



The 5-Phase Stepping Driver

PMM-BA-5604-1

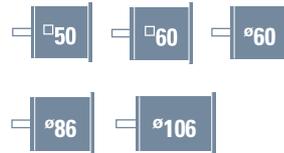
PMM-BA-5644-1

AC 100 V/115 V

Full-step/Half-step

(500 x 1 divisions) (500 x 2 divisions)

● Applicable motors



Characteristics

● High-speed type

These drivers are high-speed types of PMM-BA-56 □ 3-1. Stepping motors can be used even in the high-speed range.

● Flexible

The drivers can drive various stepping motors of small to large capacities without adjustment for wide range uses.

● Small size and high torque

Dedicated ICs are mounted to realize the small size and high torque as a result of parts consolidation and high reliability.

● Two types interface

Terminal block type :PMM-BA-5604-1

Connector type :PMM-BA-5644-1

Built-in function

● Low-vibration control

Our original control system employment enables a smooth and low-vibration operation.

● Pulse input system selection function

Either "Pulse and direction mode" or "2-input mode" can be selected, using a dipswitch. Resolution setting function.

● Operation current switchover function

Stepping motor operation current ranging from the rated one to 40% can be set by using the rotary switch.

PM driver specifications

Item		PMM-BA-5604-1	PMM-BA-5644-1	
Basic specifications	Environment	Input source	Single phase AC100/115V+10,-15% 50/60Hz	
		Source current	8A	
		Operating ambient temperature	0 to +50 °C	
		Conservation temperature	- 20 to + 70 °C	
		Operating ambient humidity	35 to 85 % RH (no condensation)	
		Conservation humidity	10 to 90 % RH (no condensation)	
		Vibration resistance	Tested under the following conditions: Frequency range: 10 to 55 Hz, 0.5 G along the X, Y, and Z axes for 2 hours	
		Impact resistance	No abnormality for the NDS-C-0110 Standard, Section 3.2.2, Division "C".	
		Withstand voltage	No abnormality against an AC 1500 V application between the power input terminal and the cabinet for one minute.	
		Insulation resistance	Minimum 10 MΩ when applying the DC 500 V Megger between the power input terminal and the cabinet.	
Function	Mass(Weight)	1.3kg(2.87 lbs)		
	Protection function	Against PM driver overheat		
	Selection function	Automatic current reduction, excitation mode, pulse input system, operation current, and low vibration		
I/O signals	LED indicator	Power supply monitor, phase origin monitor, pulse monitor, and alarm monitor.		
	Command pulse input signal	Photocoupler input system, input resistance 330 Ω Input signal voltage: "H" level: 4.0 to 5.5 V, "L" level: 0 to 0.5 V Maximum input frequency: 100 kpulses/s		
	Power down input signal	Photocoupler input system, input resistance 330 Ω Input signal voltage: "H" level: 4.0 to 5.5 V, "L" level: 0 to 0.5 V		
	Phase origin monitor output signal		Open collector output by photocoupler Output signal standard V _{ceo} : Maximum 30 V, I _c : Maximum 5 mA	
	Alarm output signal	Relay contact output (normal open) Contact capacity: Maximum 1 A at DC 24 V or maximum 0.5 A at AC 120 V		

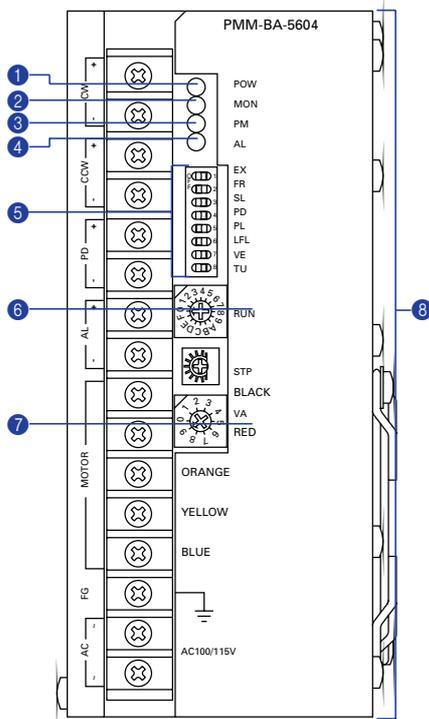
Standard combined stepping motor

Stepping motor dimensions	Stepping motor model number		Holding torque N·m(oz·in)	Rotor inertia ×10 ⁻⁴ kg·m ² (oz·in ²)	Mass(Weight) kg(lbs)	Page
	Single shaft	Double shaft				
□50mm	103H6500-8041	103H6500-8011	0.225(31.86)	0.057(0.31)	0.38(0.84)	Page 303
	103H6501-8041	103H6501-8011	0.39(55.23)	0.105(0.57)	0.44(0.97)	
□60mm	103H7851-8051	103H7851-8021	0.65(92.0)	0.275(1.50)	0.6(1.32)	Page 305
	103H7852-8051	103H7852-8021	0.98(138.8)	0.4(2.19)	0.78(1.72)	
	103H7853-8051	103H7853-8021	1.86(263.4)	0.84(4.59)	1.36(3.00)	
ø60mm	103H7521-8051	103H7521-8021	0.461(65.3)	0.148(0.81)	0.51(1.12)	Page 307
	103H7522-8051	103H7522-8021	0.735(104.1)	0.18(0.98)	0.6(1.32)	
	103H7523-8051	103H7523-8021	1.568(222.0)	0.423(2.31)	1.1(2.43)	
ø86mm	103H8581-8041	103H8581-8011	2.06(291.7)	1.45(7.93)	1.5(3.31)	Page 309
	103H8582-8041	103H8582-8011	4.02(569.3)	2.9(15.86)	2.5(5.51)	
	103H8583-8041	103H8583-8011	6.17(873.7)	4.4(24.06)	3.5(7.72)	
ø106mm	103H89582-8041	103H89582-8011	10.8(1529.4)	14.6(79.83)	7(15.43)	Page 311
	103H89583-8041	103H89583-8011	16(2265.7)	22(120.28)	10.4(22.93)	

• For the general specifications and dimensions of each stepping motor, refer to the reference pages.

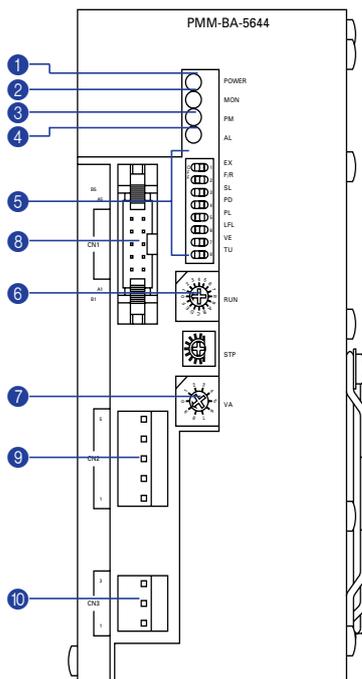
Operation, connection, and function

- Each section name of the PM driver conform to CE Marking
PMM-BA-5604-1



- 1 Internal power establishment (POW) Indicates that the internal power is established.
- 2 Phase origin monitor (MON) Indicates that the excitation phase is at the origin (in the state when the power is turned ON).
- 3 Input pulse monitor (PM) Indicates that the input pulse is applied.
- 4 Alarm monitor (AL) Turns ON when the internal alarm circuit operates.
- 5 Function selection dipswitch Functions can be selected according to the specification.
(EX, F/R, SL, PD, PL, LFL, VE, TU)
- 6 Operation current selection switch (RUN) Stepping motor current value during operation can be selected.
- 7 Selection switch for low vibration (VA) Low-vibration operation and the stepping motor heat generation reduction can be performed.
- 8 Terminal block (TB) I/O signals, the single-phase AC power source, and the stepping motor power cable are connected.

PMM-BA-5644-1

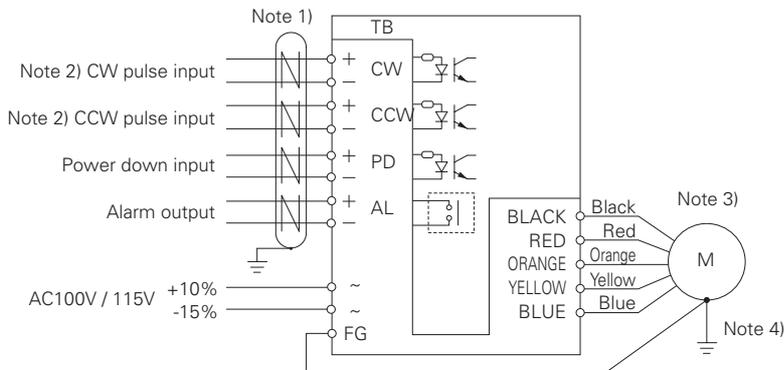


- 1 Internal power establishment (POWER) Indicates that the internal power is established.
- 2 Phase origin monitor (MON) Indicates that the excitation phase is at the origin (in the state when the power is turned ON).
- 3 Input pulse monitor (PM) Indicates that the input pulse is applied.
- 4 Alarm monitor (AL) Turns ON when the internal alarm circuit operates.
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(EX, F/R, SL, PD, PL, LFL, VE, TU)
- 6 Operation current selection switch (RUN) Stepping motor current value during operation can be selected.
- 7 Selection switch for low vibration (VA) Low-vibration operation and the stepping motor heat generation reduction can be performed.
- 8 Connectors for I/O signal I/O signals are connected.
- 9 Stepping output connector (CN2) The stepping motor power cable is connected.
- 10 Power source input connector (CN3) Single-phase AC power source is connected.

Operation, connection, and function

External wiring diagram

PMM-BA-5604-1



Note 1) Use shielded twisted-pair cables.

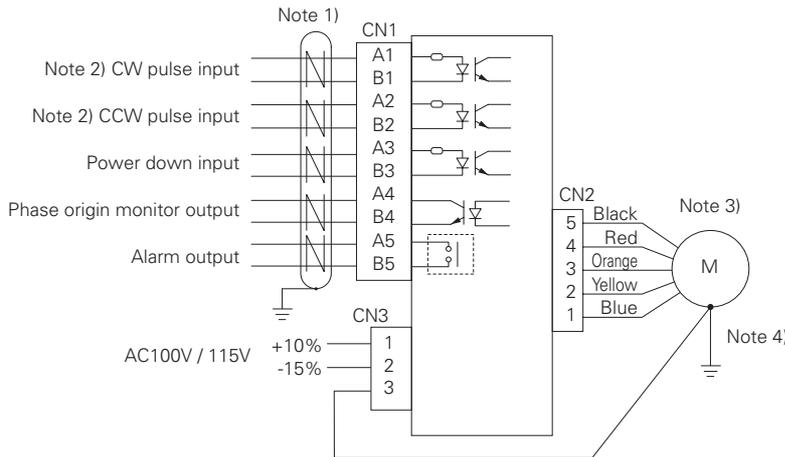
Note 2) Either "2-input mode (CW and CCW)" or "Pulse and direction mode (CK and U/D)" can be selected by using the function selection switch F/R

Note 3) Refer to the following table when connecting the 103H785 □ type stepping motor:

Product	Terminal block silk screen print/stepping motor connector pin number				
PM driver (TB)	BLACK	RED	ORANGE	YELLOW	BLUE
Stepping motor connector	1	4	3	2	5

Note 4) Ground the stepping motor flange section and the stepping motor fastening screw by fixing them together. Use a single point grounding.

PMM-BA-5644-1



Note 1) Use shielded twisted-pair cables.

Note 2) Either "2-input mode (CW and CCW)" or "Pulse and direction mode (CK and U/D)" can be selected by using the function selection switch F/R

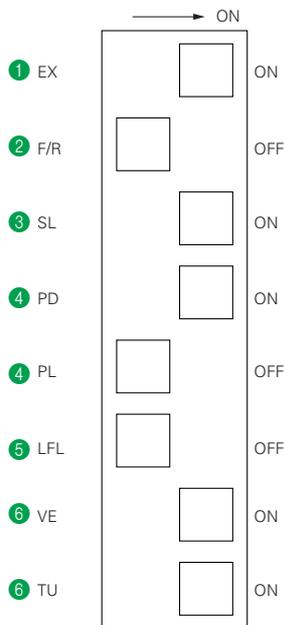
Note 3) Refer to the following table when connecting the 103H785 □ type stepping motor:

Product	Connector pin number				
PM driver (CN3)	5	4	3	2	1
Stepping motor connector	1	4	3	2	5

Note 4) Ground the stepping motor flange section and the stepping motor fastening screw by fixing them together. Use a single point grounding.

Operation, connection, and function

● Function selection dipswitch ---5



- Settings at the shipment are shown above.
- Turn OFF the PM driver power before changing switch settings to change the function selection dipswitch settings.

① EX (excitation system selection) Excitation mode is selected.

EX	Energization system
ON	Half step (0.36°/pulse)
OFF	Full step (0.72°/pulse)

② F/R (pulse input system selection) A pulse input system is selected.

F/R	Pulse input system
ON	Pulse and direction mode (CK and U/D)
OFF	2-input mode (CW and CCW)

③ SL (automatic current reduction selection) Automatic current reduction function is selected.

SL	Auto current down
ON	Approx. 50% of current rating when stopped
OFF	100% of current rating when stopped

*1) The temperature increase in the motor driver can be controlled by setting SL to On (approx. 50% of the rated current).

*2) The output torque when SL is On (approx. 50% of the rated current) is approx. 50% of that when SL is Off (100% of the rated current).

④ PD and PL (power down and power low selection) The stepping motor windings current value at the power down signal input is selected.

PD	PL	Stepping motor current
ON	OFF	OA (power OFF)
OFF	ON	The current value (power low) using the stopping current adjustment control (STP)

⑤ LFL selection (Note)

This switch is not used.
Do not turn it ON.

⑥ VE and TU selection (Note)

This switch is not used.
Do not turn it OFF.

● Operation current selection switch (RUN) ---6

The operation current value of stepping motor can be selected.

Scale	0	1	2	3	4	5	6	7
Stepping motor current (A total)	6.0	5.8	5.6	5.2	5.0	4.8	4.6	4.4
Scale	8	9	A	B	C	D	E	F
Stepping motor current (A total)	4.2	3.8	3.6	3.4	3.2	3.0	2.6	2.4

- "0" is set at the shipment.
- 1.5 A/phase is set at scale 0.

● Low-vibration selection switch (VA) ---7

The vibration and the stepping motor heat generation can be reduced.

Scale	Function
9	Standard
3	Vibration reduction Motor heat generation reduction
2	
1	
0	

- "9" is set at the shipment.
- Settings from 0 to 3 are valid.
- Sometimes the high-speed torque may decrease.

Operation, connection, and function

● I/O signal function ---8

Signal name (Abbreviation)	Silk print/Pin Number		Function
	Terminal block type	Connector type	
CW pulse input (CW)	CW+	A1	When using "2-input mode" Drive pulse for the CW direction rotation is input.
	CW-	B1	
Pulse column input (CK)	CK+	A1	When using "Pulse and direction mode" Drive pulse train for the stepping motor rotation is input.
	CK-	B1	
CCW pulse input (CCW)	CCW+	A2	When using "2-input mode" Drive pulse for the CCW direction rotation is input.
	CCW-	B2	
Rotation direction input (U/D)	U/D+	A2	The rotation direction signal of stepping motor is input for the "Pulse and direction mode". Internal photocoupler ON CW direction Internal photocoupler OFF CCW direction
	U/D-	B2	
Power down input (PD)	PD+	A3	Inputting the PD signal cuts OFF the current flowing through the stepping motor (turns OFF the power). (The power down input can be changed to the power low function by selecting dipswitches.) PD input signal ON (internal photocoupler ON) PD function enabled PD input signal OFF (internal photocoupler OFF) PD function disabled
	PD-	B3	
Phase origin monitor output (MON)	-	A4	It is turned ON when the excitation phase is at the origin (in the state when the power is turned ON) It is turned ON once per 10 pulses when setting to 2-division (full step). It is turned ON once per 20 pulses when setting to 1-division (half step).
		B4	
Alarm output (AL)	AL+	A5	The signal is externally output when one of several alarm circuits operates in the PM driver. At this time, the stepping motor is in the unexcited state.
	AL-	B5	

- The terminal block type indicates "PMM-BA-5604-1" and the connector type indicates "PMM-BA-5644-1" in the table.
- The CW direction of stepping motor means the clockwise direction rotation as viewed from the output shaft side (flange side).
The CCW direction means the counterclockwise direction rotation as viewed from the output shaft side (flange side).

● Connectors to be used

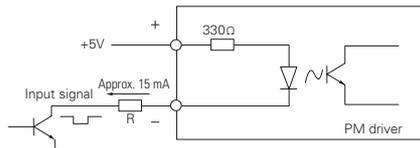
PMM-BA-5644-1

PM driver side		Applicable connector model number	Manufacturer
Used for	Model number		
I/O signals (CN1)	HIF3BD-10PA-2.54DS	Applicable socket :HIF3BD-10DA-2.54R	Hirose Electric Co., Ltd.
Stepping motor (CN2)	5274-05A	Applicable housing:5195-05 Applicable contact:5194PBTL	Molex Japan
AC power source (CN3)	5274-03A	Applicable housing:5195-03 Applicable contact:5194PBTL	Molex Japan

- The applicable connectors should be either prepared by the user or ordered from the optional connector set or connector cables (refer to Option in page 215).
- PMM-BA-5604-1 using the terminal block interface does not require connectors.

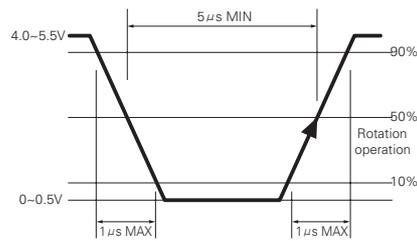
Operation, connection, and function

● Input circuit configuration (CW and CCW)



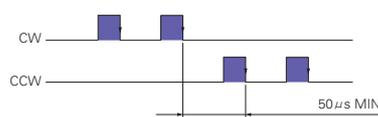
- Pulse duty is 50 % MAX.
- When the peak value of the input signal is 5V, the external limit resistance R is 0 Ω. If the peak value exceeds 5V, set the input current to approx. 15mA using the external limit resistance R.

Input signal specifications



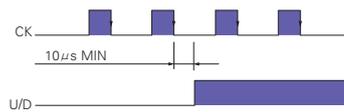
Timing of the command pulse

● 2-input mode (CW and CCW)



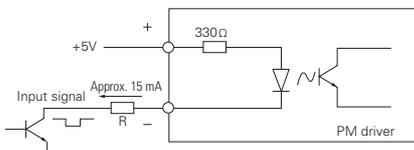
- The internal photocoupler turns ON at ■, and the internal circuit (stepping motor) operates at the leading edge of the photocoupler "ON".
- When applying the pulse to CW, set the internal photocoupler on the CCW side to "OFF".
- When applying the pulse to CCW, set the internal photocoupler on the CW side to "OFF".

● Pulse and direction mode (CK and U/D)



- The internal photocoupler turns ON at ■, and the internal circuit (stepping motor) operates at the leading edge of the CK photocoupler "ON".
- Before switching the U/D input signals, turn OFF the internal photocoupler on the CK side.

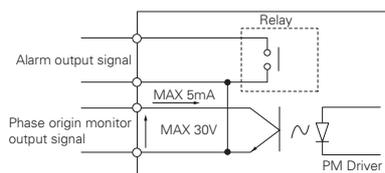
● Input circuit configuration (PD)



- When the peak value of the input signal is 5V, the external limit resistance R is 0 Ω. If the peak value exceeds 5V, set the input current to approx. 15mA using the external limit resistance R.

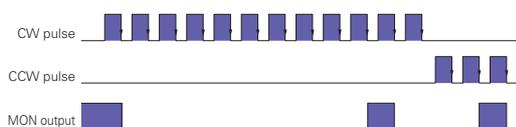
Operation, connection, and function

● Output circuit configuration (MON and AL)



- Alarm output signal
Contact type: Relay contact output (normal open)
Contact capacity: Maximum 1 A at DC 24 V or maximum 0.5 A at AC 120 V
- Phase origin monitor output signal
Contact type: For open collector output by photocoupler
Contact capacity: Maximum 5 mA at DC 30 V
- Phase origin monitor output signal is compatible with PMM-BA-5644-1.
(There is no phase origin monitor output signal for PMM-BA-5604-1.)
- I/O connectors B4 and B5 of PMM-BA-5644-1 are common inside.

● Timing of the MON output (at full step)

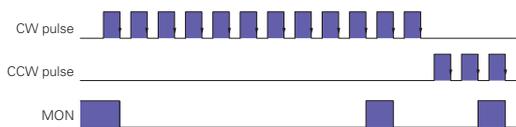


- The internal photocoupler turns "ON" at [blue square].

● State Indication (LED)

Indication	Color	Explanation
POW turns on.	Green	Internal power has been established.
MON turns on.	Green	Excitation phase is at the origin (the power is turned on). When 1-division is specified (full step), turns on once in 10 pulses. When 2-division is specified (half step), turns on once in 20 pulses.
PM turns on.	Green	Command pulse is input. Turns on for Approx. 100ms for every one pulse input.

● Timing of MON illumination (at full step)



- The internal photocoupler turns "ON" at [blue square] and MON illuminates.

● Alarm Indication (LED)

Indication	Color	Explanation
AL turns on.	Red	The overheat protection alarm circuit of the internal device operates. The circuit operates when both the internal temperature of the PM driver and the ambient temperature become 80°C MIN.

- Each alarm circuit operation turns on the alarm LED and cuts off the stepping motor current to result in the unexcited state. At the same time, the alarm output circuit photocoupler of I/O signal connector (CN1) turns ON and the signal is output externally. The alarm automatically stops to turn ON the stepping motor current when the internal semiconductor temperature becomes 80°C MAX. Turn OFF the main power and try to radiate the generated heat by the forced-air-cooling of PM driver cabinet and so on before the automatic recovery from the alarm state when an alarm occurs.

PWAPA1S6A01

PWAPA1S6B01

PMM-MA-5003A

PMM-MA-5006A

PMM-BA-5603-5643

PMM-BA-5604-5644

PMDPB1S6P01

PMDPC1S3P01

PMM-MD-53030-53031

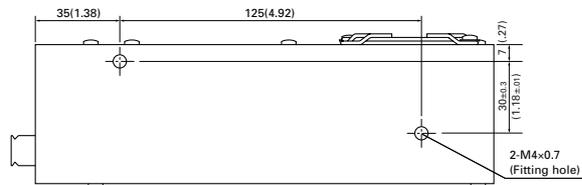
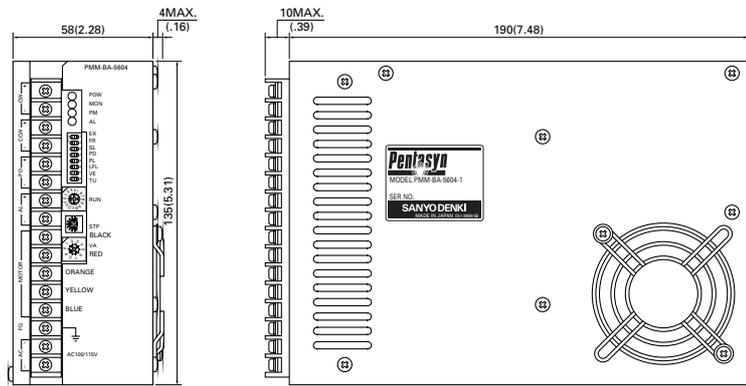
PMM-BD-53130-53131

PMDPD1S1P01

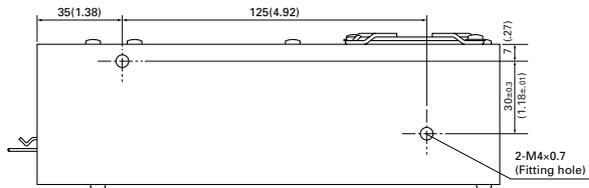
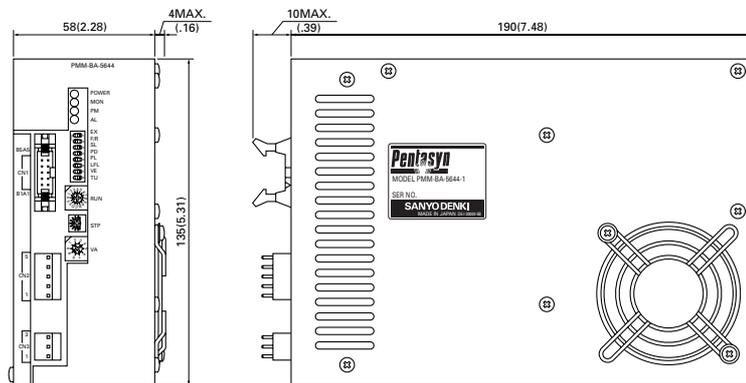
PMDPA1C3P50

Dimensions [Unit:mm(inch)]

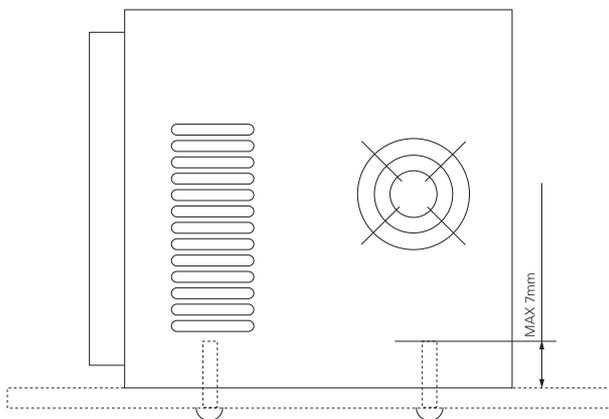
PMM-BA-5604-1



PMM-BA-5644-1



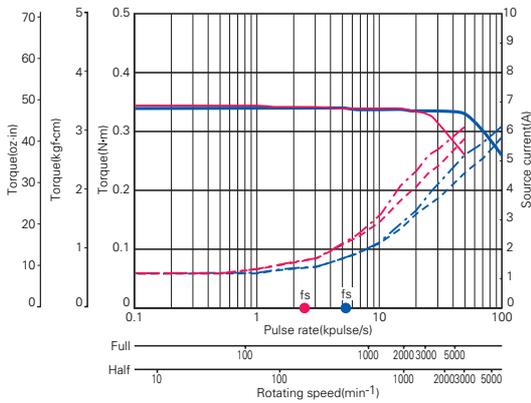
Installation direction and position



- Install the PM driver vertically.
- As shown in the figure, fix the PM driver by using the M4 screws through fitting holes on the bottom surface of PM driver (no fitting metals are necessary).
- Use such screws that enter inside the drive equipment for maximum 7 mm.

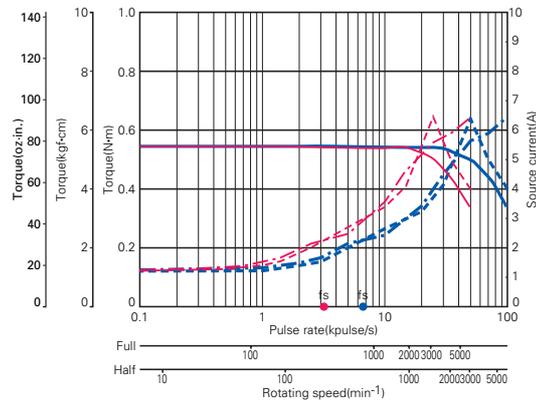
Pulse rate-torque characteristics/pulse rate-source current characteristics

●103H6500-80 □□ :100V



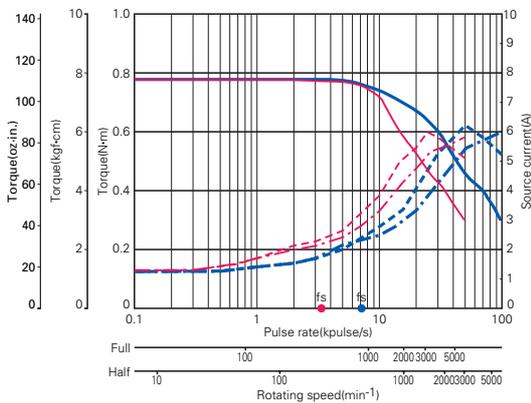
Source voltage:AC100V.Operating current: 1.5A/phase
 — Pull-out torque($J_{L1}=0.94 \times 10^{-4} \text{kg}\cdot\text{m}^2$ [5.14 oz-in²] Use the rubber coupling)
 - - - Source current($T_L=\text{MAX}$) - - - Source current($T_L=0$)
 fs:No load maximum starting pulse rate
 ■ Full step ■ Half step

●103H6501-80 □□ :100V



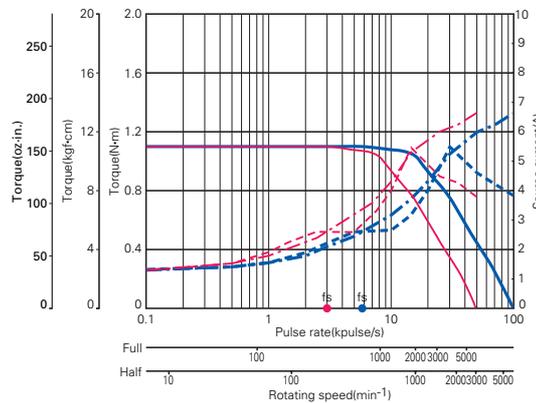
Source voltage:AC100V.Operating current: 1.5A/phase
 — Pull-out torque($J_{L1}=0.94 \times 10^{-4} \text{kg}\cdot\text{m}^2$ [5.14 oz-in²] Use the rubber coupling)
 - - - Source current($T_L=\text{MAX}$) - - - Source current($T_L=0$)
 fs:No load maximum starting pulse rate
 ■ Full step ■ Half step

●103H7851-80 □□ :100V



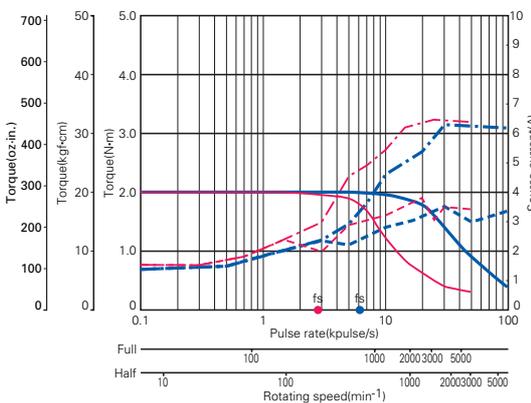
Source voltage:AC100V.Operating current: 1.5A/phase
 — Pull-out torque($J_{L1}=2.6 \times 10^{-4} \text{kg}\cdot\text{m}^2$ [14.22 oz-in²] Use the rubber coupling)
 - - - Source current($T_L=\text{MAX}$) - - - Source current($T_L=0$)
 fs:No load maximum starting pulse rate
 ■ Full step ■ Half step

●103H7852-80 □□ :100V



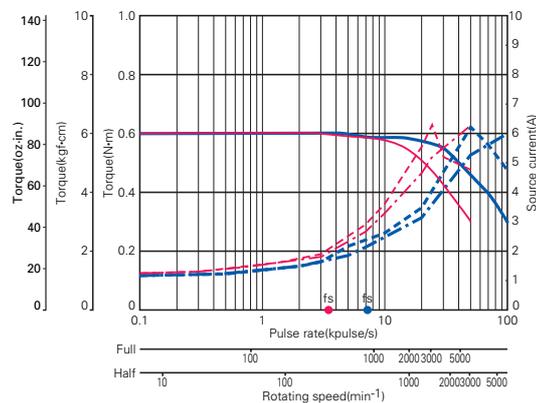
Source voltage:AC100V.Operating current: 1.5A/phase
 — Pull-out torque($J_{L1}=2.6 \times 10^{-4} \text{kg}\cdot\text{m}^2$ [14.22 oz-in²] Use the rubber coupling)
 - - - Source current($T_L=\text{MAX}$) - - - Source current($T_L=0$)
 fs:No load maximum starting pulse rate
 ■ Full step ■ Half step

●103H7853-80 □□ :100V



Source voltage:AC100V.Operating current: 1.5A/phase
 — Pull-out torque($J_{L1}=7.4 \times 10^{-4} \text{kg}\cdot\text{m}^2$ [40.46 oz-in²] Use the rubber coupling)
 - - - Source current($T_L=\text{MAX}$) - - - Source current($T_L=0$)
 fs:No load maximum starting pulse rate
 ■ Full step ■ Half step

●103H7521-80 □□ :100V



Source voltage:AC100V.Operating current: 1.5A/phase
 — Pull-out torque($J_{L1}=0.94 \times 10^{-4} \text{kg}\cdot\text{m}^2$ [5.14 oz-in²] Use the rubber coupling)
 - - - Source current($T_L=\text{MAX}$) - - - Source current($T_L=0$)
 fs:No load maximum starting pulse rate
 ■ Full step ■ Half step

PWAPA1S6A01

PWAPA1S6B01

PMM-MA-50034

PMM-MA-50064

PMM-BA-5003-5043

PMM-BA-5004-5044

PMDPB1S6P01

PMDPC1S3P01

PMM-MD-53030-53031

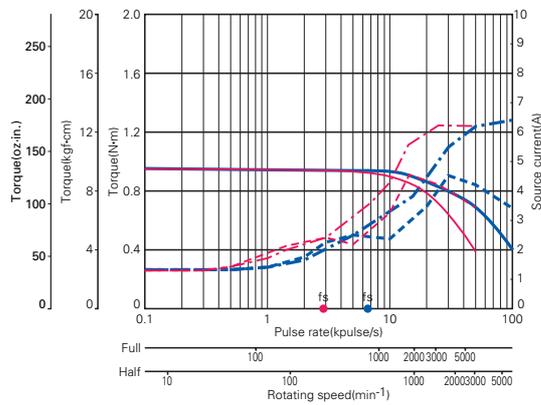
PMM-BD-53130-53131

PMDPD1S1P01

PMDPA1C3P50

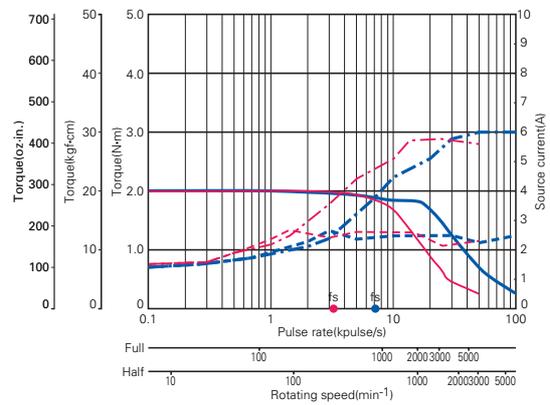
Pulse rate-torque characteristics/pulse rate-source current characteristics

●103H7522-80 □□ :100V



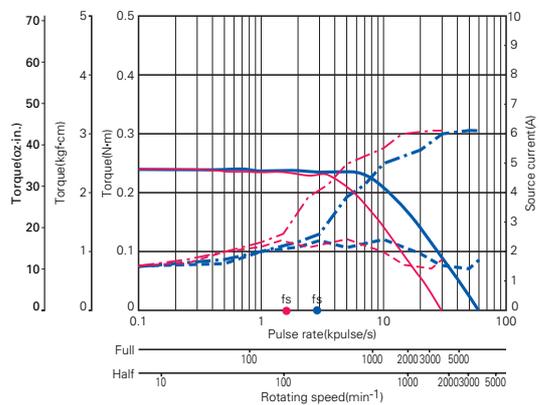
Source voltage:AC100V-Operating current: 1.5A/phase
 — Pull-out torque($J_{L1}=2.6 \times 10^{-4} \text{kg-m}^2$ [14.22 oz-in²]) Use the rubber coupling)
 - - - Source current($T_L=MAX$) - - - Source current($T_L=0$)
 fs:No load maximum starting pulse rate
 ■ Full step ■ Half step

●103H7523-80 □□ :100V



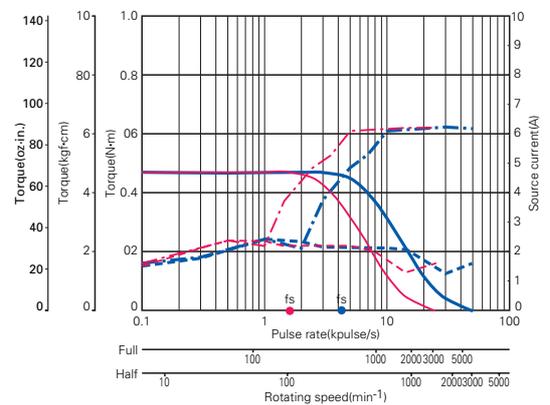
Source voltage:AC100V-Operating current: 1.5A/phase
 — Pull-out torque($J_{L1}=7.4 \times 10^{-4} \text{kg-m}^2$ [40.46 oz-in²]) Use the rubber coupling)
 - - - Source current($T_L=MAX$) - - - Source current($T_L=0$)
 fs:No load maximum starting pulse rate
 ■ Full step ■ Half step

●103H8581-80 □□ :100V



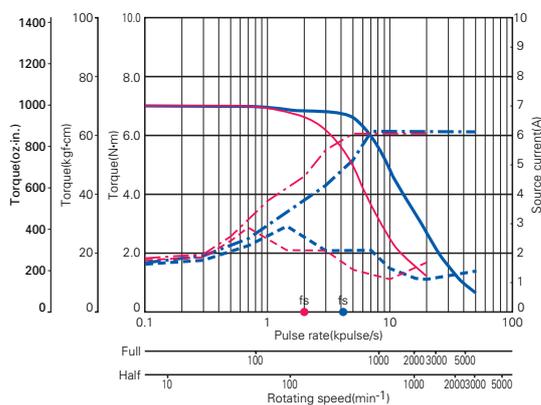
Source voltage:AC100V-Operating current: 1.5A/phase
 — Pull-out torque($J_{L1}=7.4 \times 10^{-4} \text{kg-m}^2$ [40.46 oz-in²]) Use the rubber coupling)
 - - - Source current($T_L=MAX$) - - - Source current($T_L=0$)
 fs:No load maximum starting pulse rate
 ■ Full step ■ Half step

●103H8582-80 □□ :100V



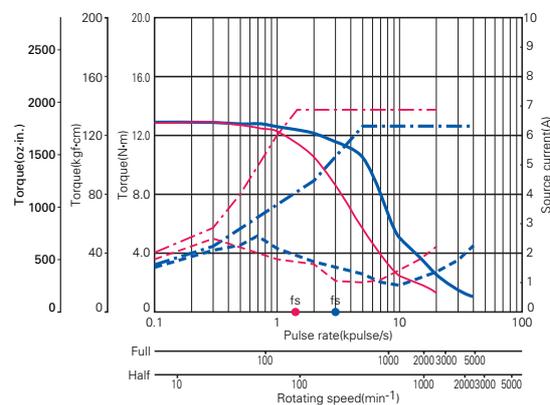
Source voltage:AC100V-Operating current: 1.5A/phase
 — Pull-out torque($J_{L1}=15.3 \times 10^{-4} \text{kg-m}^2$ [83.65 oz-in²]) Use the rubber coupling)
 - - - Source current($T_L=MAX$) - - - Source current($T_L=0$)
 fs:No load maximum starting pulse rate
 ■ Full step ■ Half step

●103H8583-80 □□ :100V



Source voltage:AC100V-Operating current: 1.5A/phase
 — Pull-out torque($J_{L1}=43 \times 10^{-4} \text{kg-m}^2$ [235.10 oz-in²]) Use the rubber coupling)
 - - - Source current($T_L=MAX$) - - - Source current($T_L=0$)
 fs:No load maximum starting pulse rate
 ■ Full step ■ Half step

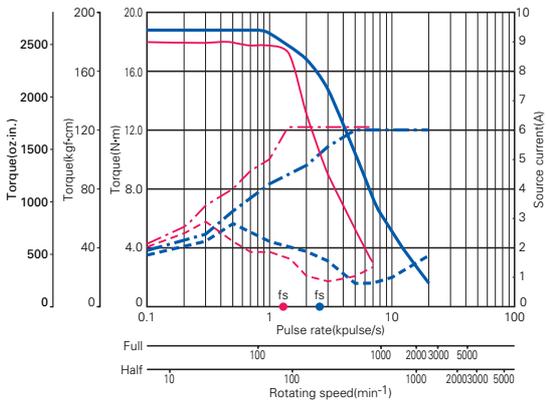
●103H89582-80 □□ :100V



Source voltage:AC100V-Operating current: 1.5A/phase
 — Pull-out torque($J_{L1}=43 \times 10^{-4} \text{kg-m}^2$ [235.10 oz-in²]) Use the rubber coupling)
 - - - Source current($T_L=MAX$) - - - Source current($T_L=0$)
 fs:No load maximum starting pulse rate
 ■ Full step ■ Half step

Pulse rate-torque characteristics/pulse rate-source current characteristics

● 103H89583-80 □ □ :100V



Source voltage:AC100V-Operating current: 1.5A/phase
 — Pull-out torque($J_{L1}=43 \times 10^{-4} \text{kg}\cdot\text{m}^2$ [235.10 oz-in²] Use the rubber coupling)
 - - - Source current($T_L=\text{MAX}$) - - - Source current($T_L=0$)
 fs:No load maximum starting pulse rate
 ■ Full step ■ Half step

- PMAPAT56A01
- PMAPAT56B01
- PMM-MA-50034
- PMM-MA-50064
- PMM-BA-5003-5043
- PMM-BA-5004-5044
- PMDBT56P01
- PMDFT53P01
- PMM-MD-53030-53031
- PMM-BD-53130-53131
- PMDPD151P01
- PMDPATC3P50

Option

PMM-BA-5644-1

● Connector set

Model number	Used for	Set content	Combination stepping motor model number
PM-AP-049	I/O signal (CN1)	Applicable socket:HIF3BA-10DA-2.54R	Type 103H785□
	Power source (CN3)	Applicable housing:5195-03 Applicable contact:5194PBTL	
	Stepping motor (CN2)	Applicable housing:5195-05 Applicable contact:5194PBTL Applicable housing:VHR-5N Applicable contact:SVH-21T-PL1.1	
PM-AP-035	I/O signal (CN1)	Applicable socket:HIF3BA-10DA-2.54R	Type 103H650□ 103H752□ 103H858□ 103H8958□
	Power source (CN3)	Applicable housing:5195-03 Applicable contact:5194PBTL	
	Stepping motor (CN2)	Applicable housing:5195-05 Applicable contact:5194PBTL	

● Connector cable

Model number	Application
PM-C10S0100-03	Connector cable for I/O signals (CN1)
PM-C05M0100-□□	Connector cable for stepping motors (CN2)
PM-C03P0100-01	Connector cable for AC power source (CN3)

- The connector cable is a 1-meter cable assembled with the connector.

□□ are spaces to be filled by the serial number 05 or 06 (refer to Supplement table 1).

Applicable connector cable		
CN1	CN2	CN3
Cable 2	Cable 3 or 4	Cable 1

PMM-BA-5604-1

● Terminal block cover

Model number	Quantity
PM-AP-020	One

Stepping motor cable model number (Supplement table 1)

Serial No.	Stepping motor model number
05	103H6500-80 □□
	103H6501-80 □□
	103H7521-80 □□
	103H7522-80 □□
	103H7523-80 □□
	103H8581-80 □□
	103H8582-80 □□
	103H8583-80 □□
	103H89582-80 □□
	103H89583-80 □□
06	103H7851-80 □□
	103H7852-80 □□
	103H7853-80 □□

