

ABSODEX AX SERIES GH AND H TYPE VERSION UP DRIVER

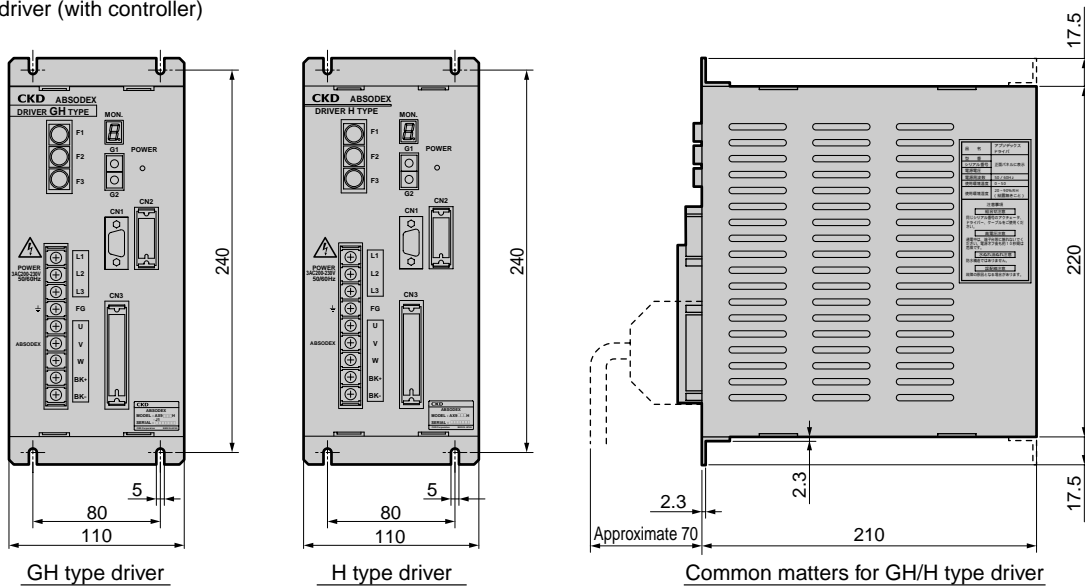


Main Contents of Version UP

- Additional Features
 - By adding home position output (Z phase output), the home position can be confirmed when the unit is operated with the pulse string input mode.
 - Brake output protection circuit is added to avoid circuit breakage caused by excess current of brake output and miswiring.
- Lead-Free Solder
 - Lead-free solder is employed except for some electrical components.

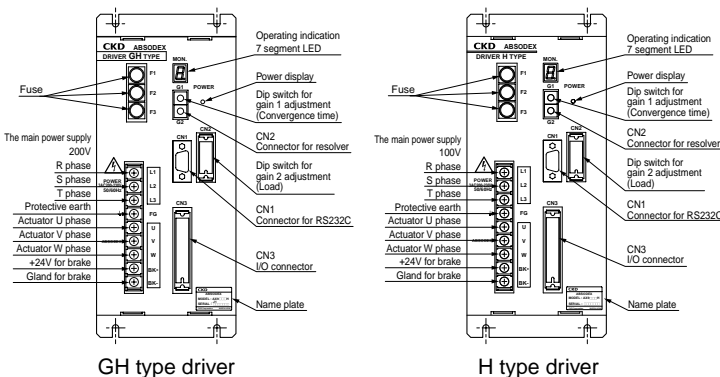
Dimensions

- GH/H type driver (with controller)



Panel explanation Note) GH and H type drivers have different front panel designs.

- GH/H type driver (with controller)



Programming tool

- [AX0170H] is available as programming terminal for GS-S and GH-H type drivers.
- Computer communication software [Teaching note] is available. (Free software for Windows). Programming, parameter setting and sending operation commands, etc. to a direct drive actuator are done from PC. It is possible to save the programs. RS-232C interface cable is required.
 - a) for D-sub 25 pin (2m) (model no.: AX-RS232C-25P)
 - b) for D-sub 9 pin (2m) (model no.: AX-RS232C-9P)
 - c) for 14 pin half pitch (2m) (model no.: AX-RS232C-14P)

Please carefully read "use with caution!" instructions attached on the product before using.

GH/H type driver

Dimensions, etc.

Common specifications

Descriptions	Model	
	H type driver AX9***H	GH type driver AX9000GH
Power supply voltage	1.3-200V AC ±10% (standard) (Note 1) 2.1-100V AC ±10% (J1: option) 3.220V AC -10% to 230V AC +10%, Three phase (J2: option) (Note 2)	3-200V AC -10% to 230V AC +10%
Power supply frequency	50/60 Hz	
Configuration	Driver and controller integrated type (open frame)	
Ambient temperature range	0 to 50 °C	
Ambient humidity range	20 to 90%RH (to be no dew condensation.)	
Conservation ambient temperature range	-20 to 80 °C	
Conservation ambient humidity range	20 to 90%RH (to be no dew condensation.)	
Atmosphere	To be no corrosive gas and powder dust.	
Noise-resistance	1000V (P-P), pulse amplitude 1 micron sec. and start up 1nsec.	
Vibration resistance	4.9m/s ²	
Mass	Approximate 3.2kg	

(Note 1) The models with maximum torque 50 N·m or less can be used for single phase 200V AC (standard) and 230V (option).

Performance specifications

Descriptions	Content
Number of control axis	1 axis and 540672 pulse/turn (name: A axis)
Angle input increment	°(degree), pulse and index number
Angle least input increment	0.001° and pulse
Speed input increment	Second and rpm
Speed setting range	0.01 to 100 sec./0.01 to 100rpm (Note) Maximum rotational speed may vary per actuator connected.
Equal index number	1 to 255
Maximum command value	7 digits input ±9999999
Timer	0.01 to 99.99 sec.
Programming language	NC language
Programming method	Data is set up by dialog terminal or PC, etc., through a RS232C port.
Operation mode	Automatic, MDI, jog, single block, servo OFF, pulse row input mode
Coordinates	Absolute and incremental
Acceleration curve	<5 types > Modified sine (MS), deformation constant velocity (MC/MC2), modified trapezoidal (MT) and tropecoid (TR)
Status display	Power supply display by LED
Operating indication	Display by 7-segment LED
Communication interface	RS-232C conformed
I/O signal	<Input > Return to origin command, reset, start, stop, continuous rotation stop, emergency stop, answer, program number selection, brake release, program number setting and pulse string input <Output > Alarm 1/2, positioning complete, in-position, start input waiting, M code 8 points, 1/2 during indexing, timing, M code strobing and index position strobing
Program capacity	Approximate 6000 characters (256 programs)
Electronic thermal	Overheat protection for actuator

Power supply wattage/breaker capacity GH type driver

Actuator model no.	Driver model no.	Electric power supply capacity (KVA)		Breaker capacity Rated current (A)
		Max.	Rated	
AX4150G	AX9000GH	3.0	0.8	20
AX4300G		4.0	1.5	
AX4500G		4.0	2.0	

H type driver

Actuator model no.	Driver model no.	Electric power supply capacity (KVA)		Breaker capacity Rated current (A)
		Max.	Rated	
AX * 006	AX9006H	0.8	0.5	10
AX * 009 and AX * 012	AX9009H and AX9012H	1.0	0.5	
AX * 021 and AX * 022	AX9021H and AX9022H			
AX * 045 and AX * 042	AX9045H and AX9042H	1.5	0.5	
AX * 070 and AX * 075	AX9070H and AX9075H	2.0	0.8	20
AX * 150	AX9150H	3.0	0.8	
AX * 210	AX9210H	4.0	0.8	
AX * 300	AX9300H	4.0	1.5	
AX * 500	AX9500H	4.0	2.0	

Note 2. Please refer to the Absodex General Catalog (No. CB-32A) for the model number to order.
The driver model number shows the model number printed on the label in the driver.

CN3 input signal

Pin number	Signal name	Logic	Judgment
1 to 2	External power input +24V ±10%		
3 to 4	External power input GND		
5	Program number selection input (bit 0)	Positive	Level
6	Program number selection input (bit 1)	Positive	Level
7	Program number selection input (bit 2)	Positive	Level
8	Program number selection input (bit 3)	Positive	Level
9	Program number selection input (bit 4) /program number setting input 2nd digit	Positive	Level Edge
10	Program number setting input 1st digit	Positive	Edge
11	Reset input	Positive	Edge
12	Return to origin command input	Positive	Edge
13	Start input	Positive	Edge
14	Program stop input	Positive	Edge
15	Continuous rotation stop input	Positive	Edge
16	Answer input	Positive	Edge
17	Emergency stop input	Negative	Level
18	Brake release input	Positive	Level

CN3 pulse string input signal

Pin number	Signal name
19	PULSE/UP/A phase
20	-PULSE/-UP/-A phase
21	DIR/DOWN/B phase
22	-DIR/-DOWN/-B phase

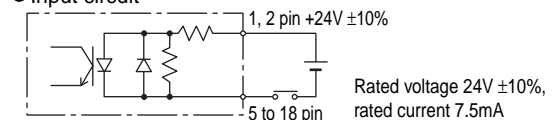
CN3 output signal

Pin number	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	Positioning complete output	Positive
43	Start input waiting output	Positive
44	Alarm output 1	Negative
45	Alarm output 2	Negative
46	Output during indexing 1/Z phase output (Pulse string input mode)	Positive
47	Output during indexing 2	Positive
48	Output of time	Positive
49	Index position strobing output	Positive
50	M code strobing output	Positive

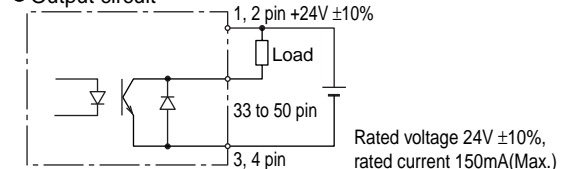
Note 3. Timing output can not be used in case the direction of revolution is CCW (counter clockwise).

CN3 I/O circuit specifications

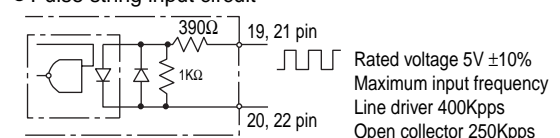
● Input circuit



● Output circuit



● Pulse string input circuit



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