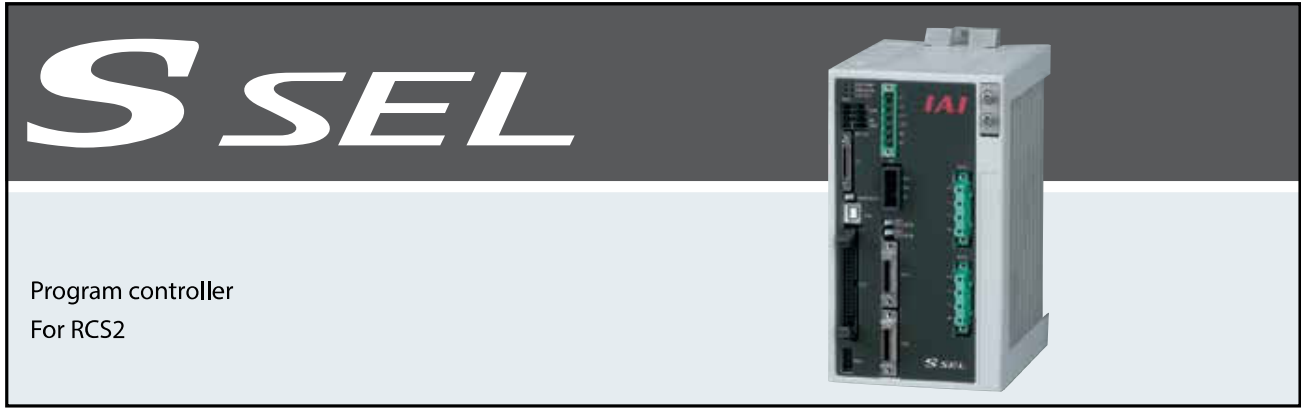


SSEL Controller


- Controller
- PMEC
AMEC
- PSEP
ASEP
DSEP
- MSEP
- ERC3
- ERC2
- PCON
-CA
- PCON
- ACON
- SCON
-CA
- MSCON
- PSEL
- ASEL
- SSEL**
- XSEL
- PS-24



Program controller
For RCS2

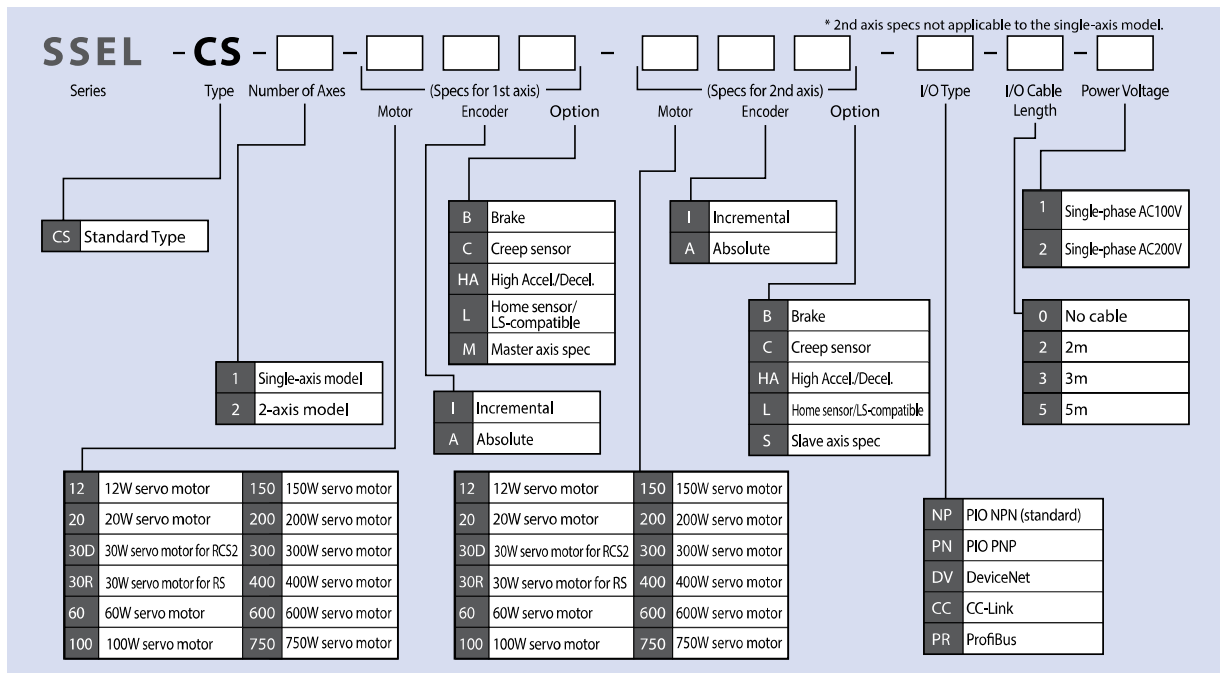
List of models

Program controller for operating RCS2 Series actuators. One unit can handle various controls.

Type	CS	
Name	Program mode	Positioner mode
External view		
Description	Both the actuator operation and communication with external equipment can be handled by a single controller. When two axes are connected, arc interpolation, path operations, and synchronization can be performed.	Up to 20,000 positioning points are supported. Push-motion operation and teaching operation are also possible.
Position points	20,000 points	

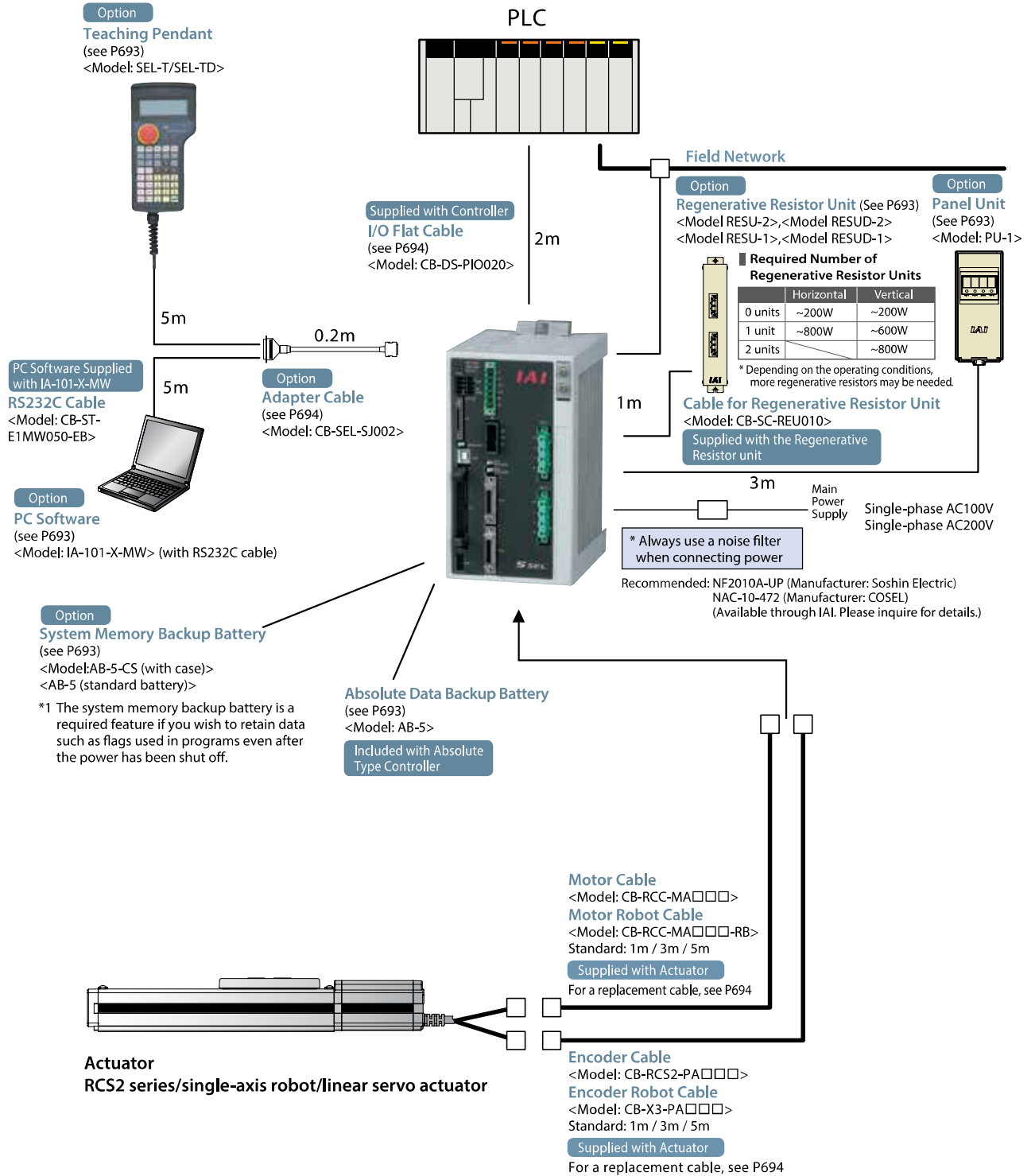
Standard Price	1 axis	Incremental	20~150W	200W	300~400W	600W	750W
			Absolute	—	—	—	—
	2 axes	Incremental	—	—	—	—	—
			Absolute	—	—	—	—

Models



- Pulse Motor
- Servo Motor (24V)
- Servo Motor (200V)
- Linear Servo Motor

System Configuration



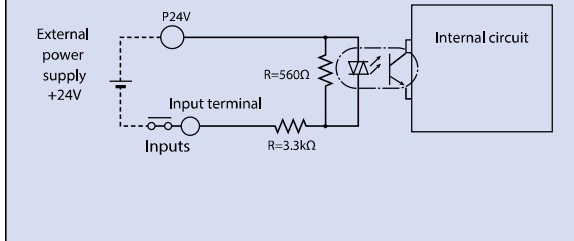
- Controller
- PMEC
AMEC
- PSEP
ASEP
DSEP
- MSEP
- ERC3
- ERC2
- PCON
-CA
- PCON
- ACON
- SCON
-CA
- MCON
- PSEL
- ASEL
- SSEL**
- XSEL
- PS-24
- Pulse Motor
- Servo Motor (24V)
- Servo Motor (200V)
- Linear Servo Motor

I/O Specification

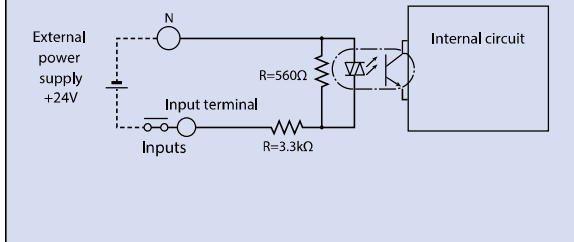
Input section External input specifications

Item	Specifications
Input voltage	DC24V ±10%
Input current	7mA/circuit
ON/OFF voltage	ON voltage (min.) NPN : DC16V / PNP : DC8V OFF voltage (max.) NPN : DC5V / PNP : DC19V
Isolation method	Photocoupler

NPN Specifications



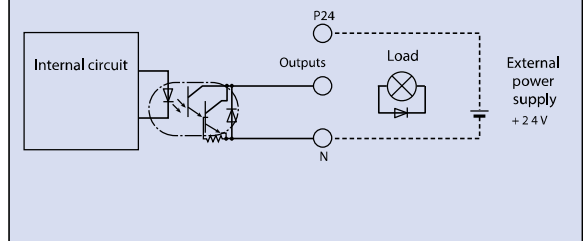
PNP Specifications



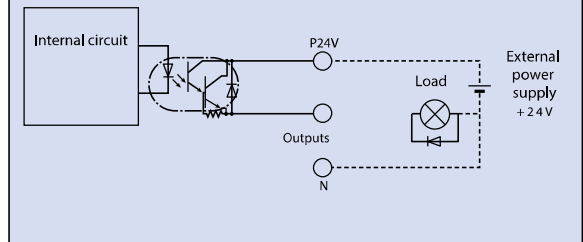
Output section External output specifications

Item	Specifications
Load Voltage	DC24V
Max. load current	100mA / 1 point 400mA / 8 points in total
Residual voltage (Max.)	Max 0.1mA / 1 point
Isolation method	Photocoupler

NPN Specifications



PNP Specifications



Explanation of I/O Signal Functions

Two modes can be selected for the ASEL controller: "Program Mode," in which the actuator is operated by entering a program, and "Positioner Mode," in which PLC signals are received and the actuator is moved to designated positions. The Positioner Mode has the five input patterns listed below to enable various applications.

Control Function by Type

Operation mode	Features
Program mode	Various operations including linear/arc interpolation operation, path operation ideal for coating processes, etc., arch-motion operation and palletizing operation can be performed using the Super SEL language that lets you program complex control actions using simple commands.
Positioner mode	Standard mode This is the basic mode from which operations can be conducted by designating position numbers and inputting the start signal. Push-motion operation and teaching operation are also possible.
	Product Change mode Multiple work parts of the same shape with slightly different hole positions can be handled using movement commands to the same position numbers by simply changing the product type number.
	2-axis independent mode With a 2-axis controller, each axis can be commanded and operated separately.
	Teaching mode In this mode, the slider (rod) moves based on an external signal, when the actuator is stopped, the current location can be registered as position data.
	DS-S-C1 Compatible mode If you were using a DS-S-C1 controller, you can replace it with a ASEL controller without having to change the host programs. *This mode does not ensure actuator compatibility.

Explanation of I/O Signal Functions

Program mode

Pin Number	Category	Port No.	Program Mode	Functions	Wiring Diagram	
1A	P24		24V input	Connect 24V.		
1B		016	Select Program No. 1	Selects the program number to start. (Input as BCD values to ports 016 to 022)		
2A		017	Select Program No. 2			
2B		018	Select Program No. 4			
3A		019	Select Program No. 8			
3B		020	Select Program No. 10			
4A		021	Select Program No. 20			
4B		022	Select Program No. 40			
5A		023	CPU reset			Resets the system to the same state as when the power is turned on.
5B		000	Start			Starts the programs selected by ports 016 to 022.
6A		001	General-purpose input			Waits for external input via program instructions.
6B		002	General-purpose input			
7A		003	General-purpose input			
7B		004	General-purpose input			
8A		005	General-purpose input			
8B		006	General-purpose input			
9A		007	General-purpose input			
9B		008	General-purpose input			
10A		009	General-purpose input			
10B		010	General-purpose input			
11A		011	General-purpose input			
11B		012	General-purpose input			
12A		013	General-purpose input			
12B		014	General-purpose input			
13A		015	General-purpose input			
13B		300	Alarm	Turns off when an alarm occurs. (Contact B)		
14A		301	Ready	Turns on when the controller starts up normally and is in an operable state.		
14B		302	General-purpose output	These outputs can be turned ON/OFF as desired via program instructions.		
15A		303	General-purpose output			
15B		304	General-purpose output			
16A		305	General-purpose output			
16B		306	General-purpose output			
17A		307	General-purpose output			
17B	N		0V input	Connect 0V.		

Note: This is for NPN. PNP will be different.

Positioner mode

Pin Number	Category	Port No.	Positioner Standard Mode	Functions	Wiring Diagram
1A	P24		24V input	Connect 24V.	
1B		016	Position input 10	Specifies the position numbers to move to, using port number 007 to 019 The number can be specified either as BCD or binary.	
2A		017	Position input 11		
2B		018	Position input 12		
3A		019	Position input 13		
3B		020	Position input 14		
4A		021	Position input 15		
4B		022	Position input 16		
5A		023	Error reset		
5B		000	Start	Starts moving to selected position.	
6A		001	Home Return	Performs home return.	
6B		002	Servo ON	Switches between Servo ON and OFF.	
7A		003	Push	Performs a push motion.	
7B		004	Pause	Pauses the motion when turned OFF, and resumes motion when turned ON.	
8A		005	Cancel	Stops the motion when turned OFF. The remaining motion is canceled.	
8B		006	Interpolation setting	When this signal is turned ON for a 2-axis model, the actuator moves by linear interpolation.	
9A		007	Position input 1	Specifies the position numbers to move to, using ports 007 to 019. The number can be specified either as BCD or binary.	
9B		008	Position input 2		
10A		009	Position input 3		
10B		010	Position input 4		
11A		011	Position input 5		
11B		012	Position input 6		
12A		013	Position input 7		
12B		014	Position input 8		
13A		015	Position input 9		
13B		300	Alarm	Turns off when an alarm occurs. (Contact B)	
14A		301	Ready	Turns on when the controller starts up normally and is in an operable state.	
14B		302	Positioning complete	Turns on when the movement to the destination is complete.	
15A		303	Home Return complete	Turns on when the home return operation is complete.	
15B		304	Servo ON output	Turns on when servo is ON.	
16A		305	Pushing complete	Turns on when a push motion is complete.	
16B		306	System battery error	Turns on when the system battery runs low (warning level).	
17A		307	Absolute encoder battery error	Turns on when the battery for the absolute encoder runs low (warning level).	
17B	N		0V input	Connect 0V.	

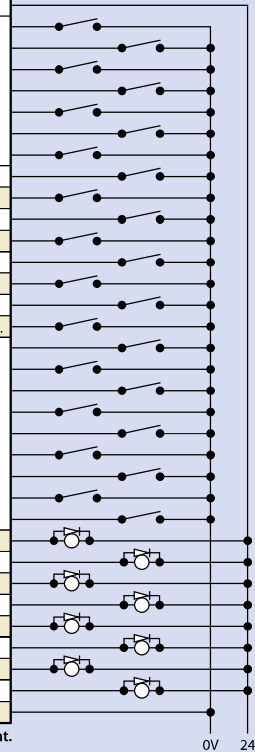
Note: This is for NPN. PNP will be different.

Explanation of I/O Signal Functions

Positioner, Product-Type Change Mode

Pin Number	Category	Port No.	Positioner Product Type Change Mode	Functions		
1A	Input	P24	24V input	Connect 24V.		
1B			016	Position/Product Type Input 10	Specifies the position numbers to move to, and the product type numbers, using ports 007 to 022. The position and product type numbers are assigned by parameter settings. The number can be specified either as BCD or binary.	
2A			017	Position/Product Type Input 11		
2B			018	Position/Product Type Input 12		
3A			019	Position/Product Type Input 13		
3B			020	Position/Product Type Input 14		
4A			021	Position/Product Type Input 15		
4B			022	Position/Product Type Input 16	Resets minor errors. (Severe errors require a restart.)	
5A			023	Error reset		
5B			000	Start		Starts moving to selected position.
6A			001	Home Return		Performs home return.
6B			002	Servo ON		Switches between Servo ON and OFF.
7A			003	Push		Performs a push motion.
7B			004	Pause	Pauses the motion when turned OFF, and resumes motion when turned ON.	
8A			005	Cancel	Stops the motion when turned OFF. The remaining motion is canceled.	
8B			006	Interpolation setting	When this signal is turned ON for a 2-axis model, the actuator moves by linear interpolation.	
9A			007	Position/Product Type Input 1	Specifies the position numbers to move to, and the product type numbers, using ports 007 to 022. The position and product type numbers are assigned by parameter settings. The number can be specified either as BCD or binary.	
9B	008	Position/Product Type Input 2				
10A	009	Position/Product Type Input 3				
10B	010	Position/Product Type Input 4				
11A	011	Position/Product Type Input 5				
11B	012	Position/Product Type Input 6				
12A	013	Position/Product Type Input 7	Turns off when an alarm occurs. (Contact B)			
12B	014	Position/Product Type Input 8				
13A	015	Position/Product Type Input 9				
13B	300	Alarm				
14A	301	Ready		Turns on when the controller starts up normally and is in an operable state.		
14B	302	Positioning complete		Turns on when the movement to the destination is complete.		
15A	303	Home Return complete	Turns on when the home return operation is complete.			
15B	304	Servo ON output	Turns on when servo is ON.			
16A	305	Pushing complete	Turns on when a push motion is complete.			
16B	306	System battery error	Turns on when the system battery runs low (warning level).			
17A	307	Absolute encoder battery error	Turns on when the battery for the absolute encoder runs low (warning level).			
17B	N	0V input	Connect 0V.			

Wiring Diagram

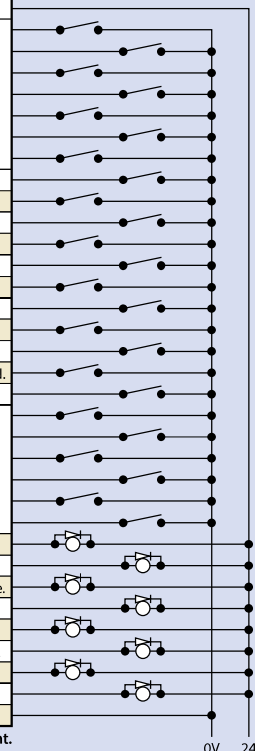


Note: This is for NPN. PNP will be different.

Positioner, 2-axis Independent Mode

Pin Number	Category	Port No.	Positioner Independent Mode	Functions		
1A	Input	P24	24V input	Connect 24V.		
1B			016	Position input 7	Specifies the position numbers to move to, using ports 010 to 022. The position numbers on the 1st and 2nd axes are assigned by parameter settings. The number can be specified either as BCD or binary.	
2A			017	Position input 8		
2B			018	Position input 9		
3A			019	Position input 10		
3B			020	Position input 11		
4A			021	Position input 12		
4B			022	Position input 13	Resets minor errors. (Severe errors require a restart.)	
5A			023	Error reset		
5B			000	Start 1		Starts the movement to the selected position number on the 1st axis.
6A			001	Home Return 1		Performs Home Return on the 1st axis.
6B			002	Servo ON 1		Switches between servo ON and OFF for the 1st axis.
7A			003	Pause 1		Pauses the motion on 1st axis when turned OFF, and resumes when turned ON.
7B			004	Cancel 1	Cancels the movement on the 1st axis.	
8A			005	Start 2	Starts the movement to the selected position number on the 2nd axis.	
8B			006	Home Return 2	Performs Home Return on the 2nd axis.	
9A			007	Servo ON 2	Switches between servo ON and OFF for the 2nd axis.	
9B	008	Pause 2	Pauses the motion on 2nd axis when turned OFF, and resumes when turned ON.			
10A	009	Cancel 2	Cancels the movement on the 2nd axis.			
10B	010	Position input 1	Specifies the position numbers to move to, using ports 010 to 022. The position numbers on the 1st and 2nd axes are assigned by parameter settings. The number can be specified either as BCD or binary.			
11A	011	Position input 2				
11B	012	Position input 3				
12A	013	Position input 4				
12B	014	Position input 5				
13A	015	Position input 6				
13B	300	Alarm	Turns off when an alarm occurs. (Contact B)			
14A	301	Ready		Turns on when the controller starts up normally and is in an operable state.		
14B	302	Positioning complete 1		Turns on when the movement to the specified position on the 1st axis is complete.		
15A	303	Home Return complete 1		Turns on when home return on the 1st axis is complete.		
15B	304	Servo ON output 1		Turns on when the 1st axis is in a servo ON state.		
16A	305	Positioning complete 2		Turns on when the movement to the specified position on the 2nd axis is complete.		
16B	306	Home Return complete 2	Turns on when home return on the 2nd axis is complete.			
17A	307	Servo ON output 2	Turns on when the 2nd axis is in a servo ON state.			
17B	N	0V input	Connect 0V.			

Wiring Diagram



Note: This is for NPN. PNP will be different.

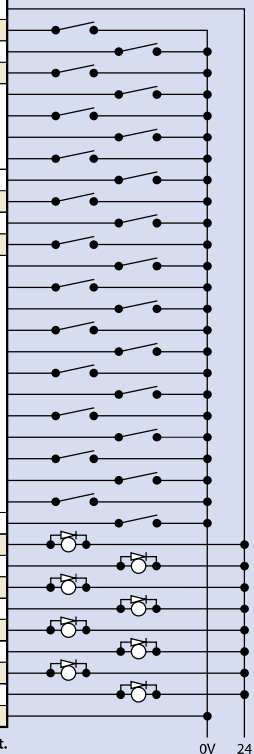
- Controller
- PMEC AMEC
- PSEP ASEP DSEP
- MSEP
- ERC3
- ERC2
- PCON -CA
- PCON
- ACON
- SCON -CA
- MSCON
- PSEL
- ASEL
- SSEL
- XSEL
- PS-24
- Pulse Motor
- Servo Motor (24V)
- Servo Motor (200V)
- Linear Servo Motor

Explanation of I/O Signal Functions

Positioner, Teaching Mode

Pin Number	Category	Port No.	Positioner Teaching Mode	Functions
1A	P24		24V input	Connect 24V.
1B	Input	016	JOG- on 1st axis	While the signal is input, the 1st axis is moved in the - (negative) direction.
2A		017	JOG+ on 2nd axis	While the signal is input, the 2nd axis is moved in the + (positive) direction.
2B		018	JOG- on 2nd axis	While the signal is input, the 2nd axis is moved in the - (negative) direction.
3A		019	Specify inching (0.01mm)	Specifies how much to move during inching. (Total of the values specified for ports 019 to 022)
3B		020	Specify inching (0.1mm)	
4A		021	Specify inching (0.5mm)	
4B		022	Specify inching (1mm)	
5A		023	Error reset	Resets minor errors. (Severe errors require a restart.)
5B		000	Start	Starts moving to selected position.
6A		001	Servo ON	Switches between Servo ON and OFF.
6B		002	Pause	Pauses the motion when turned OFF, and resumes motion when turned ON.
7A		003	Position input 1	Ports 003 to 013 are used to specify the position number to move, and the position number for inputting the current position. When the teaching mode setting on port 014 is in the ON state, the current value is written to the specified position number.
7B		004	Position input 2	
8A	005	Position input 3		
8B	006	Position input 4		
9A	007	Position input 5		
9B	008	Position input 6		
10A	009	Position input 7		
10B	010	Position input 8		
11A	011	Position input 9		
11B	012	Position input 10		
12A	013	Position input 11		
12B	014	Teaching mode setting		
13A	015	JOG+ on 1st axis	While the signal is input, the 1st axis is moved in the plus direction.	
13B	Output	300	Alarm	Turns off when an alarm occurs. (Contact B)
14A		301	Ready	Turns on when the controller starts up normally and is in an operable state.
14B		302	Positioning complete	Turns on when the movement to the destination is complete.
15A		303	Home Return complete	Turns on when the home return operation is complete.
15B		304	Servo ON output	Turns on when servo is ON.
16A		305	—	—
16B		306	System battery error	Turns on when the system battery runs low (warning level).
17A		307	Absolute encoder battery error	Turns on when the battery for the absolute encoder runs low (warning level).
17B	N		0V input	Connect 0V.

Wiring Diagram

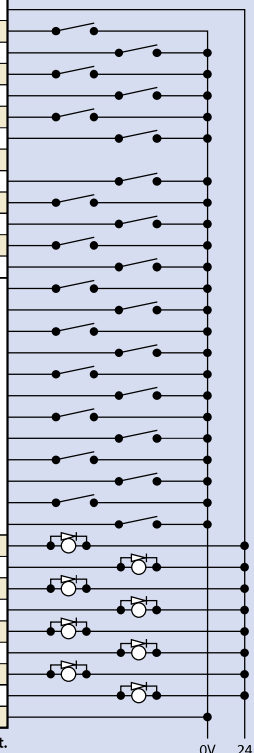


Note: This is for NPN. PNP will be different.

Positioner, DS-S-C1 Compatible Mode

Pin Number	Category	Port No.	Positioner DS-S-C1 Compatible Mode	Functions
1A	P24		24V input	Connect 24V.
1B	Input	016	Position No. 1000	(Same as ports 004 through 015)
2A		017	Position No. 2000	—
2B		018	Position No. 4000	—
3A		019	Position No. 8000	—
3B		020	Position No. 10000	—
4A		021	Position No. 20000	—
4B		022	NC (*1)	—
5A		023	CPU reset	Resets the system to the same state as when the power is turned on.
5B		000	Start	Starts moving to selected position.
6A		001	Hold (Pause)	Pauses the motion when turned ON, and resumes motion when turned OFF.
6B		002	Cancel	Stops the motion when turned ON. The remaining motion is canceled.
7A		003	Interpolation setting	When this signal is turned ON for a 2-axis model, the actuator moves by linear interpolation.
7B		004	Position No. 1	Ports 004 through 016 are used to specify the position number to move. The numbers are specified as BCD.
8A	005	Position No. 2		
8B	006	Position No. 4		
9A	007	Position No. 8		
9B	008	Position No. 10		
10A	009	Position No. 20		
10B	010	Position No. 40		
11A	011	Position No. 80		
11B	012	Position No. 100		
12A	013	Position No. 200		
12B	014	Position No. 400		
13A	015	Position No. 800		
13B	Output	300	Alarm	Turns off when an alarm occurs. (Contact A)
14A		301	Ready	Turns on when the controller starts up normally and is in an operable state.
14B		302	Positioning complete	Turns on when the movement to the destination is complete.
15A		303	—	—
15B		304	—	—
16A		305	—	—
16B		306	System battery error	Turns on when the system battery runs low (warning level).
17A		307	Absolute encoder battery error	Turns on when the battery for the absolute encoder runs low (warning level).
17B	N		0V input	Connect 0V.

Wiring Diagram



(*1) The input needs to be set to OFF. Be sure to leave this disconnected.

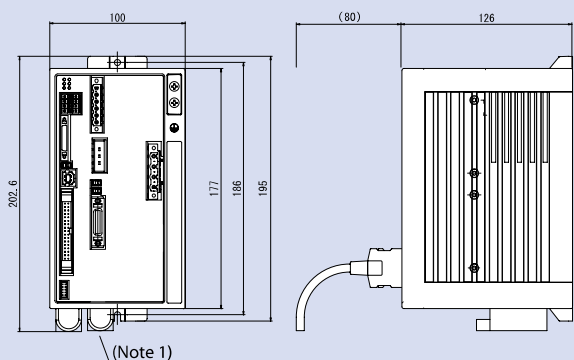
Note: This is for NPN. PNP will be different.

Table of Specifications

	Item	Specifications
Basic Specifications	Connected actuator	RCS2 series actuator / single axis robot / linear servo actuator
	Input Voltage	Single-phase AC90V to AC126.5V / Single-phase AC180V to AC253V
	Power Supply Capacity	Max. 1660VA (for 400W, 2-axis operation)
	Dielectric strength voltage	DC500V 10MΩ or higher
	Withstand voltage	AC500V 1 min.
	Rush current	Control Power 15A / Motor Power 37.5A / Control Power 30A / Motor Power 75A
Control specification	Vibration resistance	XYZ directions 10 to 57Hz, One side amplitude: 0.035mm (continuous), 0.075mm (intermittent) 58 to 150 Hz 4.9 m/s ² (continuous), 9.8 m/s ² (intermittent)
	Number of control axes	1 axis / 2 axes
	Maximum total output of connected axis	400W / 800W
	Position detection method	Incremental encoder / Absolute encoder
	Speed setting	1mm/sec and up, the maximum depends on actuator specifications
	Acceleration setting	0.01G and up, the maximum depends on the actuator
Program	Operating method	Program operation / Positioner operation (switchable)
	Programming language	Super SEL language
	Number of programs	128 programs
	Number of program steps	9,999 steps
	Number of multi-tasking programs	8 programs
	Positioning Points	20,000 points
Communication	Data memory device	FLASHROM (A system-memory backup battery can be added as an option)
	Data input method	Teaching pendant or PC software
	Number of I/O	24 input points / 8 output points (NPN or PNP selectable)
	I/O power	Externally supplied 24VDC ± 10%
	PIO cable	CB-DS-PIO□□□ (supplied with the controller)
	Serial communications function	RS232C (D-Sub Half-pitch connector) / USB connector
General specifications	Field Network	DeviceNet, CC-Link, ProfiBus
	Motor Cable	CB-ACS-MA□□□□ (Max. 20m)
	Encoder cable	CB-RCP2-PA□□□□ (Max. 20m)
	Protection function	Motor overcurrent, Motor driver temperature check, Overload check, Encoder open-circuit check Soft limit over, system error, battery error, etc.
	Ambient operating humidity and temperature	0 to 40°C 10 to 95% (non-condensing)
	Ambient atmosphere	Free from corrosive gases. In particular, there shall be no significant dust.
General specifications	Protection class	IP20
	Weight	1.4kg
	External dimensions	100mm (W) x 202.6mm (H) x 126mm (D)

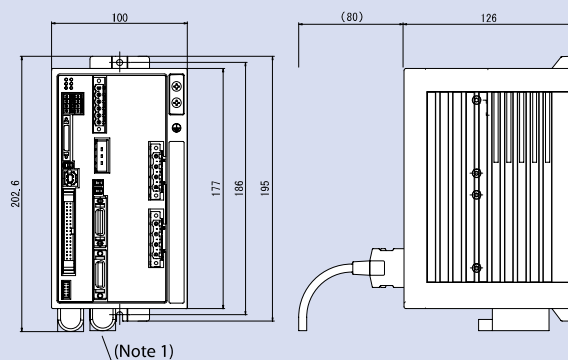
External Dimensions

SSEL 1-axis controller



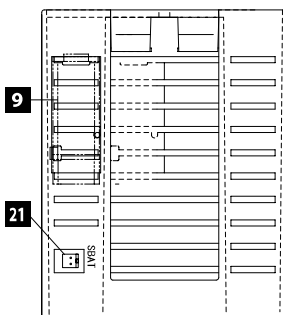
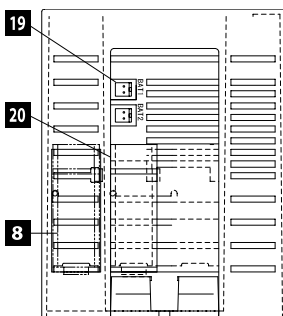
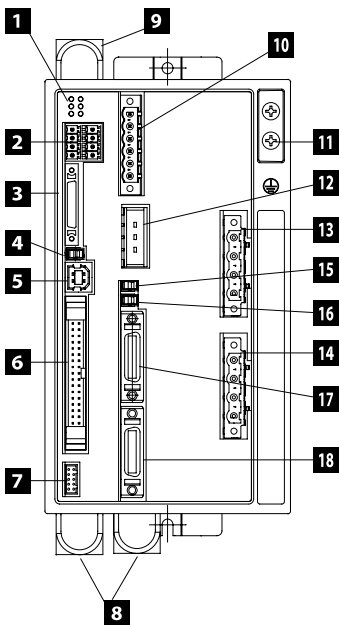
(Note 1) Absolute data back-up battery. Not installed with incremental specification.

SSEL 2-axis controller



(Note 1) Absolute data back-up battery. Not installed with incremental specification.

Name of Each Part



1 Status indicator LEDs

These LEDs are used to indicate the operating condition of the controller.

The LED status indicators are as follows:

- PWR : Power is input to controller.
- RDY : The controller is ready to perform program operation.
- ALM : The controller is abnormal.
- EMG : An emergency stop is actuated and the drive source is cut off.
- SV1 : The axis 1 actuator servo is on.
- SV2 : The axis 2 actuator servo is on.

2 System I/O connector

Connector for emergency stop / enable input / brake power input, etc.

3 Teaching pendant connector

A half-pitch I/O 26-pin connector that connects a teaching pendant when the running mode is MANU. A special conversion cable is needed to connect a conventional Dsub, 25-pin connector.

4 Mode switch

This switch is used to specify the running mode of the controller. The left position indicates the MANU (manual operation) mode, while the right position indicates the AUTO (automatic operation) mode. Teaching can only be performed as manual operation, and automatic operation using external I/Os is not possible in the MANU mode.

5 USB connector

A connector for PC connection via USB. If the USB connector is connected, the TP connector is disabled and all communication inputs to the TP connector are cut off.

6 I/O Connector

A connector for interface I/Os.

34-pin flat cable connector for DIO (24IN/8OUT) interface.

I/O power is also supplied to the controller via this connector (Pin No. 1 and No. 34).

7 Panel unit connector

A connector for the panel unit (optional) that displays the controller status and error numbers.

8 Absolute data backup battery

When an absolute-type axis is operated, this battery retains position data even after the power is cut off.

9 System memory backup battery (Option)

This battery is needed if you wish to retain various data recorded in the SRAM of the controller even after the power is cut off. This battery is optional. Specify it if necessary.

10 Power supply connector

AC power connector. Divided into the control power input and motor power input.

11 Grounding screw

Protective grounding screw. Always ground this screw.

12 External regenerative resistor connector

A connector for the regenerative resistor that must be connected when the built-in regenerative resistor alone does not offer sufficient capacity in high-acceleration/ high-load operation, etc.

Whether or not an external regenerative resistor is necessary depends on the conditions of your specific application such as the axis configuration.

13 Motor connector for axis 1

Connects the motor cable of the axis 1 actuator.

14 Motor connector for axis 2

Connects the motor cable of the axis 2 actuator.

15 Brake switch for axis 1

This switch is used to release the axis brake. Setting it to the left position (RLS side) forcibly releases the brake, while setting it to the right position (NOM side) causes the controller to automatically control the brake.

16 Brake switch for axis 2

This switch is used to release the axis brake. Setting it to the left position (RLS side) forcibly releases the brake, while setting it to the right position (NOM side) causes the controller to automatically control the brake.

17 Encoder connector for axis 1

Connect the encoder cable of the axis 1 actuator.

18 Encoder connector for axis 2

Connect the encoder cable of the axis 2 actuator.

19 Absolute-data backup battery connector for axis 1

A connector for the battery that backs up absolute data for axis 1 when the actuator uses an absolute encoder.

20 Absolute-data backup battery connector for axis 2

A connector for the battery that backs up absolute data for axis 2 when the actuator uses an absolute encoder.

21 System-memory backup battery connector

A connector for the system-memory backup battery.

PMEC

AMEC

PSEP

ASEP

DSEP

MSEP

ERC3

ERC2

PCON

-CA

PCON

ACON

SCON

-CA

MSCON

PSEL

ASEL

SSEL

XSEL

PS-24

Pulse

Motor

Servo

Motor

(24V)

Servo

Motor

(200V)

Linear

Servo

Motor

- Controller
- PMEC
AMEC
- PSEP
ASEP
DSEP
- MSEP
- ERC3
- ERC2
- PCON
-CA
- PCON
- ACON
- SCON
-CA
- MSCON
- PSEL
- ASEL
- SSEL**
- XSEL
- PS-24
- Pulse Motor
- Servo Motor (24V)
- Servo Motor (200V)
- Linear Servo Motor

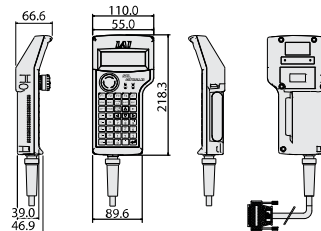
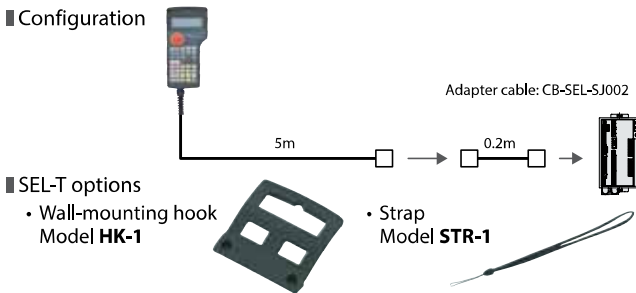
Options

Teaching Pendant

Features A teaching device for entering programs and positions, test runs, and monitoring.

Model/Price

Model	Description
SEL-T-J	Standard type with adapter cable
SEL-TD-J	Deadman's switch type and adapter cable



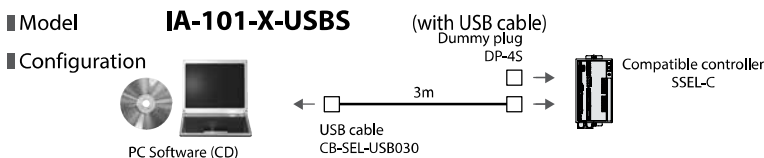
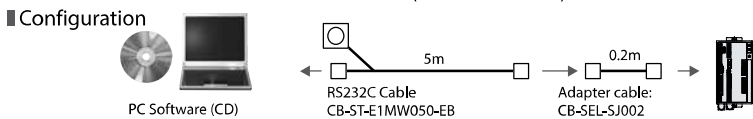
Specifications

Item	SEL-T-J	SEL-TD-J
3-position Enable Switch	No	Yes
ANSI/UL standards	Non-compliant	Compliant
CE mark	Compliant	
Display	20 char. x 4 lines	
Ambient Operating Temp./Humidity	0~40°C 10~90% RH (non-condensing)	
Protective structure	IP54	
Weight	Approx. 0.4kg (not incl. cable)	

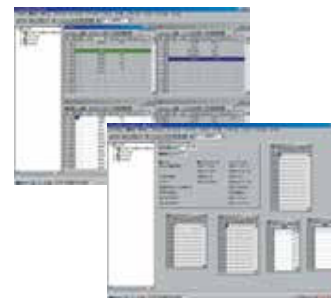
PC software (Windows Only)

Features A startup support software for entering programs/positions, performing test runs, and monitoring. More functions have been added for debugging, and improvements have been made to shorten the start-up time.

Model **IA-101-X-MW-JS** (with RS232C cable + adapter cable)
IA-101-X-MW (with RS232C cable)



Supported Windows OS:
2000 SP4 or later / XP SP2 or later / Vista / 7



Note
Only versions 6.0.0.0 and later can be used with the SSEL controller.

Regenerative Resistor Unit

Features This unit converts regenerative current that generates when the motor decelerates, to heat. Check the total wattage of the actuators to be operated and provide a regenerative resistance unit or units if required.

Model **RESU-2** (Standard specification)
RESUD-2 (DIN rail mount specification)
RESU-1 (Standard specification, second or subsequent unit)
RESUD-1 (DIN rail mount specification, second or subsequent unit)

* If two regenerative units are required, arrange one RESU-2/RESUD-2 (1st) and one RESU-1/RESUD-1 (2nd or after).

Required Number of Units

Model	Horizontal	Vertical
0 units	~200W	~200W
1 unit	~800W	~600W
2 units		~800W

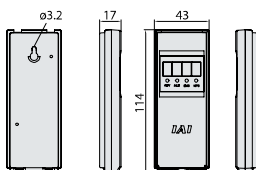
* Depending on the operating conditions, more regenerative resistors may be needed.

* Please see MSCON section page 662 for specification information and drawings.

Panel Unit

Features Display device that shows the error code from the controller or the currently running program number.

Model **PU-1** (Cable length: 3m)



Absolute Data Backup Battery

Features Battery for saving absolute data, when operating an actuator with an absolute encoder. Same as the battery used for system memory backup.

Model **AB-5**



System Memory Backup Battery

Features This battery is required, for example, when you are using global flags in the program and you want to retain your data even after the power has been turned OFF.

Model **AB-5-CS** (with case)
AB-5 (Standalone battery)



