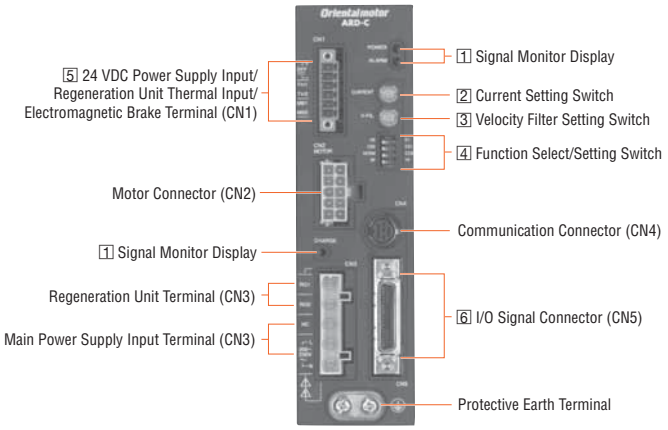
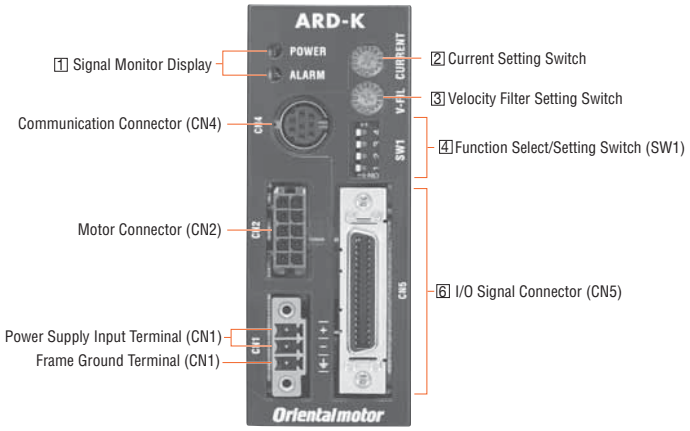
# Connection and Operation

## Names and Functions of Driver Parts

AC Input Type




DC Input Type




### 1 Signal Monitor Displays

#### ◇LED Displays

| Indication | Color | Function | When Activated |
|---|---|---|---|
| POWER | Green | Power supply indication | AC input type: Lights when main power or 24 VDC power is on. DC input type: Lights when power is on. |
| ALARM | Red | Alarm indication | Blinks when protective functions are activated. |
| CHARGE* | Red | Power supply indication | Lights when main power is on. |

*Only for AC input type

#### ◇Alarms

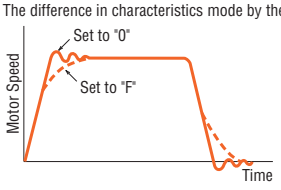
| Blink Count | Function | When Activated |
|---|---|---|
| 2 | Overheat | The temperature inside the driver rises above 85°C (185°F). |
| | Overload | When the amount of time during which the load torque exceeded the maximum torque exceeds the overload detection time. (Default value: 5 seconds) |
| | Overspeed | The motor output shaft speed exceeds 4500 r/min. |
| | Command pulse error | The command pulse value becomes abnormal. |
| | Regeneration unit overheat* | The thermostat for regeneration unit signal is activated. |
| 3 | Overvoltage | The primary voltage of the driver's inverter exceeds the upper limit. |
| | Main power supply error* | The main power is cut off when an operation command is input. |
| | Undervoltage | The primary voltage of the driver's inverter drops below the lower limit. |
| 4 | Overflow rotation during current on | The position deviation exceeds the overflow revolutions. (Default value: 3 revolutions) |
| | Overflow rotation during current off | The current is turned on even though the position deviation when the current is turned off was equal to or greater than the permissible value. (Default value: 100 revolutions or more) |
| 5 | Overcurrent* | An excessive current flows through the inverter power element inside the driver. |
| | Drive circuit error* | The power cable of the motor is disconnected. |
| 7 | Abnormal operation data | Return to electrical home operation is performed while an operation data error warning is present. |
| | Electronic gear setting error | The resolution set by the electronic gear is outside the specified range. |
| 8 | Sensor error during operation | A sensor error occurs while the motor is rotating. |
| | Initial sensor error | The power source is turned on when the motor cable is not connected to the driver. |
| | Initial rotor rotation error | The main power is turned on while the motor is rotating. |
| | Motor combination error | A motor not supported by the driver is connected. |
| 9 | EEPROM error | A motor control parameter is damaged. |

*Only for AC input type

### 2 Current Setting Switch

| Indication | Switch Name | Function |
|---|---|---|
| CURRENT | Current setting switch | This switch adjusts the operating current. It is used to limit the torque and temperature rise.<br>A desired current can be set as a percentage (%) of the rated output current. The factory setting is "F." |

### 3 Velocity Filter Setting Switch

| Indication | Switch Name | Function |
|---|---|---|
| V-FIL | Velocity filter setting switch | This switch adjusts the motor response.<br>Adjust the switch if you want to suppress motor vibration or cause the motor to start/stop smoothly.<br>"0" and "F" correspond to the minimum and maximum velocity filter settings, respectively.<br>The factory setting is "1."<br>The difference in characteristics mode by the velocity filter<br>  |

## 4 Function Select/Setting Switches

| Indication | Switch Name | Function |
|---|---|---|
| DO/D1 (4)<br>CS0/CS1 (3) | Resolution select switches | These switches are used to set the resolution per rotation of the motor output shaft.<br>"D0 (4:OFF)" "CS0 (3:OFF)"→1000 pulse <0.36°/step> [Factory setting]<br>"D0 (4:OFF)" "CS1 (3:ON)"→10000 pulse <0.036°/step><br>"D1 (4:ON)" "CS0 (3:OFF)"→500 pulse <0.72°/step><br>"D1 (4:ON)" "CS1 (3:ON)"→5000 pulse <0.072°/step> |
| NORM/CCM (2) | Control mode select switches | This switch toggles the driver between the normal mode and current control mode. In the current control mode, noise and vibration can be reduced although the motor synchronicity may reduce.<br>"NORM (2:OFF)": Normal mode [Factory setting]<br>"CCM (2:ON)": Current control mode |
| 2P/1P (1) | Pulse input mode switch | The settings of this switch are compatible with the following two types of pulse input modes:<br>"2P (1:OFF)" for the 2-pulse input mode, "1P (1:ON)" for the 1-pulse input mode. |

Indication and Function in parentheses are for DC input type.

## 5 24 VDC Power Supply Input/Regeneration Unit Thermal Input/Electromagnetic Brake Terminal (CN1) (Only for AC Input Type)

| Indication | Input/Output | Terminal Name | Description |
|---|---|---|---|
| 24V+ | Input | 24 VDC power supply input terminal+ | Connect a power supply to these terminals if you want to supply the control power separately from the main power. Supply of the control power is optional. If you are using an electromagnetic brake motor, connect a power supply to these terminals for the electromagnetic brake power. |
| 24V− | | 24 VDC power supply input terminal− | |
| TH1 | | Regeneration unit thermal input terminal | Connect the accessory regeneration unit **RGB100** (sold separately).<br>If no regeneration unit is used, short the TH1 and TH2 terminals of CN1. |
| TH2 | | Regeneration unit thermal input terminal | |
| MB1 | Output | Electromagnetic brake terminal− | Connect the lead wires from the electromagnetic brake. |
| MB2 | | Electromagnetic brake terminal+ | |

## 6 I/O Signal Connector (CN5, 36 pins)

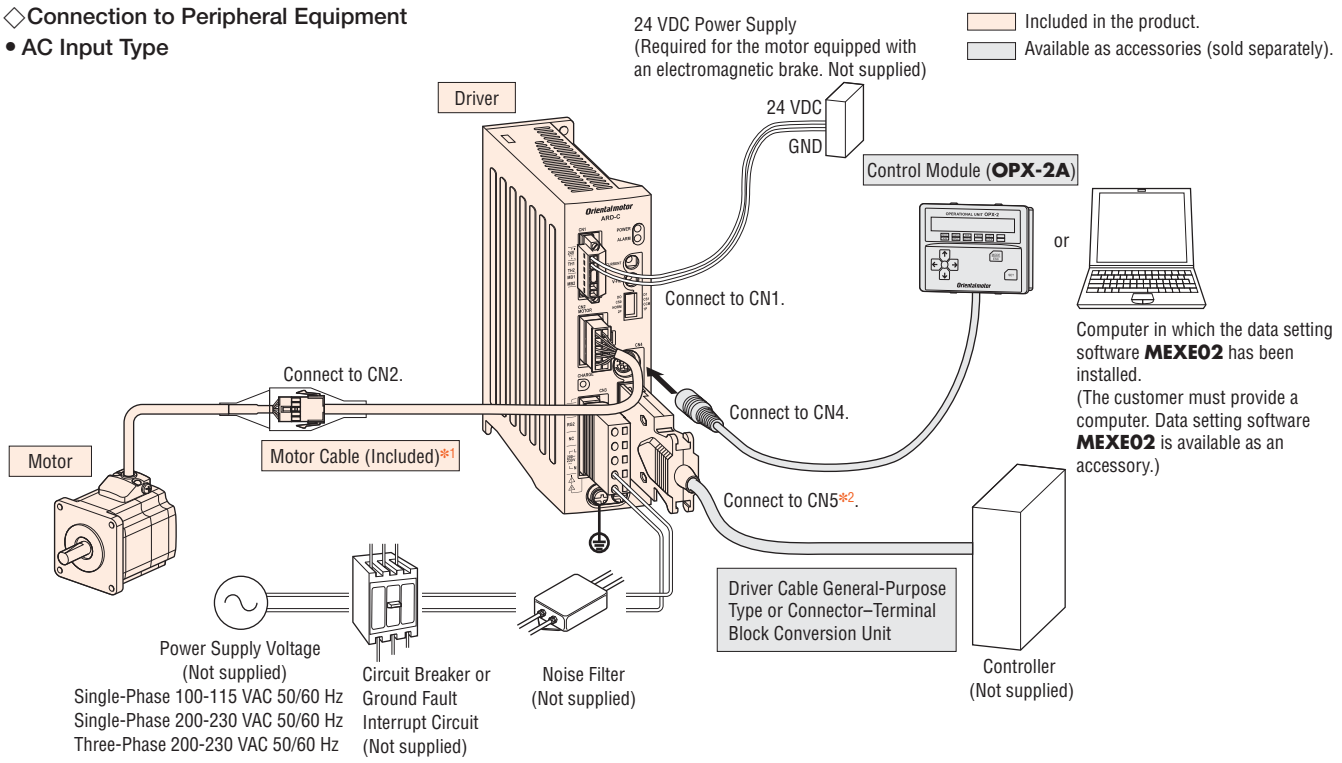
| Indication | Input/Output | Pin No. | Signal | | Signal Name | |
|---|---|---|---|---|---|---|
| | | | Positioning Operation | Push-Motion Operation*1 | Positioning Operation | Push-Motion Operation*1 |
| CN5 | – | 1 | – | | – | |
| | Output | 2 | GND | | Ground connection | |
| | | 3 | ASG+ | | A-phase pulse output (line driver) | |
| | | 4 | ASG− | | | |
| | | 5 | BSG+ | | B-phase pulse output (line driver) | |
| | | 6 | BSG− | | | |
| | | 7 | TIM1+ | | Timing output (line driver) | |
| | | 8 | TIM1− | | | |
| | | 9 | ALM+ | | Alarm output | |
| | | 10 | ALM− | | | |
| | | 11 | WNG+ | | Warning output | |
| | | 12 | WNG− | | | |
| | | 13 | END+ | | Positioning complete output | |
| | | 14 | END− | | | |
| | | 15 | READY+/AL0+*1 | | Operation ready complete output/Alarm code output 0*1 | |
| | | 16 | READY−/AL0−*1 | | | |
| | | 17 | TLC+/AL1+*1 | | Torque limit output /Alarm code output 1*1 | |
| | | 18 | TLC−/AL1−*1 | | | |
| | | 19 | TIM2+/AL2+*1 | | Timing output (open-collector)/Alarm code output 2*1 | |
| | | 20 | TIM2−/AL2−*1 | | | |
| | | 21 | GND | | Ground connection | |
| | Input | 22 | IN–COM | | Input signal common | |
| | | 23 | C–ON | | Current on input | |
| | | 24 | CLR/ALM–RST | | Deviation counter clear input/Alarm reset input | |
| | | 25 | CCM | | Current control mode ON input | |
| | | 26 | CS | T–MODE*1 | Resolution select input | Push-motion operation ON*1 |
| | | 27 | – | M0*1 | – | Push-current setting select input*1 |
| | | 28 | RETURN | M1*1 | Return to electrical home operation | |
| | | 29 | P–RESET | M2*1 | Position reset input | |
| | | 30 | FREE | | Electromagnetic brake release*2, excitation OFF | |
| | | 31 | CW+/PLS+ | | CW pulse input/Pulse input (+5 V/line driver) | |
| | | 32 | CW−/PLS− | | | |
| | | 33 | CW+24/PLS+24 V | | CW pulse input/Pulse input (+24 V) | |
| | | 34 | CCW+24/DIR+24 V | | CCW pulse input/Direction input (+24 V) | |
| | | 35 | CCW+/DIR+ | | CCW pulse input/Direction input (+5 V/line driver) | |
| | | 36 | CCW−/DIR− | | | |

*1 The signal will become effective if the applicable setting has been changed using the accessory control module **OPX-2A** or the data setting software **MEXE02** (both sold separately).
*2 Only for AC input type

## ●Connection Diagram

### ◇Connection to Peripheral Equipment

• AC Input Type

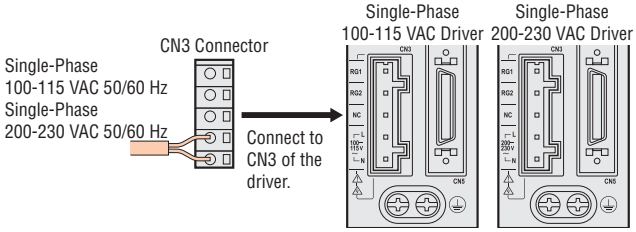



*1 Each model comes with a motor cable 3 m (9.8 ft.) long. If you need a cable of a different length, or a flexible cable, select an appropriate cable from among the accessories (sold separately).
*2 Each model comes with a control I/O connector (CN5), but you must select the driver cable general-purpose type or connector–terminal block conversion unit, both of which are provided as accessories (sold separately).

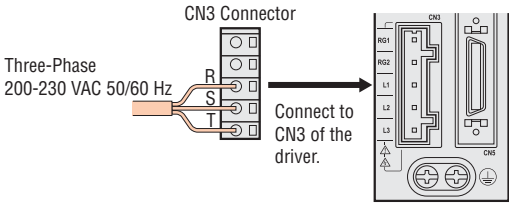
### ◇Connecting a Main Power Supply

Use the following cable for the power supply line;
Single-phase 100-115 VAC, Single-phase 200-230 VAC: 3-core cable of AWG16 to 14
Three-phase 200-230 VAC: 4-core cable of AWG16 to 14

・Single-Phase 100-115 VAC, Single-Phase 200-230 VAC

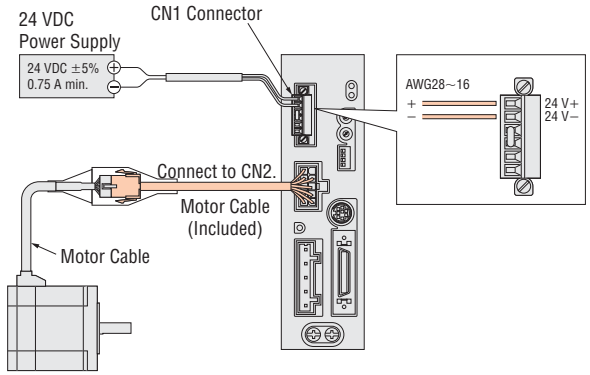



・Three-Phase 200-230 VAC



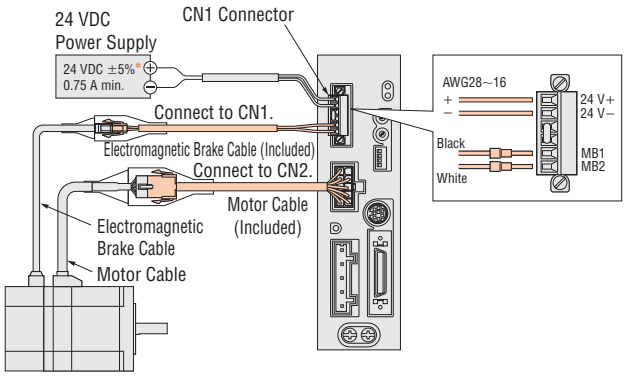

### ◇Connecting the Control Power Supply

Provide a 24 VDC power supply if you want to supply the control power separately from the main power. Supply of the control power is optional.



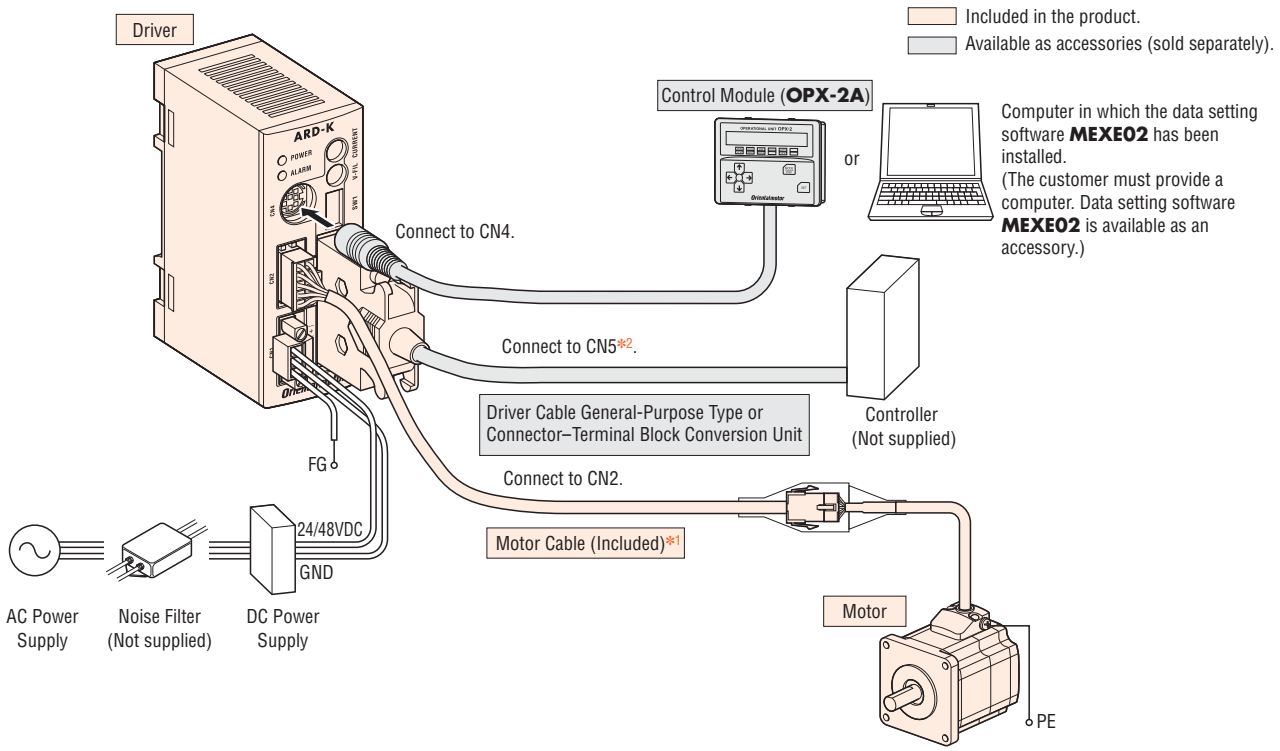

### ◇Connecting the Electromagnetic Brake

Provide a 24 VDC power supply.
Control power for the electromagnetic brake motor is separated from the main power.




*If the distance between the motor and driver is extended to 20 m (65.6 ft.) or longer, use a power supply of 24 VDC ±4%.

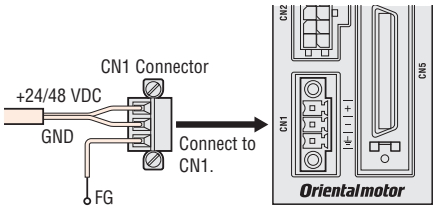
• DC Input Type




*1 Each model comes with a motor cable 3 m (9.8 ft.) long. If you need a cable of a different length, or a flexible cable, select an appropriate cable from among the accessories (sold separately).
*2 Each model comes with a control I/O connector (CN5), but you must select the driver cable general-purpose type or connector–terminal block conversion unit, both of which are provided as accessories (sold separately).

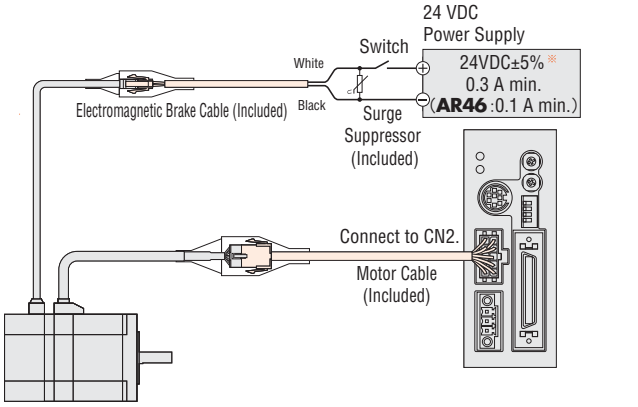
### ◇Connecting a Main Power Supply

Use the following cable for the power supply line;
AWG24 to 16




### ◇Connecting the Electromagnetic Brake

Provide a 24 VDC power supply.




*If the distance between the motor and driver is extended to 20 m (65.6 ft.) or longer, use a power supply of 24 VDC ±4%.

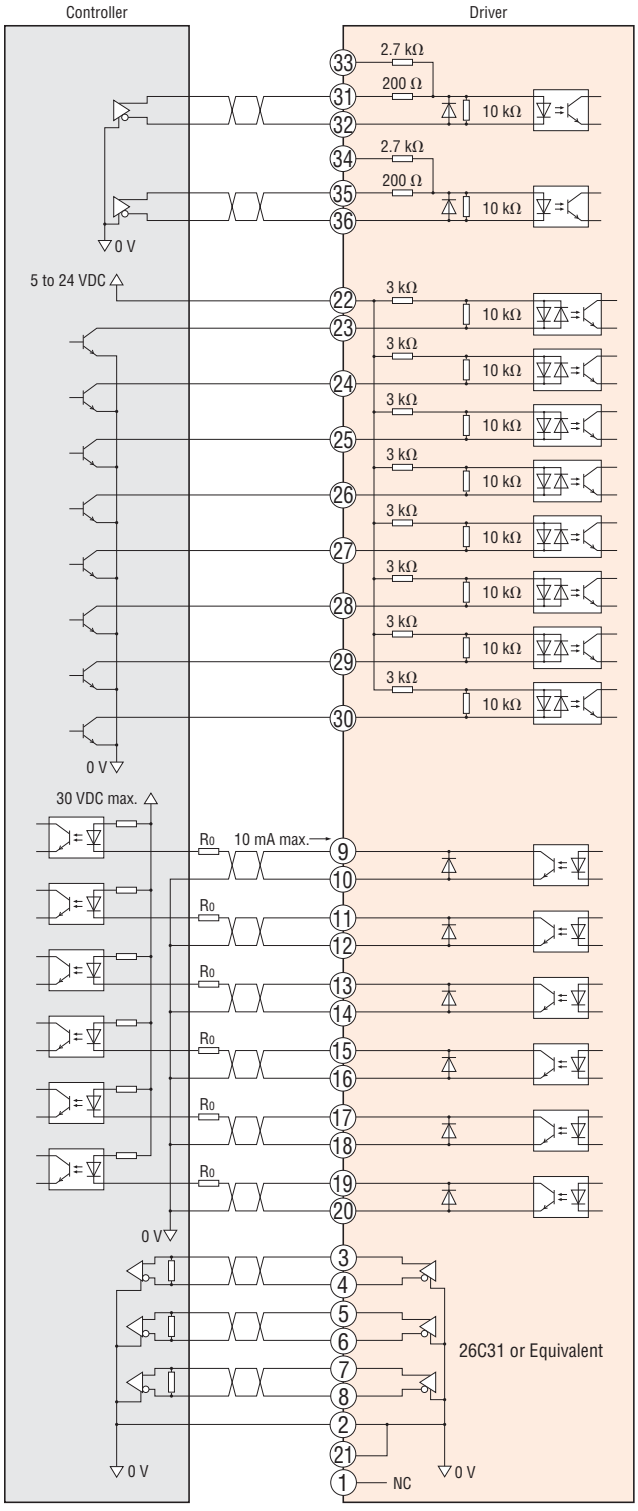
**Note:**

- To protect the switch contacts and prevent noise, always connect the surge suppressor. (The surge suppressor is included with electromagnetic brake motors.)

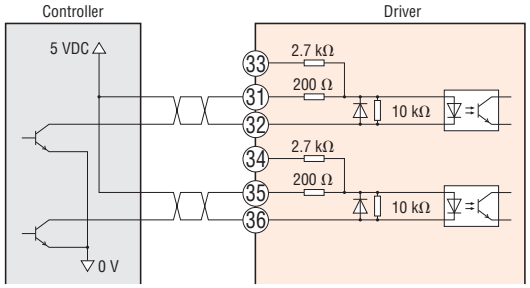
## ◇Connecting to a Host Controller

### • Connecting to a Current Sink Output Circuit

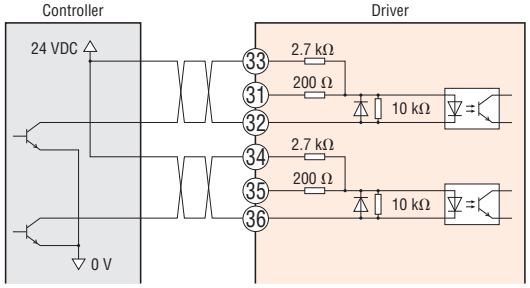
When pulse input is of line driver type




When pulse input is of 5 VDC type




When pulse input is of 24 VDC type



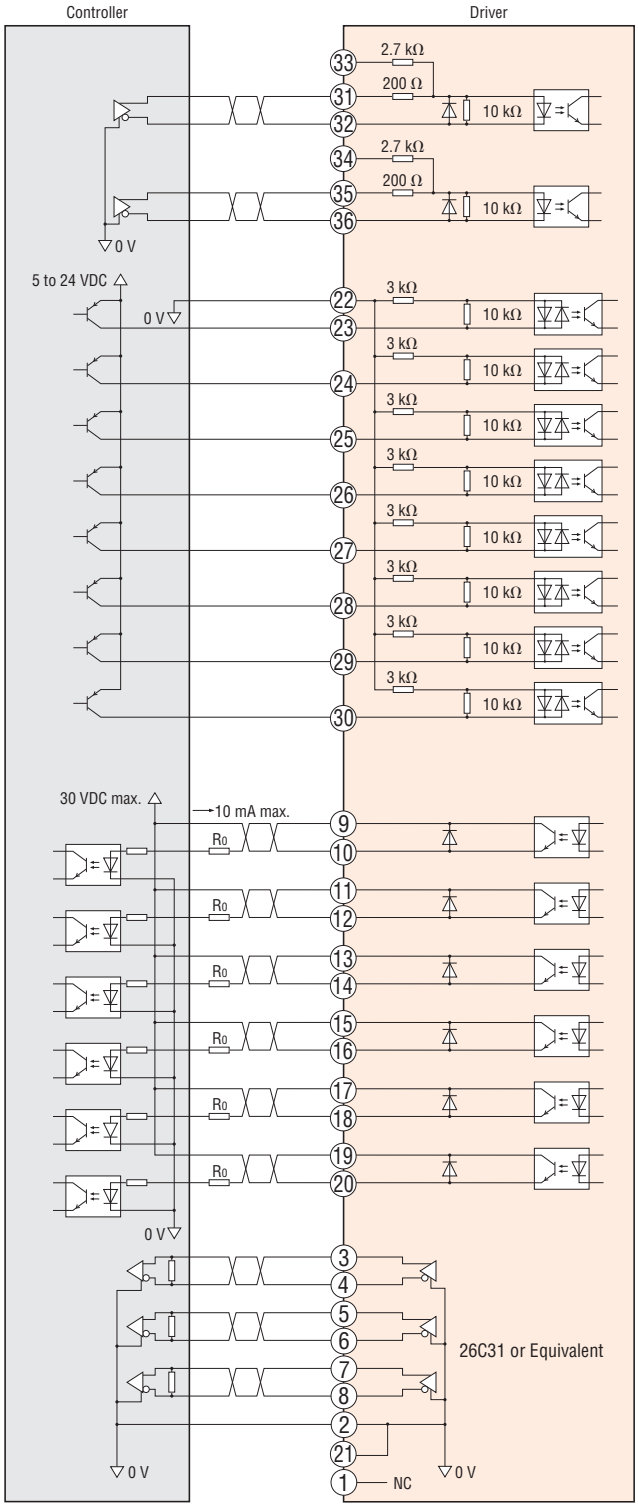

**Notes:**

- Use output signals at 30 VDC or less. If the current exceeds 10 mA, connect an external resistor $R_0$.
- Connect a terminal resistor of 100 Ω or more between the input of the line receiver terminals.
- Use a multi-core, twisted-pair shielded wire of AWG28 to 26 for the control input/output signal line (CN5), and keep wiring as short as possible [within 2 m (6.6 ft.)].
- Note that as the length of the pulse signal line increases, the maximum transmission frequency decreases.
- Provide a minimum distance of 300 mm (1 ft.) between the control I/O signal lines and power lines (AC lines, motor lines and other large-current circuits). Do not run the control I/O signal lines in the same duct as power lines or bundle them with power lines.

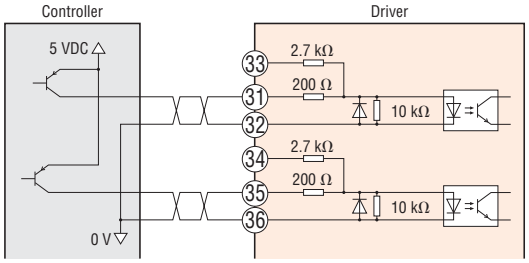
## ◇Connecting to a Host Controller

### • Connecting to a Current Source Output Circuit

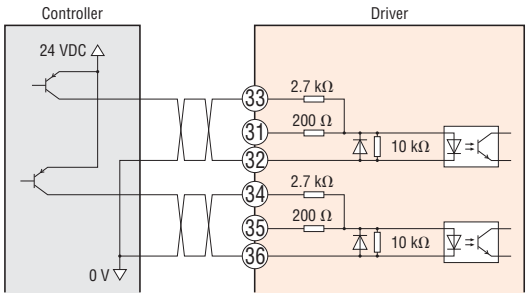
When pulse input is of line driver type




When pulse input is of 5 VDC type




When pulse input is of 24 VDC type




**Notes:**

- Use output signals at 30 VDC or less. If the current exceeds 10 mA, connect an external resistor $R_0$.
- Connect a terminal resistor of 100 Ω or more between the input of the line receiver terminals.
- Use a multi-core, twisted-pair shielded wire of AWG28 to 26 for the control input/output signal line (CN5), and keep wiring as short as possible [within 2 m (6.6 ft.)].
- Note that as the length of the pulse signal line increases, the maximum transmission frequency decreases.
- Provide a minimum distance of 300 mm (1 ft.) between the control I/O signal lines and power lines (AC lines, motor lines and other large-current circuits). Do not run the control I/O signal lines in the same duct as power lines or bundle them with power lines.

## ●Description of Input/Output Signals

Indication of Input/Output Signal "ON""OFF"

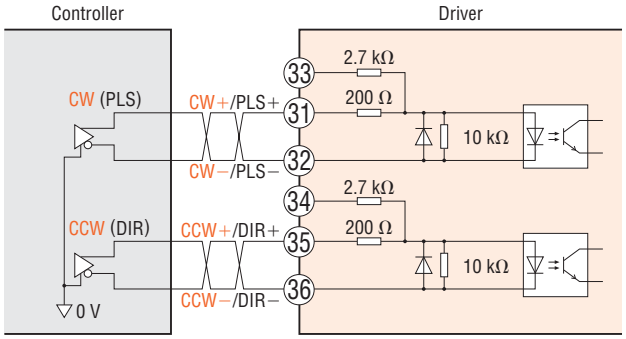
Input (output) "ON" indicates that the current is sent into the photocoupler (transistor) inside the driver. Input (output) "OFF" indicates that the current is not sent into the photocoupler (transistor) inside the driver. The input/output remains "OFF" if nothing is connected.

Photocoupler OFF ON

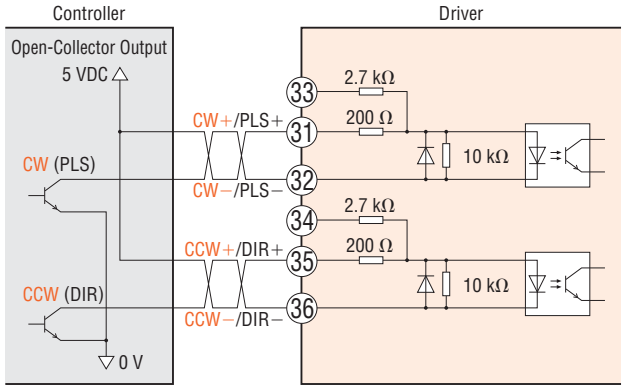
## CW (PLS) and CCW (DIR) Pulse Input Signal

### ◇Input Circuit and Sample Connection

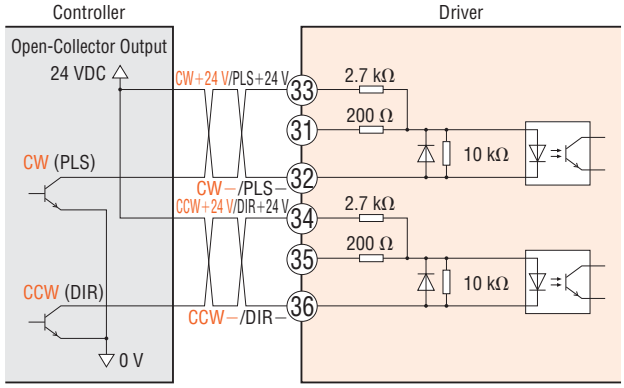
**• Line Driver Output**




**• When Using 5 VDC**

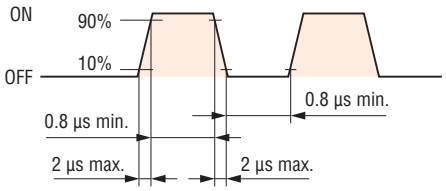



**• When Using 24 VDC**




● The colored characters indicate signals under the 2-pulse input mode, while the black characters indicate signals under the 1-pulse input mode.

### ◇Pulse Waveform Characteristics

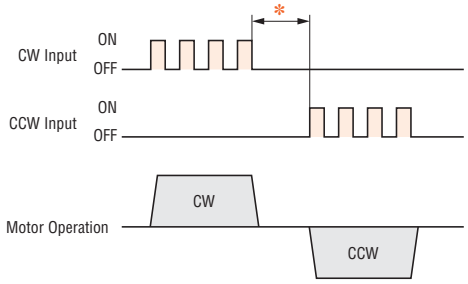



● For pulse signals, use input pulse waveforms like those shown in the figure above.

### ◇Pulse Input Mode

**• 2-Pulse Input Mode**

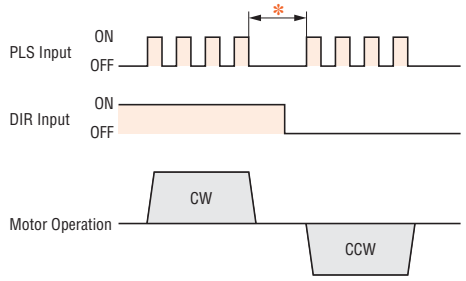
When the CW input is turned ON, the motor will rotate by one step in CW direction. When the CCW input is turned ON, the motor will rotate by one step in CCW direction.




* The minimum interval time needed for switching the rotation direction will vary, depending on the operating speed and size of the load. Do not shorten the interval time any more than is necessary.

**• 1-Pulse Input Mode**

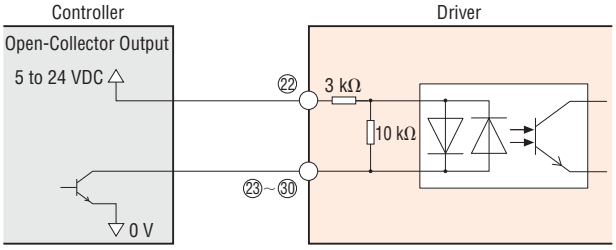
When the PLS input is turned ON while the DIR input is ON, the motor will rotate by one step in CW direction. When the PLS input is turned ON while the DIR input is OFF, the motor will rotate by one step in CCW direction.




* The minimum interval time needed for switching the rotation direction will vary, depending on the operating speed and size of the load. Do not shorten the interval time any more than is necessary.

## Control Input Signals

### ◇Input Circuit and Sample Connection




### ◇Current ON (C-ON) Input

**Pin No.㉓**

This signal is used to excite the motor.

**• AC Input Type**

If an electromagnetic brake motor is used, the electromagnetic brake will be released after the motor is excited.

**• DC Input Type**

If an electromagnetic brake motor is used, please release the electromagnetic brake after the motor is excited.

With the control module **OPX-2A** or data setting software **MEXE02** (both sold separately), you can change the signal logic. Moreover, you can set the automatic return operation to be performed after the C-ON input has been turned ON. When the C-ON input is turned ON, the motor automatically returns to the position where it was stopped.

**Note:**

● When operating the motor, be sure to turn the C-ON input ON.

### ◇Electromagnetic Brake Release*, Excitation OFF (FREE) Input
Pin No.㉚

*Only for AC input type

This signal is used to put the motor in a non-excitation (free) state. It is used when turning the motor shaft externally or when positioning manually.

**• AC Input Type**

When the FREE input is turned ON, current supplied to the motor will be cut off. When the FREE input is turned OFF, current will be supplied to the motor. If an electromagnetic brake motor is used, when the FREE input is turned ON, the electromagnetic brake will be released and current supplied to the motor will be cut off.

**• DC Input Type**

When the FREE input is turned ON, current supplied to the motor will be cut off. In this condition, the detent torque is bigger than the torque when cutting power off, because the coil inside the motor is shorted. When the FREE input is turned OFF, current will be supplied to the motor.

With the control module **OPX-2A** or data setting software **MEXE02** (both sold separately), you can set the automatic return operation to be performed after the FREE input has been turned OFF. When the FREE input is turned OFF, the motor automatically returns to the position where it was stopped.

**Note:**

- When operating the motor, be sure to turn the FREE input OFF.

### ◇Resolution Select (CS) Input/Push-Motion Operation ON (T-MODE) Input
Pin No.㉖

#### CS Input Setting (Factory setting)

This signal is used to switch the resolution.
Resolutions can be switched when in combination with the resolution select switches.
With the control module **OPX-2A** or data setting software **MEXE02** (both sold separately), you can change the basic settings of the resolution.

| Resolution Select Switch | CS Input OFF | CS Input ON |
|---|---|---|
| D0 (SW1-No.4: OFF) | The CS0 (SW1-No.3: OFF) setting is selected. Factory setting: 1000 P/R | The CS1 (SW1-No.3: ON) setting is selected. Factory setting: 10000 P/R |
| D1 (SW1-No.4: ON) | The CS0 (SW1-No.3: OFF) setting is selected. Factory setting: 500 P/R | The CS1 (SW1-No.3: ON) setting is selected. Factory setting: 5000 P/R |

- Descriptions in parentheses are for DC input type.

**Notes:**

AC Input Type:

- While the resolution select switch (CS0/CS1) is set to "CS0", the CS input becomes effective.
- While the resolution select switch (CS0/CS1) is set to "CS1", the CS input is ignored and the CS1 setting is maintained.

DC Input Type:

- While the resolution select switch (SW1-No.3) is set to "OFF", the CS input becomes effective.
- While the resolution select switch (SW1-No.3) is set to "ON", the CS input is ignored and the (SW1-No.3: ON) setting is maintained.

#### T-MODE Input Setting

When "push-motion operation" is selected with the control module **OPX-2A** or data setting software **MEXE02** (both sold separately), the push-motion operation ON (T-MODE) input will become effective. When the T-MODE input is turned ON and pulses are input, the motor will start a push-motion operation.

### ◇Push-Current Setting Selection (M0) Input
Pin No.㉗

#### Factory Setting

Signals are not assigned at the time of shipment.

#### M0 Input Setting

When "push-motion operation" is selected with the control module **OPX-2A** or data setting software **MEXE02** (both sold separately), the push-current setting select (M0) input will become effective. The setting data can be selected via the combination of M0, M1 and M2 inputs.

### ◇Return to Electrical Home Operation (RETURN) Input/Push-Current Setting Select (M1) Input
Pin No.㉘

#### RETURN Input (Factory setting)

This signal is used to start a return to electrical home operation.
The electrical home position can be changed freely using the P-RESET input.
Initial setting is at the position when the power is turned ON.

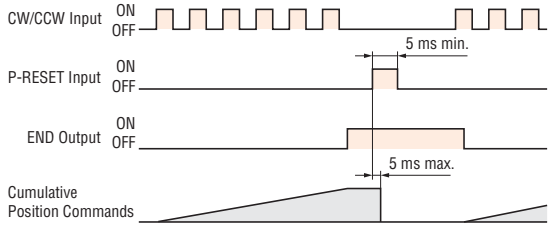
#### M1 Input Setting

When "push-motion operation" is selected with the control module **OPX-2A** or data setting software **MEXE02** (both sold separately), the push-current setting select (M1) input will become effective. The setting data can be selected via the combination of M0, M1 and M2 inputs.

### ◇Position Reset (P-RESET) Input/Push-Current Setting Select (M2) Input
Pin No.㉙

#### P-RESET Input (Factory setting)

This signal is used to set the electrical home.
When the P-RESET input is turned ON, the electrical home position will be set. Input this signal while the motor is at standstill.




#### M2 Input Setting

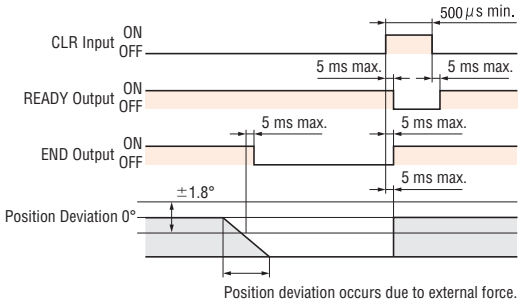
When "push-motion operation" is selected with the control module **OPX-2A** or data setting software **MEXE02** (both sold separately), the push-current setting select (M2) input will become effective. The setting data can be selected via the combination of M0, M1 and M2 inputs.

### ◇Deviation Counter Clear (CLR)/Alarm Reset (ALM-RST) Input
Pin No.㉔

Normally, this signal is used to clear the position deviation counter. If an alarm generates, the CLR/ALM-RST input will function as an input signal for resetting the alarm.

#### Deviation Counter Clear (CLR) Input

This signal is used to clear the position deviation counter.

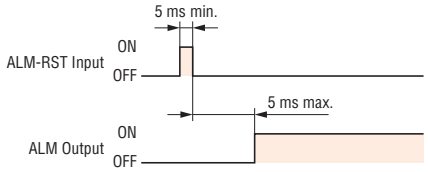



**Notes:**

- Pulse input is disabled while the CLR input is ON.
- When the CLR input is turned ON during the automatic return operation and return to electrical home operation, the motor will stop.

### Alarm Reset (ALM-RST) Input

This signal is used for clearing the alarm when a protective function has been activated.
Resolve the cause and turn on the alarm reset input.




**Note:**

- The following alarms cannot be cleared. To clear the alarm, first resolve the cause and check for safety, and then turn power on again.
  · Regeneration unit overheat* · Overvoltage · Overcurrent* · Driver circuit error* · Electronic gear setting error · Sensor error during operation · Initial sensor error · Initial rotor rotation error · Motor combination error · EEPROM error

* Only for AC input type

### ◇Current Control Mode ON (CCM) Input

**Pin No.㉕**

The control mode will change from the normal mode to the current control mode.
In the current control mode, noise and vibration can be reduced although the motor synchronicity may reduce.

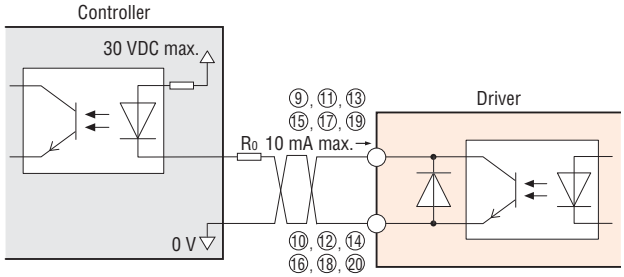
**Notes:**

- Switch the mode while the motor is at standstill.
- The CCM input becomes effective, when the control mode switch is set to "NORM" for AC input type or switch (SW1-No.2) is set to "OFF" for DC input type.

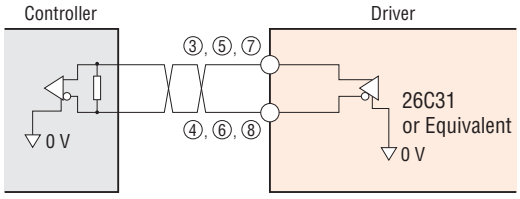
## Control Output Signals

### ◇Output Circuit and Sample Connection

· Operation Ready Complete (READY)/Alarm Code 0 (AL0) Output
· Torque Limit (TLC)/Alarm Code 1 (AL1) Output
· Positioning Complete (END) Output
· Warning (WNG) Output
· Alarm (ALM) Output
· Timing (TIM2)/Alarm Code 2 (AL2) Output




· Encoder (ASG, BSG) Signal Output
· Timing (TIM1) Signal Output




- Be sure to connect pin 2 or 21 of the driver to the GND.

### ◇Operation Ready Complete (READY) Output/ Alarm Code 0 (AL0) Output

**Pin No.⑮, ⑯**

### READY Output Setting (Factory setting)

This signal will be output when the driver becomes ready. Input pulse signals after the READY output has turned ON.

### AL0 Output Setting

When the settings are changed with the control module **OPX-2A** or data setting software **MEXE02** (both sold separately), the alarm code 0 (AL0) output will become effective. This signal will be output when the protective function is activated and an alarm generates. The protective function that activated can be checked via the combination of AL0, AL1 and AL2 outputs.

### ◇Torque Limit (TLC)/Alarm Code 1 (AL1) Output

**Pin No.⑰, ⑱**

### TLC Output Setting (Factory setting)

This signal will be output when the torque characteristic exceeds the specified range. If a torque limit is set using the control module **OPX-2A** or data setting software **MEXE02** (both sold separately), this signal will be output when the torque limit is reached.

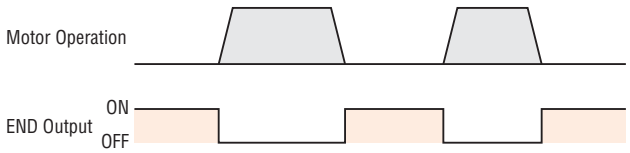
### AL1 Output Setting

When the settings are changed with the control module **OPX-2A** or data setting software **MEXE02** (both sold separately), the alarm code 1 (AL1) output will become effective. This signal will be output when the protective function is activated and the alarm generates. The protective function that activated can be checked via the combination of AL0, AL1 and AL2 outputs.

### ◇Position Complete (END)

**Pin No.⑬, ⑭**

When the motor has completed its movement, the END output will turn ON. Specifically, the END output will turn ON when the rotor position falls within ±1.8° of the command position while no pulse signal is input.
You can set a desired output condition for the END output using the control module **OPX-2A** or data setting software **MEXE02** (both sold separately).

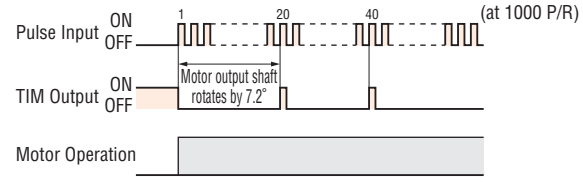


◇Timing (TIM1) Output
Pin No.⑦, ⑧

Timing (TIM2) Output/Alarm Code 2 (AL2) Output
Pin No.⑲, ⑳

### TIM1 Output, TIM2 Output Setting (Factory setting)

The TIM output will turn ON every time the motor output shaft rotates by 7.2°.
This signal can be used to detect the home position with greater precision.
Two types of TIM outputs are available: the open-collector output (TIM2 output) and the line driver output (TIM1 output). Change the TIM output according to the pulse input mode of the host controller.
When the settings of the TIM2 output are changed with the control module **OPX-2A** or data setting software **MEXE02** (both sold separately), the alarm code (AL2) output will become effective.



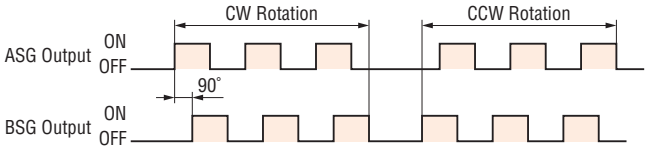

**Notes:**
- The TIM1 output will not turn ON properly unless the pulse speed is 10 kHz or less. The TIM2 output will not turn ON properly unless the pulse speed is 500 Hz or less.
- When changing the resolution using the CS input, do so while the TIM output is ON and the motor is at standstill. If the CS input is turned ON/OFF when one or both of these conditions are unsatisfied, the TIM output will not turn ON even after the motor output shaft rotates by 7.2°.

### AL2 Output Setting

When the settings are changed with the control module **OPX-2A** or data setting software **MEXE02** (both sold separately), the alarm code 2 (AL2) output will become effective. This signal will be output when the protective function is activated and the alarm generates. The protective function that activated can be checked via the combination of AL0, AL1 and AL2 outputs.

◇A-Phase Pulse (ASG)/B-Phase Pulse (BSG) Output
Pin No. ③, ④, ⑤, ⑥

A counter or similar device can be connected to monitor the position of the motor. You can monitor the motor position by counting the ASG output pulses. The BSG output has a 90° phase difference with respect to the ASG output. You can determine the motor rotation direction by detecting the BSG output level at the rise of the ASG output. The number of output pulses per motor rotation varies depending on the resolution effective when the power was turned on.




**Notes:**
- The ASG output and BSG output are subject to a maximum delay of 0.1 ms with respect to motor operation. Use these outputs to check the position at which the motor is stopped.
- Connect a terminal resistor of 100 Ω or more between the input of the line receiver terminals.

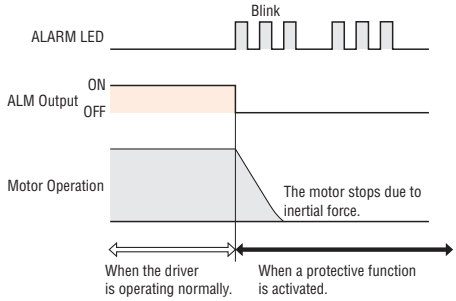
◇Warning (WNG) Output
Pin No.⑪, ⑫

You can cause a warning to generate before a corresponding alarm does. To use the WNG output, the output condition must be changed using the control module **OPX-2A** or data setting software **MEXE02** (both sold separately).

◇Alarm (ALM) Output
Pin No.⑨, ⑩

When a protective function is activated, the ALM output will turn OFF. At the same time, the ALARM LED of the driver will blink and the motor current will be cut off. For AC input type, in the case of an electromagnetic brake motor, the electromagnetic brake will switch to the holding mode and the motor current will be cut off. Set the host controller so that it will stop motor operation commands upon detection of an OFF status of the ALM output.
You can check the cause of the alarm by counting the number of times the ALARM LED blinks.
To cancel the alarm, first resolve the cause and check for safety, and then input an "Alarm Reset" (ALM-RST) signal or reset power. Wait at least 10 seconds before turning on the power.

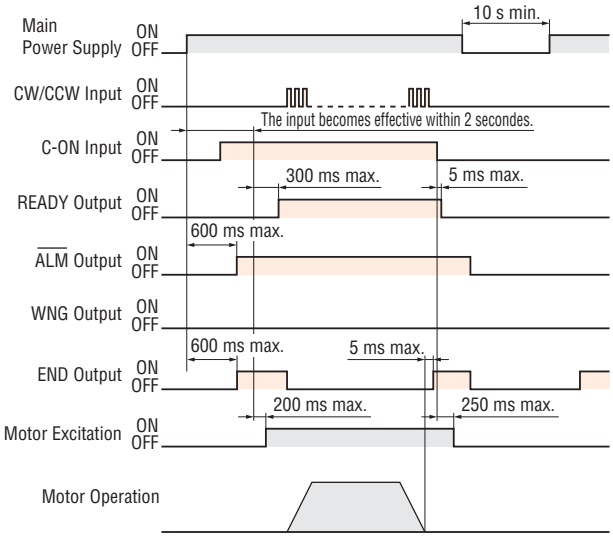
**Note:**
- In the case of operation data errors, the current will not be cut off and if an AC input type motor is used, the electromagnetic brake will not be held even after these errors occur.



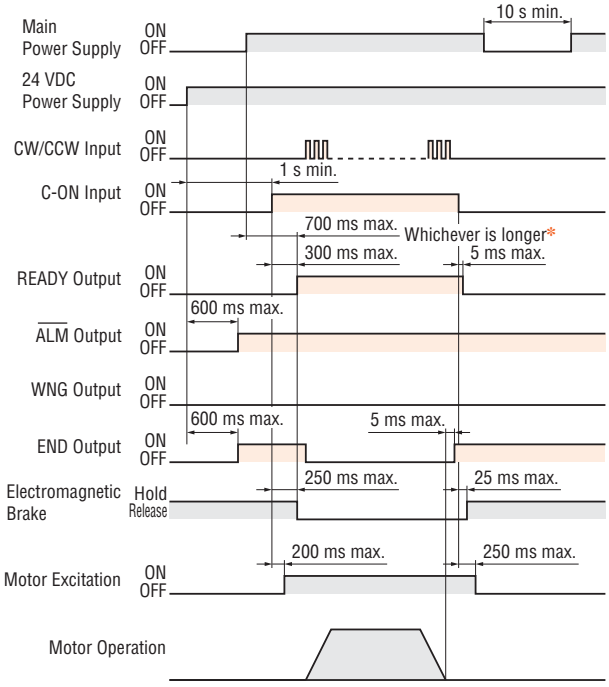
## ●Timing Charts

### ◇Power Supply Input

Turn ON the main power supply and turn the C-ON input ON. The motor will be excited. The READY output will turn ON and pulse input will be enabled.

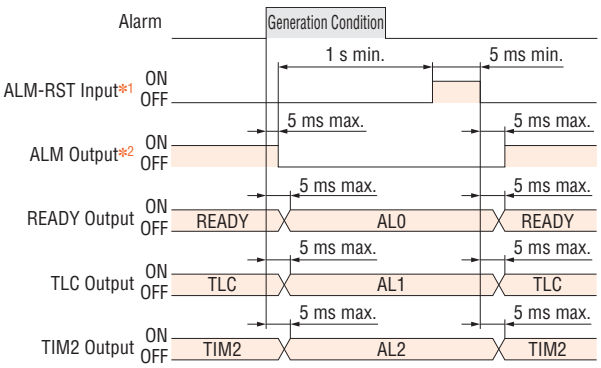



### • Using 24 VDC Power Supply (Only for AC Input Type)




* The specific time varies depending on the timing at which the C-ON input is turned ON.

### ◇AL0/AL1/AL2 Output




*1 Alarms are reset at the ON → OFF edge of the signal. To reset an alarm, always resolve the cause of the alarm and then input this signal.
*2 The signal logic is normally closed. The signal remains ON in a normal condition, and turns OFF when an alarm generates.