



C O N T E N T S

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ABSODEX

AXD Series

Interface specifications: Parallel I/O, CC-Link,
EtherCAT, EtherNet/IP



How to order

AXD - **S** **A2** - **NP**

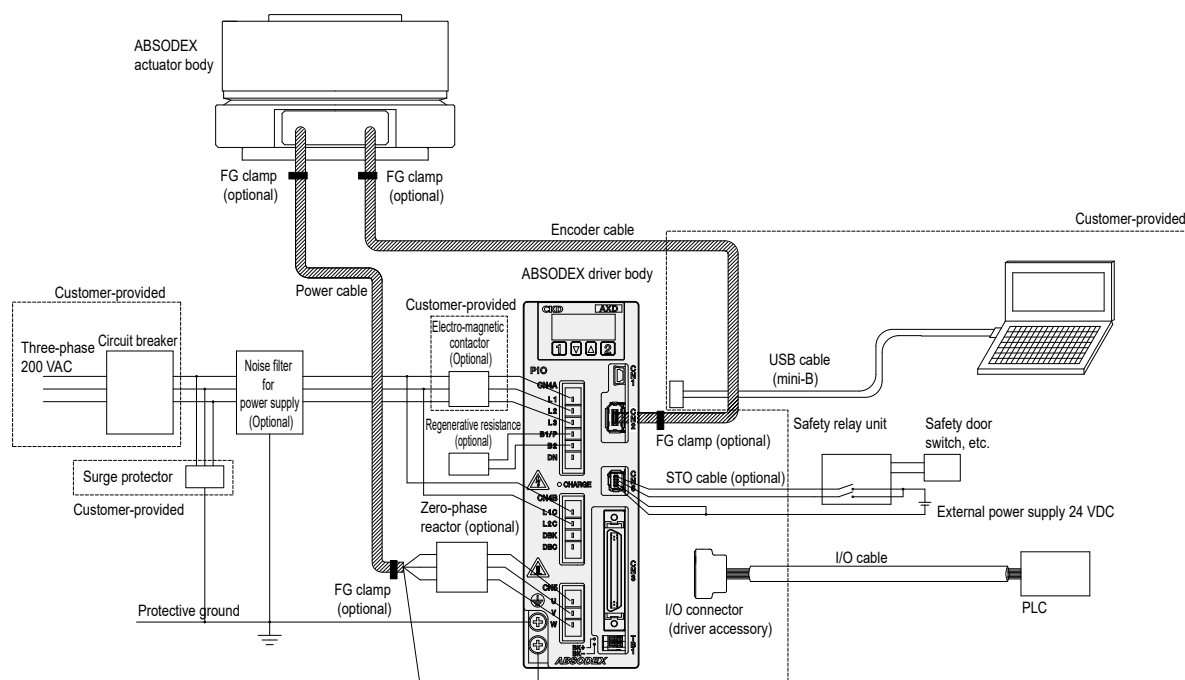
①
Power supply
voltage
200 VAC

②

① Driver size (rated output)	
S	Compact (400 W)
H	Large (800 W)

② Interface specifications	
NP	Parallel I/O (NPN, PNP)
CL	CC-LINK
EC	EtherCAT
EN	EtherNet/IP

System configuration



To comply with the CE marking, the parts shown below or overcurrent/short circuit protection components are required. In addition, the driver must be installed within the switchboard. For details on the selection, installation and wiring methods of these components, refer to the instruction manual.

*2

Part name	Application	Model No.	Manufacturer
Noise filter	Three-phase	3SUP-EF10-ER-6	Okaya Electric Industries Co., Ltd.
		NF3010A-VZ	Soshin Electric Co., Ltd.
	Single phase	NF2015A-OD	Soshin Electric Co., Ltd.
		NF2016A-UP NF2016A-UPF	
Zero phase reactor		RC5060ZZ	Soshin Electric Co., Ltd.
Surge protector	Single phase	RSPD-250-U4	Okaya Electric Industries Co., Ltd.
	Three-phase	LT-CS32G801WS	Soshin Electric Co., Ltd.
		LT-C32G801WS	
FG clamp *1		FGC-5, FGC-8	Kitagawa Industries Co., Ltd.

*1: FG clamps are used to ground the power cable and encoder cable shields.

*2: Parts available for purchase from CKD. Refer to related parts (page 48).

General specifications

Item		Model No.	
		AXD-SA2	AXD-HA2
Rated output W		400	800
Main circuit Input power	Rated voltage V	AC200 to 240 Single-phase or three-phase *1, *4, *5	
	Frequency Hz	50/60	
	Allowable voltage fluctuation V	AC170 to 264	
	Rated current A	5.5 (single-phase) 3.2 (three-phase)	9.0 (single-phase) 5.2 (three-phase)
	Rated capacity kVA	1.1	1.8
	Rush current *2A	45 (5ms)	45 (9ms)
Control circuit Input power	Rated voltage V	AC200 to 240 Single-phase *1, *4, *5	
	Frequency Hz	50/60	
	Allowable voltage fluctuation V	AC170 to 264	
	Rated current A	0.12	
	Power consumption W	15	
	Rush current *2A	17 (3ms)	
Continuous output current A		3.5	6.8
Instantaneous output current A		9.9	17.0
Structure (degree of protection)		Natural cooling (IP20)	Forced cooling (IP20)
Operating ambient temperature		0 to 55 °C	
Storage ambient temperature		-20 to 65 °C	
Operating ambient humidity		90% or less, no condensation	
Storage ambient humidity		90% or less, no condensation	
Atmosphere		Avoid a harmful atmosphere such as corrosive gas, grinding oil, metal powder, and oil Indoor place not exposed to direct sunlight	
Sea level		1000 m or less	
Vibration resistance		5.9m/s ² (10 to 55Hz) No resonance	
Drive method		3-phase sine wave PWM	
Braking method		Regenerative braking force: External regenerative resistor *3	
Mounting method		Panel mounting	
Weight kg		Approx. 1.0	Approx. 1.5

* 1: The calculation of torque limit area is different from the usual when used in single-phase 200 VAC. Contact CKD to determine usability.

* 2: Value at rated voltage 240 VAC. The numbers in () are the time constants of the inrush current. Use three times the values in () as a guide for the time until the rush current stops.

* 3: Regenerative resistor is optional.

* 4: If the main power is cut off while the actuator is rotating, the rotation may continue due to inertia.

* 5: After the main power supply is cut OFF, the motor may rotate by the residual voltage of the driver.

Breaker capacity

●AXD-SA2

Actuator model No.	Breaker capacity
	Rated current (A)
AX1R-022, AX1R-045, AX1R-075	10
AX2R-006, AX2R-012, AX2R-018	
AX4R-009, AX4R-022, AX4R-045, AX4R-075	

●AXD-HA2

Actuator model No.	Breaker capacity
	Rated current (A)
AX1R-150, AX1R-210	20
AX4R-150, AX4R-300, AX4R-500, AX4R-10W	

Operation mode

Operation mode	Overview
Automatic operation mode	Mode in which a program is executed continuously. In the shipping state, this automatic operation mode is entered after the power supply is turned ON.
Single block mode	Mode in which one block of the program is executed and stopped (program stop) for each start input.
MDI mode	In this mode, the NC code input from the USB port is immediately executed.
Job mode	Mode in which to perform jog operation.
Servo off mode	Mode in which the servo on is released.
pulse train input mode	Mode in which the device operates by connecting to the pulse train output controller. It is impossible to operate by an NC program, change parameter, etc.
Network operation mode	This operation mode can be used with the reduced wiring specifications -CL, -EC, -EN (CC-Link, EtherCAT, EtherNet/IP).

Performance specifications

Item	Description
No. of control axes	1 axis, 540, 672 pulse/1 rotation (2,097,152 pulses/1 rotation)
Angle setting unit	° (degree), pulse, indexing No.
Angle min. setting unit	0.001°, 1 pulse
Speed setting unit	sec., rpm
Speed setting range	0.01 to 100 sec / 0.01 to 300rpm (*1)
Equal divisions	1 to 255
Max. command value	8-digit numeric input ±99,999,999
Timer	0.01 sec. to 99.99 sec
Programming language	NC
Programming method	Set data through USB port with a PC, etc. (*2)
Operation mode	Auto, MDI, jog, single block, servo off, pulse train input mode, network operation
Coordinates	Absolute, incremental
Acceleration curve	[5 types] Modified Sine (MS), Modified Constant Velocity (MC/MC2), Modified Trapezoid (MT), Trapezoid (TR)
Status display	LED display CHARGE: Main power supply
Operation display	Indicator with 7-segment LED (5 digits)
Communication interface	USB2.0 standard compliant (FULL Speed) mini-B
I/O signal	Refer to interface specification pages.
Program capacity	Approx. 6000 characters (256)
Load factor	Overheating protection for actuator

* 1: Maximum rotation speed differs depending on the actuator connected and the resolution setting of the actuator.

* 2: "AX-Tools" PC software is available. (Provided free of charge for the Windows version) Please download and use the latest version of the PC software "AX-Tools" from our website.

Actuator
AX1R

Actuator
AX2R

Actuator
AX4R

Driver
AXD

Related parts
AXP

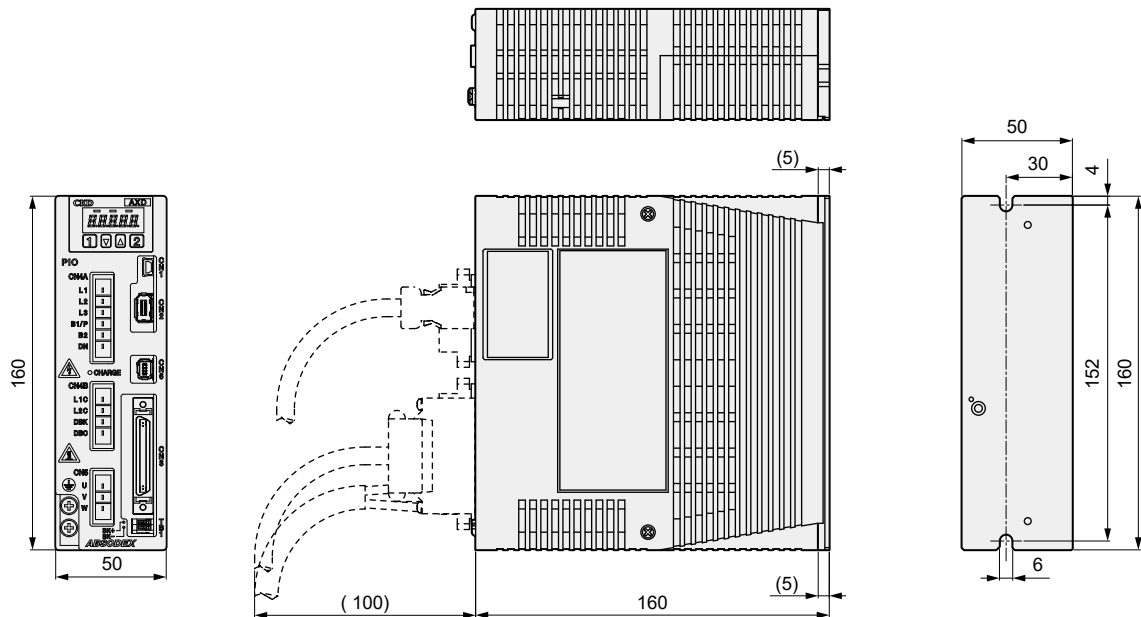
Model
selection

Safety precautions

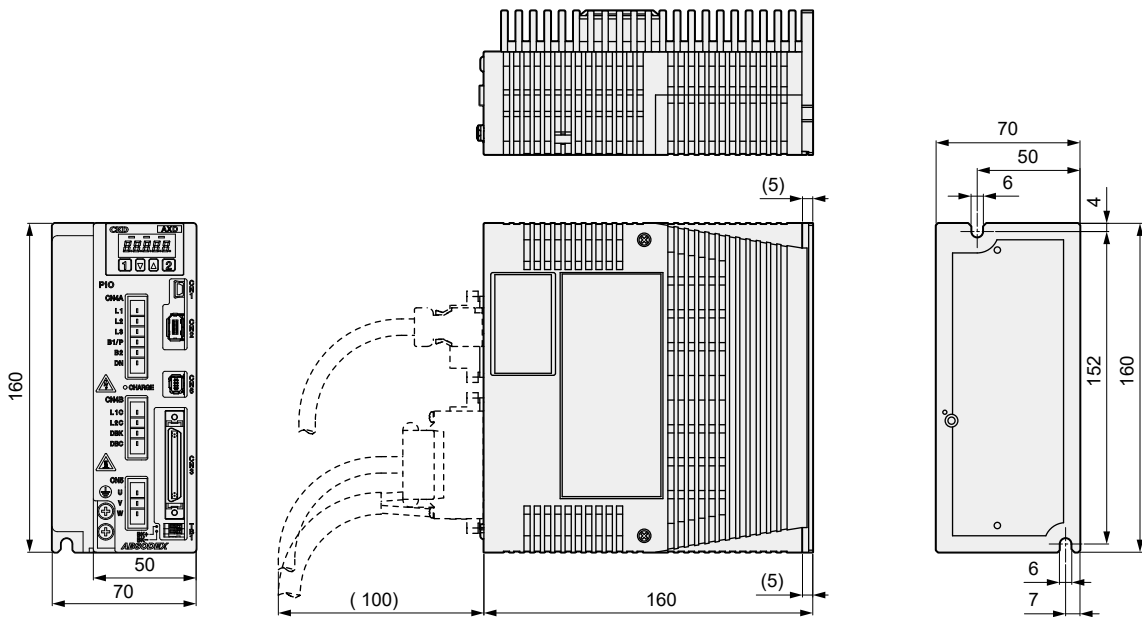
Model selection
specifications
Check sheet

Dimensions

● AXD-SA2



● AXD-HA2



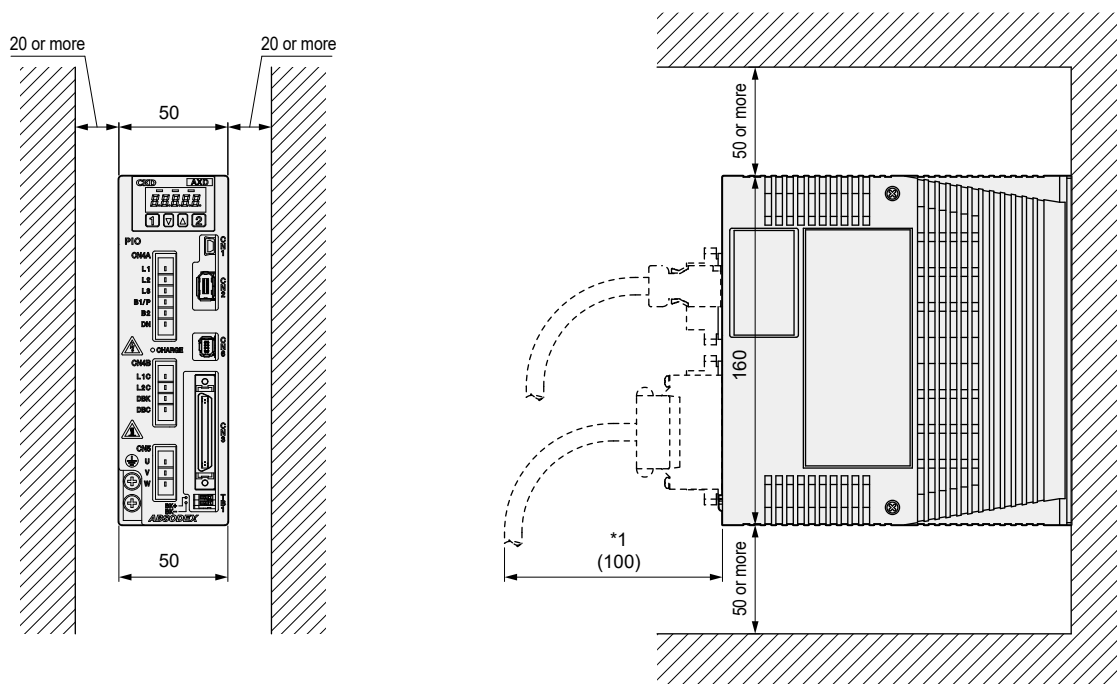
Driver accessory

Model No.	Interface Specifications	Signal connector		Connector for power supply
AXD-□A2-NP	Parallel I/O	[CN3] Sumitomo 3M Ltd. 10150-3000PE (plug) 10350-52A0-008 (shell)	[CN6] Japan Aircraft Electronics Industries Co., Ltd. DZ02B008DC1	[CN4A] J.S.T. Mfg Co., Ltd. 06JFAT-SBXGF-I or 06JFAT-SBXGGKS-A
AXD-□A2-CL	CC-LINK	[CN3] Weidmüller BLZP5.08HC/05/180F SN OR BX		[CN4B] J.S.T. Mfg Co., Ltd. 04JFAT-SBXGF-I or 04JFAT-SBXGGKS-A
AXD-□A2-EC	EtherCAT	[CN3A, CN3B] Not included		[CN5] J.S.T. Mfg Co., Ltd. 03JFAT-SBYGF-I or 03JFAT-SBYGGKS-A
AXD-□A2-EN	EtherNet/IP	[CN3A, CN3B] Not included		[Operation lever for connector] J.S.T. Mfg. Co., Ltd. J-FAT-OT or J-FAT-OT(N)

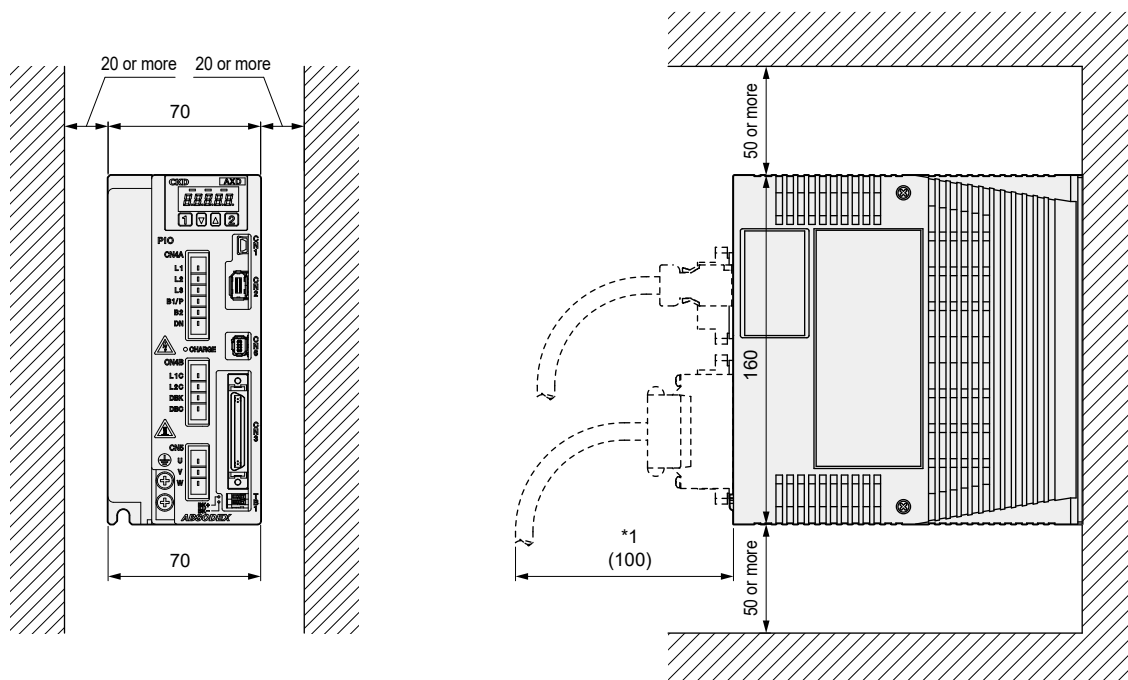
When ordering additional parts, refer to the related parts list.

Installation dimensions

● AXD-SA2



● AXD-HA2



* 1: Determine the dimension with extra allowance according to the cable you want to use.

Safety precautions

- The ABSODEX driver is not dustproof or waterproof. Provide protection in your working environment to prevent dust, water, oil, and other substances from entering the driver.
- Install the ABSODEX driver away from other Components, walls or other structures by 50 mm or more from both top and bottom and 20 mm or more from sides. If heat is generated from other drivers or devices, be careful that the ambient temperature does not rise to 55 °C or more.

Actuator
AX1R

Actuator
AX2R

Actuator
AX4R

Driver
AXD

Related parts
AXP

Model
selection

Safety
precautions

Model selection
specifications
Check sheet

Panel description

Actuator
AX1R

Actuator
AX2R

Actuator
AX4R

Driver
AXD

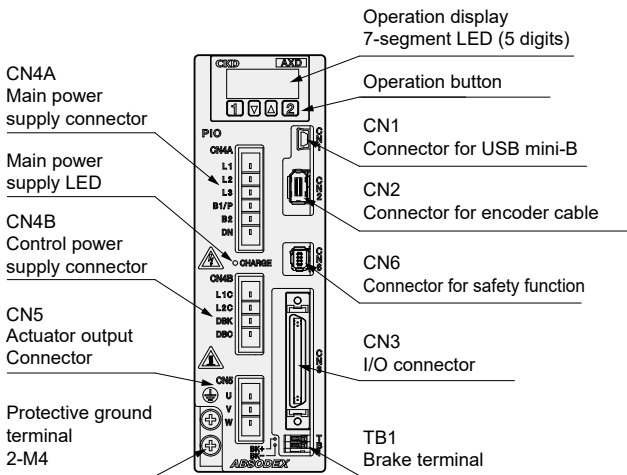
Related parts
AXP

Model
selection

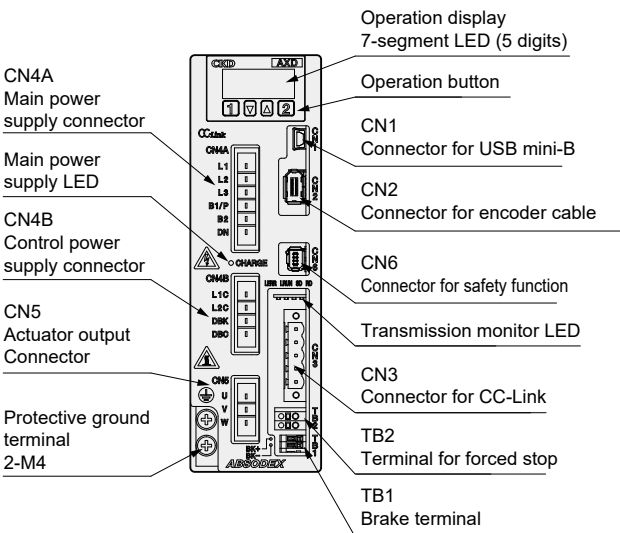
Safety precautions

Model selection
specifications
Check sheet

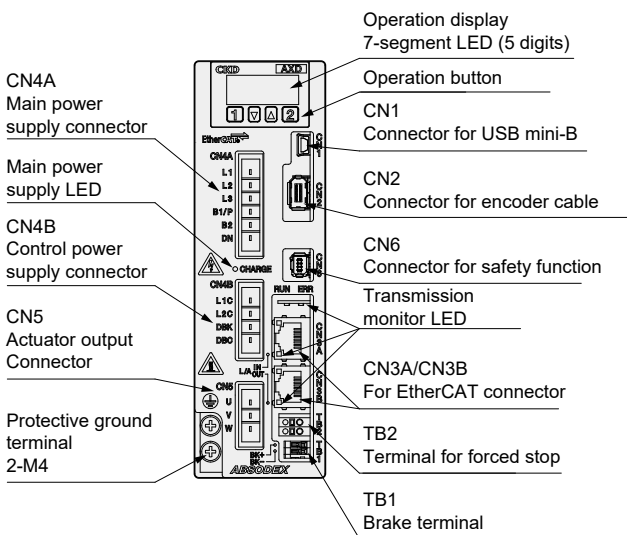
● Parallel I/O



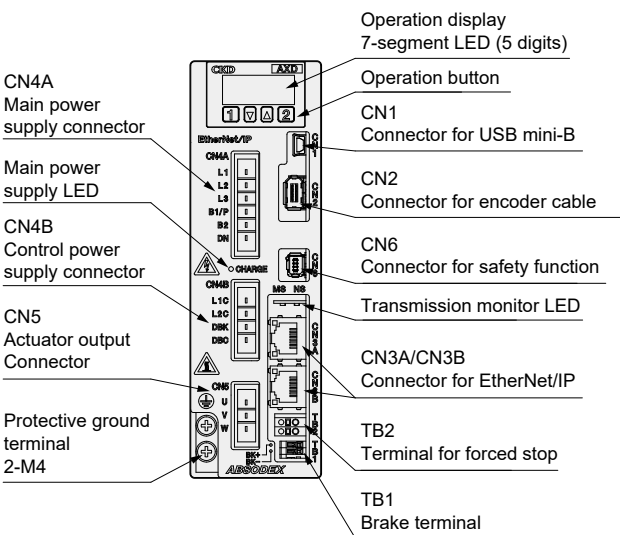
● CC-LINK



● EtherCAT



● EtherNet/IP



Parallel I/O

CN3 input signal

Pin No.	Signal name	Logic	Judgment
1 to 2	Input signal power supply common		
3 to 4	Output signal power supply common		
5	Program No. selection input (bit 0)	Positive	Level
6	Program No. selection input (bit 1)	Positive	Level
7	Program No. selection input (bit 2)	Positive	Level
8	Program No. selection input (bit 3)	Positive	Level
9	Program number setting input 2nd digit/ Program number selection input (bit 4)	Positive	Edge Level
10	Program number setting input 1st digit/ Program number selection input (bit 5)	Positive	Edge Level
11	Reset input	Positive	Edge
12	Origin position return command input	Positive	Edge
13	Startup input	Positive	Edge
14	Servo on input/ Program stop input	Positive	Level Edge
15	Ready return/Continuous rotation stop input	Positive	Edge
16	Answer input/Position deviation counter reset input	Positive	Level Edge
17	Forced stop input	Negative	Level
18	Brake release input	Positive	Level

CN3 pulse train input signal

Pin No.	Signal name
19	PULSE/UP/A-phase
20	-PULSE/UP/-A-phase
21	DIR/DOWN/B-phase
22	-DIR/-DOWN/-B-phase

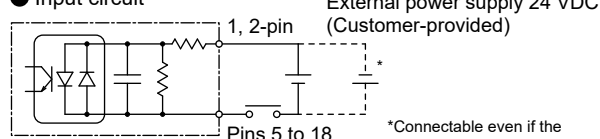
I/O circuit specifications

Description	1 circuit current (mA)	Max. number of points (Circuit)	Max. current (mA)	Max. current consumption (mA)
Input circuit	5	14	70	1120
Output circuit	50	18	900	
Brake output (BK+, BK-)	75	2	150	

* The maximum simultaneous output points of the output circuit are 14 points out of 18 points.

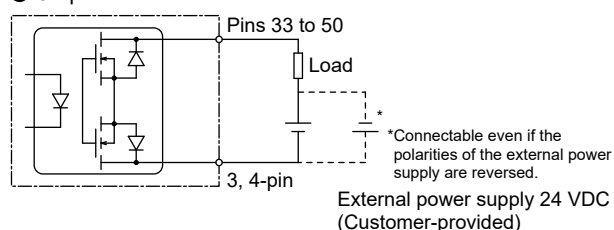
CN3 I/O circuit specifications

● Input circuit



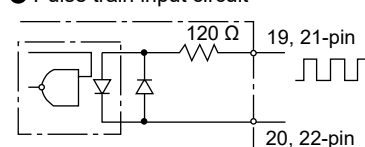
Rated voltage: 24 V $\pm$ 10% (including ripple)
Rated current: 5 mA (with 24 VDC)

● Output circuit



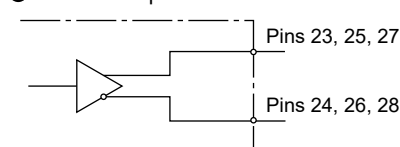
Rated voltage: 24 V $\pm$ 10% (including ripple)
Load current: 50mA (MAX)

● Pulse train input circuit



Max. input frequency
Line driver: 4 Mpps
Open collector: 250 Kpps

● Encoder output circuit



Output: Line driver
Line driver used: 26 LS31 or equiv.
Recommended Line Driver: 26 LS32 or equiv.

CN3 output signal

Pin No.	Signal name	Logic
33	M-code output (bit 0)	Positive
34	M-code output (bit 1)	Positive
35	M-code output (bit 2)	Positive
36	M-code output (bit 3)	Positive
37	M-code output (bit 4)	Positive
38	M-code output (bit 5)	Positive
39	M-code output (bit 6)	Positive
40	M-code output (bit 7)	Positive
41	In-position output	Positive
42	Output of positioning completion	Positive
43	Startup input standby output	Positive
44	Alarm output 1	Negative
45	Alarm output 2	Negative
46	Output 1 during indexing/Origin position output	Positive
47	Output 2 during indexing/Servo state output	Positive
48	Ready output	Positive
49	Split position strobe output	Positive
50	M-code strobe output	Positive

CN3 encoder output signal (incremental)

Pin No.	Signal name
23	A-phase (line driver output)
24	-A-phase (line driver output)
25	B-phase (line driver output)
26	-B-phase (line driver output)
27	Z-phase (line driver output)
28	-Z-phase (line driver output)

Actuator
AX1R

Actuator
AX2R

Actuator
AX4R

Driver
AXD

Related parts
AXP

Model
selection

Safety precautions

Model selection
specifications
Check sheet

CC-LINK

Communication specifications

Item	Specifications
Power	5 VDC is supplied from the servo amplifier.
CC-Link version	Ver1.10
Number of occupied stations (Station type)	2 stations (Remote device station)
Remote input points	64 points (including unusable)
Remote output points	64 points (including unusable)
Remote register input/output	Input 8 words/Output 8 words
Communication speed	10M/5M/2.5M/625k/156kbps (Selected by parameter setting)
Connection cable	CC-Link Ver. 1.10 compliant cable (3-conductor twisted pair cable with shield)
Transmission format	HDLC compliant
Remote station No.	1 - 63 (Set by a parameter)
Number of connected units	For remote device station only, Max. 32 units/2 stations occupied
Monitor function	Present position within 1 rotation (degree, pulse), Position deviation amount, program No., Load factor, rotation speed, Point table No., torque load factor, Angular acceleration, alarm, parameters, Operation mode

I/O signal

PLC → AXD (Input)

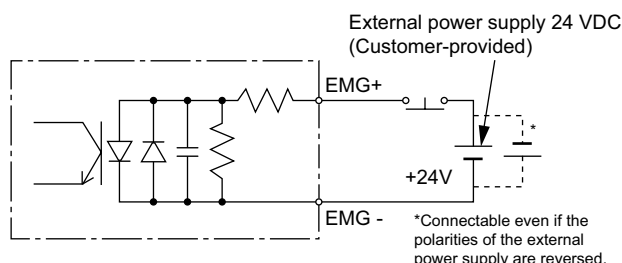
Device No.	Signal name	Logic	Judgment
RYn0	Program No. selection input (bit 0)	Correct	Level
RYn1	Program No. selection input (bit 1)	Correct	Level
RYn2	Program No. selection input (bit 2)	Correct	Level
RYn3	Program No. selection input (bit 3)	Correct	Level
RYn4	Program No. setting 2nd digit input/ Program No. selection input (bit 4)	Correct	Edge Level
RYn5	Program No. setting 1st digit input/ Program No. selection input (bit 5)	Correct	Edge Level
RYn6	Reset input	Correct	Edge
RYn7	Origin position return command input	Correct	Edge
RYn8	Startup input	Correct	Edge
RYn9	Servo ON input/ Program stop input	Correct	Level edge
RYnA	Ready return input/ Continuous rotation stop input	Correct	Edge
RYnB	Answer input/ Position deviation counter reset input	Correct	Edge Level
RYnC	Forced stop input	Negative	Level
RYnD	Brake release input	Correct	Level
RYnE	Job operation input (CW direction)	Correct	Level
RYnF	Job operation input (CCW direction)	Correct	Level
RY(n+1)0	Unusable/Travel unit selection input (Bit 0)	Correct	Level
RY(n+1)1	Unusable/Travel unit selection input (Bit 1)	Correct	Level
RY(n+1)2	Unusable/Travel speed unit selection input	Correct	Level
RY(n+1)3	Operation by table, Operation by data input Switching input	Correct	Level
RY(n+1)4 to RY(n+1)F	Unusable		
RY(n+2)0	Monitor output execution request	Correct	Level
RY(n+2)1	Command code execution request	Correct	Edge
RY(n+2)2 to RY(n+2)F	Unusable		
RY(n+3)0 to RY(n+3)F	Unusable		
RWwn0	Monitor code 1		
RWwn1	Monitor code 2		
RWwn2	Command code		
RWwn3	Write data/ A-cord or P-cord		
RWwn4	Data specification/F code		
RWwn5	-		
RWwn6	-		
RWwn7	-		

AXD (Output) → PLC

Device No.	Signal name	Logic
RXn0	M-code output (bit 0)	Correct
RXn1	M-code output (bit 1)	Correct
RXn2	M-code output (bit 2)	Correct
RXn3	M-code output (bit 3)	Correct
RXn4	M-code output (bit 4)	Correct
RXn5	M-code output (bit 5)	Correct
RXn6	M-code output (bit 6)	Correct
RXn7	M-code output (bit 7)	Correct
RXn8	In-position output	Correct
RXn9	Output of positioning completion	Correct
RXnA	Startup input standby output	Correct
RXnB	Alarm output 1	Negative
RXnC	Alarm output 2	Negative
RXnD	Output 1 during indexing/Origin position output	Correct
RXnE	Output 2 during indexing/Servo state output	Correct
RXnF	Ready output	Correct
RX(n+1)0	Split position strobe output	Correct
RX(n+1)1	M-code strobe output	Correct
RX(n+1)2 to RX(n+1)F	Unusable	
RX(n+2)0	Monitoring	Correct
RX(n+2)1	Command code execution completed	Correct
RX(n+2)2 to RX(n+2)F	Unusable	
RX(n+3)0 to RX(n+3)A	Unusable	
RX(n+3)B	Remote READY	Correct
RX(n+3)C to RX(n+3)F	Unusable	
RWwn0	Monitor data 1	
RWwn1	Response code	
RWwn2	Read data	
RWwn3	Read data	
RWwn4	Read data	
RWwn5	Monitor data 2	
RWwn6	-	
RWwn7	-	

*n is determined by the setting of the station No.

TB2 Input circuit specifications (forced stop)



Rated voltage 24 V ±10%, Rated current 5 mA or less

Safety precautions

- Reserve a sufficient distance between the communication cable and power cable (power cable, power supply cable, etc.).
- Placing the communication cable and power cable close to each other or bundling these cables makes communication unstable due to noise, possibly resulting in a communication error or retry.
- For details on the installation of the communication cable, refer to the CC-Link installation manuals on the website of the CC-Link Partner Association.

EtherCAT

Communication specifications

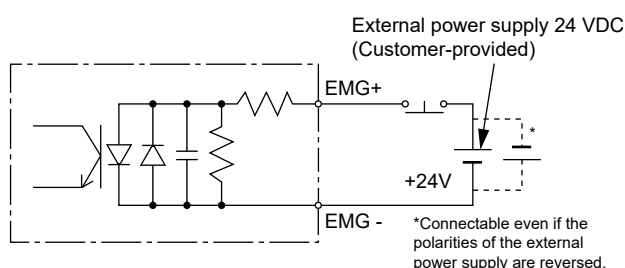
Item	Specifications
Communication protocol	EtherCAT
Communication speed	100Mbps (fast Ethernet, full duplex)
Process data	Fixed PDO mapping
Max. PDO data length	RxPDO: 40 bytes/TxPDO: 40 bytes
Station alias	0 to 65535 (set from master)
Connection cable	EtherCAT compliant cable (Twisted pair cable of CAT5e or higher (Double shielding with aluminum tape and braid is recommended))
Node address	Automatic indexing the master
Monitor function	Present position within 1 rotation (degree, pulse), Position deviation amount, program No., Load factor, rotation speed, Point table No., torque load factor, Angular acceleration, alarm, parameters, Operation mode

I/O signal

PLC → AXD (Input)

INDEX	Sub INDEX	Indicator name	bit	Signal name	Logic	Judgment
0x3000	0x01	Input signal 1	0	Program No. selection input (bit 0)	Correct	Level
			1	Program No. selection input (bit 1)	Correct	Level
			2	Program No. selection input (bit 2)	Correct	Level
			3	Program No. selection input (bit 3)	Correct	Level
			4	Program No. setting 2nd digit input/ Program No. selection input (bit 4)	Correct	Edge level
			5	Program No. setting 1st digit input/ Program No. selection input (bit 5)	Correct	Edge level
			6	Reset input	Correct	Edge
			7	Origin position return command input	Correct	Edge
			8	Startup input	Correct	Edge
			9	Servo ON input/ Program stop input	Correct	Level
			10	Ready return input/ Continuous rotation stop input	Correct	Edge
			11	Answer input/ Position deviation counter reset input	Correct	Edge level
			12	Forced stop input	Negative	Level
			13	Brake release input	Correct	Level
			14	Job operation input (CW direction)	Correct	Level
			15	Job operation input (CCW direction)	Correct	Level
			16	Unusable/Travel unit selection input (Bit 0)	Correct	Level
			17	Unusable/Travel unit selection input (Bit 1)	Correct	Level
			18	Unusable/Travel speed unit selection input	Correct	Level
			19	Operation by table, Operation by data input Switching input	Correct	Level
			20 to 31	Unusable		
	0x02	Input signal 2	0	Monitor output execution request	Correct	Level
			1	Command code execution request	Correct	Edge
			2 to 31	Unusable		
0x3001	0x01	Input data 1	-	Monitor code 1		
	0x02	Input data 2	-	Monitor code 2		
	0x03	Input data 3	-	Monitor code 3		
	0x04	Input data 4	-	Monitor code 4		
	0x05	Input data 5	-	Monitor code 5		
0x3002	0x01	Input command 1	-	Command code		
	0x02	Input command 2	-	Write data/A code or P code		
	0x03	Input command 3	-	Data specification/F code		

TB2 Input circuit specifications (forced stop)



PDO mapping

RxPDO

INDEX	Sub Index	Indicator name	Description
0x1600	0x00	Number of PDO objects	10
	0x01	Input signal 1	0x3000-0x01
	0x02	Input signal 2	0x3000-0x02
	0x03	Input data 1	0x3001-0x01
	0x04	Input data 2	0x3001-0x02
	0x05	Input data 3	0x3001-0x03
	0x06	Input data 4	0x3001-0x04
	0x07	Input data 5	0x3001-0x05
	0x08	Input command 1	0x3002-0x01
	0x09	Input command 2	0x3002-0x02
	0x0A	Input command 3	0x3002-0x03

TxPDO

INDEX	Sub Index	Indicator name	Description
0x1A00	0x00	Number of PDO objects	10
	0x01	Output signal 1	0x2000-0x01
	0x02	Output signal 2	0x2000-0x02
	0x03	Output data 1	0x2001-0x01
	0x04	Output data 2	0x2001-0x02
	0x05	Output data 3	0x2001-0x03
	0x06	Output data 4	0x2001-0x04
	0x07	Output data 5	0x2001-0x05
	0x08	Output command 1	0x2002-0x01
	0x09	Output command 2	0x2002-0x02
	0x0A	Output command 3	0x2002-0x03

I/O signal

AXD (Output) → PLC

INDEX	Sub INDEX	Indicator name	bit	Signal name	Logic
0x2000	0x01	Output signal 1	0	M-code output (bit 0)	Correct
			1	M-code output (bit 1)	Correct
			2	M-code output (bit 2)	Correct
			3	M-code output (bit 3)	Correct
			4	M-code output (bit 4)	Correct
			5	M-code output (bit 5)	Correct
			6	M-code output (bit 6)	Correct
			7	M-code output (bit 7)	Correct
			8	In-position output	Correct
			9	Output of positioning completion	Correct
			10	Startup input standby output	Correct
			11	Alarm output 1	Negative
			12	Alarm output 2	Negative
			13	Output 1 during indexing/ Origin position output	Correct
			14	Output 2 during indexing/ Servo state output	Correct
			15	Ready output	Correct
			16	Split position strobe output	Correct
			17	M-code strobe output	Correct
			18 to 31	Unusable	
0x2001	0x02	Output signal 2	0	Monitoring	Correct
			1	Command code execution completed	Correct
			2 to 31	Unusable	
			0x01	Output data 1	- Monitor data 1
			0x02	Output data 2	- Monitor data 2
0x2002	0x03	Output command 3	0x03	Output data 3	- Monitor data 3
			0x04	Output data 4	- Monitor data 4
			0x05	Output data 5	- Monitor data 5
0x2002	0x02	Output command 2	0x01	Output command 1	- Response code
			0x02	Output command 2	- Read data
			0x03	Output command 3	-

Safety precautions

- Reserve a sufficient distance between the communication cable and power cable (power cable, power supply cable, etc.).
- Placing the communication cable and power cable close to each other or bundling these cables makes communication unstable due to noise, possibly resulting in a communication error or retry.
- For details on the installation of the communication cable, refer to EtherCAT Technology Group installation guidelines on the EtherCAT website.

EtherNet/IP

Communication specifications

Item	Specifications
Communication protocol	EtherNet/IP
Communication speed	Automatic setting (100 Mbps/10 Mbps, full duplex/half duplex)
Occupied bytes	Input: 32 bytes/output: 32 bytes
IP address	0.0.0.0 to 255.255.255.255 (Set by a parameter or DHCP)
Subnet mask	0.0.0.0 to 255.255.255.255 (Set by a parameter or DHCP)
Default gateway	0.0.0.0 to 255.255.255.255 (Set by a parameter or DHCP)
RPI (Packet interval)	2 msec to 10000 msec
Connection cable	EtherNet/IP compliant cable (CAT5e or higher twisted pair cable (double shield with aluminum tape and braid) is recommended.)
Monitor function	Present position within 1 rotation (degree, pulse), Position deviation amount, program No., Load factor, rotation speed, Point table No., torque load factor, angular acceleration, alarm, Parameters and operation mode

I/O signal

PLC → AXD (Input)

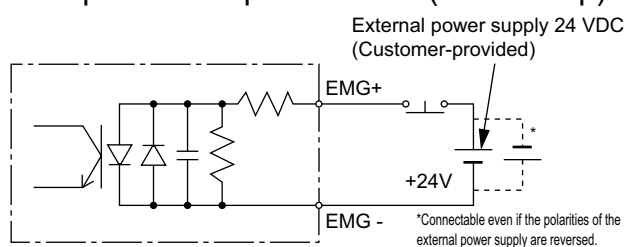
Byte	bit	Signal name	Logic	Judgment
0	0	Program No. selection input (bit 0)	Correct	Level
	1	Program No. selection input (bit 1)	Correct	Level
	2	Program No. selection input (bit 2)	Correct	Level
	3	Program No. selection input (bit 3)	Correct	Level
	4	Program No. setting 2nd digit input /Program No. selection input (Bit 4)	Correct	Edge
	5	Program No. setting 1st digit input /Program No. selection input (bit 5)	Correct	Edge
	6	Reset input	Correct	Edge
	7	Origin position return command input	Correct	Edge
1	0	Startup input	Correct	Edge
	1	Servo on input /Program stop input	Correct	Level
	2	Ready return input /Continuous rotation stop input	Correct	Edge
	3	Answer input /Position deviation counter reset input	Correct	Edge
	4	Forced stop input	Negative	Level
	5	Brake release input	Correct	Level
	6	Job operation input (CW direction)	Correct	Level
	7	Job operation input (CCW direction)	Correct	Level
2	0	Unusable/Travel unit selection input (Bit 0)	Correct	Level
	1	Unusable/Travel unit selection input (Bit 1)	Correct	Level
	2	Unusable/Travel speed unit selection input	Correct	Level
	3	Operation by table, Operation by data input Switching input	Correct	Level
	4 to 7	Unusable		
	3	- Unusable		
	0	Monitor output execution request	Correct	Level
	1	Command code execution request	Correct	Edge
4	2 to 7	Unusable		
	5	- Unusable		
	6	- Unusable		
	7	- Unusable		
	8	-		
	9	-		
	10	-		
	11	-		
10	12	-		
	13	-		
	14	-		
	15	-		
	16	-		
	17	-		
	18	-		
	19	-		
20	20	-		
	21	-		
	22	-		
	23	-		
	24	-		
	25	-		
	26	-		
	27	-		
28	28	-		
	29	-		
	30	-		
	31	-		

I/O signal

AXD(Output) → PLC

Byte	bit	Signal name	Logic
0	0	M-code output (bit 0)	Correct
	1	M-code output (bit 1)	Correct
	2	M-code output (bit 2)	Correct
	3	M-code output (bit 3)	Correct
	4	M-code output (bit 4)	Correct
	5	M-code output (bit 5)	Correct
	6	M-code output (bit 6)	Correct
	7	M-code output (bit 7)	Correct
1	0	In-position output	Correct
	1	Output of positioning completion	Correct
	2	Startup input standby output	Correct
	3	Alarm output 1	Negative
	4	Alarm output 2	Negative
	5	Output 1 during indexing /Origin position output	Correct
	6	Output 2 during indexing /Servo state output	Correct
	7	Ready output	Correct
2	0	Split position strobe output	Correct
	1	M-code strobe output	Correct
	2 to 7	Unusable	
	3	- Unusable	
	0	Monitoring	Correct
	1	Command code execution completed	Correct
	2 to 7	Unusable	
	5	- Unusable	
6	6	- Unusable	
	7	- Unusable	
	8	-	
	9	-	
	10	-	
	11	-	
	12	-	
	13	-	
14	14	-	
	15	-	
	16	-	
	17	-	
	18	-	
	19	-	
	20	-	
	21	-	
22	22	-	
	23	-	
	24	-	
	25	-	
	26	-	
	27	-	
	28	-	
	29	-	
30	30	-	
	31	-	

TB2 Input circuit specifications (forced stop)



Safety precautions

- Reserve a sufficient distance between the communication cable and power cable (power cable, power supply cable, etc.).
- Placing the communication cable and power cable close to each other or bundling these cables makes communication unstable due to noise, resulting in a communication error. Otherwise, this could lead to a communication retry.
- For details on the installation of the communication cable, refer to the EtherNet/IP installation manuals on the ODVA website.