Oriental motor

HL-14054

Data Setter **OPX-2A**

DG Ⅱ Series／**EAS** Series

OPERATING MANUAL

Thank you for purchasing an Oriental Motor product.
This operating manual describes product handling procedures and safety precautions.

- Please read it thoroughly to ensure safe operation.
- Always keep the manual where it is readily available.

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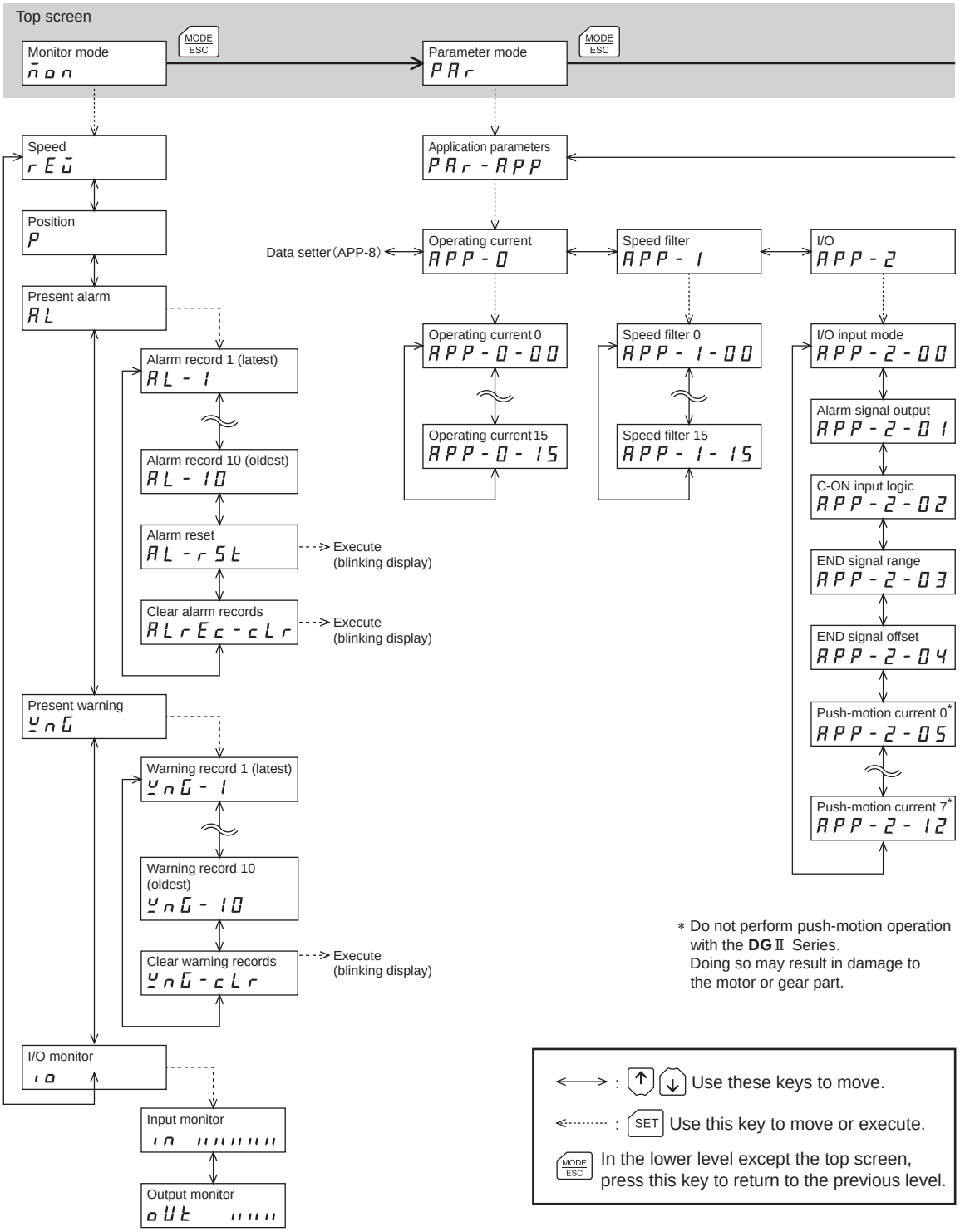
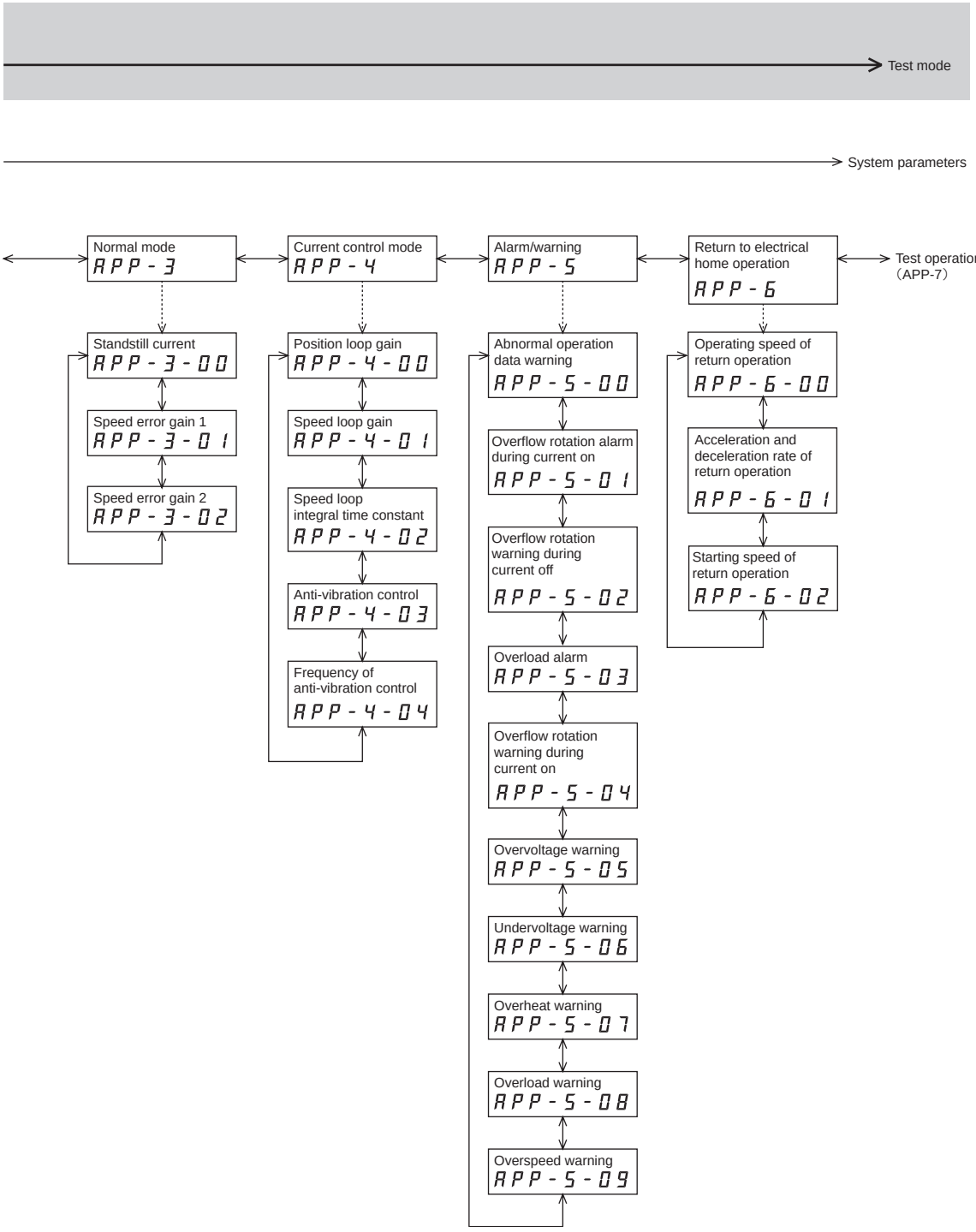
1 Screen transitions

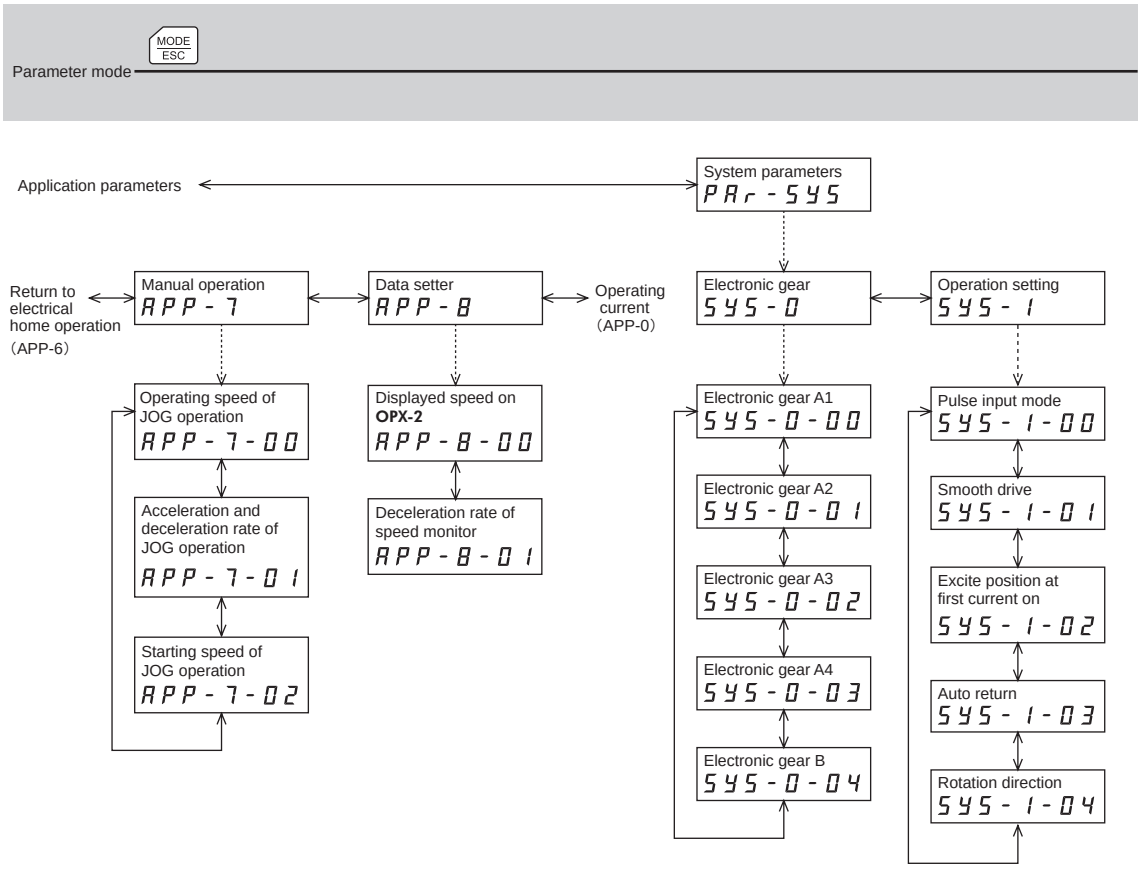


* Do not perform push-motion operation with the **DG**Ⅱ Series.
Doing so may result in damage to the motor or gear part.

Note

- Do not perform push-motion operation with the **DG Ⅱ** Series. Doing so may result in damage to the motor or gear part.
- The following limitations are present while the edit lock function is enabled.
  ・Parameter mode, copy mode: These are displayed on the screen but cannot be operated.
  ・Clearing of the alarm and warning records, reset of the electrical home: These are not displayed on the screen.

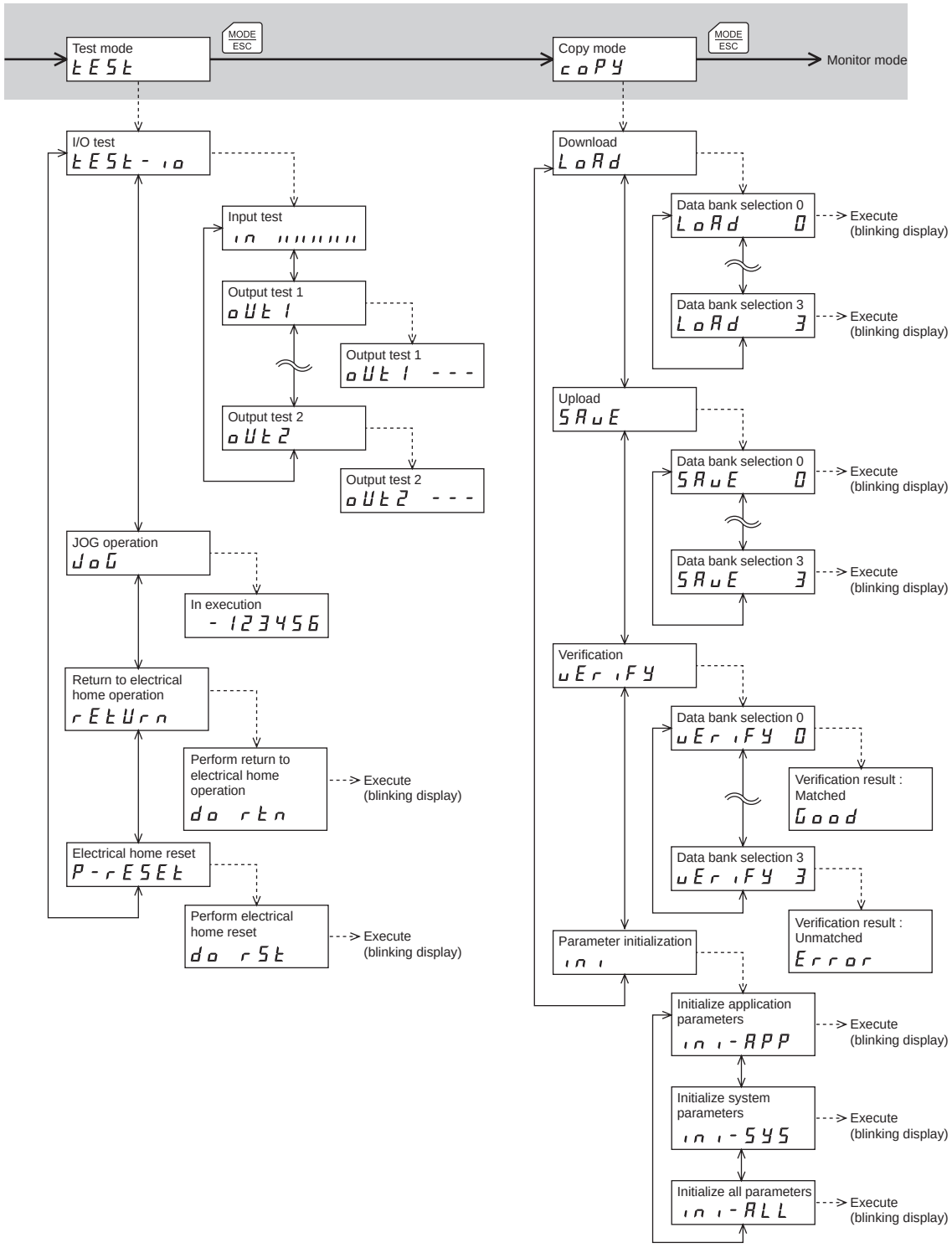




: Use these keys to move.

: SET Use this key to move or execute.

MODE ESC In the lower level except the top screen, press this key to return to the previous level.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2 Monitor mode

2.1 Overview of monitor mode

- Monitoring the operating status

  The speed and position of the motor can be monitored in real time.

- Checking alarms/warnings, clearing alarm/warning records, and resetting alarms
  - If an alarm or warning generates, since a corresponding alarm code or warning code will be displayed, the details of the alarm/warning can be checked.
  - Up to ten most recent alarms/warnings can be displayed, starting from the latest one.
  - The present alarm can be reset.
  - Alarm/warning records can be cleared.

- Checking I/O signals

  The ON/OFF status of each I/O signal for the driver can be checked.

2.2 Monitored items

■ Speed

The motor rotation speed can be checked (unit: r/min).
Operating direction and display for each series are as follows.

- **DGⅡ** Series:

When the output table rotates in the CW direction, "-" is displayed. When the output table rotates in the CCW direction, the sign is not displayed.

- **EAS** Series:

When the linear slide table moves to the motor side, "-" is displayed. When the linear slide table moves to opposite the motor side, the sign is not displayed.
When setting the display method to absolute value, the sign indicating the rotation direction is not displayed. The value display format can be selected using the "displayed speed on **OPX-2A**" parameter [APP-8-00] (p.15). Also, the motor rotation speed can be displayed as rotation speed of the gear output shaft. For this setting, use the "deceleration rate of speed monitor" parameter [APP-8-01] (p.15).

■ Position

The present position of the motor with reference to the home position can be checked.
If a resolution is set, an appropriate value based on the resolution is shown as steps.

■ Present alarm

When an alarm generates, a corresponding alarm code will be displayed.
Also, the present alarm can be reset, and alarm records can be checked or cleared.

Note

- Do not turn off the driver power while an alarm is being reset or alarm records are being cleared (= while the display is blinking). Doing so may damage the data.
- When operations are limited by the edit lock function, the alarm records cannot be cleared.
- Some alarms cannot be reset on the **OPX-2A**. For details, refer to “Alarm code list” on **OPX-2A** p.7. To reset these alarms, you must cycle the power.

Alarm code list

Code	Alarm name	Resetting on the **OPX-2A**	Number of times the driver's ALARM LED blinks	Code	Alarm name	Resetting on the **OPX-2A**	Number of times the driver's ALARM LED blinks
10	Overflow rotation during current on	Possible	4	30	Overload	Possible	2
12	Overflow rotation during current off	Possible		31	Overspeed	Possible	
20	Overcurrent protection *	Not possible	5	34	Command pulse error	Possible	
21	Overheat protection	Possible	2	41	EEPROM error	Not possible	9
22	Overvoltage protection	Not possible	3	42	Initial sensor error	Not possible	8
23	Main power supply error *	Possible		43	Initial rotor rotation error	Not possible	
25	Undervoltage	Possible		45	Motor combination error	Not possible	
28	Sensor error during operation	Not possible	8	51	Regeneration unit overheat *	Not possible	2
2D	Drive circuit error *	Not possible	5	70	Abnormal operation data	Possible	7
				71	Electronic gear setting error	Not possible	

* The LSD-A/LSD-C/LSD-S only.

■ Present warning

When a warning generates, a corresponding warning code will be displayed.
You can also check or clear warning records.

Note

- Do not turn off the driver power while warning records are being cleared (= while the display is blinking). Doing so may damage the data.
- When operations are limited by the edit lock function, the warning records cannot be cleared.
- You can also clear warning records by turning off the driver power.

Warning code list

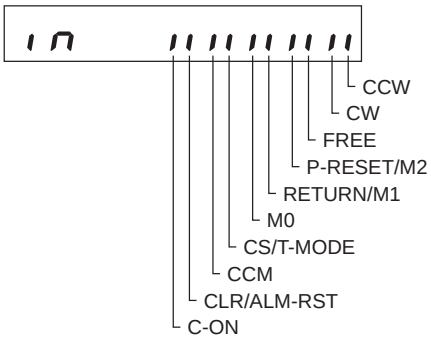
Code	Warning name	Code	Warning name
10	Overflow rotation during current on	25	Undervoltage
12	Overflow rotation during current off	30	Overload
21	Overheat	31	Overspeed
22	Overvoltage	70	Abnormal operation data
23	Main power supply error *	71	Electronic gear setting error

* The LSD-A/LSD-C/LSD-S only.

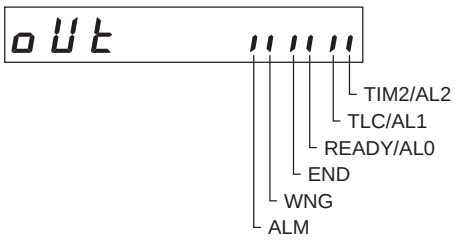
■ I/O monitor

You can check the ON/OFF status of each I/O signal of the driver.
Each digit on the 7-segment LED display corresponds to a signal. If the signal is ON, the corresponding digit is lit. If the signal is OFF, the digit is unlit.

• Input signals



• Output signals



3 Parameter mode

You can set parameters relating to Actuator operation and control. These parameters are saved in the driver.
Before setting parameters, read the USER MANUAL carefully to understand the basic operations, functions and other details of the driver.

Note

- Parameters have significant bearing on actuator operation. Before setting any parameter, make sure you fully understand the content of the parameter.
- When operations are limited by the edit lock function, the parameter mode cannot be operated.

3.1 Types of parameters

Application parameters and system parameters are handled in the parameter mode.

■ Application parameters

When an application parameter is changed, the new parameter becomes effective immediately.
Nine types of parameters are available on the levels below the application parameter screen.
These parameters are classified as follows.

Parameter classification	Description
Operating current	Sets the operating current ratio to be assigned to the current setting switch.
Speed filter	Sets the speed filter time constant to be set to the speed filter setting switch.
I/O	Sets the parameters relating to I/O signals only.
Normal mode	Sets the parameters effective only in the normal mode.
Current control mode	Sets the parameters effective only in the current control mode.
Alarm/warning	Sets the condition under which each alarm or warning generates.
Return to electrical home operation	Sets the starting speed, acceleration/deceleration rate and operating speed to be used in the return to electrical home operation.
Manual operation	Sets the starting speed, acceleration/deceleration rate and operating speed to be used in JOG operation in the test mode.
Data setter	Sets the items to be displayed on the data setter.

■ System parameters

When a system parameter is changed, the new parameter will become effective only after the power is cycled. In the LSD-A/LSD-C/LSD-S, also cycle the 24 VDC power supply.
Two types of parameters are available on the levels below the system parameter screen. These parameters are classified as follows.

Parameter classification	Description
Electronic gear	Sets the electronic gear.
Operation setting	Sets the pulse input mode, motor rotation direction, excitation position, return operation, and use of the smooth drive.

3.2 Setting example

Pressing the【SET】key in the parameter item screen enables parameter setting.
How a parameter is set is explained below.

Example: Set operating current setting 0 to “50”

1. Press the【MODE/ESC】key to move to the parameter mode.
   The “PAR” LED is lit.

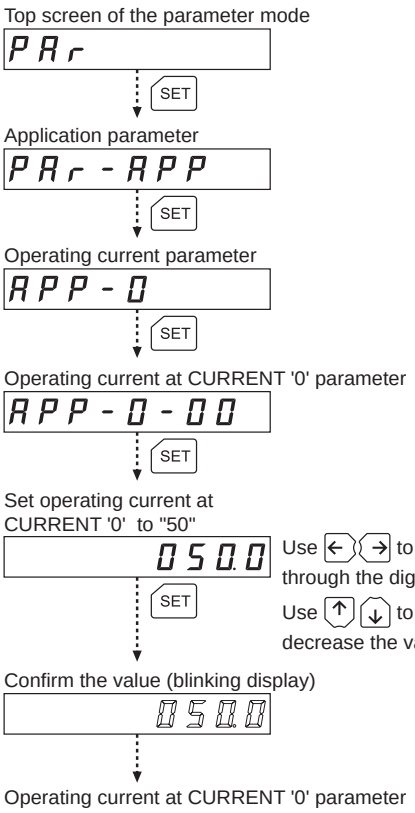
2. Press the【SET】key.
   The display changes to the application parameter screen.

3. Press the【SET】key.
   The display changes to the operating current parameter screen.

4. Press the【SET】key.
   The screen for setting operating current at CURRENT ‘0’ parameter is displayed.

5. Press the【SET】key. Use the【↑】【↓】【←】【→】keys to input “050.0.”

6. Press the【SET】key again.
   The input value is set, and the display returns to the screen for setting operating current at CURRENT ‘0’ parameter.



Note If the value you have input is outside the setting range, “Error” will be displayed for 1 second. If this error display appears, input a different value that falls within the setting range.

3.3 Description of application parameters

■ Operating current parameters

Parameter name	Display on the **OPX-2A**	Description	Setting range	Initial value
Operating current 0	APP-0-00	Sets the operating current ratio to be assigned to the current setting switch.	0.0 to 100.0[%]	6.3
Operating current 1	APP-0-01			12.5
Operating current 2	APP-0-02			18.8
Operating current 3	APP-0-03			25.0
Operating current 4	APP-0-04			31.3
Operating current 5	APP-0-05			37.5
Operating current 6	APP-0-06			43.8
Operating current 7	APP-0-07			50.0
Operating current 8	APP-0-08			56.3
Operating current 9	APP-0-09			62.5
Operating current A	APP-0-10			68.8
Operating current B	APP-0-11			75.0
Operating current C	APP-0-12			81.3
Operating current D	APP-0-13			87.5
Operating current E	APP-0-14			93.8
Operating current F	APP-0-15			100.0

■ Speed filter parameters

Parameter name	Display on the **OPX-2A**	Description	Setting range	Initial value
Speed filter 0	APP-1-00	Sets the speed filter time constant to be set to the speed filter setting switch.	0 to 200[ms]	0
Speed filter 1	APP-1-01			1
Speed filter 2	APP-1-02			2
Speed filter 3	APP-1-03			3
Speed filter 4	APP-1-04			5
Speed filter 5	APP-1-05			7
Speed filter 6	APP-1-06			10
Speed filter 7	APP-1-07			20
Speed filter 8	APP-1-08			30
Speed filter 9	APP-1-09			50
Speed filter A	APP-1-10			70
Speed filter B	APP-1-11			100
Speed filter C	APP-1-12			120
Speed filter D	APP-1-13			150
Speed filter E	APP-1-14			170
Speed filter F	APP-1-15			200

■ I/O parameters

Parameter name	Display on the **OPX-2A**	Description	Setting range	Initial value
I/O input mode	APP-2-00	Selects the input signal mode. For push-motion operation, refer to the following explanation on this page.	0:Positioning operation 1:Push-motion operation	0
Alarm code output	APP-2-01	Changes the setting to enable/ disable alarm code output.	0: Disable 1: Enable	0
C-ON input logic	APP-2-02	Changes the C-ON input logic.	0: Contact A 1: Contact B	0
END signal range	APP-2-03	Sets the output condition for END output.	0.0 to 18.0[°]	1.8
END signal offset	APP-2-04	Sets the output offset for END output.	−1.8 to 1.8[°]	0.0
Push-motion current 0	APP-2-05	Sets the operating current ratio for push-motion operation.	0.0 to 100.0[%]	30.0
Push-motion current 1	APP-2-06			40.0
Push-motion current 2	APP-2-07			50.0
Push-motion current 3	APP-2-08			60.0
Push-motion current 4	APP-2-09			70.0
Push-motion current 5	APP-2-10			80.0
Push-motion current 6	APP-2-11			90.0
Push-motion current 7	APP-2-12			100.0

Note Do not perform push-motion operation with the **DG**Ⅱ Series. Doing so may result in damage to the motor or gear part.

About push-motion operation

Push-motion operation is a type of operation where pulses are input to continuously pressurize the load. Set an operating current value for push-motion operation in each push-motion current parameter from 0 to 7 (from [APP-2-05] to [APP-2-12]).

The current value set in each parameter will be used to limit the output torque.

You can select a desired current setting based on a combination of ON/OFF statuses of M0 to M2 inputs.

Push-motion current parameter	Initial value（×0.1%）	M2	M1	M0
0[APP-2-05]	300	OFF	OFF	OFF
1[APP-2-06]	400	OFF	OFF	**ON**
2[APP-2-07]	500	OFF	**ON**	OFF
3[APP-2-08]	600	OFF	**ON**	**ON**
4[APP-2-09]	700	**ON**	OFF	OFF
5[APP-2-10]	800	**ON**	OFF	**ON**
6[APP-2-11]	900	**ON**	**ON**	OFF
7[APP-2-12]	1000	**ON**	**ON**	**ON**

■ Normal mode parameters

Parameter name	Display on the **OPX-2A**	Description	Setting range	Initial value
Standstill current	APP-3-00	Sets the standstill current as a percentage of the operating current.	0.0 to 50.0[%]	50.0
Speed error gain 1	APP-3-01	Sets the speed error gain. When this value is increased, actuator vibration will decrease.	0 to 500	45
Speed error gain 2	APP-3-02	Sets the speed error gain. When this value is increased, actuator vibration at the time of speed change will decrease.	0 to 500	45

■ Current control mode parameters

Parameter name	Display on the **OPX-2A**	Description	Setting range	Initial value
Position loop gain	APP-4-00	Sets the position loop gain. When this value is increased, the motor response will increase. Note, however, that an excessively large value may increase the actuator overshoot or cause hunting.	1 to 50	10
Speed loop gain	APP-4-01	Sets the speed loop gain. When this value is increased, the actuator overshoot can be suppresses. Note, however, that an excessively large value may cause the actuator to oscillate.	10 to 200	180
Speed loop integral time constant	APP-4-02	Sets the integral time constant for speed loop. When this value is decreased, the actuator response will increase. Note, however, that an excessively small value may increase the actuator overshoot or cause hunting.	10.0 to 200.0 [ms]	100.0
Anti-vibration control	APP-4-03	Changes the setting to enable/disable anti-vibration control.	0: Disable 1: Enable	0
Frequency of anti-vibration control	APP-4-04	Sets the frequency of anti-vibration. When this setting is used, residual vibration can be suppressed at positioning even when the motor is assembled into a machine whose rigidity is low. As a result, compliance will increase.	3.00 to 100.00 [Hz]	7.00

■ Alarm warning parameters

Parameter name	Display on the **OPX-2A**	Description	Setting range	Initial value
Abnormal operation data warning	APP-5-00	Changes the setting to enable/disable the abnormal operation data warning output.	0: Disable 1: Enable	0
Overflow rotation alarm during current on	APP-5-01	Sets the condition under which an overflow rotation alarm during current on generates, as an amount of rotation of the motor shaft.	0.01 to 300.00 [rev]	3.00
Overflow rotation warning during current off	APP-5-02	Sets the condition under which an overflow rotation warning during current off generates, as an amount of rotation of the motor shaft.	0.01 to 300.00 [rev]	100.00
Overload alarm	APP-5-03	Sets the condition under which an overload alarm generates.	0.1 to 30.0[s]	5.0
Overflow rotation warning during current on	APP-5-04	Sets the condition under which an overflow rotation warning during current on warning generates, as an amount of rotation of the motor shaft.	0.01 to 300.00 [rev]	3.00
Overvoltage warning	APP-5-05	Sets the voltage at which an overvoltage warning generates.	320 to 450 (15.0 to 63.0*) [V]	435 (63.0*)
Undervoltage warning	APP-5-06	Sets the voltage at which an undervoltage warning generates.	120 to 280 (15.0 to 63.0*) [V]	120 (18.0*)
Overheat warning	APP-5-07	Sets the temperature at which an overheat warning generates.	40 to 85[°C]	85
Overload warning	APP-5-08	Sets the condition under which an overload warning generates.	0.1 to 30.0[s]	5.0
Overspeed warning	APP-5-09	Sets the speed at which an overspeed warning generates.	1 to 5000 [r/min]	4500

* The descriptions in ( ) apply to the LSD-K.

■ Return to electrical home operation parameters

Parameter name	Display on the **OPX-2A**	Description	Setting range	Initial value
Operating speed of return operation	APP-6-00	Sets the operating speed of return to electrical home operation.	1 to 4000 [r/min]	30
Acceleration and deceleration rate of return operation	APP-6-01	Sets the acceleration and deceleration rate of return to electrical home operation.	0.01 to 1000.00 [ms/(1000 r/min)]	100.00
Starting speed of return operation	APP-6-02	Sets the starting speed of return to electrical home operation.	0 to 4000 [r/min]	30

■ Manual operation parameters

Parameter name	Display on the OPX-2A	Description	Setting range	Initial value
Operating speed of JOG operation	APP-7-00	Sets the operating speed of JOG operation.	1 to 4000 [r/min]	30
Acceleration and deceleration rate of JOG operation	APP-7-01	Sets the acceleration and deceleration rate of JOG operation.	0.01 to 1000.00 [ms/(1000 r/min)]	100.00
Starting speed of JOG operation	APP-7-02	Sets the starting speed of JOG operation.	0 to 4000 [r/min]	30

■ Data setter parameters

Parameter name	Display on the OPX-2A	Description	Setting range	Initial value
Displayed speed on OPX-2A	APP-8-00	Selects the display method of monitored speed.	0: Signed 1: Absolute value	0
Deceleration rate of speed monitor	APP-8-01	Sets the gear ratio for speed monitor. (Gear ratio of the DGII Series: 18)	1.0 to 100.0	1.0

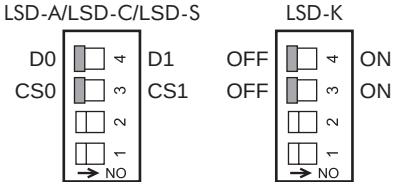
3.4 Description of system parameters

■ Electronic gear parameters

Parameter name	Display on the OPX-2A	Description	Setting range	Initial value
Electronic gear A1	SYS-0-00	Sets the denominator of electronic gear to be assigned to the resolution setting switch. (4 options are available.)	1 to 1000	10
Electronic gear A2	SYS-0-01			1
Electronic gear A3	SYS-0-02			20
Electronic gear A4	SYS-0-03			2
Electronic gear B	SYS-0-04	Sets the numerator of electronic gear to be assigned to the resolution setting switch.		10

Sets the resolution of the motor output shaft. The value of each resolution setting switch (No.3, No.4) can be changed as follows using the electronic gear parameters [SyS-0-00] to [SyS-0-04]. Note that the calculated value must be inside the setting range specified below:
Resolution setting range: 100 to 10000 P/R

No.4 \ No.3	CS0 or OFF	CS1 or ON
D0 or OFF	$1000 \times \frac{\text{Electronic gear B [SyS-0-04]}}{\text{Electronic gear A1 [SyS-0-00]}}$	$1000 \times \frac{\text{Electronic gear B [SyS-0-04]}}{\text{Electronic gear A2 [SyS-0-01]}}$
D1 or ON	$1000 \times \frac{\text{Electronic gear B [SyS-0-04]}}{\text{Electronic gear A3 [SyS-0-02]}}$	$1000 \times \frac{\text{Electronic gear B [SyS-0-04]}}{\text{Electronic gear A4 [SyS-0-03]}}$



■ Operation setting parameters

Parameter name	Display on the **OPX-2A**	Description	Setting range	Initial value
Pulse input mode	SYS-1-00	Selects the pulse input mode.	0: Setting by the pulse input mode selector switch 1: 2-pulse input mode, negative logic 2: 2-pulse input mode, positive logic 3: 1-pulse input mode, negative logic 4: 1-pulse input mode, positive logic 5: Phase difference mode, × 1 6: Phase difference mode, × 2 7: Phase difference mode, × 4	0
Smooth drive	SYS-1-01	Changes the setting to enable/disable the smooth drive.	0: Disable 1: Enable	1
Excite position at first current on	SYS-1-02	Selects the position at which the motor is excited after the power has been turned on.	0: Detected position 1: Electrical angle 0°	0
Auto return	SYS-1-03	Sets whether or not to automatically return the motor, when the current is turned on, to the position where it was stopped.	0: Disable 1: Enable	0
Rotation direction *	SYS-1-04	Selects rotation direction of the motor.	0 : + = CCW 1 : + = CW	1

* The moving direction varies as follows by the parameter setting.

DGII Series:

・When setting the "rotation direction" parameter to 0 and operating in the positive direction, the output table rotates in the CW direction.

・When setting the "rotation direction" parameter to 1 and operating in the positive direction, the output table rotates in the CCW direction.

EAS Series:

・When setting the "rotation direction" parameter to 0 and operating in the positive direction, the linear slide table moves to the motor side.

・When setting the "rotation direction" parameter to 1 and operating in the positive direction, the linear slide table moves to opposite the motor side.

Note When the "auto return" parameter (SYS-1-03) is set to enable, the motor automatically start return operation to the position where the motor last stopped if the motor is excited by turning the C-ON (current-on) input ON or turning the FREE (free) input OFF.

3.5 Initializing parameters

You can revert parameters saved in the driver to their initial values.
For details, refer to 5.5, “Initializing driver parameters” on p.21.

4 Test mode

4.1 Overview of test mode

- I/O test

  You can check the ON/OFF status of each input signal of the driver.
  You can also switch the ON/OFF status of each output signal on the **OPX-2A**.
  There is also an I/O test function with which you can check the connection status of the driver.

- JOG operation

  You can operate the motor using the keys on the **OPX-2A**.

- Return to electrical home operation

  You can perform an operation that returns the motor to its electrical home position.

- Electrical home reset

  You can set the current position as the electrical home position.

- What happens when the【SET】key is pressed while the actuator is operating

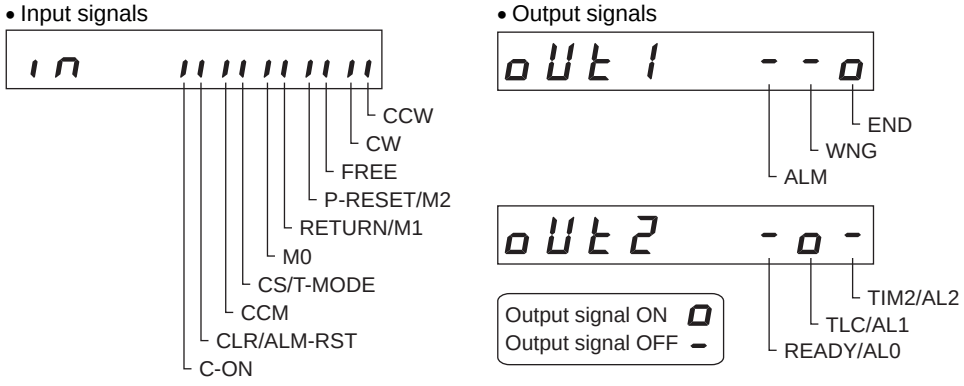
  While the motor is operating, you cannot move to any lower from the top screen of the test mode. Pressing the【SET】key will generate an error, and “oPE-Err” will be shown.
  Be sure to stop the motor operation before pressing the【SET】key.

Note

- Stop the actuator operation before changing to the test mode.
- When you move from the top screen of the test mode to a lower level, the CW/CCW input and RETURN input will be disabled.
- When you move from the I/O test or electrical home reset screen to a lower level, all I/O signals and operations will be disabled.

4.2 I/O test

There is also an I/O test function with which you can check the connection status of the driver.
Each digit on the 7-segment LED display corresponds to a signal.
If the signal is ON, the corresponding digit is lit. If the signal is OFF, the digit is unlit.
The output signal can be switched to a ON/OFF status using the【↑】【↓】keys, and " 0 " is displayed when the output signal is ON, while " - " is displayed when the output signal is OFF.



4.3 JOG operation

You can operate the motor using the keys on the **OPX-2A**.
When pressing the【↑】 key once, the motor rotates by one step in the positive direction. If the key is kept pressing, the motor rotates in the positive direction continuously.
When pressing the【↓】 key once, the motor rotates by one step in the negative direction. If the key is kept pressing, the motor rotates in the negative direction continuously.

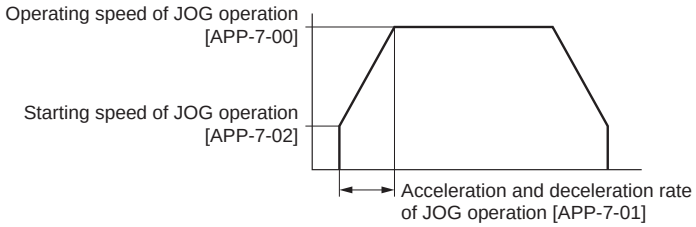
- **DG**Ⅱ Series:

Positive direction: The output table rotates in the CCW direction.
Negative direction: The output table rotates in the CW direction.

- **EAS** Series:

Positive direction: The linear slide table moves to opposite the motor side.
Negative direction: The linear slide table moves to the motor side.

The operating speed corresponds to the value set in the operating speed of JOG operation parameter [APP-7-00].
If the value set in the starting speed of JOG operation parameter [APP-7-02] is greater than the value set in the operating speed of JOG operation parameter [APP-7-00], the starting speed of JOG operation is used.



Note In JOG operation, the actuator operates at the set operating speed while the applicable key is pressed. Before executing JOG operation, consider the status of the equipment and condition of its surroundings to confirm thoroughly that actuator operation will not cause any dangerous situation.

4.4 Return to electrical home operation

You can perform an operation that returns the motor to its electrical home position.

Note The actuator operates at the set operating speed in return-to-electrical home operation. Before executing return-to-electrical home operation, consider the status of the equipment and condition of its surroundings to confirm thoroughly that actuator operation will not cause any dangerous situation.

4.5 Electrical home reset

You can set the current position as the electrical home position.

Note If operations are limited by the edit lock function, the electrical home position cannot be reset.

5 Copy mode

The **OPX-2A** has four data banks, and parameters can be saved in each of these data banks. Since an EEPROM is used for the data memory, stored parameters will be retained even after the power is turned off.
In the copy mode, you can download parameters saved in the **OPX-2A** to the driver. You can also upload parameters saved in the driver to the **OPX-2A**.
It is also possible to verify parameters in the **OPX-2A** against the corresponding parameters in the driver, or revert driver parameters to their initial values.

5.1 Overview of copy mode

- Download

  Copy parameters saved in the **OPX-2A** to the driver.

- Upload

  Copy parameters saved in the driver to the **OPX-2A**.

- Verification

  Verify parameters in the **OPX-2A** against the corresponding parameters in the driver.

- Initializing driver parameters

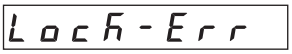
  Revert parameters saved in the driver to their initial values.

- What happens when the【SET】key is pressed while the actuator is operating

  While the motor is operating, you cannot move to any lower level from the top screen of the copy mode. Pressing the【SET】key will generate an error, and “oPE-Err” will be shown.
  Be sure to stop the actuator operation before pressing the【SET】key.

- What happens when the【SET】key is pressed while the edit lock is enabled

  While the edit lock is enabled, you cannot move to any lower level from the top screen of the copy mode. Pressing the【SET】key will generate an error, and “LocK-Err” will be shown.
  Be sure to cancel the edit lock before pressing the【SET】key. Refer to Before Use for the procedure to cancel the edit lock.

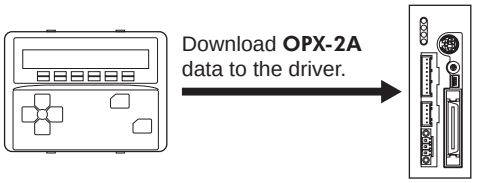


Note

- Stop the actuator operation before changing to the copy mode.
- When you move from the top screen of the copy mode to a lower level, the CW/CCW input and RETURN input will be disabled.
- When operations are limited by the edit lock function, the copy mode cannot be operated.
- Data cannot be copied between the LSD-A/LSD-C/LSD-S and LSD-K.

5.2 Downloading to the driver

In this operation, parameters of the specified data bank number are downloaded to the driver.
If a download error occurs, a code indicating the nature of the error will blink on the display.
Download will not be performed and the display will return to the top screen of download.



Blinking display	Description	Action
Prod-Err	The product series of the driver to which data is downloaded is wrong.	• Check the product series of the driver. • Check the data bank number on the **OPX-2A**.
HEAd-Err bcc-Err	An error occurred while data was being downloaded.	Perform download again. If the same error occurs, the data saved in the **OPX-2A** may be damaged. Upload the applicable data to set the **OPX-2A** data again.
no-dAtA	The specified data bank number does not contain parameters.	Check the data bank number.
dAtA-Err	An error occurred while data was being written.	Perform download again.

Note

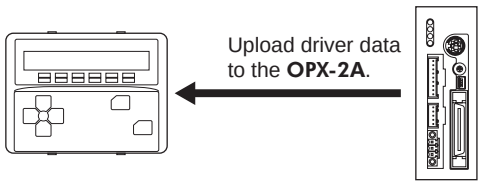
- System parameters that have been changed will become effective after the power is cycled. If the system parameters have been changed as a result of the download, cycle the driver power. In the LSD-A/LSD-C/LSD-S, if a 24 VDC power supply is used, also cycle the 24 VDC power supply.
- Do not turn off the driver power while the download is still in progress (= while the display is blinking). Doing so may damage the data.

5.3 Uploading to the OPX-2A

In this operation, parameters saved in the driver is uploaded to the specified data bank number.

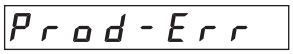
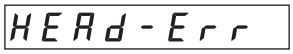
Note

Do not turn off the driver power while the upload is still in progress (= while the display is blinking). Doing so may damage the data.



5.4 Verifying parameters

In this operation, parameters in the specified data bank number are verified against the corresponding parameters saved in the driver.
If the verification finds that the two sets of parameters match, “Good” will be shown. If the two do not match, “Error” will be shown.
If a verification error occurs, a code indicating the nature of the error will blink on the display.
Verification will not be performed and the display will return to the top screen of verification.

Blinking display	Description	Action
	The product series of the driver against which data is verified is wrong.	• Check the product series of the driver. • Check the data bank number on the **OPX-2A**.
 	An error occurred while data was being verified.	Perform verification again. If the same error occurs, the data saved in the **OPX-2A** may be damaged. Upload the applicable data to set the **OPX-2A** data again.
	The specified data bank number does not contain parameters.	Check the data bank number.

5.5 Initializing driver parameters

In this operation, parameters saved in the driver are reverted to their initial values.

Note

- System parameters that have been changed will become effective after the power is cycled. If the system parameters have been changed as a result of the initialization, cycle the driver power. In the LSD-A/LSD-C/LSD-S, if a 24 VDC power supply is used, also cycle the 24 VDC power supply.
- Do not turn off the driver power while the initialization is still in progress (= while the display is blinking). Doing so may damage the data.

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