



## The 5-phase Stepping Set

### DP3 series

### DC24V

### Full-step/Half-step

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

Configuration of the 5-phase Stepping Motor Set, DP3 Series

Name	Quantity
DP3 Series Instruction Manual	1 pc.
PM Driver	1 pc.
Stepping Motor	1 pc.
Power Cable (CN1)	1 pc.
Input Cable (CN2)	1 pc.
Stepping Motor Cable (CN3)	1 pc.

## Characteristics

- **Fast operation**

This product is a fast operation version of the DP2 series.

- **Flexible**

This stepping system is able to drive wide variety of stepping motors from small capacity to large capacity without adjustment, resulting in wide applications.

- **Compact**

Mounting dedicated gate arrays realizes highly integrated and higher reliable system.

## Built-in function

- **Excitation system selectable**

Full-step or half-step can be selected through an external input signal.

- **Power down function**

Stepping motor current can be turned off through an external input signal.

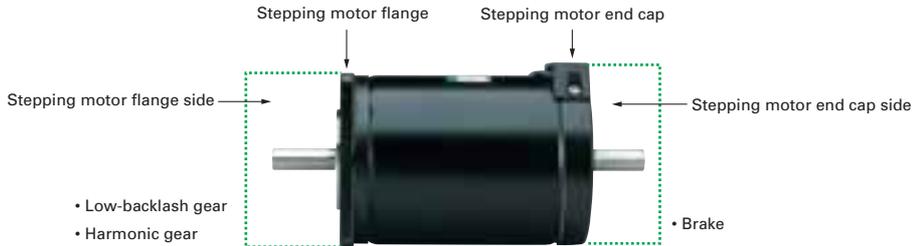
## Explanation of set model number

### ① System on the stepping motor flange side

Code	Flange side	Deceleration ratio
C	Low-backlash gear	1 / 3.6, 1 / 7.2, 1 / 10, 1 / 20, 1 / 30, 1 / 36
H	Harmonic gear	1 / 50, 1 / 100
X	None	

### ② System on the stepping motor end cap side

Code	End cap side	Function
B	Brake	Electromagnetic brake
E	Encoder	Please contact us regarding the encoder
X	None	

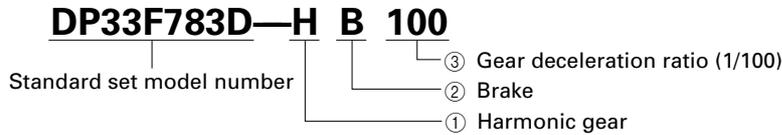


### ③ Deceleration ratio of gear system

Example: deceleration ratio      1 / 3.6 → 3.6

#### Explanation for model number in the combined case

The set model number of the stepping motor is as follows when PMDP1S6P01 and 103F7853 type are combined and equipped with the system of harmonic gear (1/100) and brake:



#### How to order

Please use the "Set Model Number" in the List of Combined Stepping Motor Model Number for the 5-phase Stepping Set, DP3 Series.

To order gear, brake, and encoder, put the product code number after the set number according to the "Explanation of combination numbering" ①, ②, and ③.

## PM driver specifications

Model number		PMDPB1S6P01	
Standard specification	Input source	For main power DC24V±10%	
	Source current	For main power 3.5A	
	Environment	Operating ambient temperature	0 ~ +50°C
		Conservation temperature	-20 ~ +70°C
		Operating ambient humidity	35 ~ 85%RH (no condensation)
		Conservation humidity	10 ~ 90%RH (no condensation)
		Vibration resistance	0.5G Tested under the following conditions, frequency range: 10 to 55Hz, direction: along the X, Y, and Z axes, for 2 hours
		Impact resistance	Considering the NDS-C-0110 standard section 3.2.2 division "C", not influenced.
		Withstand voltage	Not influenced when applying AC500V between the power input terminal and cabinet for one minute.
	Function	Insulation resistance	10MΩ MIN. when applying DC500V between the power input terminal and cabinet.
Mass(Weight)		0.4kg(0.88 lbs)	
I/O signals	Select function	Pulse input system (option)	
	Command pulse input signal	Photo coupler input method, input resistance 330Ω Input signal voltage "H" level: 4.0 to 5.5V, "L" level: 0 to 0.5V Maximum input frequency 400 kpulse/s	
	Power down input signal	Photo coupler input method, input resistance 330Ω Input signal voltage "H" level: 4.0 to 5.5V, "L" level: 0 to 0.5V	
	Energization system selection input signal	Photo coupler input method, input resistance 330Ω Input signal voltage "H" level: 4.0 to 5.5V, "L" level: 0 to 0.5V	

\* For information about the operation, connection, function, and dimensions of the PM driver, refer to pages 217 and after.

## Stepping motor common specifications

Item	Combined stepping motors of DP3 series
Insulation class	Class B (+130°C)
Withstand voltage	Conditions: AC1000V, 50/60 Hz, and for one minute
Insulation resistance	100MΩ MIN. against DC500V
Vibration resistance	Conditions: amplitude 1.52 mm (P-P), frequency range 10 to 55 Hz, 5 minutes sweep time, along X, Y, and Z axes, for 2 hours
Impact resistance	Conditions: 98 m/s <sup>2</sup> acceleration, 11 minutes duration, half-wave/sine wave, three times each along X, Y, and Z axes, 18 times in total
Operating ambient temperature	-10 to +50°C (0 to +40°C with harmonic gears)
Operating ambient humidity	20~90% (no condensation)

## Standard combined stepping motors for 5-phase stepping set "DP3" series

PM driver model number : PMDPB1S6P01

Combination Model Number for STEPSYN F Series

System support	Dimensions of stepping motor	Single shaft		Double shaft	
		Set model number	Standard combined stepping motor number	Set model number	Standard combined stepping motor number
Standard type	□ 60mm	<b>DP33F781S</b>	103F7851-8041	<b>DP33F781D</b>	103F7851-8011
		<b>DP33F782S</b>	103F7852-8041	<b>DP33F782D</b>	103F7852-8011
		<b>DP33F783S</b>	103F7853-8041	<b>DP33F783D</b>	103F7853-8011
	∅ 86mm	<b>DP33F851S</b>	103F8581-8041	<b>DP33F851D</b>	103F8581-8011
		<b>DP33F852S</b>	103F8582-8041	<b>DP33F852D</b>	103F8582-8011
		<b>DP33F853S</b>	103F8583-8041	<b>DP33F853D</b>	103F8583-8011
Low-backlash gear	□ 60mm	<b>DP33F781S-CX3.6</b>	103F7851-80CXA4	<b>DP33F781D-CX3.6</b>	103F7851-80CXA1
		<b>DP33F781S-CX7.2</b>	103F7851-80CXB4	<b>DP33F781D-CX7.2</b>	103F7851-80CXB1
		<b>DP33F781S-CX10</b>	103F7851-80CXE4	<b>DP33F781D-CX10</b>	103F7851-80CXE1
		<b>DP33F781S-CX20</b>	103F7851-80CXG4	<b>DP33F781D-CX20</b>	103F7851-80CXG1
		<b>DP33F781S-CX30</b>	103F7851-80CXJ4	<b>DP33F781D-CX30</b>	103F7851-80CXJ1
		<b>DP33F781S-CX36</b>	103F7851-80CCK4	<b>DP33F781D-CX36</b>	103F7851-80CCK1
	∅ 86mm	<b>DP33F851S-CX3.6</b>	103F8581-80CXA4	<b>DP33F851D-CX3.6</b>	103F8581-80CXA1
		<b>DP33F851S-CX7.2</b>	103F8581-80CXB4	<b>DP33F851D-CX7.2</b>	103F8581-80CXB1
		<b>DP33F851S-CX10</b>	103F8581-80CXE4	<b>DP33F851D-CX10</b>	103F8581-80CXE1
		<b>DP33F851S-CX20</b>	103F8581-80CXG4	<b>DP33F851D-CX20</b>	103F8581-80CXG1
		<b>DP33F851S-CX30</b>	103F8581-80CXJ4	<b>DP33F851D-CX30</b>	103F8581-80CXJ1
		<b>DP33F851S-CX36</b>	103F8581-80CCK4	<b>DP33F851D-CX36</b>	103F8581-80CCK1
Harmonic gear	□ 60mm	<b>DP33F781S-HX50</b>	103F7851-80HXL4	<b>DP33F781D-HX50</b>	103F7851-80HXL1
		<b>DP33F781S-HX100</b>	103F7851-80HXM4	<b>DP33F781D-HX100</b>	103F7851-80HXM1
	∅ 86mm	<b>DP33F851S-HX50</b>	103F8581-80HXL4	<b>DP33F851D-HX50</b>	103F8581-80HXL1
		<b>DP33F851S-HX100</b>	103F8581-80HXM4	<b>DP33F851D-HX100</b>	103F8581-80HXM1
Electromagnetic brake	□ 60mm	<b>DP33F781S-XB</b>	103F7851-80XB41		
		<b>DP33F782S-XB</b>	103F7852-80XB41		
		<b>DP33F783S-XB</b>	103F7853-80XB41		
	∅ 86mm	<b>DP33F851S-XB</b>	103F8581-80XB41		
		<b>DP33F852S-XB</b>	103F8582-80XB41		
		<b>DP33F853S-XB</b>	103F8583-80XB41		

# Stepping motor data sheet

## STEPSYN F Series (Standard)

Set model number	Single shaft	DP33F781S	DP33F782S	DP33F783S
	Double shaft	DP33F781D	DP33F782D	DP33F783D
Holding torque	N·m(oz·in)	0.6(85.0)	0.93(131.7)	1.79(253.5)
Rotor inertia	$\times 10^{-4}$ kg·m <sup>2</sup> (oz·in <sup>2</sup> )	0.275(1.50)	0.4(2.19)	0.84(4.59)
Mass(Weight)	kg(lbs)	0.6(1.32)	0.78(1.72)	1.36(3.00)

Set model number	Single shaft	DP33F851S	DP33F852S	DP33F853S
	Double shaft	DP33F851D	DP33F852D	DP33F853D
Holding torque	N·m(oz·in)	2.06(291.7)	4.02(569.3)	6.17(873.7)
Rotor inertia	$\times 10^{-4}$ kg·m <sup>2</sup> (oz·in <sup>2</sup> )	1.45(7.93)	2.9(15.86)	4.4(24.06)
Mass(Weight)	kg(lbs)	1.5(3.31)	2.5(5.51)	3.5(7.72)

## STEPSYN F Series (With low-backlash gear)

Set model number	Single shaft	DP33F781S-CX3.6	DP33F781S-CX7.2	DP33F781S-CX10	DP33F781S-CX20	DP33F781S-CX30	DP33F781S-CX36
	Double shaft	DP33F781D-CX3.6	DP33F781D-CX7.2	DP33F781D-CX10	DP33F781D-CX20	DP33F781D-CX30	DP33F781D-CX36
Allowable torque	N·m(oz·in)	1.25(177.0)	2.5(354.0)	3(424.8)	3.5(495.6)	4(566.4)	4(566.4)
Rotor inertia	$\times 10^{-4}$ kg·m <sup>2</sup> (oz·in <sup>2</sup> )	0.275(1.50)					
Basic step angle	°	0.2	0.1	0.072	0.036	0.024	0.02
Deceleration ratio		1 : 3.6	1 : 7.2	1 : 10	1 : 20	1 : 30	1 : 36
Backlash	°	0.55	0.25	0.25	0.17	0.17	0.17
Allowable number of rotations	min <sup>-1</sup>	500	250	180	90	60	50
Mass(Weight)	kg(lbs)	0.97(2.14)					
Allowable thrust load	N	30					
Allowable radial load (Note1)	N	100					

\* The rotation direction of the motor and the gear output shaft is as follows: when deceleration ratio is 1:3.6 or 1:7.2, both motor and shaft rotate in the same direction, and for 1:10, 1:20, or 1:30 type, the motor and the shaft rotate in opposite direction.  
 (Note1) When load is applied at 1/3 length from output shaft edge.

Set model number	Single shaft	DP33F851S-CX3.6	DP33F851S-CX7.2	DP33F851S-CX10	DP33F851S-CX20	DP33F851S-CX30	DP33F851S-CX36
	Double shaft	DP33F851D-CX3.6	DP33F851D-CX7.2	DP33F851D-CX10	DP33F851D-CX20	DP33F851D-CX30	DP33F851D-CX36
Allowable torque	N·m(oz·in)	4.5(637.2)	9(1274.5)	9(1274.5)	12(1699.3)	12(1699.3)	12(1699.3)
Rotor inertia	$\times 10^{-4}$ kg·m <sup>2</sup> (oz·in <sup>2</sup> )	1.45(7.93)					
Basic step angle	°	0.2	0.1	0.072	0.036	0.024	0.02
Deceleration ratio		1 : 3.6	1 : 7.2	1 : 10	1 : 20	1 : 30	1 : 36
Backlash	°	0.4	0.25	0.25	0.17	0.17	0.15
Allowable number of rotations	min <sup>-1</sup>	500	250	180	90	60	50
Mass(Weight)	kg(lbs)	2.7(5.95)					
Allowable thrust load	N	60					
Allowable radial load (Note1)	N	300					

\* The rotation direction of the motor and the gear output shaft is as follows: when deceleration ratio is 1:3.6 or 1:7.2, both motor and shaft rotate in the same direction, and for 1:10, 1:20, or 1:30 type, the motor and the shaft rotate in opposite direction.  
 (Note1) When load is applied at 1/3 length from output shaft edge.

# Stepping motor data sheet

## STEPSYN F Series (With harmonic gear)

Set model number	Single shaft	DP33F781S-HX50	DP33F781S-HX100
	Double shaft	DP33F781D-HX50	DP33F781D-HX100
Allowable torque	N·m(oz·in)	5.5(778.8)	8(1132.9)
Rotor inertia	$\times 10^{-4}$ kg·m <sup>2</sup> (oz·in <sup>2</sup> )	0.31(1.69)	
Basic step angle	°	0.0144	0.0072
Deceleration ratio		1 : 50	1 : 100
Lost motion	Minute	0.4~3 ( $\pm 0.28$ N·m)( $\pm 39.65$ oz·in)	0.4~1.5 ( $\pm 0.4$ N·m)( $\pm 56.64$ oz·in)
Allowable number of rotations	min <sup>-1</sup>	70	35
Mass(Weight)	kg(lbs)	1.2(2.65)	
Allowable thrust load	N	400	
Allowable radial load (Note1)	N	400	

\* The gear output shaft rotates in the opposite direction of the motor.

(Note1) When load is applied at 1/3 length from output shaft edge.

Set model number	Single shaft	DP33F851S-HX50	DP33F851S-HX100
	Double shaft	DP33F851D-HX50	DP33F851D-HX100
Allowable torque	N·m(oz·in)	25(3540.2)	41(5805.9)
Rotor inertia	$\times 10^{-4}$ kg·m <sup>2</sup> (oz·in <sup>2</sup> )	1.65(9.02)	
Basic step angle	°	0.0144	0.0072
Deceleration ratio		1 : 50	1 : 100
Lost motion	Minute	0.4~3 ( $\pm 0.28$ N·m)( $\pm 39.65$ oz·in)	0.4~3 ( $\pm 0.28$ N·m)( $\pm 56.64$ oz·in)
Allowable number of rotations	min <sup>-1</sup>	500	250
Mass(Weight)	kg(lbs)	3.3(7.28)	
Allowable thrust load	N	1400	
Allowable radial load (Note1)	N	1400	

\* The gear output shaft rotates in the opposite direction of the motor.

(Note1) When load is applied at 1/3 length from output shaft edge.

## STEPSYN F Series (With electromagnetic brake)

Set model number	Single shaft	DP33F781S-XB	DP33F782S-XB	DP33F783S-XB
	Double shaft			
Holding torque	N·m(oz·in)	0.6(85.0)	0.93(131.7)	1.79(253.5)
Rotor inertia	$\times 10^{-4}$ kg·m <sup>2</sup> (oz·in <sup>2</sup> )	0.43(2.35)	0.56(3.06)	1(5.47)
Mass(Weight)	kg(lbs)	0.94(2.07)	1.12(2.47)	1.7(3.75)
Electromagnetic brake specification	Brake operation system	Non-excitation operation system		
	Source voltage	DC 24 $\pm$ 5%		
	Exciting current	0.25		
	Electric power consumption	6		
	Static friction torque	N·m(oz·in)	0.8(113.3)	
	Brake operating time	ms	30	
	Brake release time	ms	20	
	Polarity		Red:⊕,Black:⊖	

Set model number	Single shaft	DP33F851S-XB	DP33F852S-XB	DP33F853S-XB
	Double shaft			
Holding torque	N·m(oz·in)	2.06(291.7)	4.02(569.3)	6.17(873.7)
Rotor inertia	$\times 10^{-4}$ kg·m <sup>2</sup> (oz·in <sup>2</sup> )	2.24(12.25)	3.69(20.17)	5.19(28.38)
Mass(Weight)	kg(lbs)	3.5(7.72)	4.5(9.92)	5.5(12.13)
Electromagnetic brake specification	Brake operation system	Non-excitation operation system		
	Source voltage	DC 24 $\pm$ 5%		
	Exciting current	0.42		
	Electric power consumption	10		
	Static friction torque	N·m(oz·in)	7(991.2)	
	Brake operating time	ms	50	
	Brake release time	ms	20	
	Polarity		Red:⊕,Black:⊖	

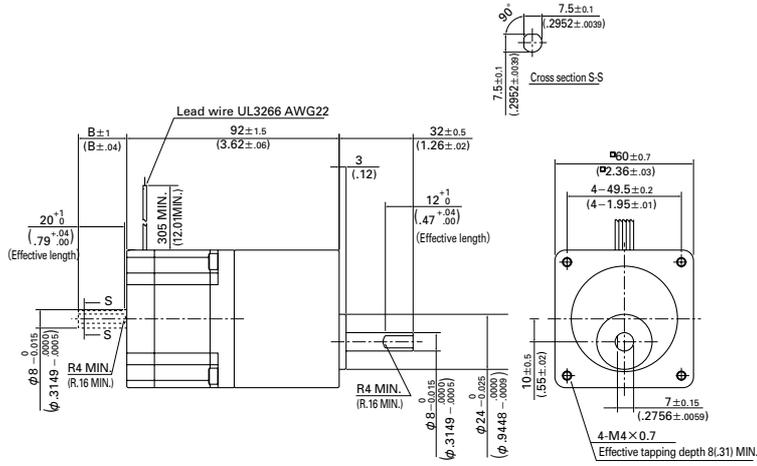


# Dimensions [ Unit: mm (inch) ]

## STEPSYN F with low-backlash gear

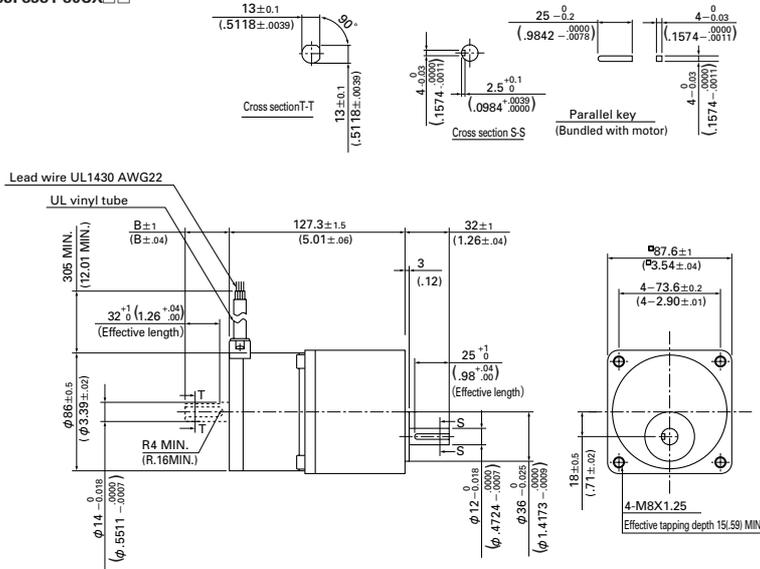
### DP33F781□-CX□□

#### 103F7851-80CX□□



### DP33F851□-CX□□

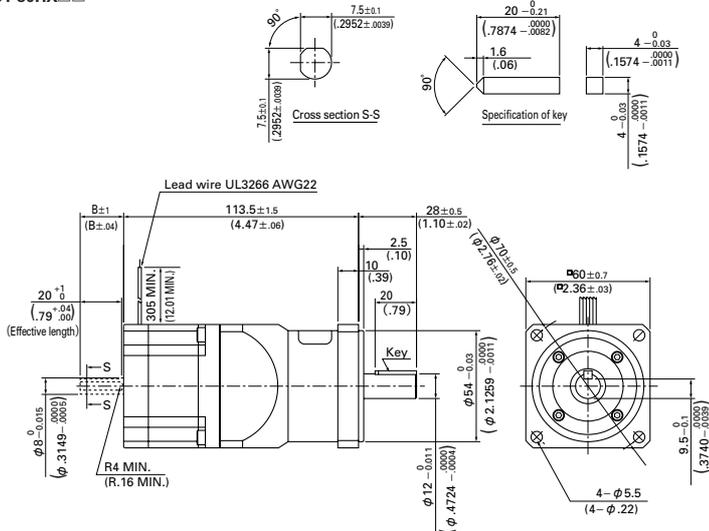
#### 103F8581-80CX□□



## STEPSYN F with harmonic gear

### DP33F781□-HX□□

#### 103F7851-80HX□□



Model name	B
DP33F781S-CX3.6 (103F7851-80CXA4)	—
DP33F781D-CX3.6 (103F7851-80CXA1)	21 (.83)
DP33F781S-CX7.2 (103F7851-80CXB4)	—
DP33F781D-CX7.2 (103F7851-80CXB1)	21 (.83)
DP33F781S-CX10 (103F7851-80CXE4)	—
DP33F781D-CX10 (103F7851-80CXE1)	21 (.83)
DP33F781S-CX20 (103F7851-80CXG4)	—
DP33F781D-CX20 (103F7851-80CXG1)	21 (.83)
DP33F781S-CX30 (103F7851-80CXJ4)	—
DP33F781D-CX30 (103F7851-80CXJ1)	21 (.83)
DP33F781S-CX36 (103F7851-80CXK4)	—
DP33F781D-CX36 (103F7851-80CXK1)	21 (.83)

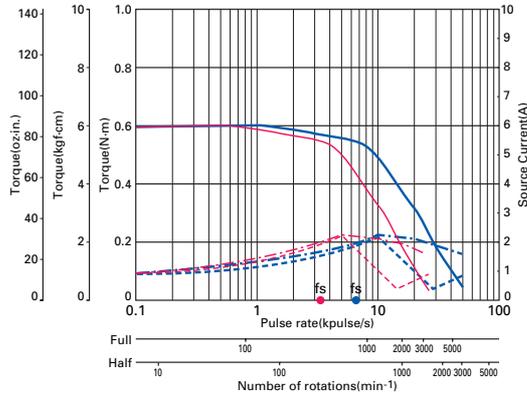
Model name	B
DP33F851S-CX3.6 (103F8581-80CXA4)	—
DP33F851D-CX3.6 (103F8581-80CXA1)	32 (1.26)
DP33F851S-CX7.2 (103F8581-80CXB4)	—
DP33F851D-CX7.2 (103F8581-80CXB1)	32 (1.26)
DP33F851S-CX10 (103F8581-80CXE4)	—
DP33F851D-CX10 (103F8581-80CXE1)	32 (1.26)
DP33F851S-CX20 (103F8581-80CXG4)	—
DP33F851D-CX20 (103F8581-80CXG1)	32 (1.26)
DP33F851S-CX30 (103F8581-80CXJ4)	—
DP33F851D-CX30 (103F8581-80CXJ1)	32 (1.26)
DP33F851S-CX36 (103F8581-80CXK4)	—
DP33F851D-CX36 (103F8581-80CXK1)	32 (1.26)

Model name	B
DP33F781S-HX50 (103F7851-80HXL4)	—
DP33F781D-HX50 (103F7851-80HXL1)	21 (.83)
DP33F781S-HX100 (103F7851-80HXM4)	—
DP33F781D-HX100 (103F7851-80HXM1)	21 (.83)



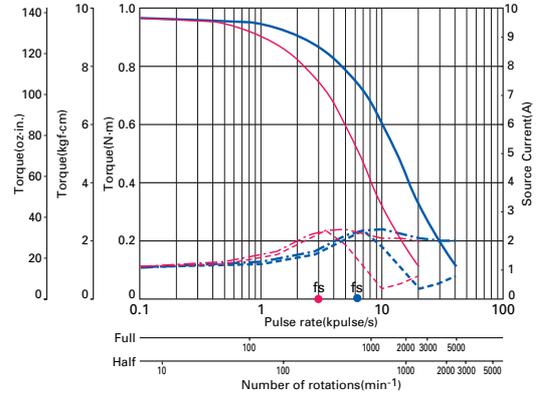
# Pulse Rate-Torque Characteristics/Pulse Rate-Source Current Characteristics

● DP33F781□ / DP33F781S-XB : 24V



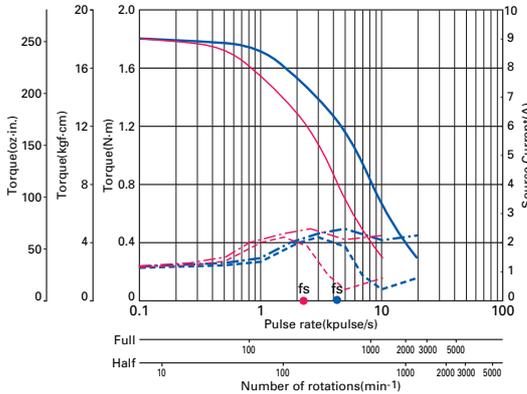
103F7851-80□□/103F7851-80XB41  
 Source voltage : DC24V-Operating current : 1.5A/phase  
 — Full-out torque(JL1=0.94×10<sup>-4</sup>kg·m<sup>2</sup>[5.14 oz-in<sup>2</sup>] Use the rubber coupling)  
 - - - Source current(TL=MAX) - - - Source current(TL=0)  
 fs : No load maximum starting pulse rate  
 ■ Full-step ■ Half-step

● DP33F782□ / DP33F782S-XB : 24V



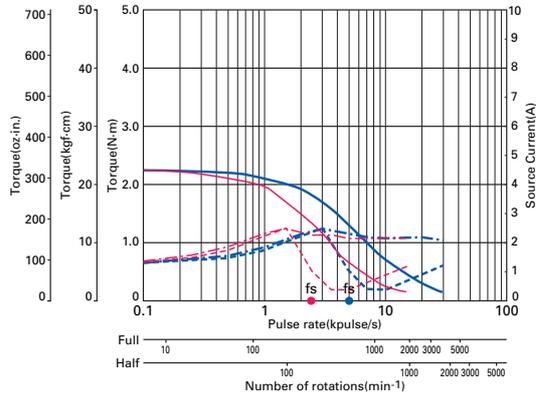
103F7852-80□□/103F7852-80XB41  
 Source voltage : DC24V-Operating current : 1.5A/phase  
 — Full-out torque(JL1=2.6×10<sup>-4</sup>kg·m<sup>2</sup>[14.22 oz-in<sup>2</sup>] Use the rubber coupling)  
 - - - Source current(TL=MAX) - - - Source current(TL=0)  
 fs : No load maximum starting pulse rate  
 ■ Full-step ■ Half-step

● DP33F783□ / DP33F783S-XB : 24V



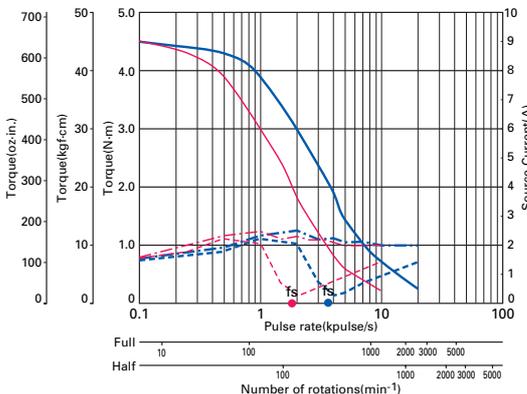
103F7853-80□□/103F7853-80XB41  
 Source voltage : DC24V-Operating current : 1.5A/phase  
 — Full-out torque(JL1=7.4×10<sup>-4</sup>kg·m<sup>2</sup>[40.46 oz-in<sup>2</sup>] Use the rubber coupling)  
 - - - Source current(TL=MAX) - - - Source current(TL=0)  
 fs : No load maximum starting pulse rate  
 ■ Full-step ■ Half-step

● DP33F851□ / DP33F851S-XB : 24V



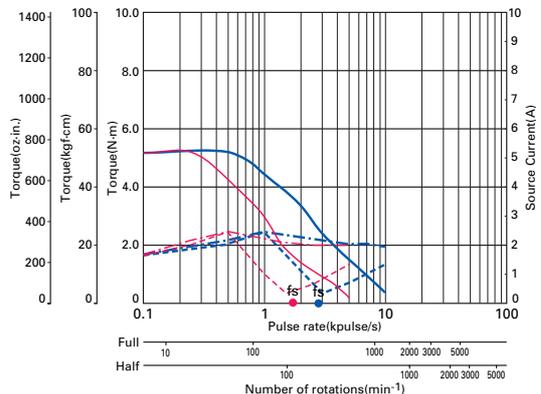
103F8581-80□□/103F8581-80XB41  
 Source voltage : DC24V-Operating current : 1.5A/phase  
 — Full-out torque(JL1=7.4×10<sup>-4</sup>kg·m<sup>2</sup>[40.46 oz-in<sup>2</sup>] Use the rubber coupling)  
 - - - Source current(TL=MAX) - - - Source current(TL=0)  
 fs : No load maximum starting pulse rate  
 ■ Full-step ■ Half-step

● DP33F852□ / DP33F852S-XB : 24V



103F8582-80□□/103F8582-80XB41  
 Source voltage : DC24V-Operating current : 1.5A/phase  
 — Full-out torque(JL1=15.3×10<sup>-4</sup>kg·m<sup>2</sup>[83.65 oz-in<sup>2</sup>] Use the rubber coupling)  
 - - - Source current(TL=MAX) - - - Source current(TL=0)  
 fs : No load maximum starting pulse rate  
 ■ Full-step ■ Half-step

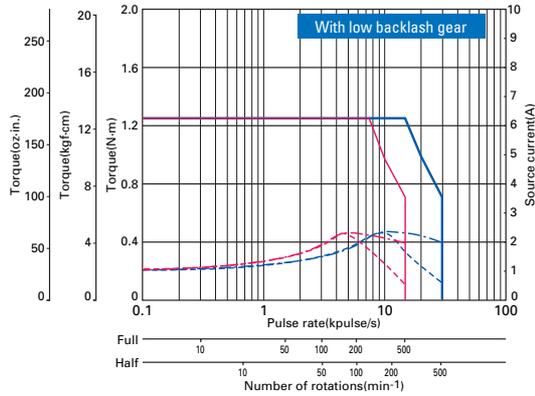
● DP33F853□ / DP33F853S-XB : 24V



103F8583-80□□/103F8583-80XB41  
 Source voltage : DC24V-Operating current : 1.5A/phase  
 — Full-out torque(JL1=15.3×10<sup>-4</sup>kg·m<sup>2</sup>[83.65 oz-in<sup>2</sup>] Use the rubber coupling)  
 - - - Source current(TL=MAX) - - - Source current(TL=0)  
 fs : No load maximum starting pulse rate  
 ■ Full-step ■ Half-step

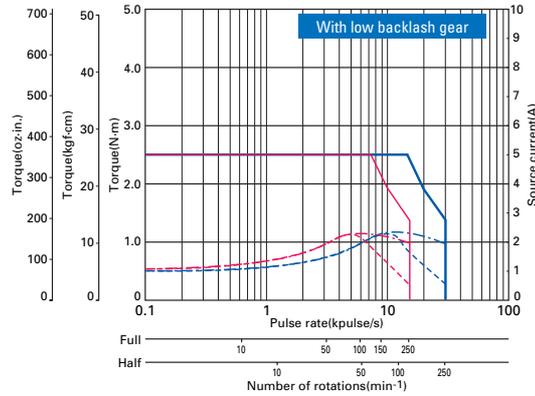
# Pulse Rate-Torque Characteristics/Pulse Rate-Source Current Characteristics

● DP33F781□-CX3.6 : 24V



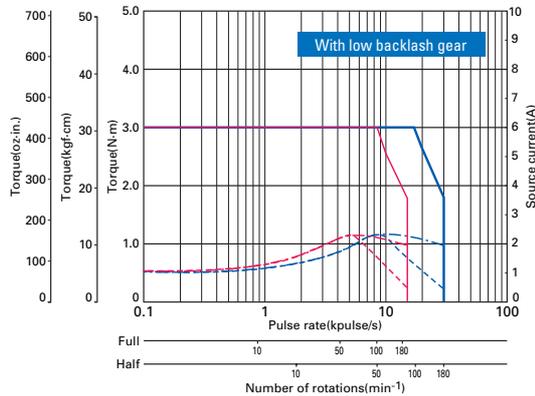
103F7851-80CXA□  
 Source voltage : DC24V. Operating current : 1.5A/phase  
 — Allowable torque(JL1=2.6×10<sup>-4</sup>kg-m<sup>2</sup>[14.22 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - - Source current(TL=MAX) - - - Source current(TL=0)  
 ■ Full-step ■ Half-step

● DP33F781□-CX7.2 : 24V



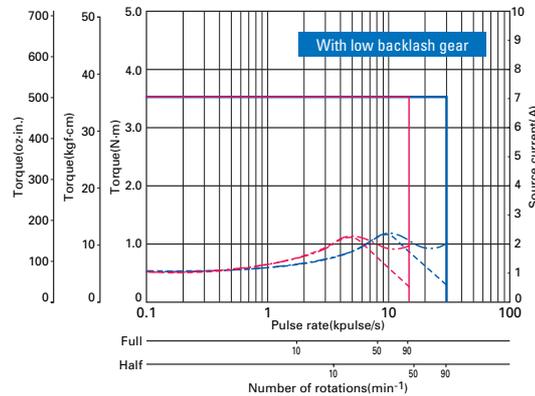
103F7851-80CXB□  
 Source voltage : DC24V. Operating current : 1.5A/phase  
 — Allowable torque(JL1=7.4×10<sup>-4</sup>kg-m<sup>2</sup>[40.46 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - - Source current(TL=MAX) - - - Source current(TL=0)  
 ■ Full-step ■ Half-step

● DP33F781□-CX10 : 24V



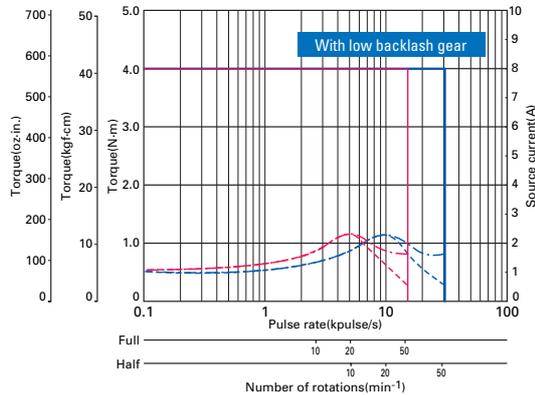
103F7851-80CXE□  
 Source voltage : DC24V. Operating current : 1.5A/phase  
 — Allowable torque(JL1=7.4×10<sup>-4</sup>kg-m<sup>2</sup>[40.46 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - - Source current(TL=MAX) - - - Source current(TL=0)  
 ■ Full-step ■ Half-step

● DP33F781□-CX20 : 24V



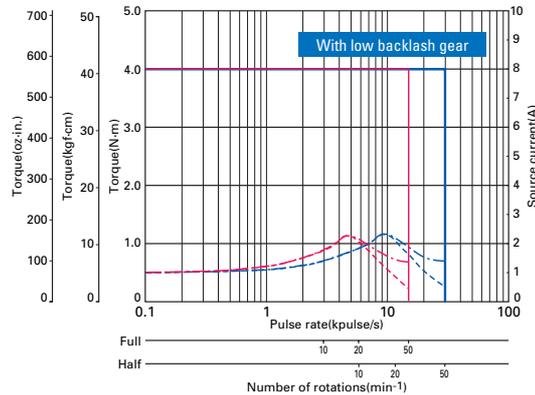
103F7851-80CXG□  
 Source voltage : DC24V. Operating current : 1.5A/phase  
 — Allowable torque(JL1=15.3×10<sup>-4</sup>kg-m<sup>2</sup>[83.65 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - - Source current(TL=MAX) - - - Source current(TL=0)  
 ■ Full-step ■ Half-step

● DP33F781□-CX30 : 24V



103F7851-80CXJ□  
 Source voltage : DC24V. Operating current : 1.5A/phase  
 — Allowable torque(JL1=15.3×10<sup>-4</sup>kg-m<sup>2</sup>[83.65 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - - Source current(TL=MAX) - - - Source current(TL=0)  
 ■ Full-step ■ Half-step

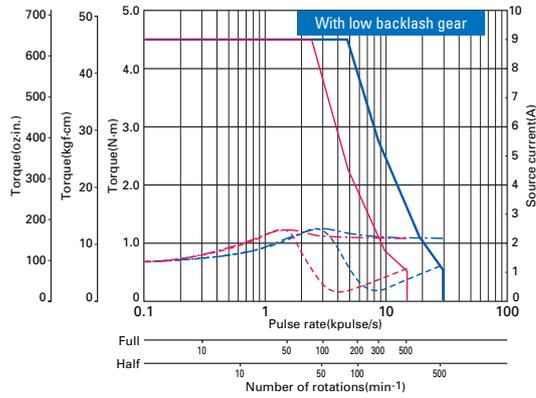
● DP33F781□-CX36 : 24V



103F7851-80CXBK□  
 Source voltage : DC24V. Operating current : 1.5A/phase  
 — Allowable torque(JL1=15.3×10<sup>-4</sup>kg-m<sup>2</sup>[83.65 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - - Source current(TL=MAX) - - - Source current(TL=0)  
 ■ Full-step ■ Half-step

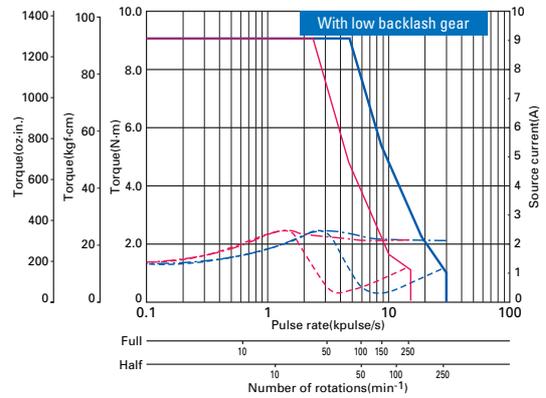
# Pulse Rate-Torque Characteristics/Pulse Rate-Source Current Characteristics

● DP33F851□-CX3.6 : 24V



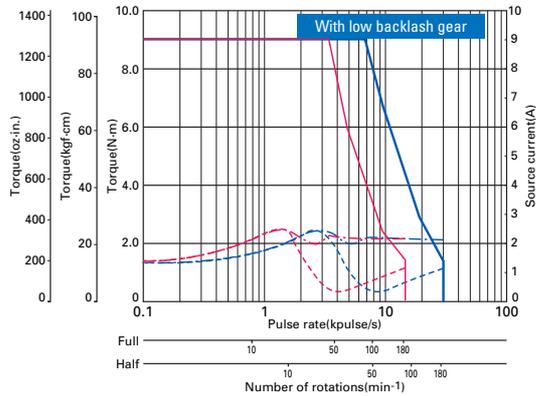
103F8581-80CXA□  
 Source voltage : DC24V-Operating current : 1.5A/phase  
 — Allowable torque( $JL_1=15.3 \times 10^{-4} \text{kg-m}^2$  [83.65 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - - Source current( $T_L=MAX$ ) - - - Source current( $T_L=0$ )  
 ■ Full-step ■ Half-step

● DP33F851□-CX7.2 : 24V



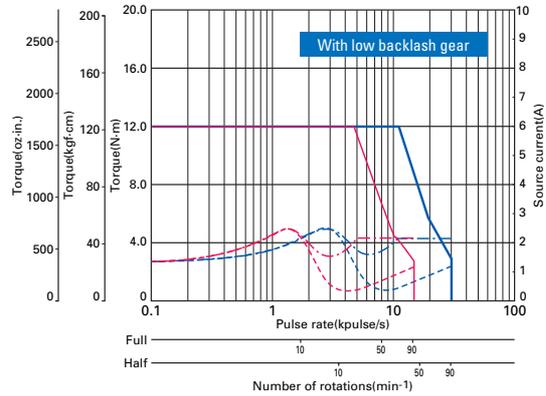
103F8581-80CXB□  
 Source voltage : DC24V-Operating current : 1.5A/phase  
 — Allowable torque( $JL_1=43 \times 10^{-4} \text{kg-m}^2$  [235.10 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - - Source current( $T_L=MAX$ ) - - - Source current( $T_L=0$ )  
 ■ Full-step ■ Half-step

● DP33F851□-CX10 : 24V



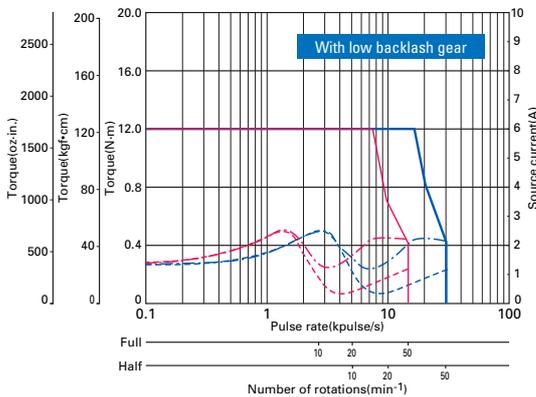
103F8581-80CXE□  
 Source voltage : DC24V-Operating current : 1.5A/phase  
 — Allowable torque( $JL_1=43 \times 10^{-4} \text{kg-m}^2$  [235.10 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - - Source current( $T_L=MAX$ ) - - - Source current( $T_L=0$ )  
 ■ Full-step ■ Half-step

● DP33F851□-CX20 : 24V



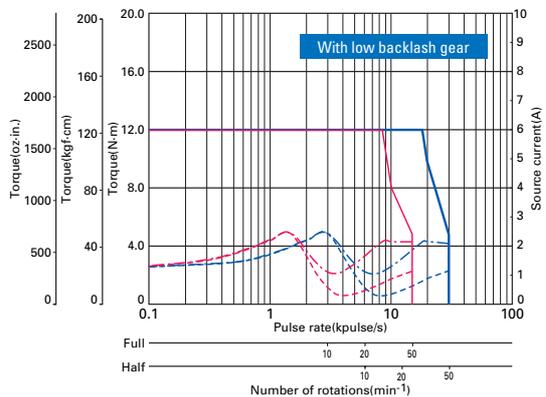
103F8581-80CXG□  
 Source voltage : DC24V-Operating current : 1.5A/phase  
 — Allowable torque( $JL_1=43 \times 10^{-4} \text{kg-m}^2$  [235.10 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - - Source current( $T_L=MAX$ ) - - - Source current( $T_L=0$ )  
 ■ Full-step ■ Half-step

● DP33F851□-CX30 : 24V



103F8581-80CXJ□  
 Source voltage : DC24V-Operating current : 1.5A/phase  
 — Allowable torque( $JL_1=43 \times 10^{-4} \text{kg-m}^2$  [235.10 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - - Source current( $T_L=MAX$ ) - - - Source current( $T_L=0$ )  
 ■ Full-step ■ Half-step

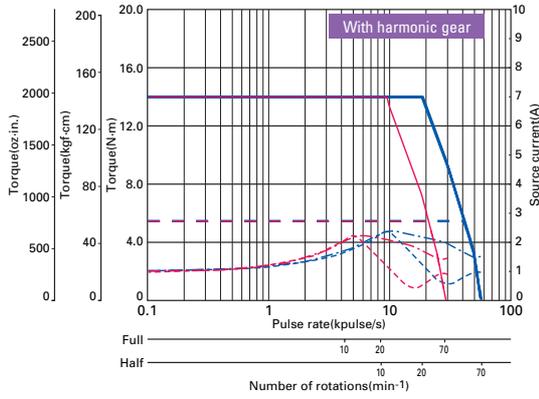
● DP33F851□-CX36 : 24V



103F8581-80CXK□  
 Source voltage : DC24V-Operating current : 1.5A/phase  
 — Allowable torque( $JL_1=43 \times 10^{-4} \text{kg-m}^2$  [235.10 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - - Source current( $T_L=MAX$ ) - - - Source current( $T_L=0$ )  
 ■ Full-step ■ Half-step

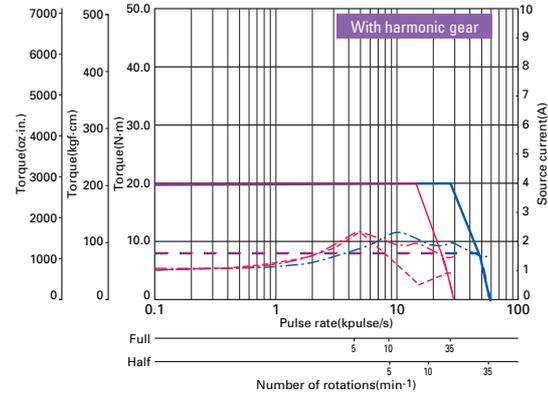
# Pulse Rate-Torque Characteristics/Pulse Rate-Source Current Characteristics

● DP33F781□-HX50 : 24V



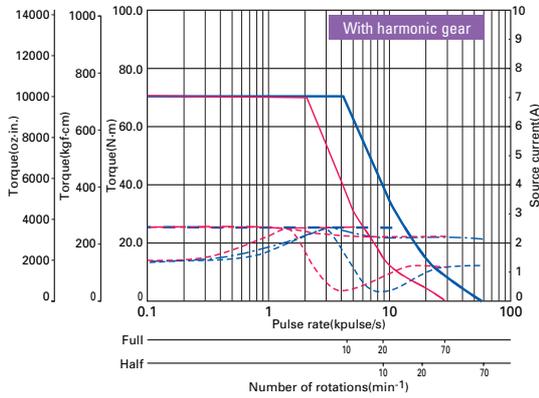
103F7851-80HXL□ ■ Full-step ■ Half-step  
 Source voltage : DC24V-Operating current : 1.5A/phase  
 — Instantaneous allowable torque( $J_{L1}=43 \times 10^{-4} \text{kg}\cdot\text{m}^2$  [235.10 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - Allowable torque( $J_{L1}=43 \times 10^{-4} \text{kg}\cdot\text{m}^2$  [235.10 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - - Source current(TL=MAX) - - - Source current(TL=0)

● DP33F781□-HX100 : 24V



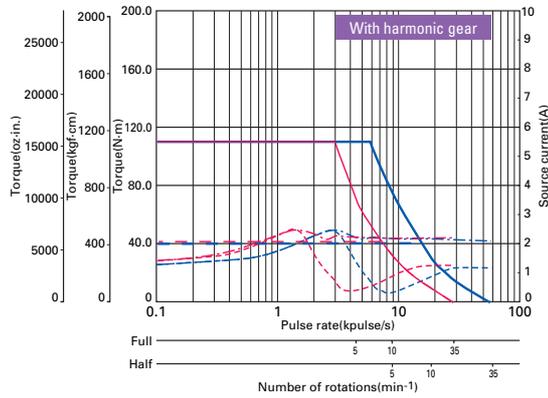
103F7851-80HXM□ ■ Full-step ■ Half-step  
 Source voltage : DC24V-Operating current : 1.5A/phase  
 — Instantaneous allowable torque( $J_{L1}=43 \times 10^{-4} \text{kg}\cdot\text{m}^2$  [235.10 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - Allowable torque( $J_{L1}=43 \times 10^{-4} \text{kg}\cdot\text{m}^2$  [235.10 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - - Source current(TL=MAX) - - - Source current(TL=0)

● DP33F851□-HX50 : 24V



103F8581-80HXL□ ■ Full-step ■ Half-step  
 Source voltage : DC24V-Operating current : 1.5A/phase  
 — Instantaneous allowable torque( $J_{L1}=43 \times 10^{-4} \text{kg}\cdot\text{m}^2$  [235.10 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - Allowable torque( $J_{L1}=43 \times 10^{-4} \text{kg}\cdot\text{m}^2$  [235.10 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - - Source current(TL=MAX) - - - Source current(TL=0)

● DP33F851□-HX100 : 24V



103F8581-80HXM□ ■ Full-step ■ Half-step  
 Source voltage : DC24V-Operating current : 1.5A/phase  
 — Instantaneous allowable torque( $J_{L1}=43 \times 10^{-4} \text{kg}\cdot\text{m}^2$  [235.10 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - Allowable torque( $J_{L1}=43 \times 10^{-4} \text{kg}\cdot\text{m}^2$  [235.10 oz-in<sup>2</sup>]) Use the rubber coupling)  
 - - - Source current(TL=MAX) - - - Source current(TL=0)

AP1  
BP1  
BP2  
WP1  
DP1  
DP2  
DP3  
DP4