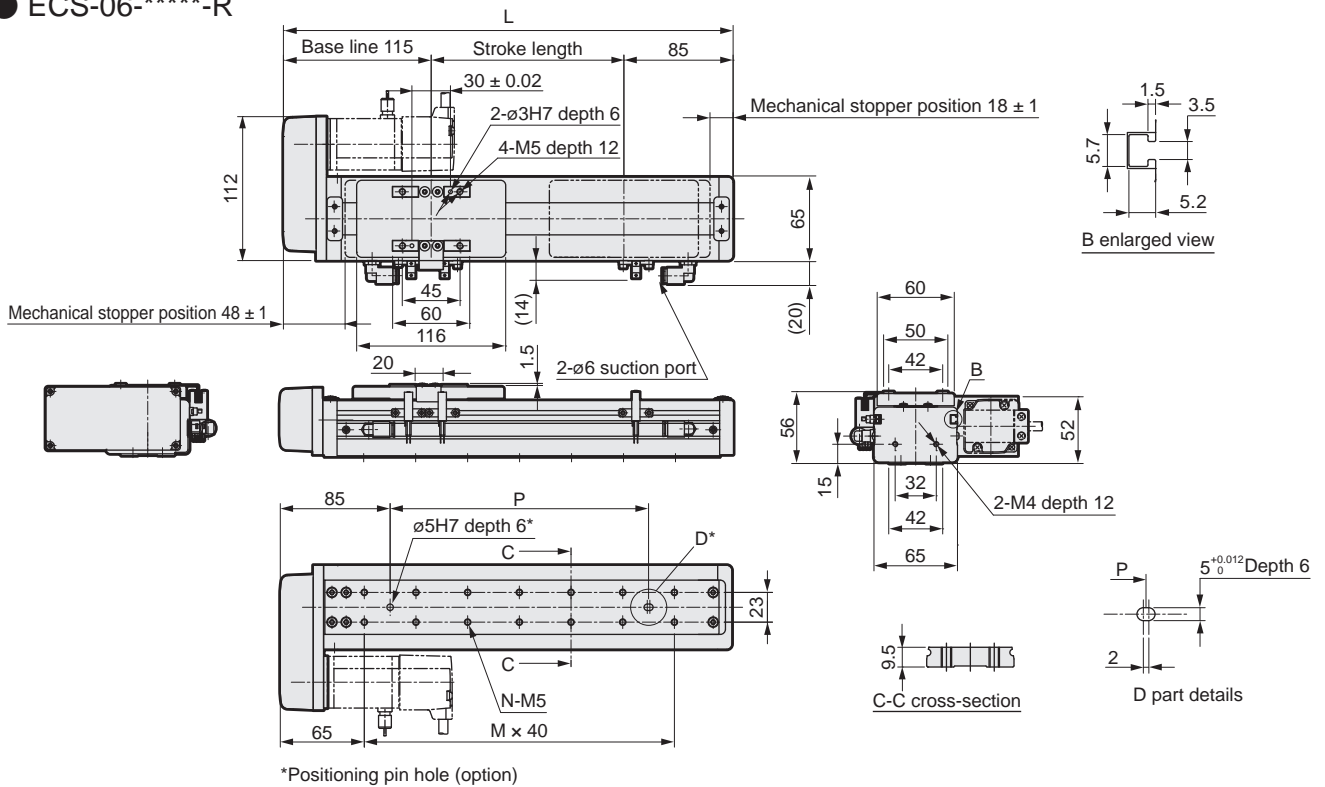
*Refer to page 674 for details.

Moment direction



Dimensions Motor right-side mounting

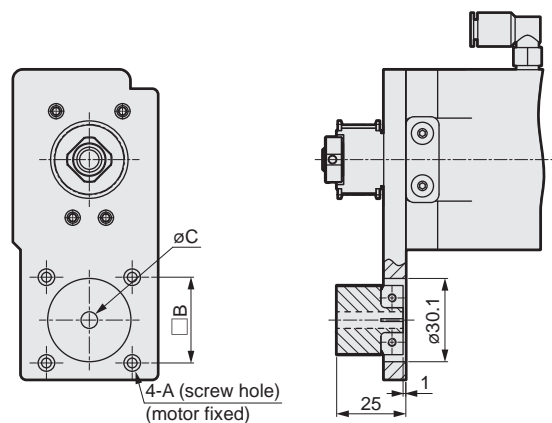
● ECS-06-****-R



*Positioning pin hole (option)

| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| L | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 |
| A | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 |
| M | 3 | 5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 | 15 | 16 | 17 | 18 | 20 | 21 | 22 |
| N | 8 | 12 | 14 | 16 | 18 | 22 | 24 | 26 | 28 | 32 | 34 | 36 | 38 | 42 | 44 | 46 |
| P | 80 | 160 | 200 | 240 | 280 | 360 | 400 | 440 | 480 | 560 | 600 | 640 | 680 | 760 | 800 | 840 |
| Weight (kg) | 2.4 | 2.9 | 3.1 | 3.4 | 3.6 | 3.8 | 4.0 | 4.3 | 4.5 | 4.7 | 4.9 | 5.2 | 5.4 | 5.6 | 5.8 | 6.0 |

Motor mounting part



| Mounted motor specification | A | B | C | Motor mounting bolt |
|-----------------------------|-----|----|---|---------------------|
| A | 3.5 | 31 | 6 | 4-M3 x L12 |
| B | 3.5 | 31 | 5 | 4-M3 x L12 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor size | Motor mounting bolt | |
|-----------------------------|----------------------|-----------------------|------------|---------------------|----------|
| | | | | Size | Quantity |
| A | Included at shipment | Assembled at shipment | □42 | M3 | 4 |
| B | | | | M3 | 4 |

*Refer to page 682 for fitting details.

[Origin sensor/Limit sensor]

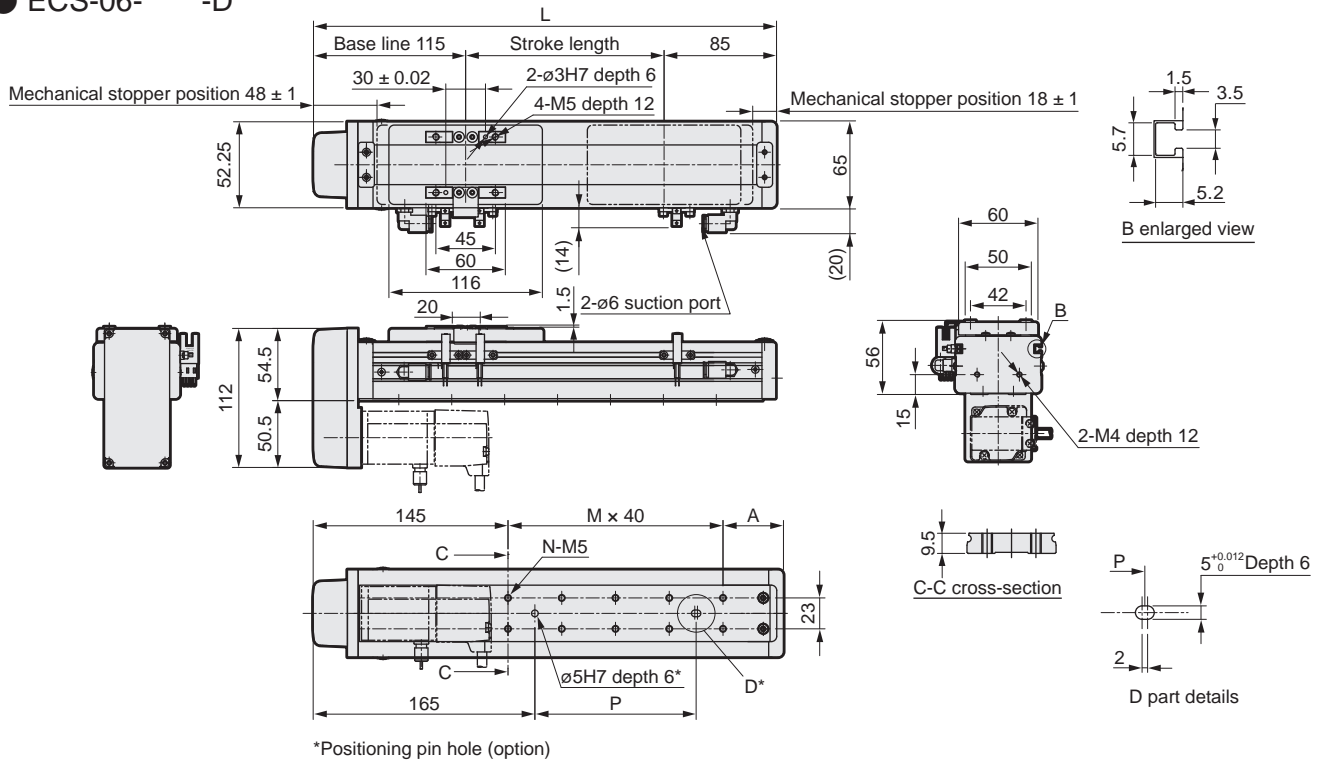
| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 678 for sensor specifications.

ECS-06 Series

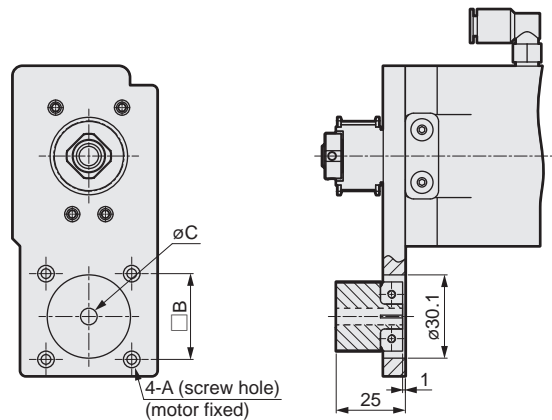
Dimensions Motor bottom mounting

● ECS-06-*****-D



| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| L | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 |
| A | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 |
| M | 1 | 3 | 4 | 5 | 6 | 8 | 9 | 10 | 11 | 13 | 14 | 15 | 16 | 18 | 19 | 20 |
| N | 4 | 8 | 10 | 12 | 14 | 18 | 20 | 22 | 24 | 28 | 30 | 32 | 34 | 38 | 40 | 42 |
| P | 0 | 80 | 120 | 160 | 200 | 280 | 320 | 360 | 400 | 480 | 520 | 560 | 600 | 680 | 720 | 760 |
| Weight (kg) | 2.4 | 2.9 | 3.1 | 3.4 | 3.6 | 3.8 | 4.0 | 4.3 | 4.5 | 4.7 | 5.0 | 5.2 | 5.4 | 5.6 | 5.8 | 6.0 |

Motor mounting part



| Mounted motor specification | A | B | C | Motor mounting bolt |
|-----------------------------|-----|----|---|---------------------|
| A | 3.5 | 31 | 6 | 4-M3 × L12 |
| B | 3.5 | 31 | 5 | 4-M3 × L12 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor size | Motor mounting bolt |
|-----------------------------|----------------------|-----------------------|------------|---------------------|
| | | | Size | Quantity |
| A | Included at shipment | Assembled at shipment | □42 | M3 4 |
| B | | | | M3 4 |

[Origin sensor/Limit sensor]

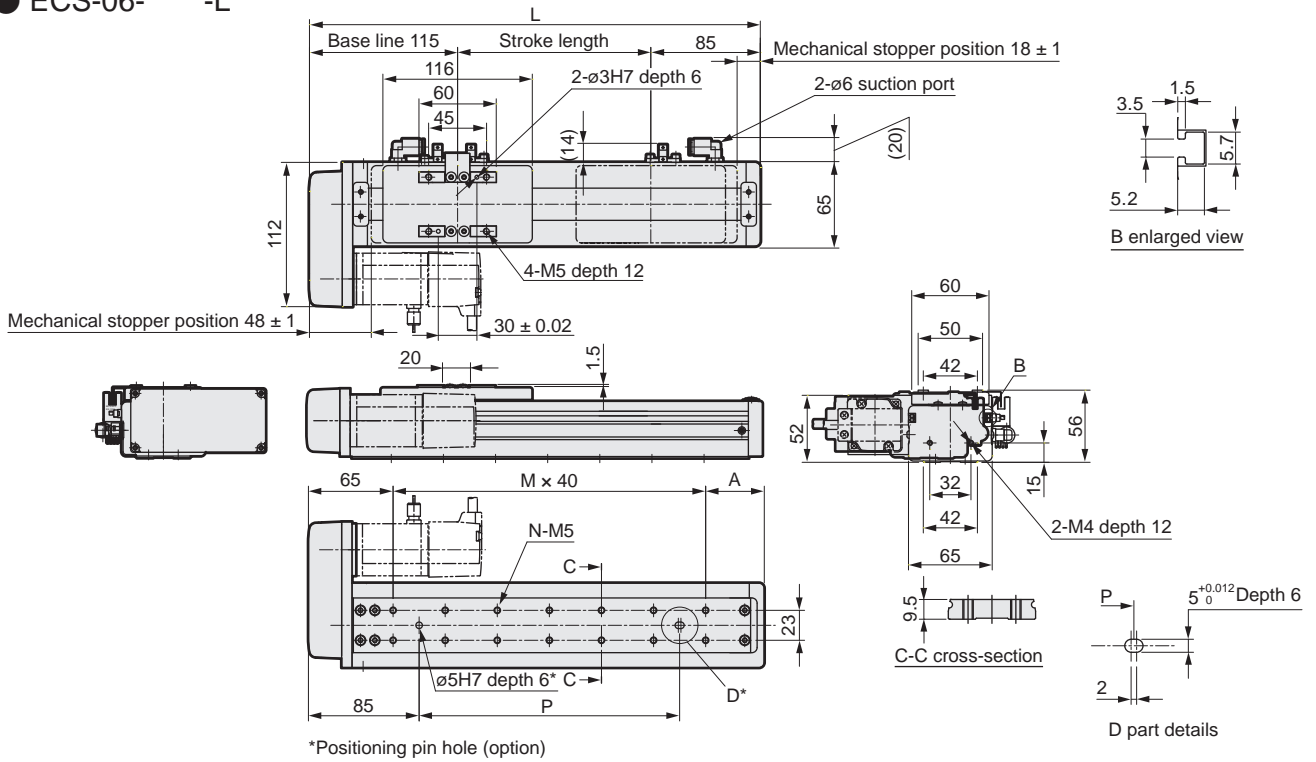
| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 678 for sensor specifications.

*Refer to page 682 for fitting details.

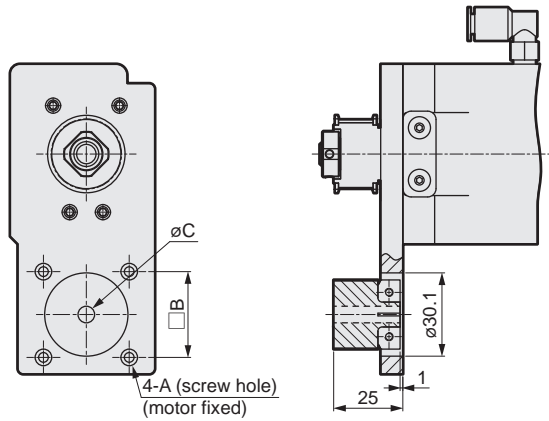
Dimensions Motor left-side mounting

● ECS-06-*****-L



| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| L | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 |
| A | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 | 65 | 35 | 45 | 55 |
| M | 3 | 5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 | 15 | 16 | 17 | 18 | 20 | 21 | 22 |
| N | 8 | 12 | 14 | 16 | 18 | 22 | 24 | 26 | 28 | 32 | 34 | 36 | 38 | 42 | 44 | 46 |
| P | 80 | 160 | 200 | 240 | 280 | 360 | 400 | 440 | 480 | 560 | 600 | 640 | 680 | 760 | 800 | 840 |
| Weight (kg) | 2.4 | 2.9 | 3.1 | 3.4 | 3.6 | 3.8 | 4.0 | 4.3 | 4.5 | 4.7 | 4.9 | 5.2 | 5.4 | 5.6 | 5.8 | 6.0 |

Motor mounting part



| Mounted motor specification | A | B | C | Motor mounting bolt |
|-----------------------------|-----|----|---|---------------------|
| A | 3.5 | 31 | 6 | 4-M3 x L12 |
| B | 3.5 | 31 | 5 | 4-M3 x L12 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor size | Motor mounting bolt | |
|-----------------------------|----------------------|-----------------------|------------|---------------------|----------|
| | | | | Size | Quantity |
| A | Included at shipment | Assembled at shipment | □42 | M3 | 4 |
| B | | | | M3 | 4 |

*Refer to page 682 for fitting details.

[Origin sensor/Limit sensor]

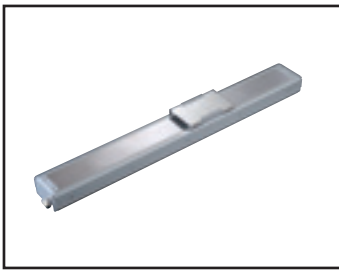
| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 678 for sensor specifications.

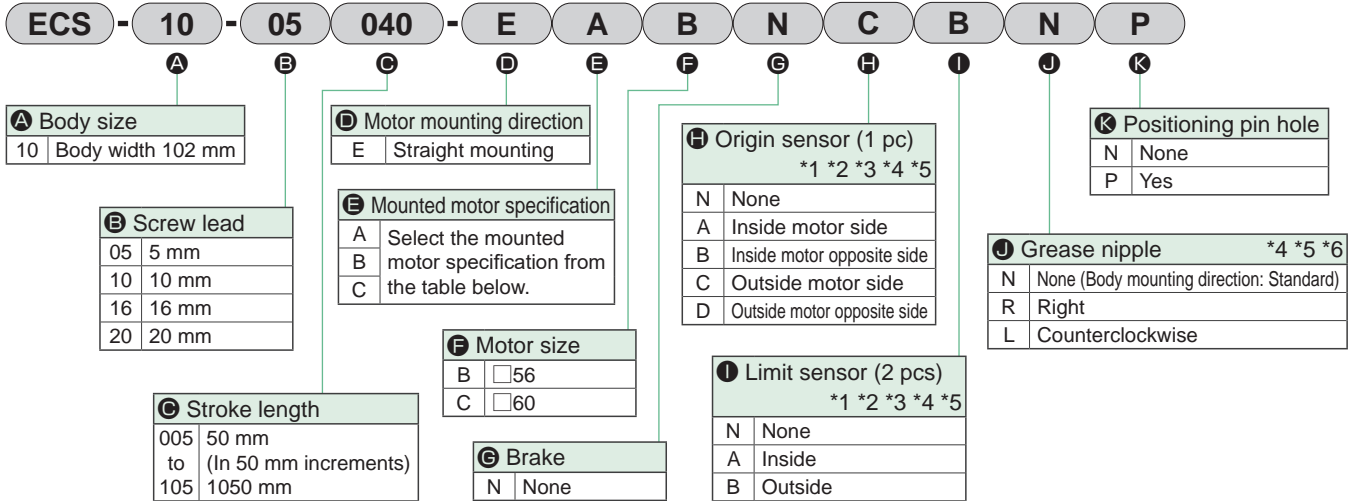
ECS-10 Series

Straight motor mounting

● Stepper motor size: 56, 60



How to order



- *1: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.
- *2: Origin sensor B and limit sensor A cannot be combined.
- *3: For sensor inside mounting, the user cannot adjust the position. (Assembled at shipment)
For sensor outside mounting, the user can adjust the position. (Included at shipment)
- *4: Contact CKD to use the origin sensor, limit sensor and grease nipple in the same direction.
- *5: "Body mounting direction: Standard" here refers to mounting from the bottom side.
- *6: For sensor interior mounting, select "None" for the grease nipple.

| Manufacturer | <input type="checkbox"/> 56 | <input type="checkbox"/> 60 |
|--------------------------|-----------------------------|-----------------------------|
| Oriental Motor Co., Ltd. | - | A |
| MinebeaMitsumi Inc. | B | - |
| Dyadic Systems Co., Ltd. | C | - |

*Refer to page 641 for the motor model No.

Specifications

| | | | | | |
|---|--|-----|-----|------|----|
| Applicable motor sizes | <input type="checkbox"/> 56, <input type="checkbox"/> 60 stepper motor | | | | |
| Drive method | Ball screw ϕ 16 | | | | |
| Ball screw accuracy grade | C7 | | | | |
| Stroke length mm | 50 to 1050 | | | | |
| Screw lead mm | 5 | 10 | 16 | 20 | |
| Max. load capacity *1 | Horizontal kg | 50 | 30 | 22 | 18 |
| | Vertical kg | 12 | 8 | 5 | 3 |
| Max. speed mm/s | 250 | 500 | 800 | 1000 | |
| Rated thrust *1 N | 683 | 341 | 213 | 174 | |
| Repeatability mm | ± 0.01 | | | | |
| Lost motion mm | 0.1 or less | | | | |
| Drive system weight kg | 1.2 | | | | |
| Other inertia $\text{kg}\cdot\text{cm}^2$ | 0.074 | | | | |
| Coefficient of friction | 0.05 | | | | |
| Mechanical efficiency | 0.8 | | | | |
| Ball screw length | Stroke + 200 | | | | |
| Dynamic allowable load N | 2651 | | | | |
| Static allowable moment N·m | MP: 110, MY: 110, MR: 120 | | | | |
| Dynamic allowable moment N·m | MP: 24.1, MY: 24.1, MR: 24.8 | | | | |
| Operating ambient temperature, humidity | 0 to 40°C (no freezing) | | | | |
| | 35 to 80% RH (no condensation) | | | | |
| Storage ambient temperature, humidity | -10 to 50°C (no freezing) | | | | |
| | 35 to 80% RH (no condensation) | | | | |
| Atmosphere | No corrosive gas, explosive gas, or dust | | | | |

*1 The rated thrust and max. load capacity values are the allowable values for the actuator body; the actual thrust and load capacity are limited by the motor used.

Stroke and max. speed

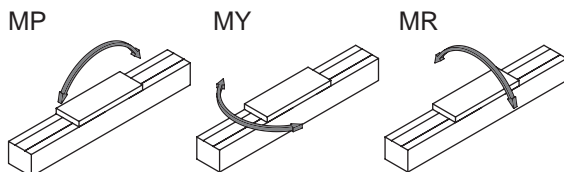
| Stroke length Screw lead | (mm/s) | | | | | |
|-----------------------------|------------|-----|-----|-----|-----|------|
| | 100 to 750 | 800 | 850 | 900 | 950 | 1050 |
| 5 | 250 | 225 | 200 | 175 | 150 | 125 |
| 10 | 500 | 450 | 400 | 350 | 300 | 250 |
| 16 | 800 | 720 | 640 | 560 | 480 | 400 |
| 20 | 1000 | 900 | 800 | 700 | 600 | 500 |

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable overhang length

*Refer to page 674 for details.

Moment direction



EBS

EBR

ETS

Servo motor compatible
ETS Multi-Axis

ECS

ETV

ECV

EKS

EBS

Stepper motor compatible
EBR
ETS

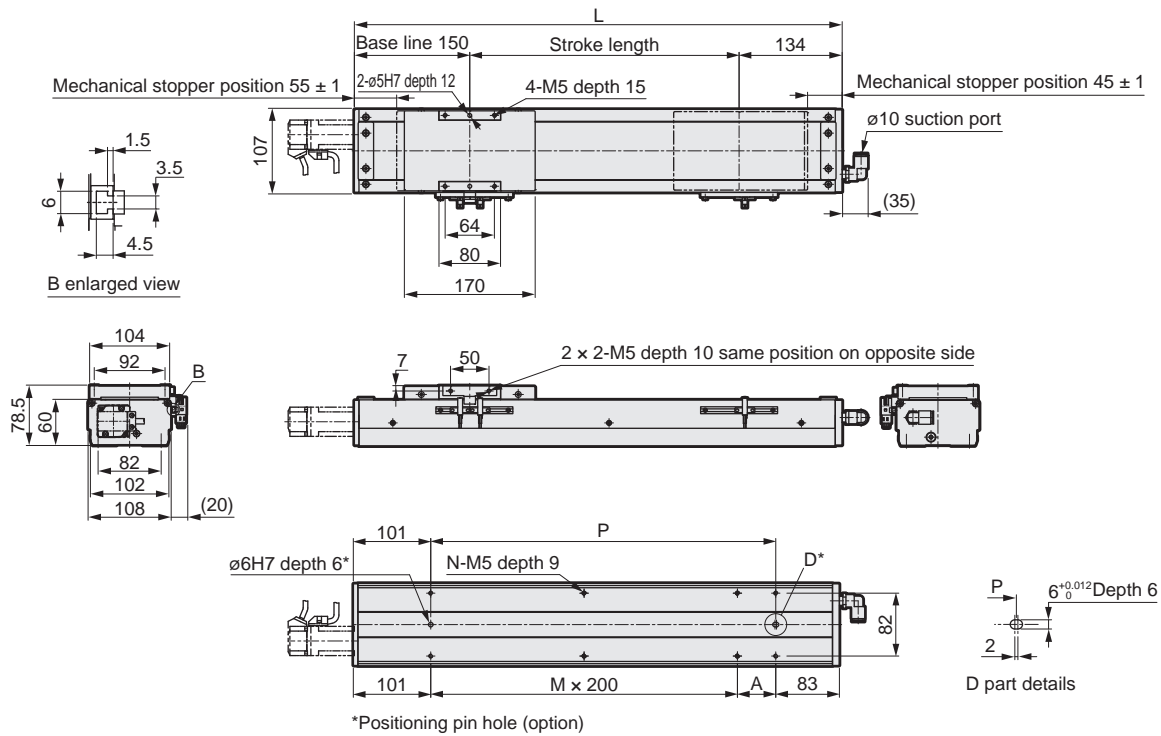
ECS

Safety
Precautions

Dimensions Straight motor mounting

● ECS-10-****-E

Refer to page 680 for grease nipple dimensions.

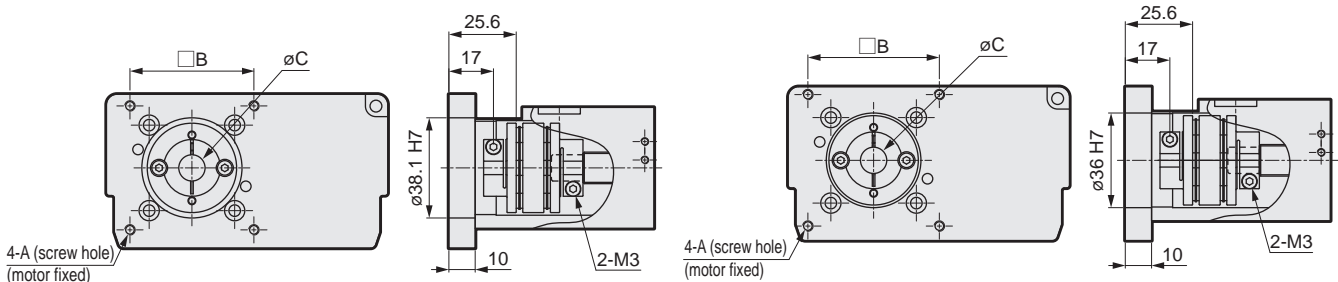


| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 |
|--------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|
| L | 334 | 384 | 434 | 484 | 534 | 584 | 634 | 684 | 734 | 784 | 834 | 884 | 934 | 984 | 1034 | 1084 | 1134 | 1184 | 1234 | 1284 | 1334 |
| A | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 |
| M | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 |
| N | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 |
| P | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 |
| Weight (kg) | 5.07 | 5.5 | 6.0 | 6.4 | 6.8 | 7.2 | 7.6 | 8.1 | 8.5 | 8.9 | 9.3 | 9.7 | 10.2 | 10.6 | 11.0 | 11.4 | 11.8 | 12.3 | 12.7 | 13.1 | 13.5 |

Motor mounting part

● ECS-10-E (□ 56)

● ECS-10-E (□ 60)



| Mounted motor specification | A | B | C | Motor mounting bolt | |
|-----------------------------|-----|-------------|-------|---------------------|------------|
| A | □60 | M4 depth 10 | 50 | 10 | 4-M4 x L12 |
| B | □56 | M4 depth 10 | 47.14 | 6.35 | 4-M4 x L12 |
| C | □56 | M4 depth 10 | 47.14 | 8 | 4-M4 x L12 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Coupling | Fitting | Motor size | Motor mounting bolt | |
|-----------------------------|-----------------------|----------------------|------------|---------------------|----------|
| | | | | Size | Quantity |
| A | Assembled at shipment | Included at shipment | □56 | M4 | 4 |
| B | | | □60 | M4 | 4 |
| C | | | M4 | 4 | |

*Refer to page 682 for fitting details.

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 678 for sensor specifications.

ECS-10 Series

Motor side mounting (left, right, bottom)

● Stepper motor size: 56, 60



How to order

ECS - 10 - 05 040 - R A B N C B N P

A Body size

| | |
|----|-------------------|
| 10 | Body width 102 mm |
|----|-------------------|

E Screw lead

| | |
|----|-------|
| 05 | 5 mm |
| 10 | 10 mm |
| 16 | 16 mm |
| 20 | 20 mm |

C Stroke length

| | |
|-----|-----------------------|
| 005 | 50 mm |
| to | (In 50 mm increments) |
| 105 | 1050 mm |

D Motor mounting direction *6

| | |
|---|-----------------|
| R | Right mounting |
| D | Bottom mounting |
| L | Left mounting |

E Mounted motor specification

| | |
|---|--------------------------|
| A | Select the mounted |
| B | motor specification from |
| C | the table below. |

F Motor size

| | |
|---|-----------------------------|
| B | <input type="checkbox"/> 56 |
| C | <input type="checkbox"/> 60 |

G Brake

| | |
|---|------|
| N | None |
|---|------|

H Origin sensor (1 pc)
*1 *2 *3 *4 *7

| | |
|---|-----------------------------|
| N | None |
| A | Inside motor side |
| B | Inside motor opposite side |
| C | Outside motor side |
| D | Outside motor opposite side |

I Limit sensor (2 pcs)
*1 *2 *3 *4 *7

| | |
|---|---------|
| N | None |
| A | Inside |
| B | Outside |

K Positioning pin hole

| | |
|---|------|
| N | None |
| P | Yes |

J Grease nipple *4 *5 *6 *7

| | |
|---|--|
| N | None (Body mounting direction: Standard) |
| R | Right |
| L | Counterclockwise |

- *1: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.
- *2: Origin sensor B and limit sensor A cannot be combined.
- *3: For sensor inside mounting, the user cannot adjust the position. (Assembled at shipment)
For sensor outside mounting, the user can adjust the position. (Included at shipment)
- *4: Contact CKD to use the origin sensor, limit sensor and grease nipple in the same direction.
- *5: "Body mounting direction: Standard" here refers to mounting from the bottom side.
- *6: When selecting motor mounting direction R, grease nipple R cannot be selected.
When selecting L, grease nipple L cannot be selected.
- *7: For sensor interior mounting, select "None" for the grease nipple.

| Manufacturer | <input type="checkbox"/> 56 | <input type="checkbox"/> 60 |
|--------------------------|-----------------------------|-----------------------------|
| Oriental Motor Co., Ltd. | - | A |
| MinebeaMitsumi Inc. | B | - |
| Dyadic Systems Co., Ltd. | C | - |

*Refer to page 641 for the motor model No.

Specifications

| | | | | | |
|---|--|-----|-----|------|----|
| Applicable motor sizes | <input type="checkbox"/> 56, <input type="checkbox"/> 60 stepper motor | | | | |
| Drive method | Ball screw ϕ 16 | | | | |
| Ball screw accuracy grade | C7 | | | | |
| Stroke length mm | 50 to 1050 | | | | |
| Screw lead mm | 5 | 10 | 16 | 20 | |
| Max. load capacity *1 | Horizontal kg | 50 | 30 | 22 | 18 |
| | Vertical kg | 12 | 8 | 5 | 3 |
| Max. speed mm/s | 250 | 500 | 800 | 1000 | |
| Rated thrust *1 N | 683 | 341 | 213 | 174 | |
| Repeatability mm | \pm 0.01 | | | | |
| Lost motion mm | 0.1 or less | | | | |
| Drive system weight kg | 1.2 | | | | |
| Other inertia kg·cm ² | 0.730 | | | | |
| Coefficient of friction | 0.05 | | | | |
| Mechanical efficiency | 0.8 | | | | |
| Ball screw length | Stroke + 200 | | | | |
| Dynamic allowable load N | 2651 | | | | |
| Static allowable moment N·m | MP: 110, MY: 110, MR: 120 | | | | |
| Dynamic allowable moment N·m | MP: 24.1, MY: 24.1, MR: 24.8 | | | | |
| Operating ambient temperature, humidity | 0 to 40°C (no freezing) | | | | |
| | 35 to 80% RH (no condensation) | | | | |
| Storage ambient temperature, humidity | -10 to 50°C (no freezing) | | | | |
| | 35 to 80% RH (no condensation) | | | | |
| Atmosphere | No corrosive gas, explosive gas, or dust | | | | |

*1 The rated thrust and max. load capacity values are the allowable values for the actuator body; the actual thrust and load capacity are limited by the motor used.

Stroke and max. speed

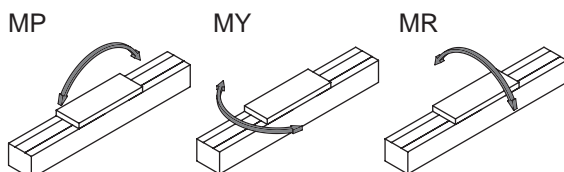
| Stroke length Screw lead | (mm/s) | | | | | |
|-----------------------------|---------------|-----|-----|-----|-----|------|
| | 100 to 750 | 800 | 850 | 900 | 950 | 1050 |
| 5 | 250 | 225 | 200 | 175 | 150 | 125 |
| 10 | 500 | 450 | 400 | 350 | 300 | 250 |
| 16 | 800 | 720 | 640 | 560 | 480 | 400 |
| 20 | 1000 | 900 | 800 | 700 | 600 | 500 |

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable overhang length

*Refer to page 674 for details.

Moment direction



EBS

EBR

ETS

Servo motor compatible
ETS Multi-Axis

ECS

ETV

ECV

EKS

EBS

Stepper motor compatible
EBR
ETS

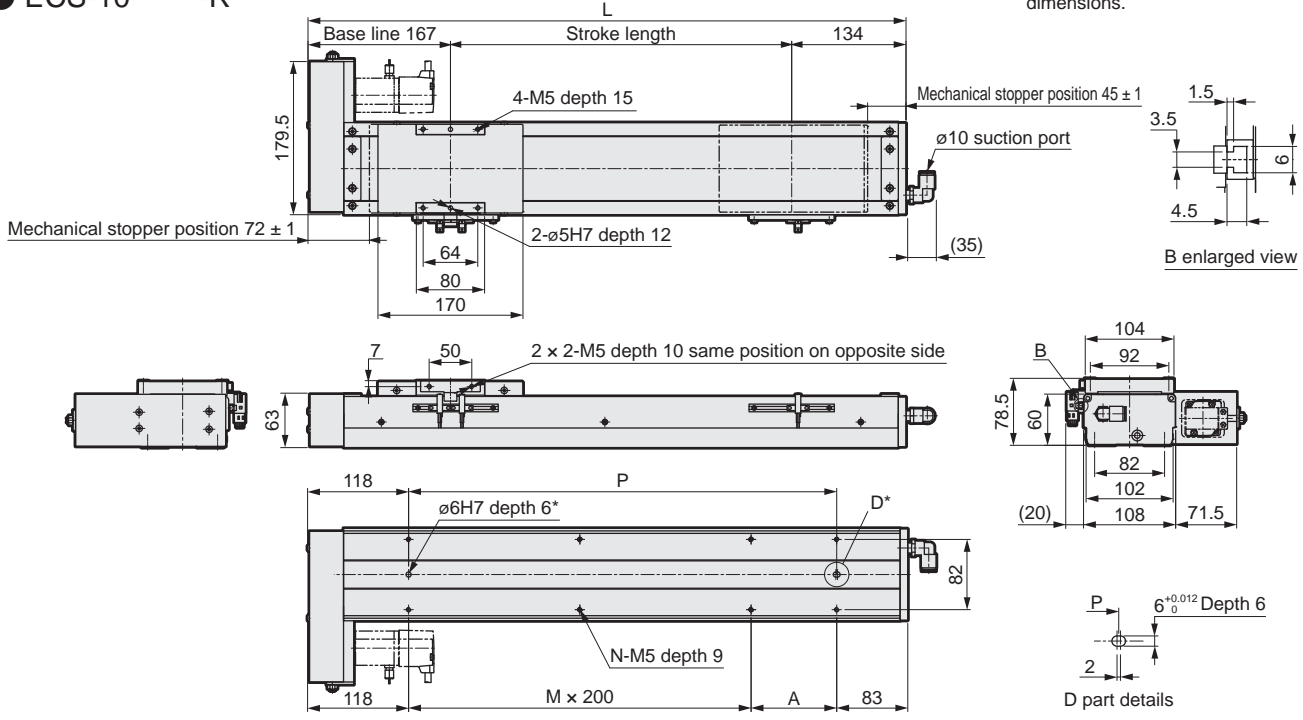
ECS

Safety
Precautions

Dimensions Motor right-side mounting

● ECS-10-****-R

Refer to page 680 for grease nipple dimensions.



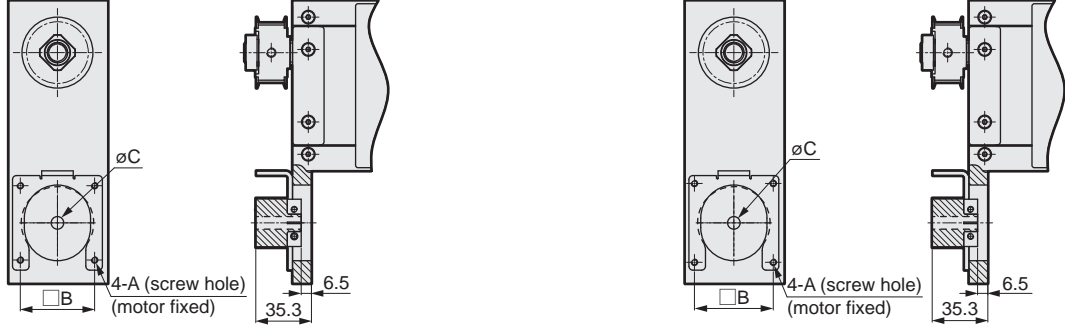
*Positioning pin hole (option)

| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|
| L | 351 | 401 | 451 | 501 | 551 | 601 | 651 | 701 | 751 | 801 | 851 | 901 | 951 | 1001 | 1051 | 1101 | 1151 | 1201 | 1251 | 1301 | 1351 |
| A | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 |
| M | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 |
| N | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 |
| P | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 |
| Weight (kg) | 5.5 | 5.9 | 6.4 | 6.8 | 7.2 | 7.6 | 8.0 | 8.4 | 8.8 | 9.2 | 9.7 | 10.1 | 10.5 | 10.9 | 11.3 | 11.7 | 12.1 | 12.5 | 13.0 | 13.4 | 13.8 |

Motor mounting part

● ECS-10-R (□ 56)

● ECS-10-R (□ 60)



| Mounted motor specification | | A | B | C | Motor mounting bolt |
|-----------------------------|-----|----|-------|------|---------------------|
| A | □60 | M4 | 50 | 10 | 4-M4 x L16 |
| B | □56 | M4 | 47.14 | 6.35 | 4-M4 x L16 |
| C | □56 | M4 | 47.14 | 8 | 4-M4 x L16 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor size | Motor mounting bolt | |
|-----------------------------|----------------------|----------------------|------------|---------------------|----------|
| | | | | Size | Quantity |
| A | Included at shipment | Included at shipment | □56 □60 | M4 | 4 |
| B | | | | M4 | 4 |
| C | | | | M4 | 4 |

*Refer to page 682 for fitting details.

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

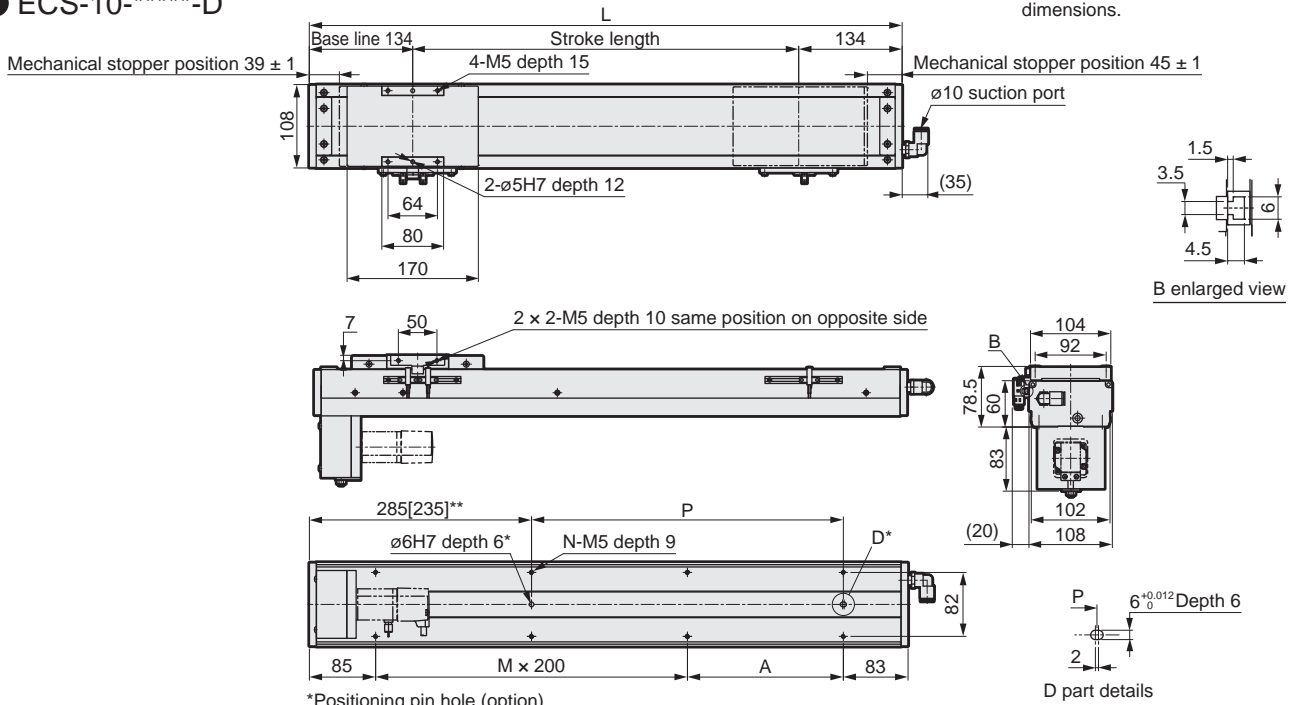
*Refer to page 678 for sensor specifications.

ECS-10 Series

Dimensions Motor bottom mounting

● ECS-10-*****-D

Refer to page 680 for grease nipple dimensions.



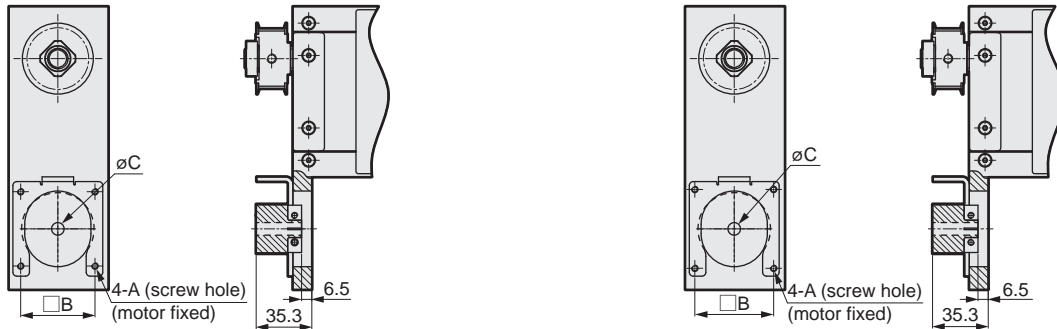
*Positioning pin hole (option)
 ** 50 stroke only
 Only round positioning pin holes are available for strokes 50 and 100.

| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|
| L | 318 | 368 | 418 | 468 | 518 | 568 | 618 | 668 | 718 | 768 | 818 | 868 | 918 | 968 | 1018 | 1068 | 1118 | 1168 | 1218 | 1268 | 1318 |
| A | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 |
| M | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 |
| N | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 |
| P | 0 | 0 | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 |
| Weight (kg) | 5.5 | 5.9 | 6.4 | 6.8 | 7.2 | 7.6 | 8.0 | 8.4 | 8.8 | 9.2 | 9.7 | 10.1 | 10.5 | 10.9 | 11.3 | 11.7 | 12.1 | 12.5 | 13.0 | 13.4 | 13.8 |

Motor mounting part

● ECS-10-D (□ 56)

● ECS-10-D (□ 60)



| Mounted motor specification | A | B | C | Motor mounting bolt |
|-----------------------------|------|----|-------|---------------------|
| A | □ 60 | M4 | 50 | 4-M4 x L16 |
| B | □ 56 | M4 | 47.14 | 4-M4 x L16 |
| C | □ 56 | M4 | 47.14 | 4-M4 x L16 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor size | Motor mounting bolt | |
|-----------------------------|----------------------|----------------------|--------------|---------------------|----------|
| | | | | Size | Quantity |
| A | Included at shipment | Included at shipment | □ 56 □ 60 | M4 | 4 |
| B | | | | M4 | 4 |
| C | | | | M4 | 4 |

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

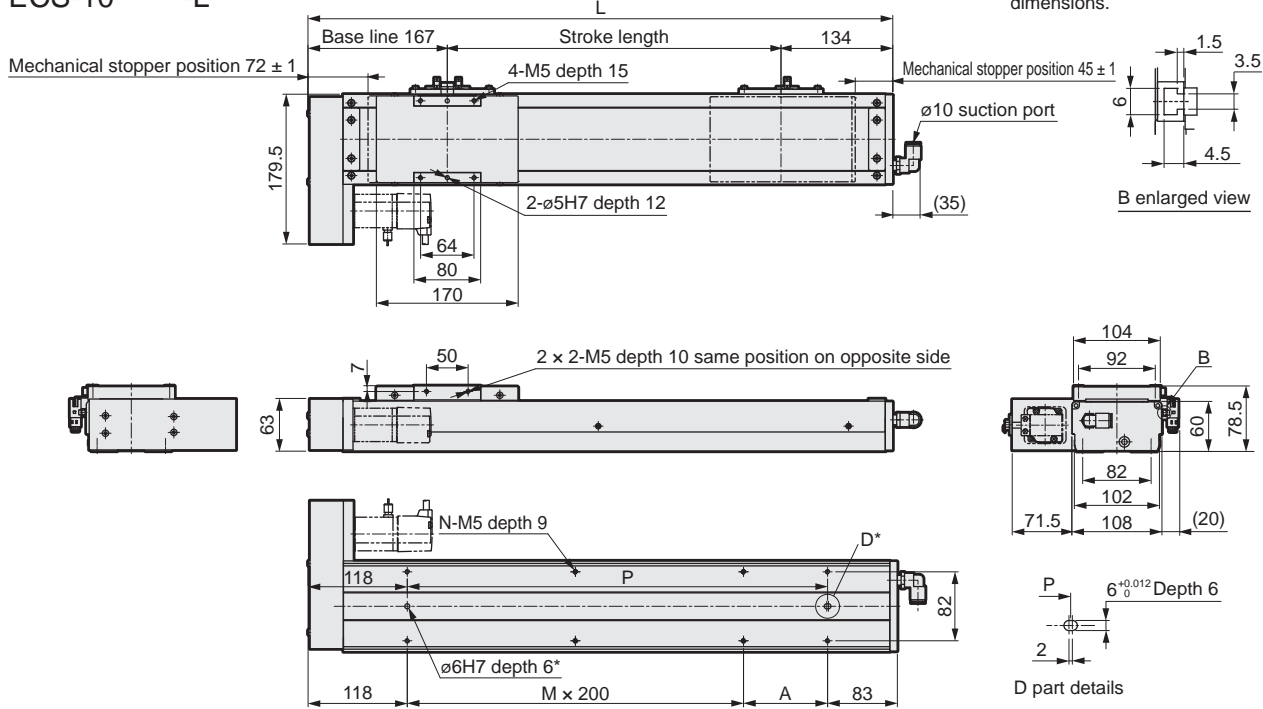
*Refer to page 678 for sensor specifications.

*Refer to page 682 for fitting details.

Dimensions Motor left-side mounting

● ECS-10-*****-L

Refer to page 680 for grease nipple dimensions.

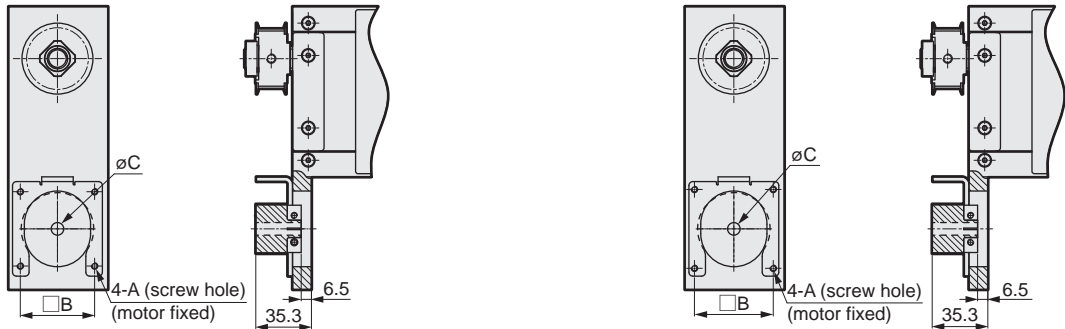


| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|
| L | 351 | 401 | 451 | 501 | 551 | 601 | 651 | 701 | 751 | 801 | 851 | 901 | 951 | 1001 | 1051 | 1101 | 1151 | 1201 | 1251 | 1301 | 1351 |
| A | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 |
| M | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 |
| N | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 |
| P | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 |
| Weight (kg) | 5.5 | 5.9 | 6.4 | 6.8 | 7.2 | 7.6 | 8.0 | 8.4 | 8.8 | 9.2 | 9.7 | 10.1 | 10.5 | 10.9 | 11.3 | 11.7 | 12.1 | 12.5 | 13.0 | 13.4 | 13.8 |

Motor mounting part

● ECS-10-L (□ 56)

● ECS-10-L (□ 60)



| Mounted motor specification | A | B | C | Motor mounting bolt | |
|-----------------------------|-----|----|-------|---------------------|------------|
| A | □60 | M4 | 50 | 10 | 4-M4 x L16 |
| B | □56 | M4 | 47.14 | 6.35 | 4-M4 x L16 |
| C | □56 | M4 | 47.14 | 8 | 4-M4 x L16 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor size | Motor mounting bolt | |
|-----------------------------|----------------------|----------------------|------------|---------------------|----------|
| | | | | Size | Quantity |
| A | Included at shipment | Included at shipment | □56 □60 | M4 | 4 |
| B | | | | M4 | 4 |
| C | | | | M4 | 4 |

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

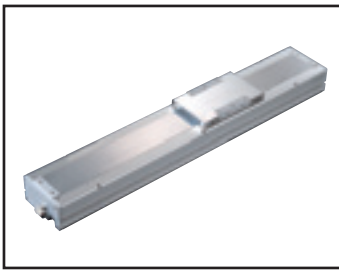
*Refer to page 678 for sensor specifications.

*Refer to page 682 for fitting details.

ECS-12 Series

Straight motor mounting

● Stepper motor size: 56, 60



How to order

ECS - 12 - 05 040 - E A B N N N N P

A Body size
12 Body width 102 mm

B Screw lead
05 5 mm
10 10 mm
16 16 mm
20 20 mm

C Stroke length
005 50 mm to (In 50 mm increments)
105 1050 mm

D Motor mounting direction
E Straight mounting

E Mounted motor specification
A Select the mounted motor specification from the table below.
B 56
C 60

F Motor size
B 56
C 60

G Brake
N None

H Origin sensor (1 pc) *1 *2 *3
N None
A Inside motor side
B Inside motor opposite side
C Outside motor side
D Outside motor opposite side

I Limit sensor (2 pcs) *1 *2 *3
N None
A Inside
B Outside

J Grease nipple *3 *4
N None (Body mounting direction: Standard)
R Right
L Counterclockwise

K Positioning pin hole
N None
P Yes

| Manufacturer | | <input type="checkbox"/> 56 | <input type="checkbox"/> 60 |
|--------------------------|--|-----------------------------|-----------------------------|
| Oriental Motor Co., Ltd. | | - | A |
| MinebeaMitsumi Inc. | | B | - |
| Dyadic Systems Co., Ltd. | | C | - |

- *1: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.
- *2: For sensor inside mounting, the user cannot adjust the position. (Assembled at shipment)
For sensor outside mounting, the user can adjust the position. (Included at shipment)
- *3: Contact CKD to use the origin sensor, limit sensor and grease nipple in the same direction.
- *4: "Body mounting direction: Standard" here refers to mounting from the bottom side.

Specifications

| | | | | | |
|---|--|-----|-----|------|----|
| Applicable motor sizes | <input type="checkbox"/> 56, <input type="checkbox"/> 60 stepper motor | | | | |
| Drive method | Ball screw ϕ 16 | | | | |
| Ball screw accuracy grade | C7 | | | | |
| Stroke length mm | 50 to 1050 | | | | |
| Screw lead mm | 5 | 10 | 16 | 20 | |
| Max. load capacity *1 | Horizontal kg | 50 | 30 | 22 | 18 |
| | Vertical kg | 12 | 8 | 5 | 3 |
| Max. speed mm/s | 250 | 500 | 800 | 1000 | |
| Rated thrust *1 N | 683 | 341 | 213 | 174 | |
| Repeatability mm | \pm 0.01 | | | | |
| Lost motion mm | 0.1 or less | | | | |
| Drive system weight kg | 0.9 | | | | |
| Other inertia kg·cm ² | 0.040 | | | | |
| Coefficient of friction | 0.05 | | | | |
| Mechanical efficiency | 0.8 | | | | |
| Ball screw length | Stroke + 200 | | | | |
| Dynamic allowable load N | 1660 | | | | |
| Static allowable moment N·m | MP: 150, MY: 150, MR: 130 | | | | |
| Dynamic allowable moment N·m | MP: 42.3, MY: 42.3, MR: 53.1 | | | | |
| Operating ambient temperature, humidity | 0 to 40°C (no freezing) | | | | |
| | 35 to 80% RH (no condensation) | | | | |
| Storage ambient temperature, humidity | -10 to 50°C (no freezing) | | | | |
| | 35 to 80% RH (no condensation) | | | | |
| Atmosphere | No corrosive gas, explosive gas, or dust | | | | |

Stroke and max. speed

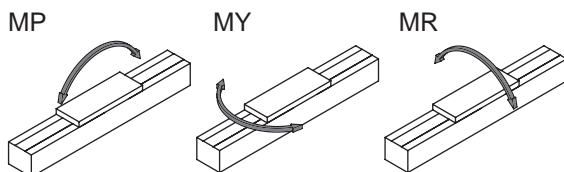
| Stroke length Screw lead | (mm/s) | | | | | |
|-----------------------------|------------|-----|-----|-----|-----|------|
| | 100 to 750 | 800 | 850 | 900 | 950 | 1050 |
| 5 | 250 | 225 | 200 | 175 | 150 | 125 |
| 10 | 500 | 450 | 400 | 350 | 300 | 250 |
| 16 | 800 | 720 | 640 | 560 | 480 | 400 |
| 20 | 1000 | 900 | 800 | 700 | 600 | 500 |

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable overhang length

*Refer to page 674 for details.

Moment direction



*1 The rated thrust and max. load capacity values are the allowable values for the actuator body; the actual thrust and load capacity are limited by the motor used.

EBS

EBR

ETS

ETS Multi-Axis

ECS

ETV

ECV

EKS

EBS

EBR

ETS

ECS

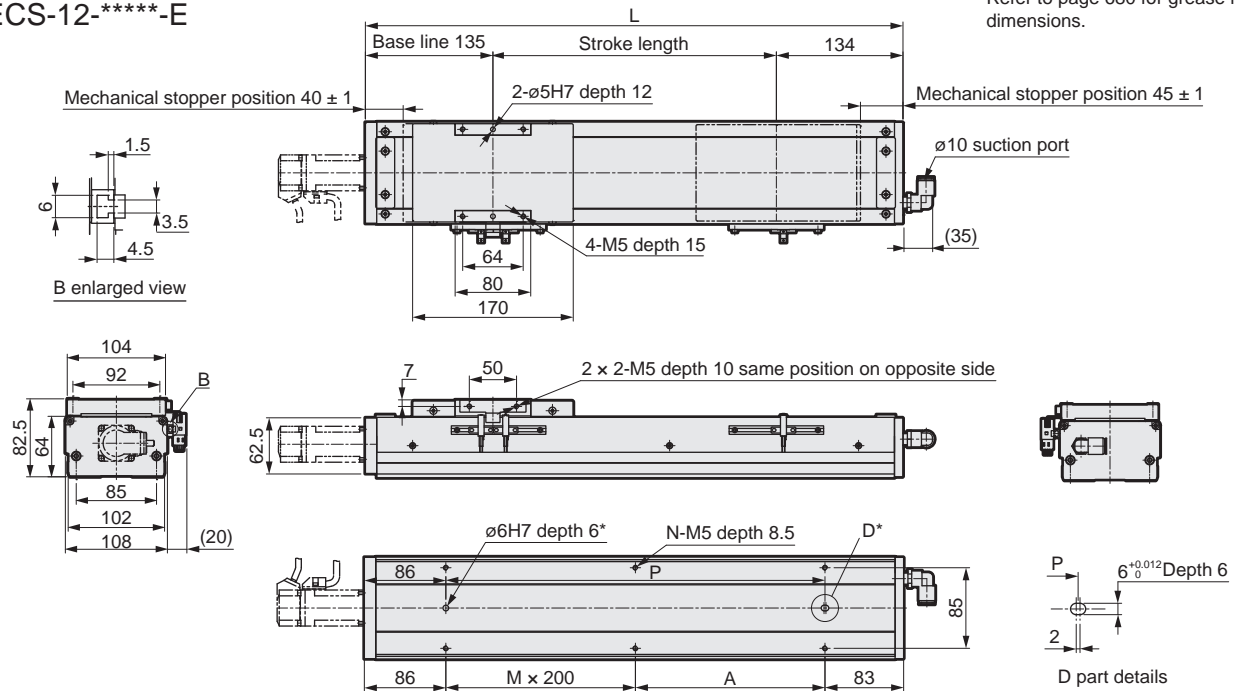
ETS

Safety Precautions

Dimensions Straight motor mounting

● ECS-12-*****-E

Refer to page 680 for grease nipple dimensions.



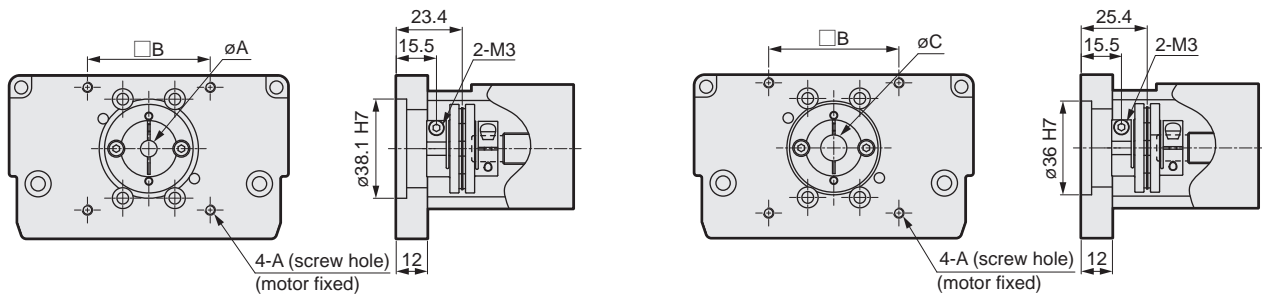
*Positioning pin hole (option)

| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|
| L | 319 | 369 | 419 | 469 | 519 | 569 | 619 | 669 | 719 | 769 | 819 | 869 | 919 | 969 | 1019 | 1069 | 1119 | 1169 | 1219 | 1269 | 1319 |
| A | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 |
| M | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 |
| N | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 |
| P | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 |
| Weight (kg) | 5.6 | 6.1 | 6.5 | 6.9 | 7.3 | 7.8 | 8.2 | 8.6 | 9.0 | 9.5 | 9.9 | 10.3 | 10.7 | 11.2 | 11.6 | 12.0 | 12.4 | 12.9 | 13.3 | 13.7 | 14.1 |

Motor mounting part

● ECS-12-E (□ 56)

● ECS-12-E (□ 60)



| Mounted motor specification | | A | B | C | Motor mounting bolt |
|-----------------------------|-----|-------------|-------|------|---------------------|
| A | □60 | M4 depth 12 | 50 | 10 | 4-M4 × L16 |
| B | □56 | M4 depth 12 | 47.14 | 6.35 | 4-M4 × L16 |
| C | □56 | M4 depth 12 | 47.14 | 8 | 4-M4 × L16 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Coupling | Fitting | Motor size | Motor mounting bolt | |
|-----------------------------|-----------------------|----------------------|------------|---------------------|----------|
| | | | | Size | Quantity |
| A | Assembled at shipment | Included at shipment | □56 | M4 | 4 |
| B | | | □60 | M4 | 4 |
| C | | | M4 | 4 | |

*Refer to page 682 for fitting details.

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 678 for sensor specifications.

ECS-12 Series

Motor side mounting (left, right, bottom)

● Stepper motor size: 56, 60



How to order

ECS - 12 - 05 040 - R A B N N N N P

A Body size
12 Body width 102 mm

B Screw lead
05 5 mm
10 10 mm
16 16 mm
20 20 mm

C Stroke length
005 50 mm to (In 50 mm increments)
105 1050 mm

D Motor mounting direction *3 *6
R Right mounting
D Bottom mounting
L Left mounting

E Mounted motor specification
A Select the mounted motor specification from the table below.
B
C

F Motor size
B 56
C 60

G Brake
N None

H Origin sensor (1 pc) *1 *2 *3 *4
N None
A Inside motor side
B Inside motor opposite side
C Outside motor side
D Outside motor opposite side

I Limit sensor (2 pcs) *1 *2 *3 *4
N None
A Inside
B Outside

J Grease nipple *4 *5 *6
N None (Body mounting direction: Standard)
R Right
L Counterclockwise

K Positioning pin hole
N None
P Yes

- *1: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.
- *2: For sensor inside mounting, the user cannot adjust the position. (Assembled at shipment)
For sensor outside mounting, the user can adjust the position. (Included at shipment)
- *3: When the motor mounting direction is R or L, origin sensor A and limit sensor A cannot be combined.
- *4: Contact CKD to use the origin sensor, limit sensor and grease nipple in the same direction.
- *5: "Body mounting direction: Standard" here refers to mounting from the bottom side.
- *6: When selecting motor mounting direction R, grease nipple R cannot be selected.
When selecting L, grease nipple L cannot be selected.

| Manufacturer | <input type="checkbox"/> 56 | <input type="checkbox"/> 60 |
|--------------------------|-----------------------------|-----------------------------|
| Oriental Motor Co., Ltd. | - | A |
| MinebeaMitsumi Inc. | B | - |
| Dyadic Systems Co., Ltd. | C | - |

*Refer to page 641 for the motor model No.

Specifications

| | | | | | |
|---|--|-----|-----|------|----|
| Applicable motor sizes | <input type="checkbox"/> 56, <input type="checkbox"/> 60 stepper motor | | | | |
| Drive method | Ball screw ϕ 16 | | | | |
| Ball screw accuracy grade | C7 | | | | |
| Stroke length mm | 50 to 1050 | | | | |
| Screw lead mm | 5 | 10 | 16 | 20 | |
| Max. load capacity *1 | Horizontal kg | 50 | 30 | 22 | 18 |
| | Vertical kg | 12 | 8 | 5 | 3 |
| Max. speed mm/s | 250 | 500 | 800 | 1000 | |
| Rated thrust *1 N | 683 | 341 | 213 | 174 | |
| Repeatability mm | \pm 0.01 | | | | |
| Lost motion mm | 0.1 or less | | | | |
| Drive system weight kg | 0.9 | | | | |
| Other inertia kg·cm ² | 0.730 | | | | |
| Coefficient of friction | 0.05 | | | | |
| Mechanical efficiency | 0.8 | | | | |
| Ball screw length | Stroke + 200 | | | | |
| Dynamic allowable load N | 1660 | | | | |
| Static allowable moment N·m | MP: 150, MY: 150, MR: 130 | | | | |
| Dynamic allowable moment N·m | MP: 42.3, MY: 42.3, MR: 53.1 | | | | |
| Operating ambient temperature, humidity | 0 to 40°C (no freezing) | | | | |
| | 35 to 80% RH (no condensation) | | | | |
| Storage ambient temperature, humidity | -10 to 50°C (no freezing) | | | | |
| | 35 to 80% RH (no condensation) | | | | |
| Atmosphere | No corrosive gas, explosive gas, or dust | | | | |

*1 The rated thrust and max. load capacity values are the allowable values for the actuator body; the actual thrust and load capacity are limited by the motor used.

Stroke and max. speed

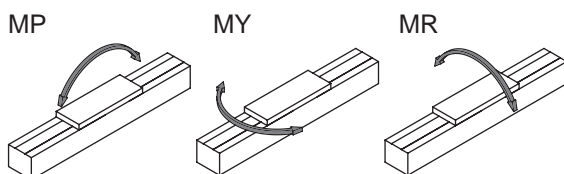
| | | (mm/s) | | | | | |
|------------|---------------|------------|-----|-----|-----|-----|------|
| Screw lead | Stroke length | 100 to 750 | 800 | 850 | 900 | 950 | 1050 |
| | 5 | | 250 | 225 | 200 | 175 | 150 |
| 10 | | 500 | 450 | 400 | 350 | 300 | 250 |
| 16 | | 800 | 720 | 640 | 560 | 480 | 400 |
| 20 | | 1000 | 900 | 800 | 700 | 600 | 500 |

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable overhang length

*Refer to page 674 for details.

Moment direction



EBS

EBR

ETS

ETS Multi-Axis

ECS

ETV

ECV

EKS

EBS

EBR

ETS

ECS

Precautions

Servo motor compatible

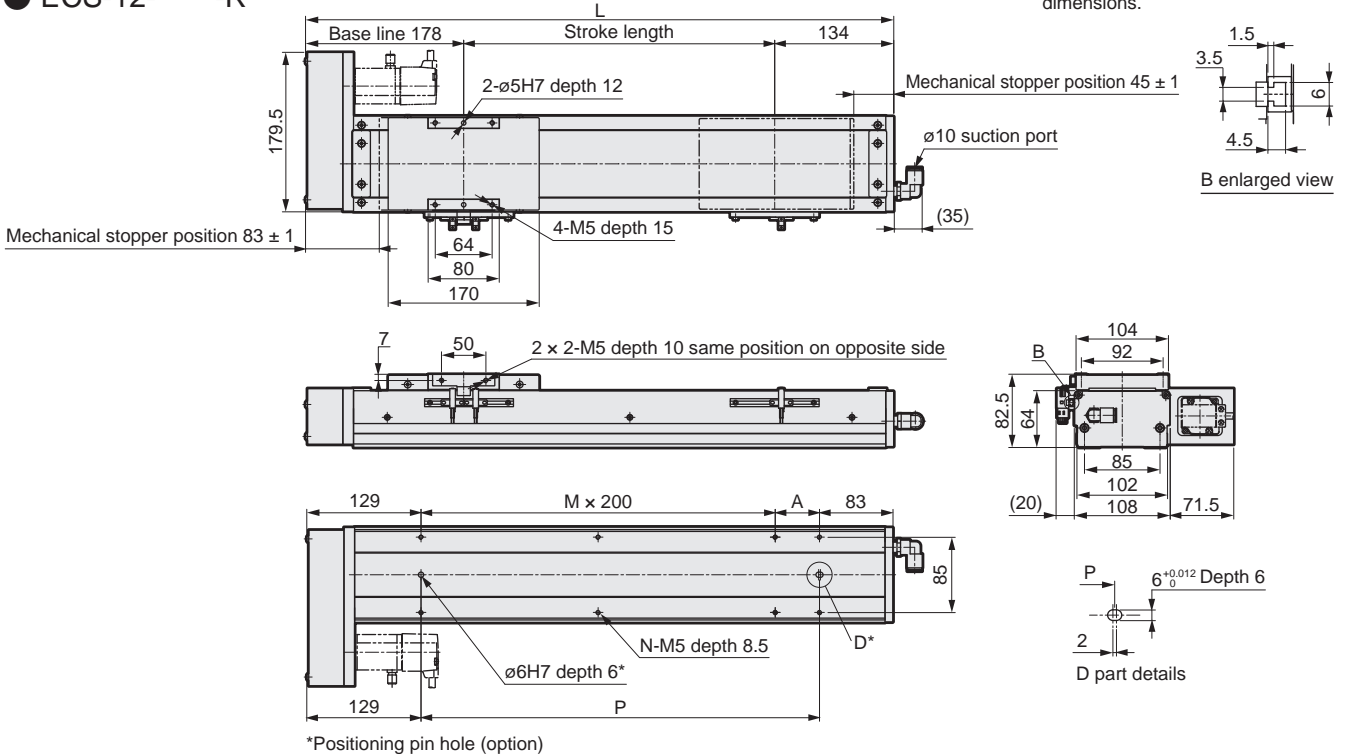
Stepper motor compatible

Safety

Dimensions Motor right-side mounting

● ECS-12-****-R

Refer to page 680 for grease nipple dimensions.

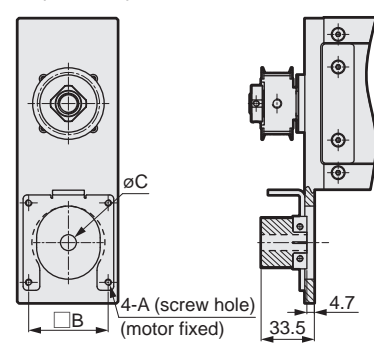
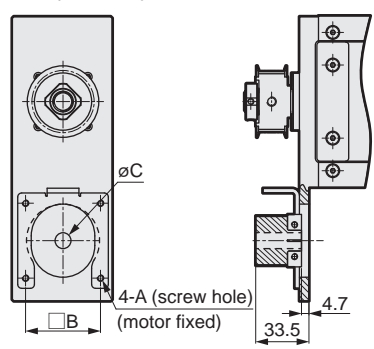


| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| L | 362 | 412 | 462 | 512 | 562 | 612 | 662 | 712 | 762 | 812 | 862 | 912 | 962 | 1012 | 1062 | 1112 | 1162 | 1212 | 1262 | 1312 | 1362 |
| A | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 |
| M | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 |
| N | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 |
| P | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 |
| Weight (kg) | 6.4 | 6.9 | 7.3 | 7.7 | 8.2 | 8.6 | 9.0 | 9.4 | 9.9 | 10.3 | 10.7 | 11.1 | 11.6 | 12.0 | 12.4 | 12.8 | 13.3 | 13.7 | 14.1 | 14.5 | 15.0 |

Motor mounting part

● ECS-10-R (□ 56)

● ECS-10-R (□ 60)



| Mounted motor specification | A | B | C | Motor mounting bolt |
|-----------------------------|-----|----|-------|---------------------|
| A | □60 | M4 | 50 | 4-M4 × L16 |
| B | □56 | M4 | 47.14 | 4-M4 × L16 |
| C | □56 | M4 | 47.14 | 4-M4 × L16 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor size | Motor mounting bolt | |
|-----------------------------|----------------------|----------------------|------------|---------------------|----------|
| | | | | Size | Quantity |
| A | Included at shipment | Included at shipment | □56 □60 | M4 | 4 |
| B | | | | M4 | 4 |
| C | | | | M4 | 4 |

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 678 for sensor specifications.

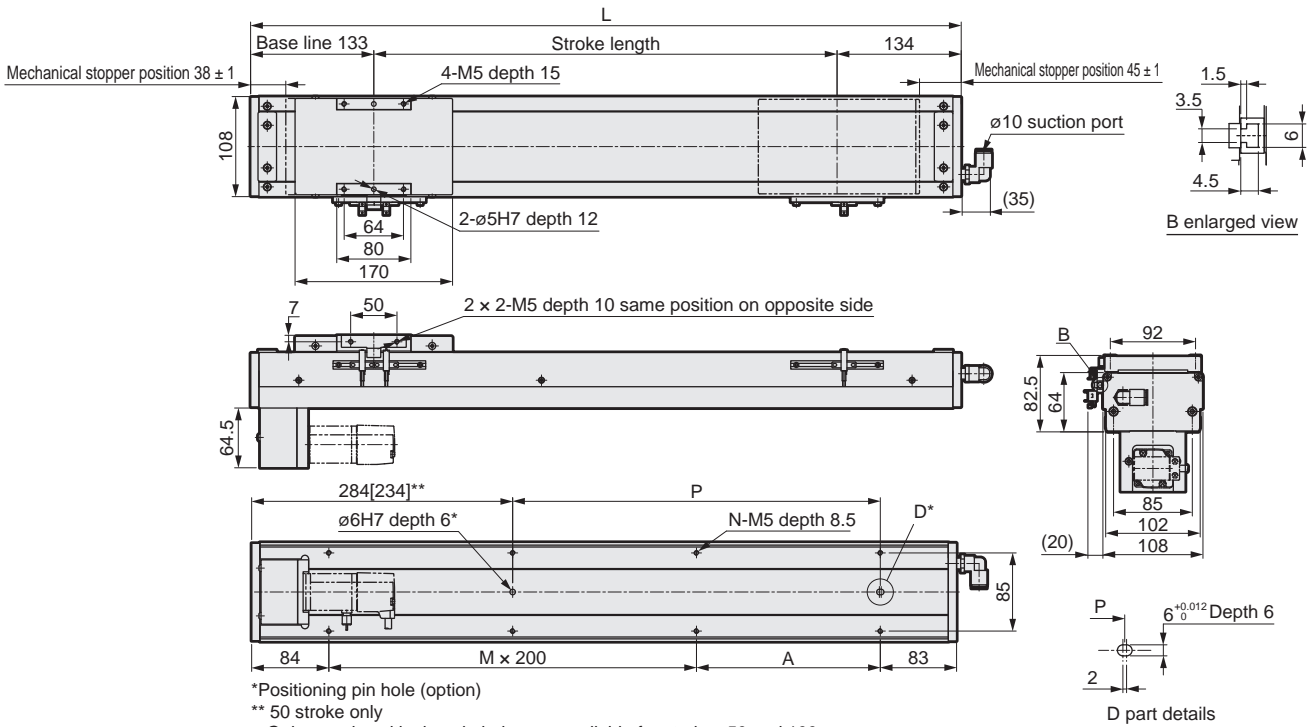
*Refer to page 682 for fitting details.

ECS-12 Series

Dimensions Motor bottom mounting

● ECS-12-*****-D

Refer to page 680 for grease nipple dimensions.

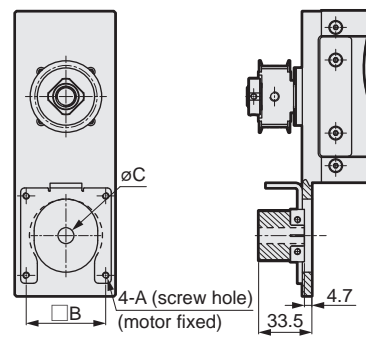
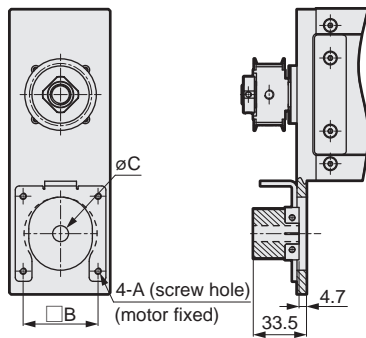


| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| L | 317 | 367 | 417 | 467 | 517 | 567 | 617 | 667 | 717 | 767 | 817 | 867 | 917 | 967 | 1017 | 1067 | 1117 | 1167 | 1217 | 1267 | 1317 |
| A | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 |
| M | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 |
| N | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 |
| P | 0 | 0 | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 |
| Weight (kg) | 6.4 | 6.9 | 7.3 | 7.7 | 8.2 | 8.6 | 9.0 | 9.4 | 9.9 | 10.3 | 10.7 | 11.1 | 11.6 | 12.0 | 12.4 | 12.8 | 13.3 | 13.7 | 14.1 | 14.5 | 15.0 |

Motor mounting part

● ECS-12-D (□ 56)

● ECS-12-D (□ 60)



| Mounted motor specification | | A | B | C | Motor mounting bolt |
|-----------------------------|------|----|-------|------|---------------------|
| A | □ 60 | M4 | 50 | 10 | 4-M4 × L16 |
| B | □ 56 | M4 | 47.14 | 6.35 | 4-M4 × L16 |
| C | □ 56 | M4 | 47.14 | 8 | 4-M4 × L16 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor size | Motor mounting bolt | |
|-----------------------------|----------------------|----------------------|--------------|---------------------|----------|
| | | | | Size | Quantity |
| A | Included at shipment | Included at shipment | □ 56 □ 60 | M4 | 4 |
| B | | | | M4 | 4 |
| C | | | | M4 | 4 |

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

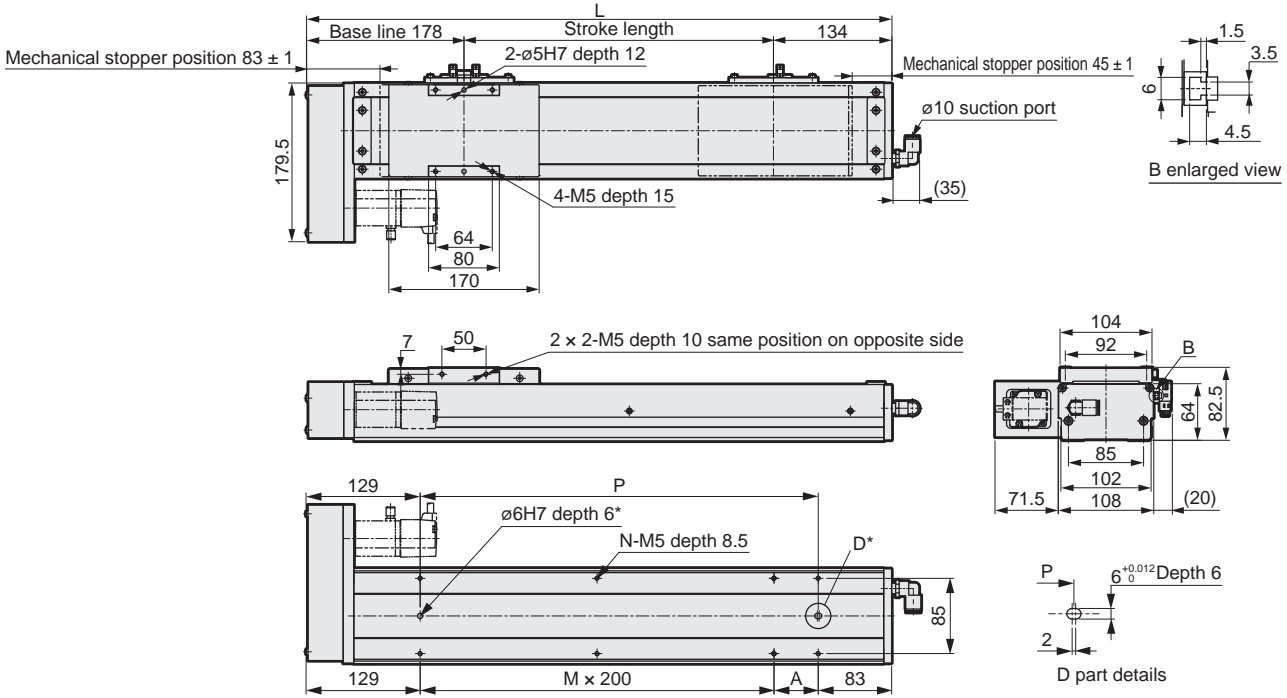
*Refer to page 678 for sensor specifications.

*Refer to page 682 for fitting details.

Dimensions Motor left-side mounting

● ECS-12-*****-L

Refer to page 680 for grease nipple dimensions.



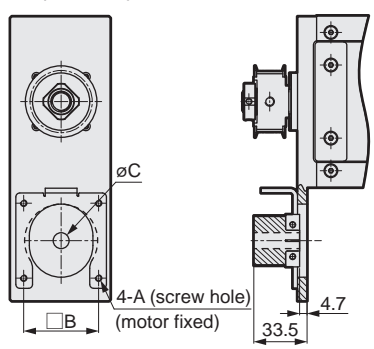
*Positioning pin hole (option)

| Stroke length (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| L | 362 | 412 | 462 | 512 | 562 | 612 | 662 | 712 | 762 | 812 | 862 | 912 | 962 | 1012 | 1062 | 1112 | 1162 | 1212 | 1262 | 1312 | 1362 |
| A | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 |
| M | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 |
| N | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 |
| P | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 |
| Weight (kg) | 6.4 | 6.9 | 7.3 | 7.7 | 8.2 | 8.6 | 9.0 | 9.4 | 9.9 | 10.3 | 10.7 | 11.1 | 11.6 | 12.0 | 12.4 | 12.8 | 13.3 | 13.7 | 14.1 | 14.5 | 15.0 |

Motor mounting part

● ECS-12-L (□ 56)

● ECS-12-L (□ 60)



| Mounted motor specification | A | B | C | Motor mounting bolt |
|-----------------------------|-----|----|-------|---------------------|
| A | □60 | M4 | 50 | 4-M4 x L16 |
| B | □56 | M4 | 47.14 | 4-M4 x L16 |
| C | □56 | M4 | 47.14 | 4-M4 x L16 |

List of attachments

[Motor mounting parts]

| Mounted motor specification | Timing belt, pulley | Fitting | Motor size | Motor mounting bolt | |
|-----------------------------|----------------------|----------------------|------------|---------------------|----------|
| | | | | Size | Quantity |
| A | Included at shipment | Included at shipment | □56 □60 | M4 | 4 |
| B | | | | M4 | 4 |
| C | | | | M4 | 4 |

[Origin sensor/Limit sensor]

| Manufacturer | Model | Quantity |
|-------------------|----------|----------|
| OMRON Corporation | EE-SX672 | 3 |

*Refer to page 678 for sensor specifications.

*Refer to page 682 for fitting details.