SANMOTION CLOSED LOOP STEPPING SYSTEMS Model No.PB

Closed Loop Stepping Systems
4-Axis Integrated Driver

DC input

Applications

Semiconductor manufacturing equipment, food machinery, and general industrial machinery

Features

Space Saving and Wire Saving

This driver can control up to four stepping motors and requires less than half the installation space of four conventional drivers.*1 Also, only one power supply and I/O signal cable are necessary, reducing the amount of wiring.

Takt Time Reduction

In addition to the conventional closed loop control that eliminates step-out—a shortcoming of stepping motors—the new model includes a mode that also eliminates delays in position commands.*2 Without any delays in position commands, device takt time is reduced.

Flexible Resolution Settings

Position command resolution can be set between 200 P/R and 51,200 P/R, enabling operation at the suitable resolution required for the device.

Easy Analysis of Settings and Operating Status

Setup software downloaded from our homepage can be used to easily adjust control parameters, execute test runs, and monitor operation status from a PC.

*1: Our conventional product model no. PB3D003M200

*2: Deviation-free closed loop control

Specifications

Basic specifications	Model no.		PB4D003P340
	Interface		Pulse train input
	Input source		Main power supply 24 / 48 VDC ± 10%　Control power supply 24 VDC ± 10%
	No. of axes		4
	Source current		14 A
	Environment	Protection class	Class Ⅲ
		Operation environment	Installation category (overvoltage category): Ⅰ　Pollution degree: 2
	Mass		0.7 kg
Functions	Maximum speed		4500 min^{-1}
	Resolution (P/R)		200, 400, 800, 1000, 1600, 2000, 3200, 5000, 6400, 10000, 12800, 20000, 25000, 25600, 50000, 51200 Electric gear compatible
	Holding brake control function		Internal
	Protection functions		Main circuit overcurrent, overload error, initialization error, driver overheat, main circuit overvoltage, regeneration error, main circuit low voltage, control circuit low voltage, encoder disconnection, overspeed error, position deviation error, wrap around, memory error, CPU peripheral circuit error
	Display		LED indication
	Operation functions		Auto zero-return / push operation (current limit) / S-shape operation function
	DIP switch		SW1: 1, 2 motor axes　SW2: 3, 4 motor axes
	PC interface		RS-485 Asynchronous half-duplex communication　Communication speed: 57,600 bps
I/O signals	Pulse input signal		Photocoupler input method, input resistance: 200 Ω　Input signal voltage: "H" = 3.0 to 5.5 VDC, "L" = 0 to 0.5 VDC Maximum input frequency: 400 kpulse/s
	Input signal		Photocoupler input method, input resistance: 2.2 kΩ　Input signal voltage: "H" = 4.0 to 26.4 VDC, "L" = 0 to 1.0 VDC Input points: 13
	Output signal		Open collector output by photocoupler　Output signal standard: Vceo = 4.75 to 26.4 V, Ic = 10 mA max. Output points: 13

Safety standards	CE (TÜV)	Directives	Standard	Name
		Low-voltage directives	EN61800-5-1	–
		EMC directives	EN61000-6-2, EN61000-6-4	–
	UL	Acquired standards	Applicable standard	File no.
		UL	UL508C	E179775
		UL for Canada (c-UL)		
	KC Mark (Korea Certification Mark)		Acquired standards	
			KN61000-6-2, KN61000-6-4	

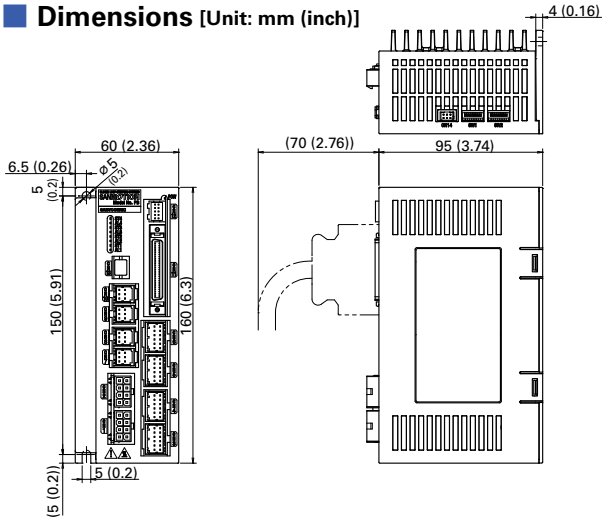
Compatible motors and options

Motor size	28 mm sq. (1.10 inch sq.)	42 mm sq. (1.65 inch sq.)	60 mm sq. (2.36 inch sq.)
Lineup	Standard	Standard	Standard
	Spur gear model Reduction gear ratios 1:3.6, 1:7.2, 1:10, 1:20, 1:30, 1:50	Low-backlash gear model Reduction gear ratios 1:3.6, 1:7.2, 1:10, 1:20, 1:30	Low-backlash gear model Reduction gear ratios 1:3.6, 1:7.2, 1:10, 1:20, 1:30
	Harmonic gear model Reduction gear ratios 1:50, 1:100	Harmonic gear model Reduction gear ratios 1:30, 1:50, 1:100	Harmonic gear model Reduction gear ratios 1:50, 1:100
	Electromagnetic brake model	Electromagnetic brake model	Electromagnetic brake model

Options

Type
Power cable
Power cable connector set
Motor extension cable
Motor cable connector set
Encoder extension connector cable
Encoder cable connector set
I/O signal cable
I/O signal cable connector set
Communication converter unit
Regenerative unit

Dimensions [Unit: mm (inch)]



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