

# EC-ST11



Body Width  
**110 mm**

24v  
Stepper  
Motor

## Model Specification Items

<b>EC</b>	<b>ST11</b>	<b>L</b>	<b>50</b>		
Series	Type	Lead	Stroke	Power · I/O cable length	Options
		L 2.5mm M 5mm	50 50mm	See power · I/O cable length table below	See options below



- (1) The home position is set on the non-motor side for the standard specification. Please check Dimensions for the home position.  
 (2) Use with allowable load of 300N or less for the thrust from a conveyor, etc.  
 (3) When using a  $\phi 7.8$  through hole, the motor cover must be removed.

### Operation Range

Stroke (mm)	EC-ST11
50	<input type="radio"/>

### Options \* Please check the Options reference pages to confirm each option.

Name	Option code	Reference page
RCON-EC connection specification (Note 1)	<b>ACR</b>	11
Brake	<b>B</b>	11
Designated grease specification	<b>G5</b>	11
Front spacer	<b>FS</b>	11
Opposite home position specification (Note 2)	<b>NM</b>	11
PNP specification	<b>PN</b>	12
Split motor and controller power supply specification	<b>TMD2</b>	12
Battery-less absolute encoder specification	<b>WA</b>	12
Wireless communication specification	<b>WL</b>	12
Wireless axis operation specification	<b>WL2</b>	12

- (Note 1) If the RCON-EC connection specification (ACR) is selected, the PNP specification (PN) and split motor and controller power supply specification (TMD2) cannot be selected.  
 (Note 2) Standard specification homes away from the motor end. Opposite specification homes at the motor end.

### Power · I/O Cable Length

#### Standard Connector Cable

Cable code	Cable length	User wiring specification (flying leads)	RCON-EC connection specification (Note 4) (with connectors on both ends)
		CB-EC-PWBIO□□□-RB supplied	CB-REC-PWBIO□□□-RB supplied
<b>0</b>	Without cable	<input type="radio"/> (Note 3)	<input type="radio"/>
<b>1 ~ 3</b>	1 ~ 3m	<input type="radio"/>	<input type="radio"/>
<b>4 ~ 5</b>	4 ~ 5m	<input type="radio"/>	<input type="radio"/>
<b>6 ~ 7</b>	6 ~ 7m	<input type="radio"/>	<input type="radio"/>
<b>8 ~ 10</b>	8 ~ 10m	<input type="radio"/>	<input type="radio"/>

- (Note 3) Only terminal block connector is included. Please refer to P. 18 for details.  
 (Note 4) If RCON-EC connection specification (ACR) is selected as an option.  
 (Note) Robot cable.

#### 4-way Connector Cable

Cable code	Cable length	User wiring specification (flying leads)	RCON-EC connection specification (Note 5) (with connectors on both ends)
		CB-EC2-PWBIO□□□-RB supplied	CB-REC2-PWBIO□□□-RB supplied
<b>S1 ~ S3</b>	1 ~ 3m	<input type="radio"/>	<input type="radio"/>
<b>S4 ~ S5</b>	4 ~ 5m	<input type="radio"/>	<input type="radio"/>
<b>S6 ~ S7</b>	6 ~ 7m	<input type="radio"/>	<input type="radio"/>
<b>S8 ~ S10</b>	8 ~ 10m	<input type="radio"/>	<input type="radio"/>

- (Note 5) If RCON-EC connection specification (ACR) is selected as an option.  
 (Note) Robot cable.

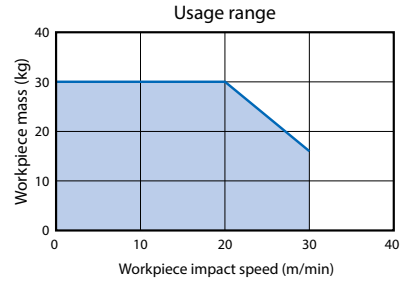
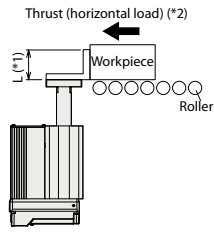
### Main Specifications

Item		Description	
Vertical	Lead	Ball screw lead (mm)	5 2.5
	Payload (Note 6)	Payload (kg) (energy-saving disabled)	1 3
		Max. speed (mm/s)	350 175
		Min. speed (mm/s)	7 4
		Rated acceleration/deceleration (G)	0.3 0.3
Brake	Brake specification	Non-excitation actuating solenoid brake	
	Brake holding force (kgf)	5 10	
Stroke (mm)		50	

(Note 6) For operation at maximum speed and maximum acceleration/deceleration.

Item	Description
Drive system	Ball screw, $\phi 8$ mm, rolled C10
Positioning repeatability	$\pm 0.15$ mm
Lost motion	- (notation not available due to 2-point positioning function)
Rod	$\phi 25$ mm, material: aluminum, hard alumite treatment
Guide shaft	S45C
Front bracket	Material: Aluminum, white alumite treatment
Ambient operating temperature, humidity	0 ~ 40°C, 85%RH or less (no condensation)
Ingress protection	IP20
Vibration & shock resistance	4.9m/s <sup>2</sup>
Overseas standards	CE marking, RoHS directive
Motor type	Stepper motor (□35)
Encoder type	Incremental/battery-less absolute
Number of encoder pulses	800 pulse/rev

Correlation Diagram of Workpiece Mass and Workpiece Impact Speed

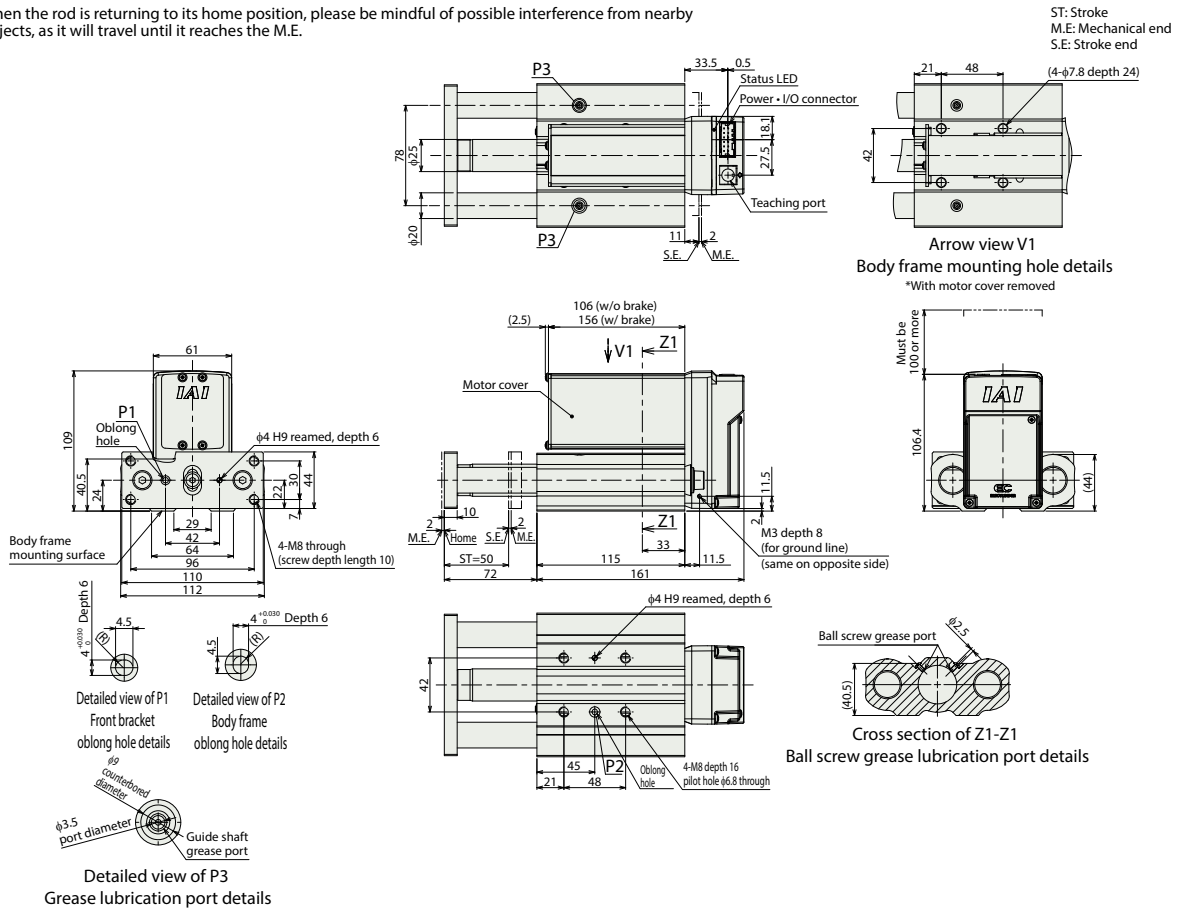


(\*1) Use within L dimension of 50mm.  
(\*2) Use with allowable load of 300N or less for the thrust from a conveyor, etc.

Dimensions

CAD drawings can be downloaded from our website.  
[www.intelligentactuator.com](http://www.intelligentactuator.com) 2D CAD 3D CAD

(Note) When the rod is returning to its home position, please be mindful of possible interference from nearby objects, as it will travel until it reaches the M.E.



**Mass**

Stroke	50	
Mass (kg)	Without brake	2.6
	With brake	2.8

Applicable Controllers

(Note) EC Series products are equipped with a built-in controller. Please refer to P. 16 for details on built-in controllers.