IAI
Quality and Innovation

ELECYLINDER® Belt Driven Type

EC-B6/EC-B7

Simple & Wireless Operation
2 Position Actuator

www.intelligentactuator.com

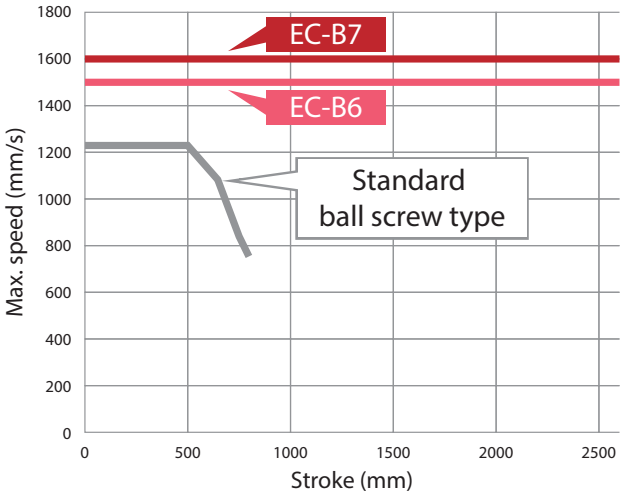
2-point positioning | Built-in controller

ELECYLINDER®
EC-B6/B7 Belt Driven Type

NEW

1 Max. stroke: 2600mm
Max. speed: 1600mm/s

Stroke and Max Speed



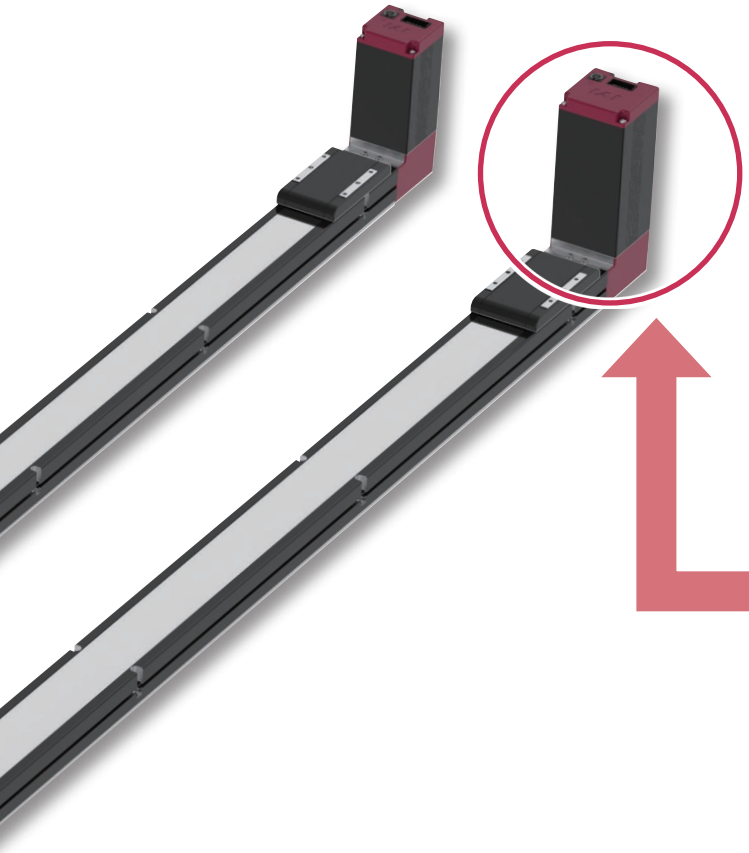
If the stroke increases for the standard ball screw type , the maximum speed will decrease due to the resonance of the ball screw. EC-B6/7 uses a belt drive system so that the maximum speed does not decrease at **a long stroke**.

EC-B6

EC-B7

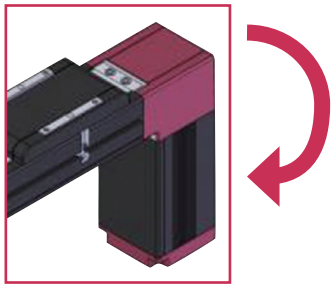
2 Max. payload: 20kg

Correlation Diagram of Speed and Payload (acceleration/deceleration: 0.3G)



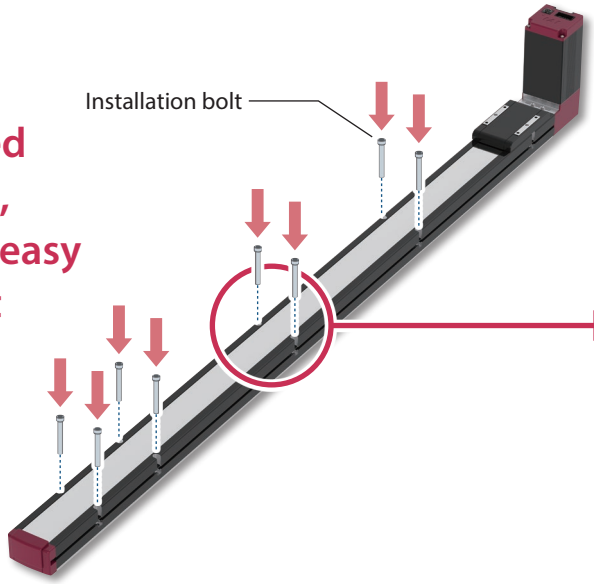
Select a battery-less absolute encoder as an option to eliminate the need to return home at a long stroke!

3 The motor installation direction can also be changed after purchase



Downward facing motor specification

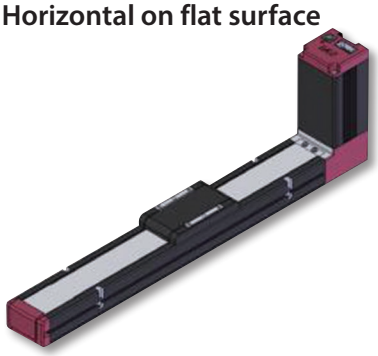
4 Can be bolted from the top, allowing for easy replacement



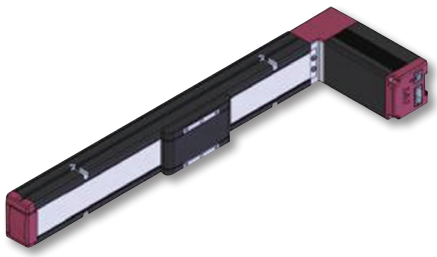
Installation bolt size
B6: M4, B7: M5

5 Installation orientation
Can be installed in any of the following orientations*

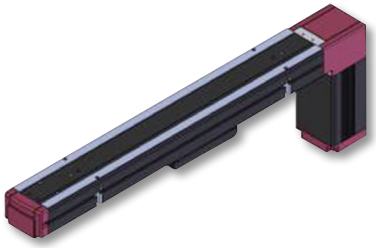
Horizontal on flat surface



Horizontal side mounted



Horizontal suspended



* Installing the product horizontal side mounted or horizontal suspended may cause slack or misalignment in the stainless steel sheet.
Continued use in these orientations can cause the stainless steel sheet to break. Please inspect it daily and adjust the sheet if any slack or misalignment is found.

Model Specification Items

ELECYLINDER®

EC - [ ] S ([ ]) - [ ] - [ ] - ([ ])

Series | Type | Lead | Motor coupling method | Stroke | Cable length | Options

Type

B6	Belt driven type 63mm wide
B7	Belt driven type 73mm wide

Lead

<B6/B7>

S	Lead 48mm equivalent

Motor coupling method

Blank	Motor top-mounted specification
U	Motor bottom-mounted specification

Stroke

300	300mm
≀	≀
2600	2600mm

(100mm increments)

Cable length

0	0m
≀	≀
10	10m

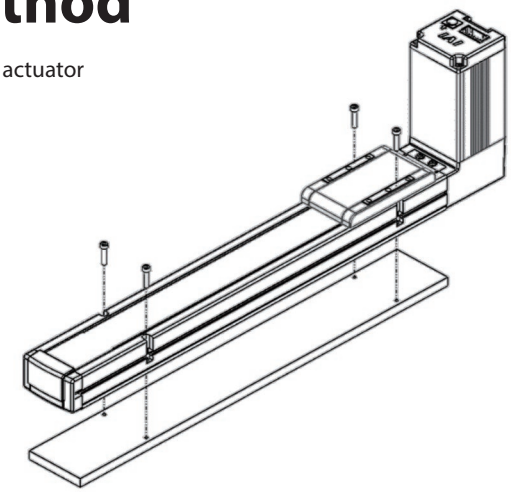
Cable length
· 0: With power / I/O connector
· 1 ~ 10: Power I/O cable included

Options

Blank	Incremental encoder specification NPN specification, no options
B	Brake
G5	Specified grease applied specification
NM	Non-motor end specification
PN	PNP specification
TMD2	Twin power supply specification
WA	Battery-less absolute encoder specification
WL	Wireless communication specification
WL2	Wireless axis operation specification

Mounting method

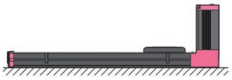
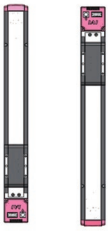
● Use the through holes on top of the actuator



Precautions for Installation

● Mounting orientation

○: Can be mounted ×: Cannot be mounted

		Mounting orientation			
					
Series	Type	Horizontal mounting on flat surface	Horizontal side mounting	Horizontal mounting suspended	Vertical mount
EC	B6	○	○ (*)	○ (*)	×
	B7				

* Installing the product horizontal side mount or horizontal suspended may cause slack or misalignment in the stainless steel sheet. Continued use in these orientations can cause the stainless steel sheet to break. Please inspect it daily and adjust the sheet if any slack or misalignment is found.

● Keep the body installation surface and workpiece mounting surface flatness within 0.05mm/m.
Uneven flatness will increase the slider's sliding resistance and may cause malfunction.

Duty Ratio

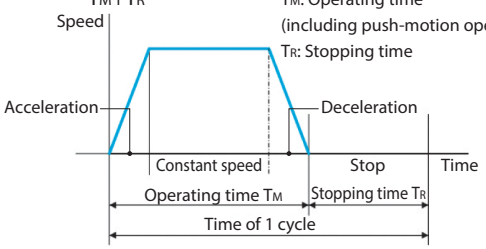
EC-B6/B7 can be operated at 100% of its duty cycle.
(Ambient temperature 0 to 40°C.)

[Duty Cycle]

Duty cycle is the percentage of the actuator's active operation time in each cycle.

$$D = \frac{T_M}{T_M + T_R} \times 100(\%)$$

D: Duty
T_M: Operating time (including push-motion operation)
T_R: Stopping time



EC-B6S
EC-B6SU

Simple dust-proof | Coupled Motor | Body width 60 mm | 24V Stepper motor | Belt type

Model Specification Items

EC – B6 S [ ] – [ ] – [ ] – [ ]

Series	Type	Lead	Specification	Stroke	Cable Length	Option
EC	B6	S: 48mm	Blank: Motor top-mounted U: Motor bottom-mounted	300 ~ 2600: 300mm ~ 2600mm (100mm increments)	0: Terminal type with connector 1 ~ 10: 1m ~ 10m	Refer to option below

CE RoHS

Horizontal | Side | Ceiling | Vertical

(Note) The above is motor top-mounted type.

Stroke

Stroke (mm)	Stroke (mm)
300	**1500**
400	**1600**
500	**1700**
600	**1800**
700	**1900**
800	**2000**
900	**2100**
1000	**2200**
1100	**2300**
1200	**2400**
1300	**2500**
1400	**2600**

Option

Name	Option code	Reference page
Brake	**B**	13
Specified grease applied specification*	**G5**	13
Non-motor end specification	**NM**	13
PNP specification	**PN**	13
Twin power supply specification	**TMD2**	13
Battery-less absolute encoder specification	**WA**	13
Wireless communication specification	**WL**	13
Wireless axis operation specification	**WL2**	13

*Change grease to food grade.

Cable Length

Cable code	Cable length
0	Without cable (with connector)
1 ~ 3	1 ~ 3m
4 ~ 5	4 ~ 5m
6 ~ 10	6 ~ 10m

POINT Selection Notes

(1) The belt type may cause vibration or noise during low-speed operation, so set the moving speed to 100mm/s or more.

(2) The actuator specifications display the payload's maximum value. Please refer to "Table of Payload by Speed/ Acceleration" for more details.

(3) Push-motion operation cannot be performed.

(4) Special attention needs to be paid to the mounting orientation.

(5) Reference value of the overhang load length is under 220mm in the Ma, Mb and Mc directions.

(6) The center of gravity of the attached object should be less than 1/2 of the overhand distance. Even when the overhang distance and load moment are within the allowable range, the operating conditions should be moderated if some abnormal vibration or noise is observed.

Main Specification

Item			Description
Horizontal	Payload	Maximum payload (energy-saving disabled) (kg)	11
		Maximum payload (energy-saving enabled) (kg)	3
	Speed/ acceleration/ deceleration	Max. speed (mm/s)	1500
		Min. speed (mm/s)	100
		Rated acceleration/ deceleration (G)	0.3
		Max. accleration/ deceleration (G)	1.0
Brake		Brake holding specification	Non-excitation actuating solenoid brake
		Brake holding force (N)	1.3
Stroke		Min. stroke (mm)	300
		Max. stroke (mm)	2600
		Stroke pitch (mm)	100

Item	Description
Driving system	Timing belt 9mm width 3mm pitch 48mm lead
Positioning repeatability	±0.08mm
Base	Dedicated aluminum extruded material (A6063SS-T5 Equivalent) Black alumite treatment
Linear guide	Linear motion infinite circulating type
Static allowable moment	Ma: 48 N·m
	Mb: 69 N·m
	Mc: 97 N·m
Dynamic allowable moment (Note 1)	Ma: 11 N·m
	Mb: 16 N·m
	Mc: 23 N·m
Ambient operation temperature/ humidity	0~40°C, 85%RH or less (Non-condensing)
Degree of protection	IP20
Vibration & shock resistance	4.9m/s^2
Overseas standards	CE marking, RoHS (Restriction of Hazardous Substances)
Motor type	Stepper motor
Encoder type	Incremental / battery-less absolute
Number of encoder pulses	800 pulse/rev

(Note 1) Based on the standard rated operation life of 5,000 km. Operation life varies according to operating and mounting conditions.

Direction of moment for the Slider type

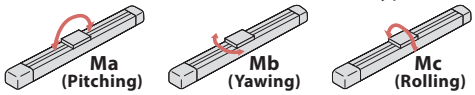


Table of Payload by Speed and Acceleration/Deceleration

Energy-saving disabled

The unit for payload is kg.

Orientation	Horizontal			
Speed (mm/s)	Acceleration (G)			
	0.3	0.5	0.7	1
0	11	10	8	7
200	11	10	8	7
300	11	8.5	7	6
600	7	5	4	3
1000	4	3	2	1
1200	3	2	1	0.5
1400	2	1	1	0.5
1500	2	1	1	0.5

Energy-saving enabled

The unit for payload is kg.

Orientation	Horizontal	
Speed (mm/s)	Acceleration (G)	
	0.3	0.7
0	3	2
800	3	2
1400	0.5	0.5

Stroke and maximum speed

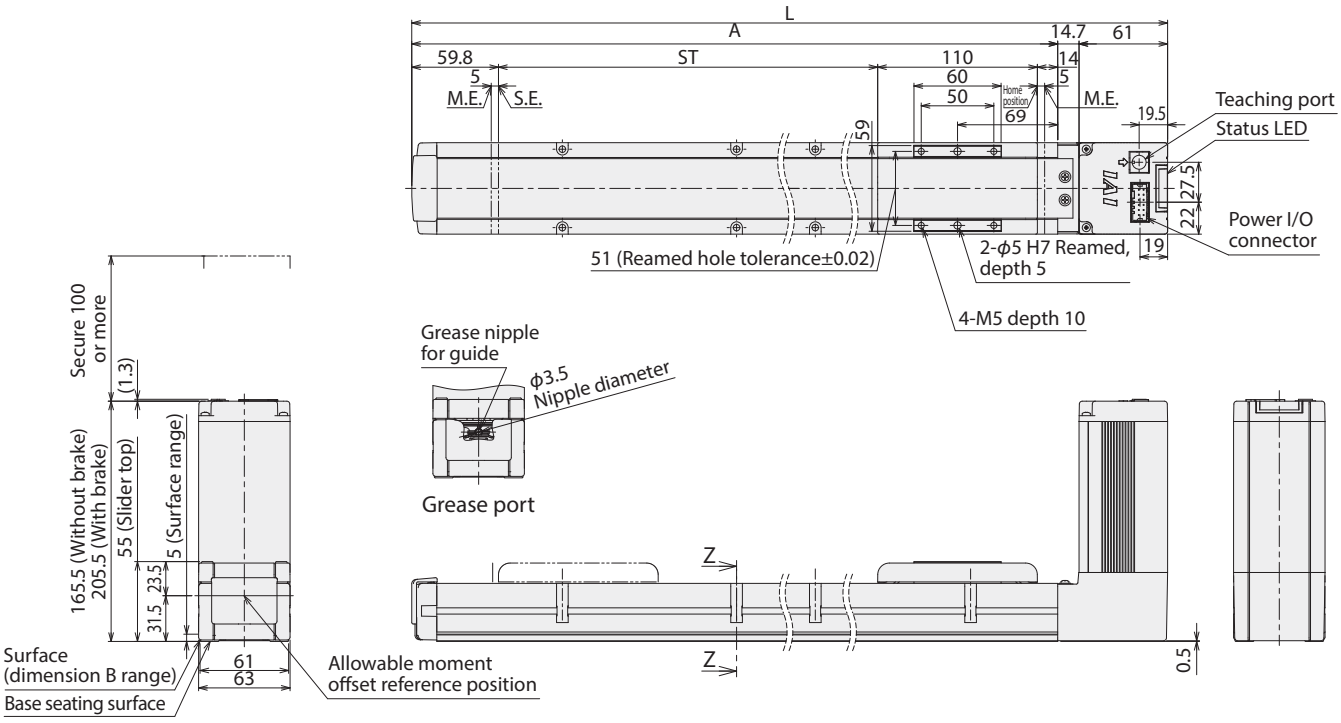
Energy saving	300 (mm)	400 (mm)	500 (mm)	600 (mm)	700 (mm)	800 (mm)	900~2600 (per 100mm)
disabled	890	1070	1220	1340	1400	1440	1500
enabled	890	1070	1220	1300	1350	1400	

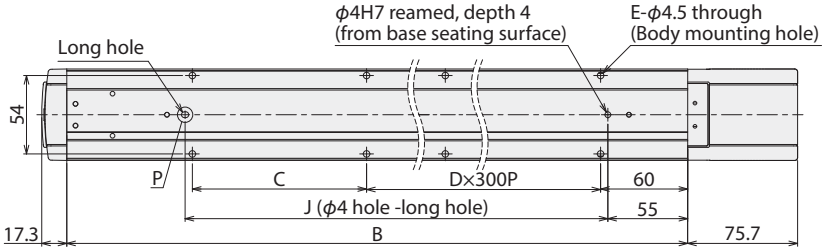
(Unit is mm/s)

CAD drawings can be downloaded from our website.
www.intelligentactuator.com

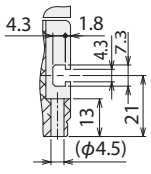
2D CAD 3D CAD

ST: Stroke
M.E.: Mechanical end
S.E.: Stroke end

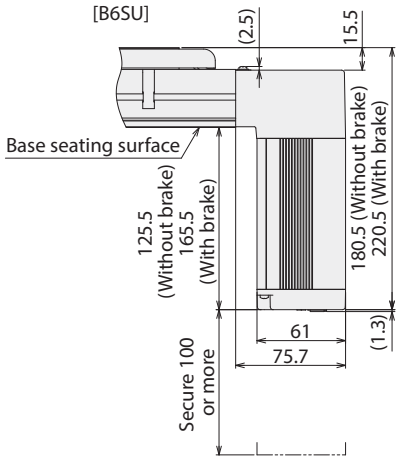




Detailed drawing P
base long hole detail



Sectional view Z-Z
Detail of through hole
for attaching the base
Base mounting hole
Details of T slot



■ Dimensions by stroke

Stroke	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600
L	559.5	659.5	759.5	859.5	959.5	1059.5	1159.5	1259.5	1359.5	1459.5	1559.5	1659.5	1759.5	1859.5	1959.5	2059.5	2159.5	2259.5	2359.5	2459.5	2559.5	2659.5	2759.5	2859.5
A	483.8	583.8	683.8	783.8	883.8	983.8	1083.8	1183.8	1283.8	1383.8	1483.8	1583.8	1683.8	1783.8	1883.8	1983.8	2083.8	2183.8	2283.8	2383.8	2483.8	2583.8	2683.8	2783.8
B	466.5	566.5	666.5	766.5	866.5	966.5	1066.5	1166.5	1266.5	1366.5	1466.5	1566.5	1666.5	1766.5	1866.5	1966.5	2066.5	2166.5	2266.5	2366.5	2466.5	2566.5	2666.5	2766.5
C	320	120	220	320	120	220	320	120	220	320	120	220	320	120	220	320	120	220	320	120	220	320	120	220
D	0	1	1	1	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8
E	4	6	6	6	8	8	8	10	10	10	12	12	12	14	14	14	16	16	16	18	18	18	20	20
J	330	430	530	630	730	830	930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	2430	2530	2630

■ Mass by stroke

Stroke		300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600
Weight (kg)	W/o Brake	2.7	3.0	3.4	3.7	4.0	4.3	4.7	5.0	5.3	5.6	5.9	6.3	6.6	6.9	7.2	7.5	7.8	8.2	8.5	8.8	9.2	9.5	9.8	10.2
	With Brake	3.0	3.3	3.7	4.0	4.3	4.6	5.0	5.3	5.6	5.9	6.2	6.6	6.9	7.2	7.5	7.8	8.1	8.5	8.8	9.1	9.5	9.8	10.1	10.5

Note: B6SU also has the same mass.

Applicable controller

(Note) The EC series is equipped with a built-in controller.

EC-B7S
EC-B7SU

Simple dust-proof | Coupled Motor | Body width 70 mm | 24V Stepper motor | Belt type

Model Specification Items

EC – B7 S [ ] – [ ] – [ ] – [ ]

Series	Type	Lead	Specification	Stroke	Cable Length	Option
		S 48mm	Blank Motor top-mounted	300 ~ 2600: 300mm ~ 2600mm (100mm increments)	0: Terminal type with connector	Refer to option below
			U Motor bottom-mounted		1 ~ 10: 1m ~ 10m	

CE RoHS

Horizontal | Side | Ceiling | Vertical

(Note) The above is motor top-mounted type.

Stroke

Stroke (mm)	Stroke (mm)
300	**1500**
400	**1600**
500	**1700**
600	**1800**
700	**1900**
800	**2000**
900	**2100**
1000	**2200**
1100	**2300**
1200	**2400**
1300	**2500**
1400	**2600**

Option

Name	Option code	Reference page
Brake	**B**	13
Specified grease applied specification*	**G5**	13
Non-motor end specification	**NM**	13
PNP specification	**PN**	13
Twin power supply specification	**TMD2**	13
Battery-less absolute encoder specification	**WA**	13
Wireless communication specification	**WL**	13
Wireless axis operation specification	**WL2**	13

*Change grease to food grade.

Cable Length

Cable code	Cable length
0	Without cable (with connector)
1 ~ 3	1 ~ 3m
4 ~ 5	4 ~ 5m
6 ~ 10	6 ~ 10m

POINT Selection Notes

(1) The belt type may cause vibration or noise during low-speed operation, so set the moving speed to 100mm/s or more.

(2) The actuator specifications display the payload's maximum value. Please refer to "Table of Payload by Speed/ Acceleration" for more details.

(3) Push-motion operation cannot be performed.

(4) Special attention needs to be paid to the mounting orientation.

(5) Reference value of the overhang load length is under 280mm in the Ma, Mb and Mc directions.

(6) The center of gravity of the attached object should be less than 1/2 of the overhand distance. Even when the overhang distance and load moment are within the allowable range, the operating conditions should be moderated if some abnormal vibration or noise is observed.

Main Specification

Item			Description
Horizontal	Payload	Maximum payload (energy-saving disabled) (kg)	20
		Maximum payload (energy-saving enabled) (kg)	14
	Speed/ acceleration/ deceleration	Max. speed (mm/s)	1600
		Min. speed (mm/s)	100
		Rated acceleration/ deceleration (G)	0.3
		Max. accleration/ deceleration (G)	1.0
Brake		Brake holding specification	Non-excitation actuating solenoid brake
		Brake holding force (N)	2.5
Stroke		Min. stroke (mm)	300
		Max. stroke (mm)	2600
		Stroke pitch (mm)	100

Item	Description
Driving system	Timing belt 9mm width 3mm pitch 48mm lead
Positioning repeatability	±0.08mm
Base	Dedicated aluminum extruded material (A6063SS-T5 Equivalent) Black alumite treatment
Linear guide	Linear motion infinite circulating type
Static allowable moment	Ma: 79 N·m
	Mb: 114 N·m
	Mc: 157 N·m
Dynamic allowable moment (Note 1)	Ma: 17 N·m
	Mb: 25 N·m
	Mc: 34 N·m
Ambient operation temperature/ humidity	0~40°C, 85%RH or less (Non-condensing)
Degree of protection	IP20
Vibration & shock resistance	4.9m/s^2
Overseas standards	CE marking, RoHS (Restriction of Hazardous Substances)
Motor type	Stepper motor
Encoder type	Incremental / battery-less absolute
Number of encoder pulses	800 pulse/rev

(Note 1) Based on the standard rated operation life of 5,000 km. Operation life varies according to operating and mounting conditions.

Direction of moment for the Slider type

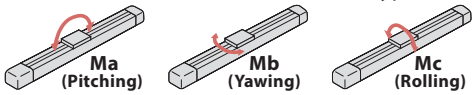


Table of Payload by Speed and Acceleration/Deceleration

Energy-saving disabled

The unit for payload is kg.

Orientation	Horizontal			
Speed (mm/s)	Acceleration (G)			
	0.3	0.5	0.7	1
0	20	20	18	16
100	20	20	18	16
200	20	20	17	15
300	19	17	15	13
600	11	9	8	7
1000	6	5	4	3
1400	3	2	1	0.5
1600	3	2	1	0.5

Energy-saving enabled

The unit for payload is kg.

Orientation	Horizontal	
Speed (mm/s)	Acceleration (G)	
	0.3	0.7
0	14	12
100	14	12
400	10	8
800	5	3
1200	1	0.5

Stroke and maximum speed

Energy saving	300 (mm)	400 (mm)	500 (mm)	600 (mm)	700 (mm)	800 (mm)	900 (mm)	1000~2600 (per 100mm)
disabled	890	1070	1220	1340	1450	1520	1550	1600
enabled	890	1070	1120	1200				

(Unit is mm/s)

Dimensions

CAD drawings can be downloaded from our website.
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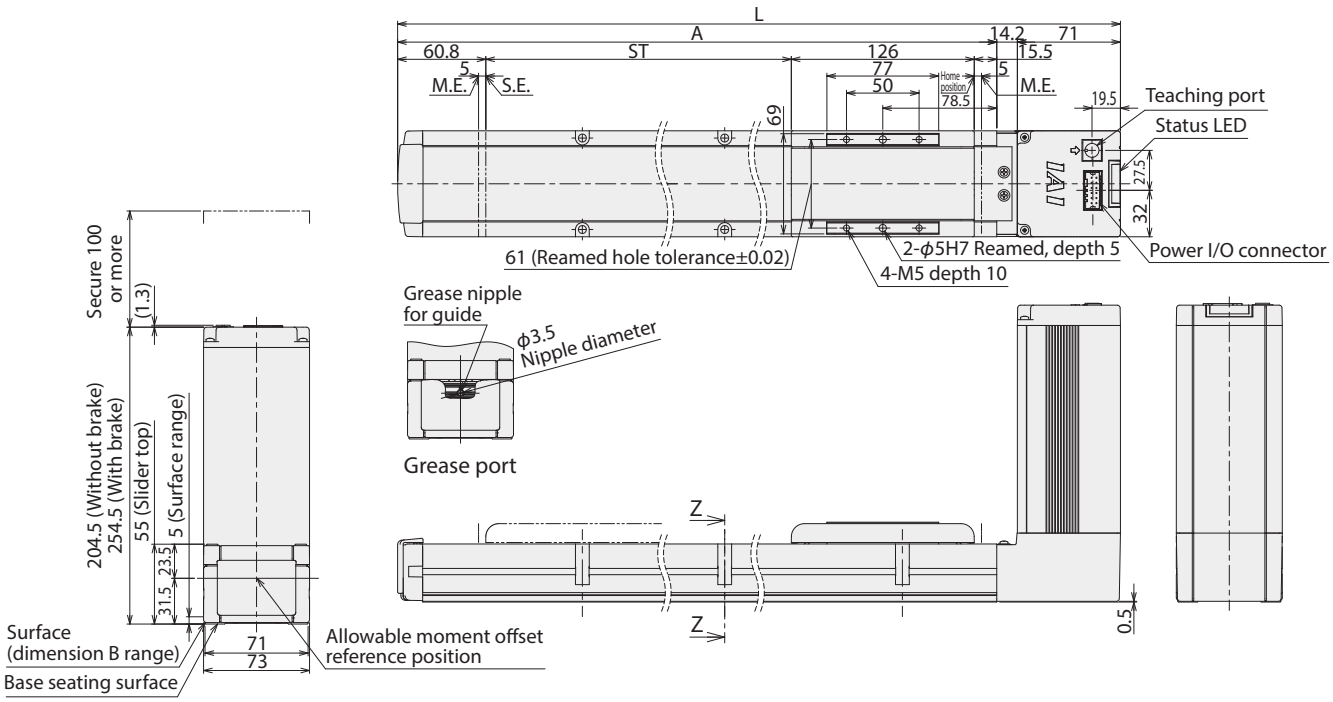
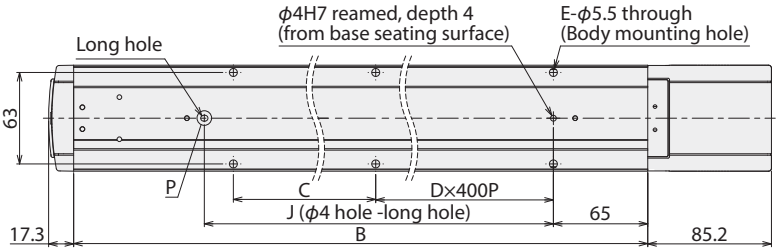
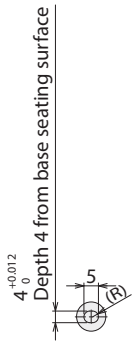
2D CAD 3D CAD

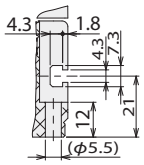
ST: Stroke
M.E.: Mechanical end
S.E.: Stroke end



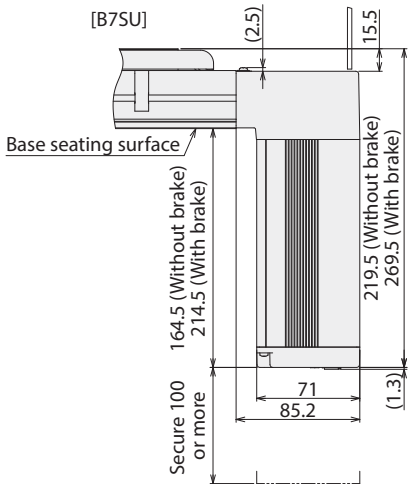




Detailed drawing P
base long hole detail



Sectional view Z-Z
Detail of through hole
for attaching the base
Base mounting hole
Details of T slot



■ Dimensions by stroke

Stroke	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600
L	587.5	687.5	787.5	887.5	987.5	1087.5	1187.5	1287.5	1387.5	1487.5	1587.5	1687.5	1787.5	1887.5	1987.5	2087.5	2187.5	2287.5	2387.5	2487.5	2587.5	2687.5	2787.5	2887.5
A	502.3	602.3	702.3	802.3	902.3	1002.3	1102.3	1202.3	1302.3	1402.3	1502.3	1602.3	1702.3	1802.3	1902.3	2002.3	2102.3	2202.3	2302.3	2402.3	2502.3	2602.3	2702.3	2802.3
B	485	585	685	785	885	985	1085	1185	1285	1385	1485	1585	1685	1785	1885	1985	2085	2185	2285	2385	2485	2585	2685	2785
C	310	410	110	210	310	410	110	210	310	410	110	210	310	410	110	210	310	410	110	210	310	410	110	210
D	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6
E	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16
J	330	430	530	630	730	830	930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	2430	2530	2630

■ Mass by stroke

Stroke		300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600
Weight (kg)	W/o Brake	4.6	4.9	5.2	5.6	5.9	6.2	6.5	6.8	7.1	7.5	7.8	8.1	8.4	8.7	9.1	9.4	9.7	10.0	10.3	10.7	11.0	11.3	11.6	12.0
	With Brake	5.1	5.4	5.7	6.1	6.4	6.7	7.0	7.3	7.6	8.0	8.3	8.6	8.9	9.2	9.6	9.9	10.2	10.5	10.8	11.2	11.5	11.8	12.1	12.5

Note: B7SU also has the same mass.

Applicable controller

(Note) The EC series is equipped with a built-in controller.

Options for the ELECYLINDER® series

Brake

Model **B**

Description This works as a holding mechanism that prevents the slider moving when the power or servo is turned off.

Specified grease applied specification

Model **G5**

Description The grease put on the ballscrew, linear guide, and rod, is changed to food grade grease (White Alcom).

Non-motor end specification

Model **NM**

Description Although the home position is usually located on the motor side, it can be reversed as an option according to the requirement of the facility layout.

PNP specification

Model **PN**

Description The EC series offers NPN specification input/output for connecting external devices as standard.
Specifying this option changes input/output to PNP specification.

Split motor and controller power supply specification

Model **TMD2**

Description Optional item to supply motor power and control power separately.
Please refer to P. 16 for wiring details.

Battery-less Absolute Encoder specification

Model **WA**

Description The EC series offers incremental encoder specification as standard.
Specifying this option installs a built-in battery-less absolute encoder.

Wireless communication specification

Model **WL**

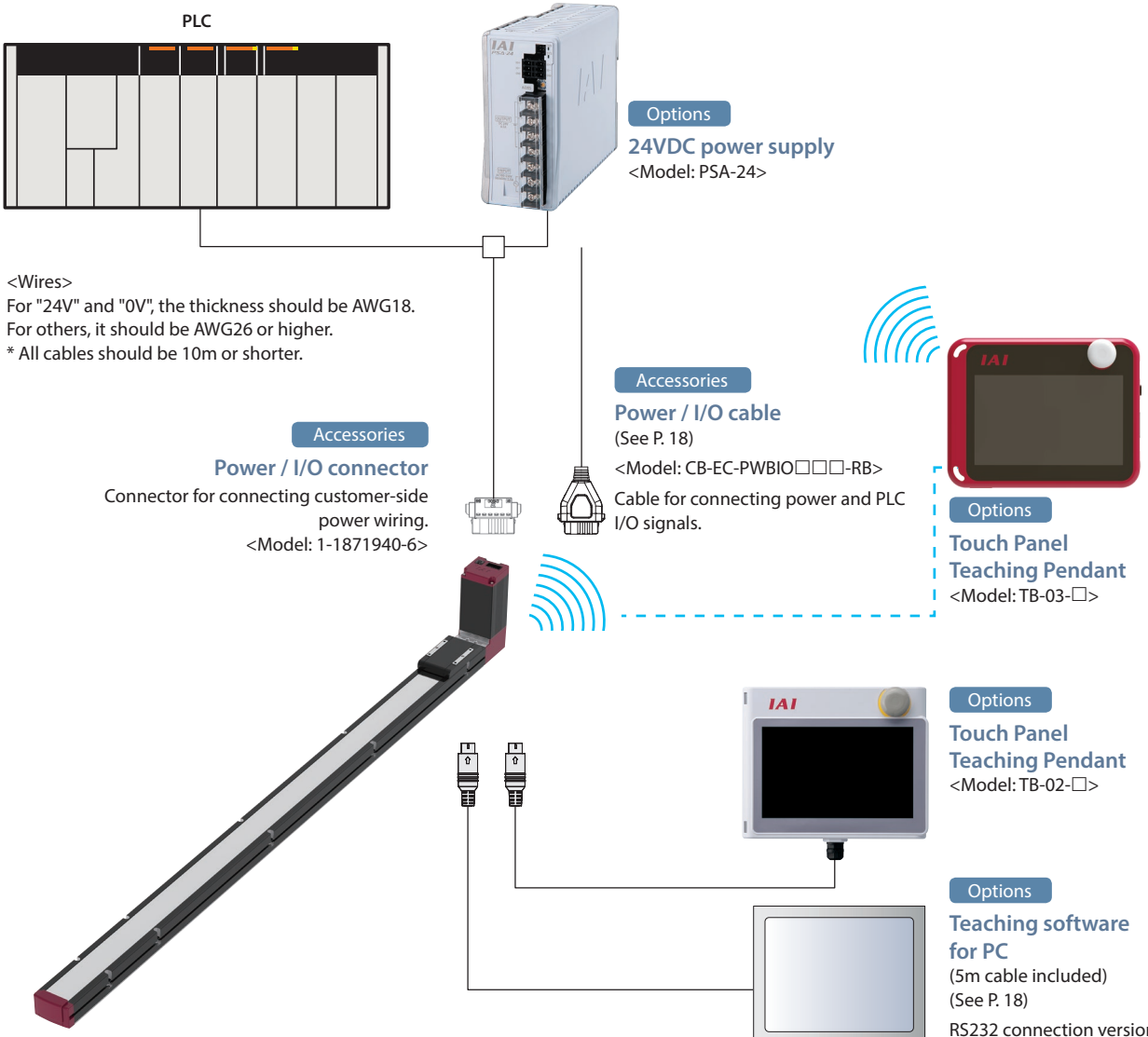
Description Optional item is for wireless communications.
By specifying this option, wireless communications with the teaching pendant TB-03 become available.

Wireless axis-operation specifications

Model **WL2**

Description By specifying WL2, all the wireless operations of WL (adjusting the starting point, the end point, and the AVD) are available, and test operation of axis movements (moving to forward/backward ends, jogging, and inching) are also possible. However, using this function for automated operations is not possible.
Alterations from WL to WL2, or vice versa cannot be made by customer. Please contact IAI for more details.

System Configuration



List of accessories

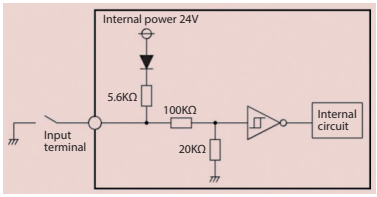
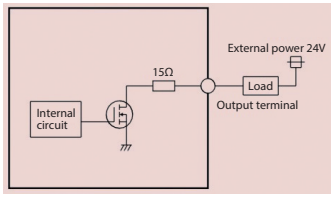
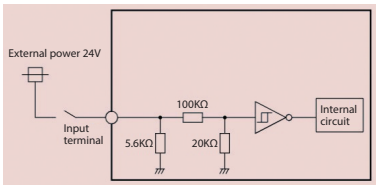
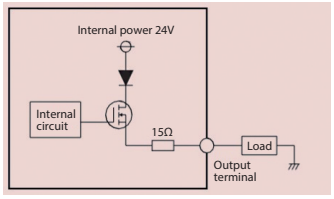
Product category	Accessories
EC power / without I/O cable (when "0" is selected for the cable length for an actuator model)	Power / I/O connector (1-1871940-6)
EC power / with I/O cable (when "1" ~ "10" is selected for the cable length for an actuator model)	Power / I/O cable (CB-EC-PWBIO□□□-RB)

Basic Controller Specifications

Specification item			Specification content
Number of controlled axes			1 axis
Power supply voltage			24VDC ±10%
Power capacity		Standard	With energy-saving setting disabled: Rated 3.5A, Max. 4.2A With energy-saving setting enabled: Max. 2.2A
Brake release power supply			24VDC ±10%, 200mA (only for external brake release)
Generated heat			8W (at 100% duty)
Inrush current (Note 1)		Standard	8.3A (with inrush current limit circuit)
Momentary power failure resistance			Max. 500μs
Motor size			□42, □56
Motor rated current			1.2A
Motor control system			Weak field-magnet vector control
Supported encoders			Incremental (800 pulse/rev), battery-less absolute encoder (800 pulse/rev)
SIO			RS485 1ch (Modbus protocol compliant)
PIO	Input specification	No. of input	3 points (forward, backward, alarm clear)
		Input voltage	24VDC ±10%
		Input current	5mA per circuit
		Leakage current	Max. 1mA/1 point
		Isolation method	Non-isolated
	Output specification	No. of output	3 points (forward complete, backward complete, alarm)
		Output voltage	24VDC ±10%
		Output current	50mA/1 point
		Residual voltage	2V or less
		Isolation method	Non-isolated
Data setting and input methods			Teaching software for PC, touch panel teaching pendant
Data retention memory			Position and parameters are saved in non-volatile memory. (No limit to rewrite)
LED display	Controller status display		Servo ON (green light ON) / Alarm (red light ON) / Initializing when power comes ON (orange light ON) / Minor failure alarm (green/red alternately blinking) / Operation from teaching: Stop from teaching (red light ON) / Servo OFF (light OFF)
	Wireless status display		Initializing wireless hardware, without wireless connection, or connecting from TP board (light OFF) Connecting through wireless (green blinking) / Wireless hardware error (red blinking) / Initializing when power comes ON (orange light ON)
Predictive maintenance/Preventative maintenance			When the number of movements or operation distance has exceeded the set value and when the LED (right side) blinks alternately green and red at overload warning * Only when configured in advance
Ambient operating temperature			0 to 40°C
Ambient operating humidity			85% RH or less (no condensation or freezing)
Operating ambience			Avoid corrosive gas and excessive dust
Insulation resistance			500VDC 10MΩ
Electric shock protection mechanism			Class 1 basic insulation
Cooling method			Natural air cooling

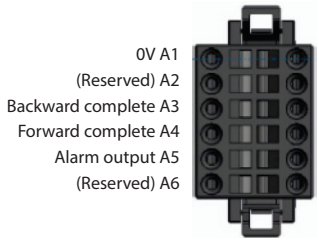
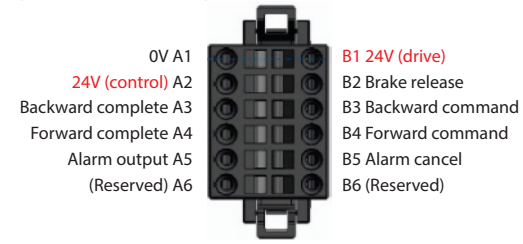
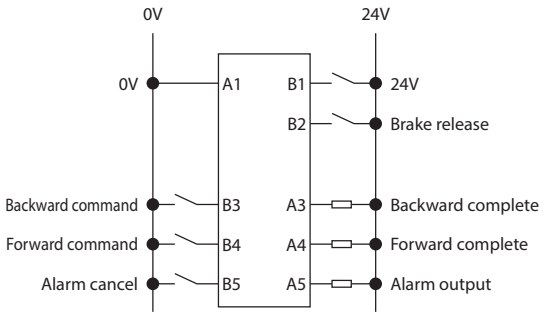
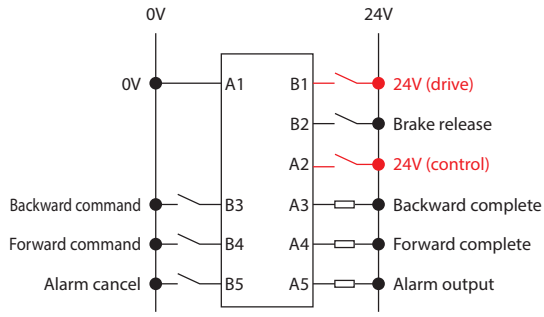
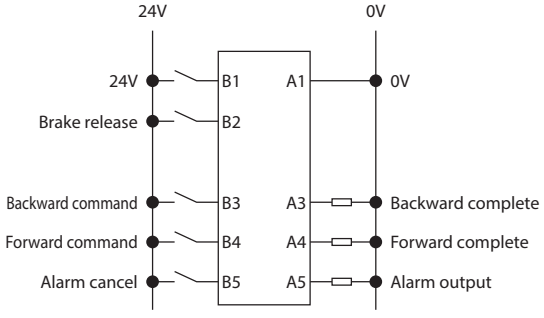
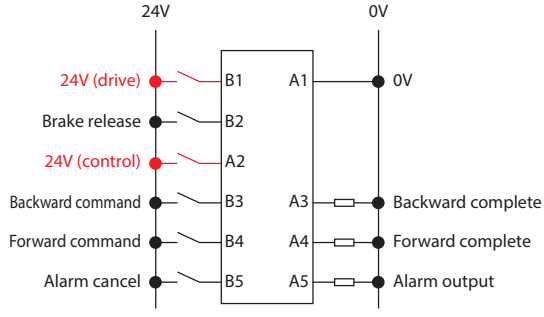
(Note 1) Inrush current flows for approximately 5ms after the power is input (At 40°C). Inrush current value differs depending on the impedance on the power supply line.

I/O (Input/Output) Specifications

I/O		Input		Output	
Specifications		Input voltage	24VDC ± 10%	Load voltage	24VDC ± 10%
		Input current	5mA per circuit	Maximum load current	50mA/1 point
		ON/OFF voltage	ON voltage: Min. 18VDC OFF voltage: Max. 6VDC	Residual voltage	2V or less
		Leakage current	Max. 1mA/1 point	Leakage current	Max. 0.1mA/1 point
Isolation method		Non-isolated from external circuit		Non-isolated from external circuit	
I/O logic	NPN				
	PNP				

(Note) Isolation method is non-isolated. When connecting an external device (such as a PLC) to ELECYLINDER, use the same ground as ELECYLINDER.

I/O Signal Wiring Diagram

I/O		Standard specification	Twin power supply specification (option model: TMD2)
Power / I/O connector			Drive power and control power are separate for the TMD2 specification. 
I/O logic	NPN		
	PNP		

I/O Signal Table

Power / I/O connector pin assignment			
Pin No.	Connector nameplate name	Signal abbreviation	Function overview
B3	Backward	ST0	Backward command
B4	Forward	ST1	Forward command
B5	Alarm cancel	RES	Alarm cancel
A3	Backward complete	LS0/PE0	Backward complete/push complete
A4	Forward complete	LS1/PE1	Forward complete/push complete
A5	Alarm	* ALM	Alarm detection (b-contact)
B2	Brake release	BKRLS	Brake forced release (for brake equipped specification)
B1 (Note)	24V	24V	24V input
A1	0V	0V	0V input
A2 (Note)	(24V)	(24V)	24V input

(Note) For the twin power supply specification (TMD2), B1 is 24V (drive) and A2 is 24V (control).

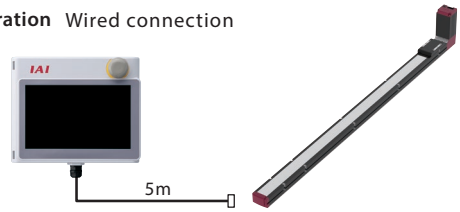
Options

Touch Panel Teaching Pendant

■ **Features** A teaching device equipped with functions such as position teaching, trial operation, and monitoring.

■ **Model** **TB-02-□** Please contact IAI for the current supported versions.

■ **Configuration** Wired connection



■ **Specifications**

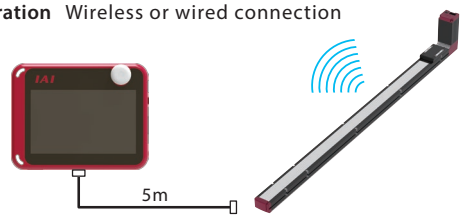
Rated voltage	24VDC
Power consumption	3.6W or less (150mA or less)
Ambient operating temperature	0 to 40°C
Ambient operating humidity	20 to 85% RH (Non-condensing)
Environmental resistance	IP20
Mass	470g (TB-02 unit only)

Touch Panel Teaching Pendant

■ **Features** A teaching device that supports wireless connection. Start point/end point/AVD input and axis operation can be performed with wireless connection for WL option. Manual operation is wirelessly possible for WL2 option.

■ **Model** **TB-03-□** Please contact IAI for the current supported versions.

■ **Configuration** Wireless or wired connection



■ **Specifications**

Rated voltage	24VDC
Power consumption	3.6W or less (150mA or less)
Ambient operating temperature	0 to 40°C
Ambient operating humidity	20 to 85% RH (Non-condensing)
Environmental resistance	IPX0
Mass	Approx. 485g (body) + approx. 175g (battery)
Charging method	Wired connection with dedicated adapter/controller
Wireless connection	Bluetooth 4.2 class2

Teaching software for PC (Windows only)

■ **Features** The start-up support software comes equipped with functions such as position teaching, trial operation, and monitoring.
A complete range of functions needed for making adjustments contributes to shortened start-up time.

Supported Windows versions: 7/8/10

■ **Model** **RCM-101-MW** (with an external device communication cable + RS232 conversion unit) Please contact IAI for the current supported versions.

■ **Configuration**

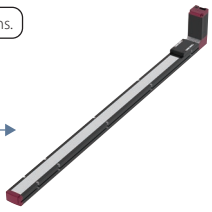
PC software (CD)

RS232 conversion adapter
RCB-CV-MW

0.3m

5m

External device communication cable
CB-RCA-SIO050



■ **Model** **RCM-101-USB** (with an external device communication cable + USB conversion adapter + USB cable) Please contact IAI for the current supported versions.

■ **Configuration**

PC software (CD)

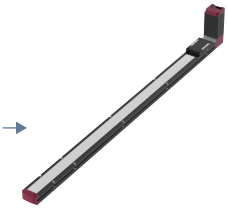
USB conversion adapter
RCB-CV-USB

3m

USB cable
CB-SEL-USB030

5m

External device communication cable
CB-RCA-SIO050



Maintenance Parts

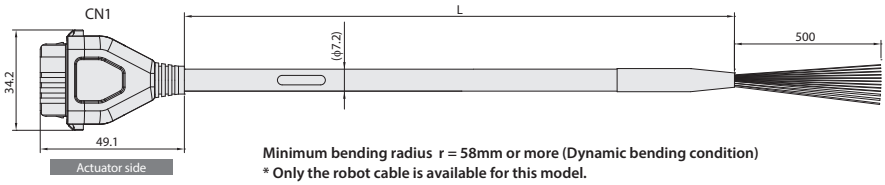
When placing an order for a replacement cable, please use the model name shown below.

■ **Table of compatible cables**

Model name	Power / I/O cable
EC	CB-EC-PWBIO□□□-RB

Model CB-EC-PWBIO□□□-RB

* Please indicate the cable length (L) in □□□, E.g.) 030 = 3m



Minimum bending radius r = 58mm or more (Dynamic bending condition)
*** Only the robot cable is available for this model.**

Color	Signal name	Pin No.
Black (AWG18)	0V	A1
Red (AWG18)	24V	B1
Light blue (AWG22)	(Reserved) (Note 1)	A2
Orange (AWG26)	IN0	B3
Yellow (AWG26)	IN1	B4
Green (AWG26)	IN2	B5
Pink (AWG26)	(reserve)	B6
Blue (AWG26)	OUT0	A3
Purple (AWG26)	OUT1	A4
Gray (AWG26)	OUT2	A5
White (AWG26)	(reserve)	A6
Brown (AWG26)	BKRLS	B2

(Note 1) 24V (control) when twin power supply specification (TMD2) selected.

Catalog No. CE0267-1A (2020APR)

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