4.3 Switch setting and display of the servo amplifier

Switching to the test operation mode, deactivating control axes, and setting control axis No. are enabled with switches on the servo amplifier.
On the servo amplifier display (three-digit, seven-segment LED), check the status of communication with the servo system controller at power-on, and the axis number, and diagnose a malfunction at occurrence of an alarm.

4.3.1 Switches

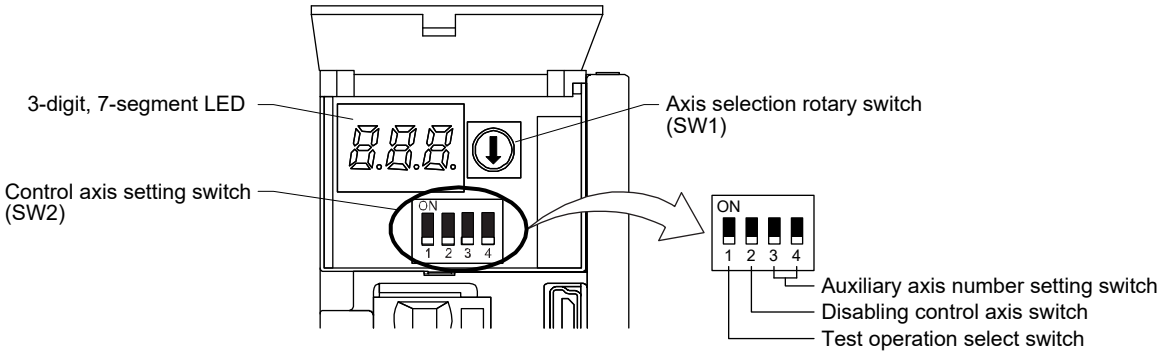
⚠WARNING

- When switching the axis selection rotary switch (SW1) and auxiliary axis number setting switch (SW2), use insulated screw driver. Do not use a metal screw driver. Touching patterns on electronic boards, lead of electronic parts, etc. may cause an electric shock.

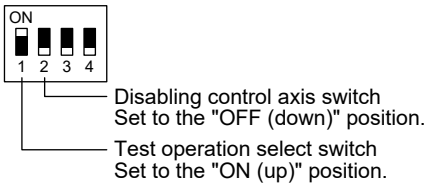
POINT

- Turning "ON (up)" all the control axis setting switches (SW2) enables an operation mode for manufacturer setting and displays "off". The mode is not available. Set the control axis setting switches (SW2) correctly according to this section.
- Cycling the main circuit power supply and control circuit power supply enables the setting of each switch.

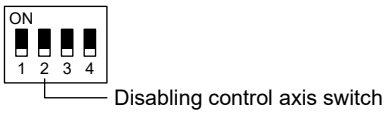
The following explains the test operation select switch, the disabling control axis switch, auxiliary axis number setting switches, and the axis selection rotary switch.



(1) Test operation select switch (SW2-1)
To use the test operation mode, turn "ON (up)" the switch. Turning "ON (up)" the switch enables the test operation mode. In the test operation mode, the functions such as JOG operation, positioning operation, and machine analyzer are available with MR Configurator2. Before turning "ON (up)" the test operation select switch, turn "OFF (down)" the disabling control axis switch.



(2) Disabling control axis switch (SW2-2)
Turning "ON (up)" the disabling control axis switch disables the corresponding servo motor. The servo motor will be disabled-axis status and will not be recognized by the controller.



(3) Switches for setting control axis No.

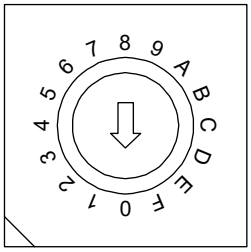
POINT
- The control axis No. set to the auxiliary axis number setting switches (SW2-3 and SW2-4) and the axis selection rotary switch (SW1) should be the same as the one set to the servo system controller. The number of the axes you can set depends on the servo system controller.
- For setting the axis selection rotary switch, use a flat-blade screwdriver with the blade edge width of 2.1 mm to 2.3 mm and the blade edge thickness of 0.6 mm to 0.7 mm.
- When the test operation mode is selected with the test operation select switch (SW2-1), the SSCNET III/H communication for the servo amplifier in the test operation mode and the following servo amplifiers is blocked.

You can set the control axis No. between 1 and 64 by using auxiliary axis number setting switches with the axis selection rotary switch. (Refer to (3) (c) in this section.)
If the same numbers are set to different control axes in a single communication system, the system will not operate properly. The control axes may be set independently of the SSCNET III cable connection sequence. The following shows the description of each switch.

(a) Auxiliary axis number setting switches (SW2-3 and SW2-4)
Turning these switches "ON (up)" enables you to set the axis No. 17 or more.

(b) Axis selection rotary switch (SW1)
You can set the control axis No. between 1 and 64 by using auxiliary axis number setting switches with the axis selection rotary switch. (Refer to (3) (c) in this section.)

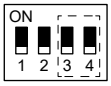
Axis selection rotary switch (SW1)

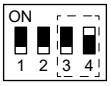


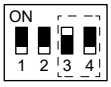
(c) Switch combination list for the control axis No. setting

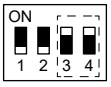
POINT
●Set control axis Nos. for one system. For details of the control axis No., refer to the servo system controller user's manual.

The following lists show the setting combinations of the auxiliary axis number setting switches and the axis selection rotary switch.

Auxiliary axis number setting switch	Axis selection rotary switch	Control axis No.
	0	1
	1	2
	2	3
	3	4
	4	5
	5	6
	6	7
	7	8
	8	9
	9	10
	A	11
	B	12
	C	13
	D	14
	E	15
	F	16

Auxiliary axis number setting switch	Axis selection rotary switch	Control axis No.
	0	17
	1	18
	2	19
	3	20
	4	21
	5	22
	6	23
	7	24
	8	25
	9	26
	A	27
	B	28
	C	29
	D	30
	E	31
	F	32

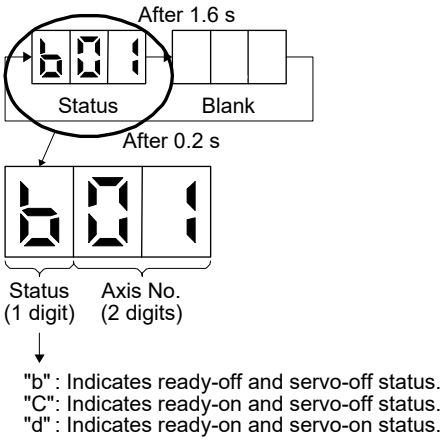
Auxiliary axis number setting switch	Axis selection rotary switch	Control axis No.
	0	33
	1	34
	2	35
	3	36
	4	37
	5	38
	6	39
	7	40
	8	41
	9	42
	A	43
	B	44
	C	45
	D	46
	E	47
	F	48

Auxiliary axis number setting switch	Axis selection rotary switch	Control axis No.
	0	49
	1	50
	2	51
	3	52
	4	53
	5	54
	6	55
	7	56
	8	57
	9	58
	A	59
	B	60
	C	61
	D	62
	E	63
	F	64

4.3.2 Scrolling display

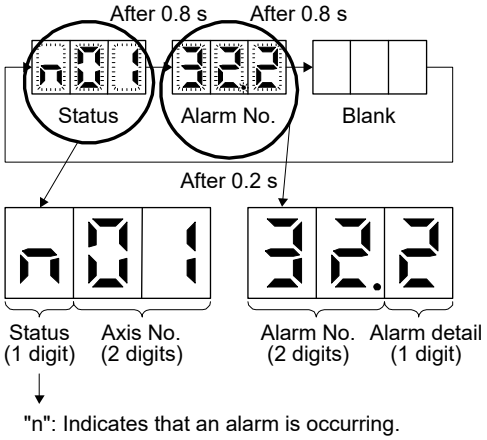
(1) Normal display

When there is no alarm, the axis No. and blank are displayed in rotation.



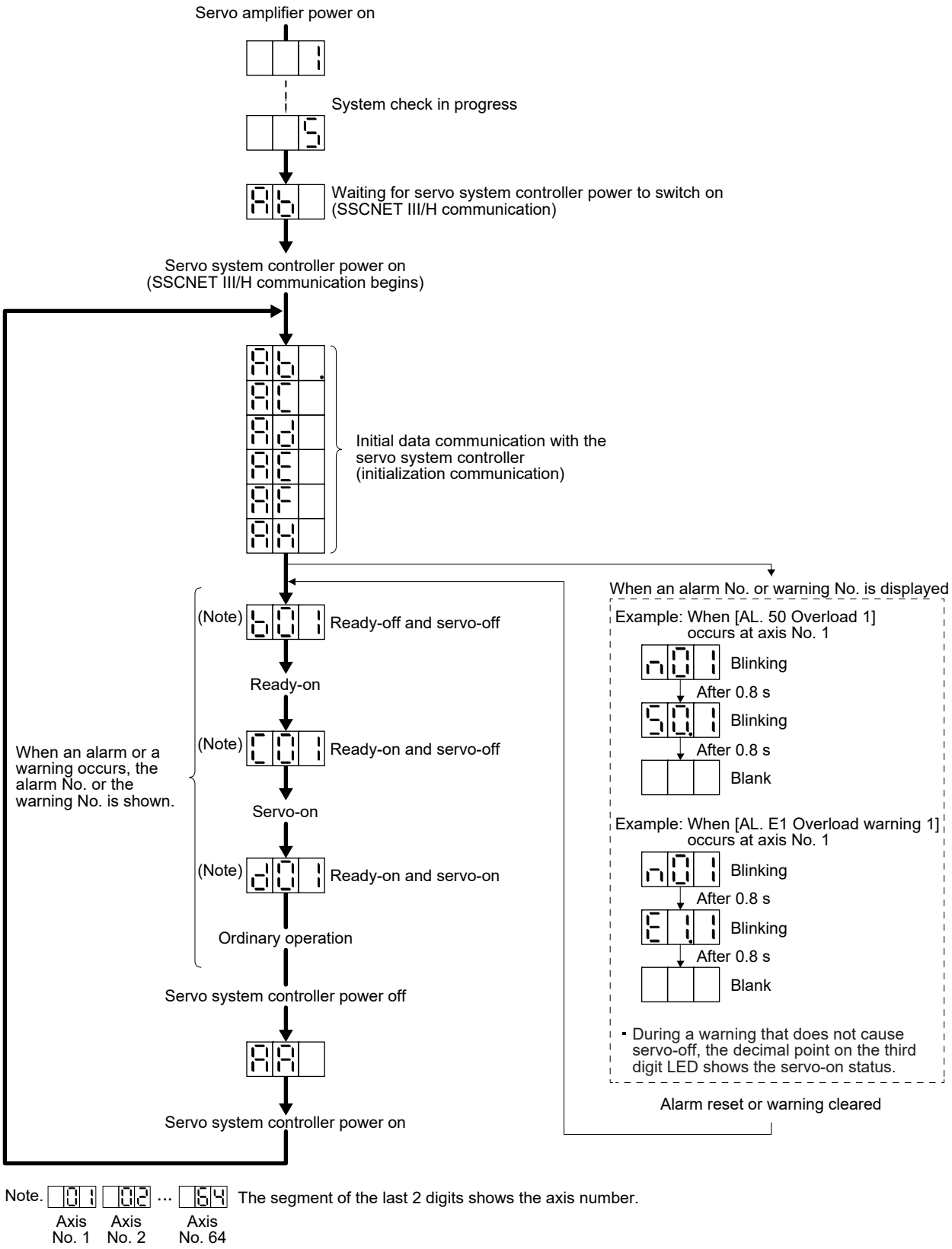
(2) Alarm display

When an alarm occurs, the alarm number (two digits) and the alarm detail (one digit) are displayed following the status display. For example, the following shows when [AL. 32 Overcurrent] is occurring.



4.3.3 Status display of an axis

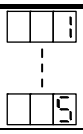
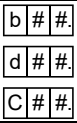
(1) Display sequence



Note. 01 02 ... 64 The segment of the last 2 digits shows the axis number.

Axis No. 1 Axis No. 2 Axis No. 64

(2) Indication list

Indication	Status	Description
	Initializing	System check in progress
	Initializing	・Power of the servo amplifier was switched on at the condition that the power of the servo system controller is off. ・The control axis No. set to the auxiliary axis number setting switches (SW2-3 and SW2-4) and the axis selection rotary switch (SW1) do not match the one set to the servo system controller. ・A servo amplifier malfunctioned, or communication error occurred with the servo system controller or the previous axis servo amplifier. In this case, the indication changes as follows: "Ab", "AC", "Ad", and "Ab" ・The servo system controller is malfunctioning.
	Initializing	During initial setting for communication specifications
	Initializing	Initial setting for communication specifications completed, and then it synchronized with servo system controller.
	Initializing	During initial parameter setting communication with servo system controller
	Initializing	During the servo motor/encoder information and telecommunication with servo system controller
	Initializing	During initial signal data communication with servo system controller
	Initializing completion	The process for initial data communication with the servo system controller is completed.
	Initializing standby	The power supply of servo system controller is turned off during the power supply of servo amplifier is on.
(Note 1) 	Ready-off	The ready-off signal from the servo system controller was received.
(Note 1) 	Servo-on	The ready-off signal from the servo system controller was received.
(Note 1) 	Servo-off	The ready-off signal from the servo system controller was received.
(Note 2) 	Alarm and warning	The alarm No. and the warning No. that occurred is displayed. (Refer to section 8. (Note 4))
	CPU error	CPU watchdog error has occurred.
(Note 1) 	(Note 3) Test operation mode	JOG operation, positioning operation, program operation, output signal (DO) forced output, or motor-less operation was set.

Note 1. The meanings of ## are listed below.

##	Description
01	Axis No. 1
to	to
64	Axis No. 64

2. ** indicates the alarm No. and the warning No.
3. Requires the MR Configurator2.
4. Only a list of alarms and warnings is listed in chapter 8. Refer to "MELSERVO-J4 Servo Amplifier Instruction Manual (Troubleshooting)" for details of alarms and warnings.