



The 5-phase Stepping Set

DP2 series DC24V/36V Full-step/Half-step (500 x 1 divisions) (500 x 2 divisions)

Configuration of the 5-phase Stepping Motor Set, DP2 Series

Name	Quantity
DP2 Series Instruction Manual	1 pc.
PM Driver	1 pc.
Stepping Motor	1 pc.
Power Cable, Signal Cable (CN1)	1 pc.
Stepping Motor Cable (CN2)	1 pc.

Characteristics

- **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 HIC 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.

- **Pulse input system selection function**

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

- **Power down function**

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

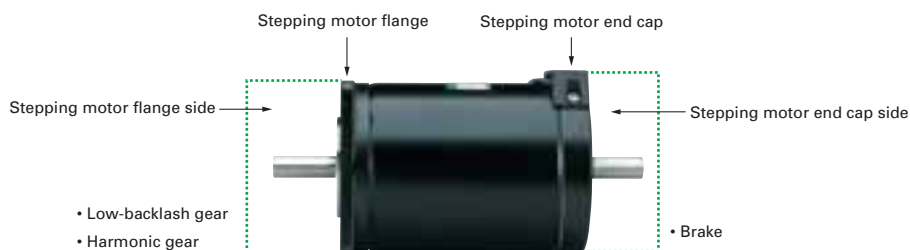
Explanation of set model number

① System on the stepping motor flange side

Code	Flange side	Deceleration ratio
G	Spur gear	1 / 3.6, 1 / 7.2, 1 / 10, 1 / 20, 1 / 30, 1 / 50
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 on flange side	

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 on end cap side	



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 PMM-BD-53130-10 and 103F5505 type are combined and equipped with the system of harmonic gear (1/100) and brake:

DP22F551S—H B 100

Standard set model number

③ Gear deceleration ratio (1/100)
 ② Brake
 ① Harmonic gear

How to order

Please use the "Set Model Number" in the List of Combined Stepping Motor Model Number for the 5-phase Stepping Set, DP2 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			PMM-BD-53130-10
Standard specification	Input source	For main power	DC24V / 36V±10%
		For control power	DC5V±5%
	Source current	For main power	2.5A
		For control power	0.15A
	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.
		Insulation resistance	10MΩ MIN. when applying DC500V between the power input terminal and cabinet.
		Mass(Weight)	0.2kg (0.44 lbs)
	Function	Select function	Pulse input system, power specification
		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
		Step angle selection	Photo coupler input method, input resistance 330Ω Input signal voltage "H" level: 4.0 to 5.5V, "L" level: 0 to 0.5V
I/O signals	Phase origin monitor output signal		Open collector output by photo coupler (ON when phase origin) Output signal standard, V _{ceo} : 30V MAX, I _c : 5 mA MAX

* For information about the operation, connection, function, and dimensions of the PM driver, refer to pages 255 and after.

Stepping motor Common specifications

Item	Combined stepping motors of DP2 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 ² 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 "DP2" series

PM driver model numbers : PMM-BD-53130-10

Combination Model Number for STEPSYN F Series (Motor for a set)

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	□ 28mm	DP22F351S	103F3505-7041	DP22F351D	103F3505-7011
		DP22F356S	103F3515-7041	DP22F356D	103F3515-7011
	□ 42mm	DP22F551S	103F5505-7041	DP22F551D	103F5505-7011
		DP22F552S	103F5508-7041	DP22F552D	103F5508-7011
		DP22F554S	103F5510-7041	DP22F554D	103F5510-7011
	□ 60mm	DP22F781S	103F7851-7041	DP22F781D	103F7851-7011
		DP22F782S	103F7852-7041	DP22F782D	103F7852-7011
		DP22F783S	103F7853-7041	DP22F783D	103F7853-7011
Low-backlash gear	□ 42mm	DP22F551S-CX3.6	103F5505-70CXA4	DP22F551D-CX3.6	103F5505-70CXA1
		DP22F551S-CX7.2	103F5505-70CXB4	DP22F551D-CX7.2	103F5505-70CXB1
		DP22F551S-CX10	103F5505-70CXE4	DP22F551D-CX10	103F5505-70CXE1
		DP22F551S-CX20	103F5505-70CXG4	DP22F551D-CX20	103F5505-70CXG1
		DP22F551S-CX30	103F5505-70CXJ4	DP22F551D-CX30	103F5505-70CXJ1
		DP22F551S-CX36	103F5505-70CXX4	DP22F551D-CX36	103F5505-70CXX1
Harmonic gear	□ 28mm	DP22F351S-HX50	103F3505-70HXL4	DP22F351D-HX50	103F3505-70HXL1
		DP22F351S-HX100	103F3505-70HXM4	DP22F351D-HX100	103F3505-70HXM1
	□ 42mm	DP22F551S-HX50	103F5505-70HXL4	DP22F551D-HX50	103F5505-70HXL1
		DP22F551S-HX100	103F5505-70HXM4	DP22F551D-HX100	103F5505-70HXM1
Spur gear	□ 28mm	DP22F351S-GX3.6	103F3505-70GXA4	DP22F351D-GX3.6	103F3505-70GXA1
		DP22F351S-GX7.2	103F3505-70GXB4	DP22F351D-GX7.2	103F3505-70GXB1
		DP22F351S-GX10	103F3505-70GXE4	DP22F351D-GX10	103F3505-70GXE1
		DP22F351S-GX20	103F3505-70GXG4	DP22F351D-GX20	103F3505-70GXG1
		DP22F351S-GX30	103F3505-70GXJ4	DP22F351D-GX30	103F3505-70GXJ1
		DP22F351S-GX50	103F3505-70GXL4	DP22F351D-GX50	103F3505-70GXL1
Electromagnetic brake	□ 42mm	DP22F551S-XB	103F5505-70XB41		
		DP22F552S-XB	103F5508-70XB41		
		DP22F554S-XB	103F5510-70XB41		

Stepping motor data sheet

STEPSYN F Series (Standard)

Set model number	Single shaft	DP22F351S	DP22F356S	DP22F551S	DP22F552S	DP22F554S
	Double shaft	DP22F351D	DP22F356D	DP22F551D	DP22F552D	DP22F554D
Holding torque	N·m(oz·in)	0.036(5.10)	0.065(9.20)	0.13(18.41)	0.18(25.49)	0.26(36.82)
Rotor inertia	$\times 10^{-4}$ kg·m ² (oz·in ²)	0.009(0.05)	0.016(0.09)	0.03(0.16)	0.053(0.29)	0.065(0.36)
Mass(Weight)	kg(lbs)	0.11(0.24)	0.2(0.44)	0.23(0.51)	0.28(0.62)	0.37(0.82)

Set model number	Single shaft	DP22F781S	DP22F782S	DP22F783S
	Double shaft	DP22F781D	DP22F782D	DP22F783D
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 ² (oz·in ²)	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)

STEPSYN F Series (With low-backlash gear)

Set model number	Single shaft	DP22F551S-CX3.6	DP22F551S-CX7.2	DP22F551S-CX10	DP22F551S-CX20	DP22F551S-CX30	DP22F551S-CX36
	Double shaft	DP22F551D-CX3.6	DP22F551D-CX7.2	DP22F551D-CX10	DP22F551D-CX20	DP22F551D-CX30	DP22F551D-CX36
Allowable torque	N·m(oz·in)	0.35(49.6)	0.7(99.1)	1(141.6)	1.5(212.4)	1.5(212.4)	1.5(212.4)
Rotor inertia	$\times 10^{-4}$ kg·m ² (oz·in ²)	0.03(0.16)					
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	°	0.6	0.4	0.35	0.25	0.25	0.25
Allowable number of rotations	min ⁻¹	500	250	180	90	60	50
Mass(Weight)	kg(lbs)	0.36(0.79)					
Allowable thrust load	N	15					
Allowable radial load (Note1)	N	20					

* The rotation direction of the motor and the gear output shaft is as follows: when deceleration ratio is 1:3.6, 1:7.2, or 1:10, both motor and shaft rotate in the same direction, and for 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.

STEPSYN F Series (With harmonic gear)

Set model number	Single shaft	DP22F351S-HX50	DP22F351S-HX100
	Double shaft	DP22F351D-HX50	DP22F351D-HX100
Allowable torque	N·m(oz·in)	1.5(212.4)	2(283.2)
Rotor inertia	$\times 10^{-4}$ kg·m ² (oz·in ²)	0.012(0.07)	
Basic step angle	°	0.0144	0.0072
Deceleration ratio		1 : 50	1 : 100
Lost motion	Minute	0.4~3 (±0.06 N·m)(±8.50 oz·in)	
Allowable number of rotations	min ⁻¹	500	250
Mass(Weight)	kg(lbs)	0.22(0.49)	
Allowable thrust load	N	100	
Allowable radial load (Note1)	N	200	

* 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	DP22F551S-HX50	DP22F551S-HX100
	Double shaft	DP22F551D-HX50	DP22F551D-HX100
Allowable torque	N·m(oz·in)	2.5(354.0)	4(566.4)
Rotor inertia	$\times 10^{-4}$ kg·m ² (oz·in ²)	0.042(0.23)	
Basic step angle	°	0.0144	0.0072
Deceleration ratio		1 : 50	1 : 100
Lost motion	Minute	0.4~3 (±0.06 N·m)(±22.66 oz·in)	
Allowable number of rotations	min ⁻¹	500	250
Mass(Weight)	kg(lbs)	0.52(1.15)	
Allowable thrust load	N	200	
Allowable radial load (Note1)	N	250	

* 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 spur gear)

Set model number	Single shaft	DP22F351S-GX3.6	DP22F351S-GX7.2	DP22F351S-GX10	DP22F351S-GX20	DP22F351S-GX30	DP22F351S-GX50
	Double shaft	DP22F351D-GX3.6	DP22F351D-GX7.2	DP22F351D-GX10	DP22F351D-GX20	DP22F351D-GX30	DP22F351D-GX50
Allowable torque	N·m(oz·in)	0.1(14.16)	0.15(21.24)	0.2(28.32)	0.35(49.56)	0.5(70.80)	0.5(70.80)
Rotor inertia	$\times 10^{-4}$ kg·m ² (oz·in ²)	0.009(0.05)					
Basic step angle	°	0.2	0.1	0.072	0.036	0.024	0.0144
Deceleration ratio		1 : 3.6	1 : 7.2	1 : 10	1 : 20	1 : 30	1 : 50
Backlash	°	2	2	2	1.5	1.5	1.5
Allowable number of rotations	min ⁻¹	800	400	300	150	100	60
Mass(Weight)	kg(lbs)	0.17(0.37)					
Allowable thrust load	N	10					
Allowable radial load (Note1)	N	15					

* The rotation direction of the motor and the gear output shaft is as follows: when deceleration ratio is 1:3.6, 1:7.2, 1:20, 1:30, or 1:50, both motor and shaft rotate in the same direction, and for 1:10 type, the motor and the shaft rotate in opposite direction.
(Note1) When load is applied at 1/3 length from output shaft edge.

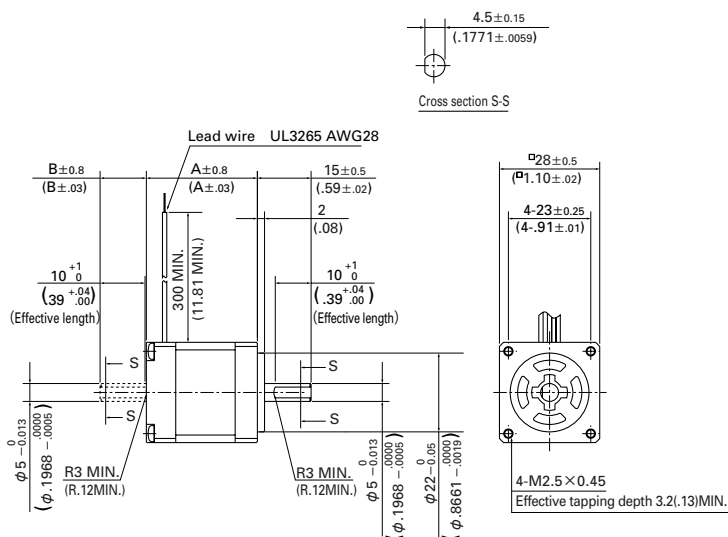
Stepping motor data sheet

STEPSYN F Series (With electromagnetic brake)

Set model number		DP22F551S-XB	DP22F552S-XB	DP22F554S-XB
	Single shaft			
	Double shaft			
Holding torque	N·m(oz·in)	0.13(18.4)	0.18(25.5)	0.26(36.8)
Rotor inertia	$\times 10^{-4}$ kg·m ² (oz·in ²)	0.045(0.25)	0.068(0.37)	0.08(0.44)
Mass(Weight)	kg(lbs)	0.38(0.84)	0.43(0.95)	0.52(1.15)
Electromagnetic brake specification	Brake operation system	Non-excitation operation system		
	Source voltage	DC 24 ± 5%		
	Exciting current	0.08		
	Electric power consumption	2		
	Static friction torque	0.3(42.48)		
	Brake operating time	30		
	Brake release time	20		
	Polarity	Brown:⊕,White:⊖		

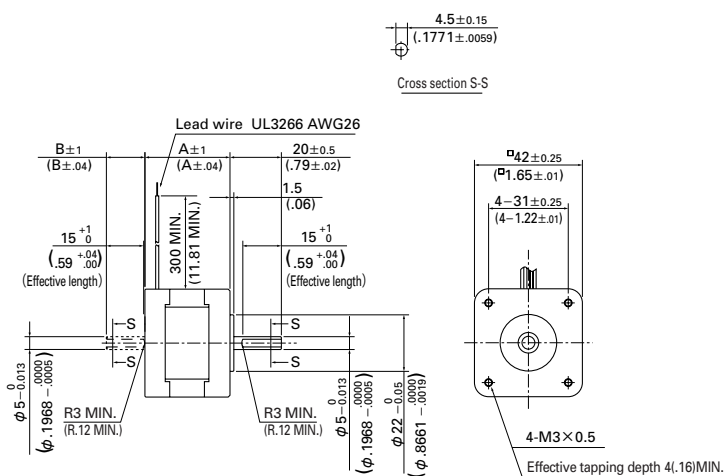
Dimensions [Unit: mm (inch)]

STEPSYN F DP22F35□□ 103F35□□-70□□



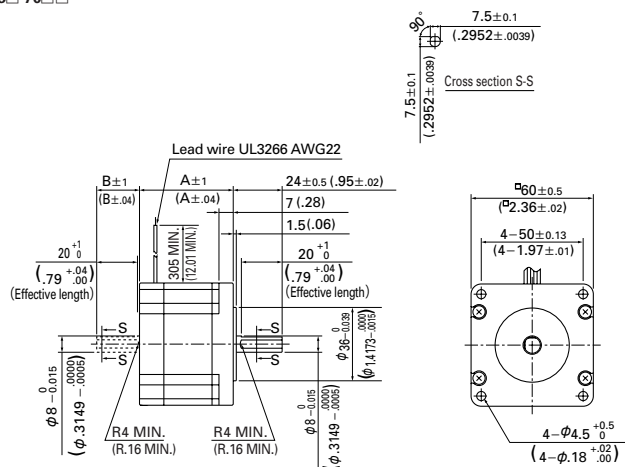
Model name	A	B
DP22F351S (103F3505-7041)	31 (1.22)	—
DP22F351D (103F3505-7011)	31 (1.22)	10 (.39)
DP22F356S (103F3515-7041)	50.5 (1.99)	—
DP22F356D (103F3515-7011)	50.5 (1.99)	10 (.39)

DP22F55□□ 103F55□□-70□□



Model name	A	B
DP22F551S (103F5505-7041)	34 (1.34)	—
DP22F551D (103F5505-7011)	34 (1.34)	15 (.59)
DP22F552S (103F5508-7041)	40 (1.57)	—
DP22F552D (103F5508-7011)	40 (1.57)	15 (.59)
DP22F554S (103F5510-7041)	49 (1.93)	—
DP22F554D (103F5510-7011)	49 (1.93)	15 (.59)

DP22F78□□ 103F785□-70□□



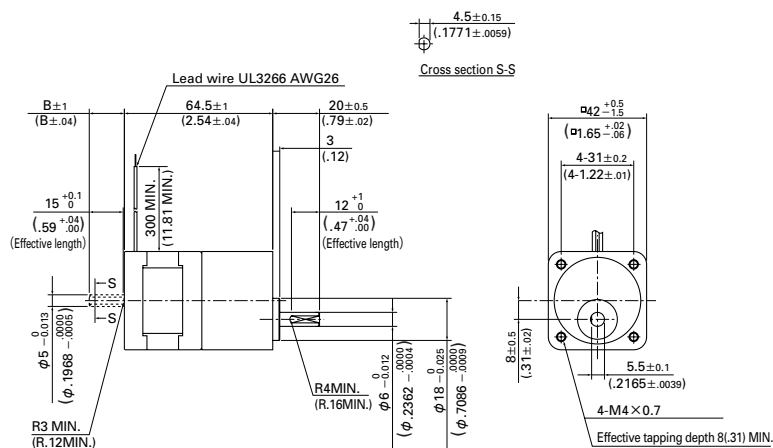
Model name	A	B
DP22F781S (103F7851-7041)	46.5 (1.83)	—
DP22F781D (103F7851-7011)	46.5 (1.83)	21 (.83)
DP22F782S (103F7852-7041)	55 (2.17)	—
DP22F782D (103F7852-7011)	55 (2.17)	21 (.83)
DP22F783S (103F7853-7041)	87.5 (3.44)	—
DP22F783D (103F7853-7011)	87.5 (3.44)	21 (.83)

Dimensions [Unit: mm (inch)]

STEPSYN F with low-backlash gear

DP22F551□-CX□□

103F5505-70CX□□

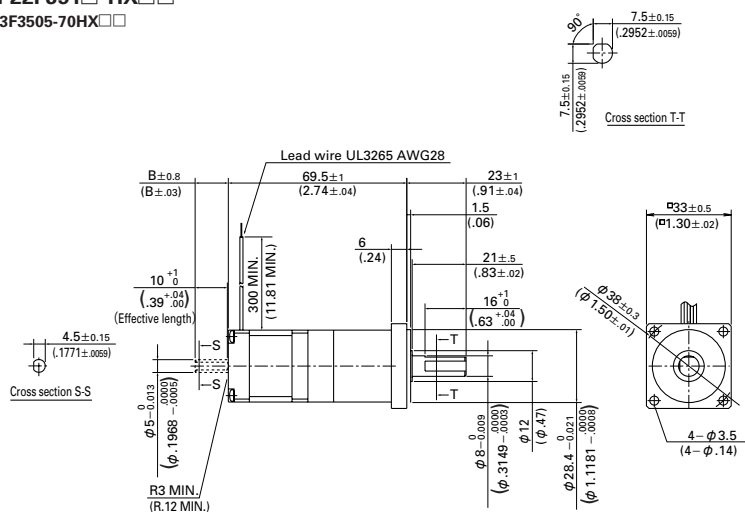


Model name	B
DP22F551S-CX3.6 (103F5505-70CXA4)	—
DP22F551D-CX3.6 (103F5505-70CXA1)	15 (.59)
DP22F551S-CX7.2 (103F5505-70CXB4)	—
DP22F551D-CX7.2 (103F5505-70CXB1)	15 (.59)
DP22F551S-CX10 (103F5505-70CXE4)	—
DP22F551D-CX10 (103F5505-70CXE1)	15 (.59)
DP22F551S-CX20 (103F5505-70CXG4)	—
DP22F551D-CX20 (103F5505-70CXG1)	15 (.59)
DP22F551S-CX30 (103F5505-70CXJ4)	—
DP22F551D-CX30 (103F5505-70CXJ1)	15 (.59)
DP22F551S-CX36 (103F5505-70CXK4)	—
DP22F551D-CX36 (103F5505-70CXK1)	15 (.59)

STEPSYN F with harmonic gear

DP22F351□-HX□□

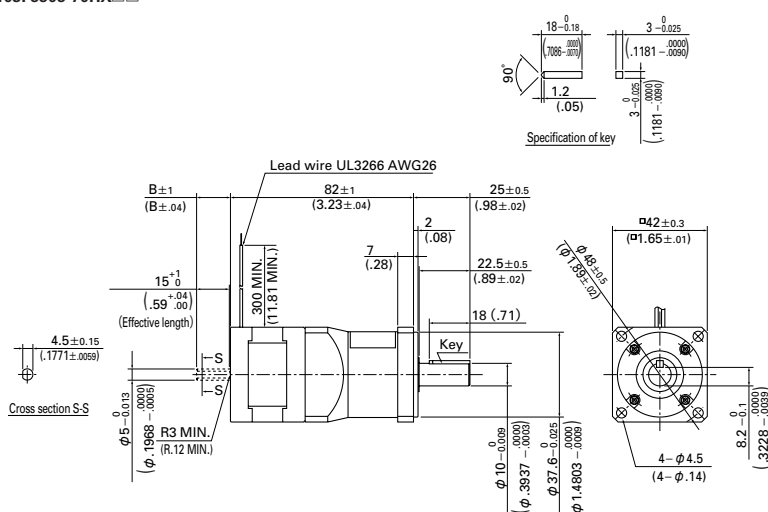
103F3505-70HX□□



Model name	B
DP22F351S-HX50 (103F3505-70HXL4)	—
DP22F351D-HX50 (103F3505-70HXL1)	10 (.39)
DP22F351S-HX100 (103F3505-70HXM4)	—
DP22F351D-HX100 (103F3505-70HXM1)	10 (.39)

DP22F551□-HX□□

103F5505-70HX□□



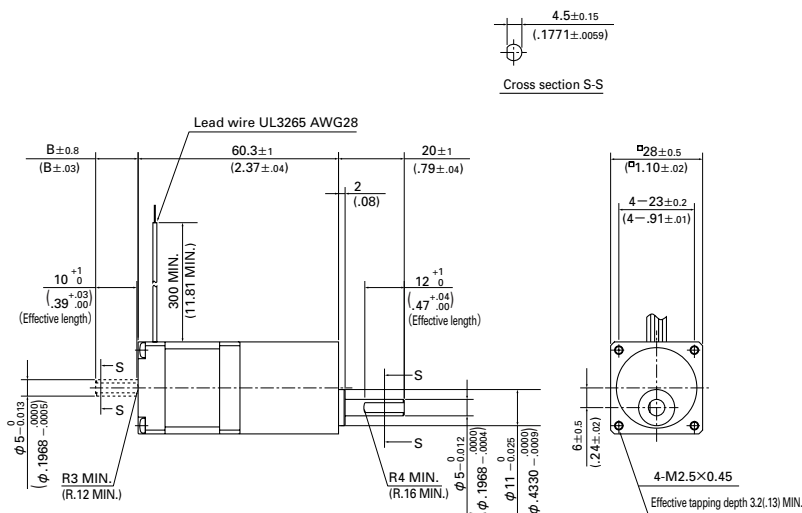
Model name	B
DP22F551S-HX50 (103F5505-70HXL4)	—
DP22F551D-HX50 (103F5505-70HXL1)	15 (.59)
DP22F551S-HX100 (103F5505-70HXM4)	—
DP22F551D-HX100 (103F5505-70HXM1)	15 (.59)

Dimensions [Unit: mm (inch)]

STEPSYN F with spur gear

DP22F351□-GX□□

103F3505-70GX□□

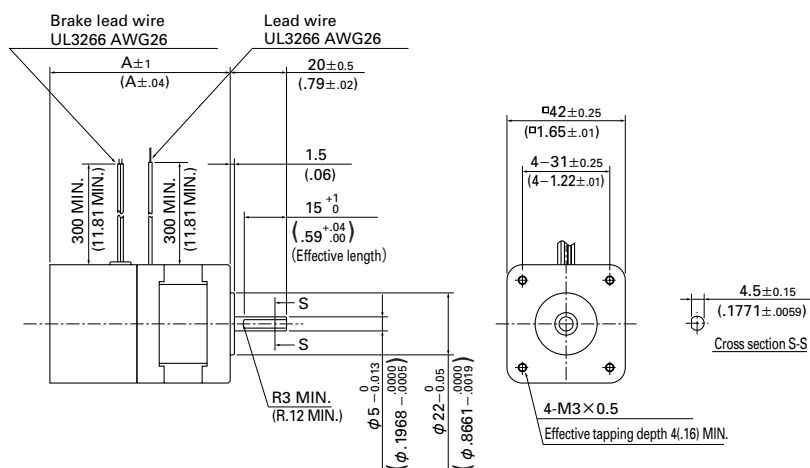


Model name	B
DP22F351S-GX3.6 (103F3505-70GXA4)	—
DP22F351D-GX3.6 (103F3505-70GXA1)	10 (.39)
DP22F351S-GX7.2 (103F3505-70GXB4)	—
DP22F351D-GX7.2 (103F3505-70GXB1)	10 (.39)
DP22F351S-GX10 (103F3505-70GXE4)	—
DP22F351D-GX10 (103F3505-70GXE1)	10 (.39)
DP22F351S-GX20 (103F3505-70GXG4)	—
DP22F351D-GX20 (103F3505-70GXG1)	10 (.39)
DP22F351S-GX30 (103F3505-70GXJ4)	—
DP22F351D-GX30 (103F3505-70GXJ1)	10 (.39)
DP22F351S-GX50 (103F3505-70GXL4)	—
DP22F351D-GX50 (103F3505-70GXL1)	10 (.39)

STEPSYN F with electromagnetic brake

DP22F55□S-XB

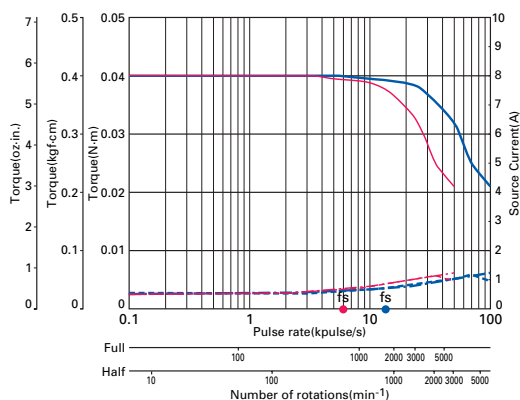
103F55□□-70XB41



Model name	A
DP22F551S-XB (103F5505-70XB41)	64.5 (2.54)
DP22F552S-XB (103F5508-70XB41)	70.5 (2.78)
DP22F553S-XB (103F5510-70XB41)	79.5 (3.13)

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

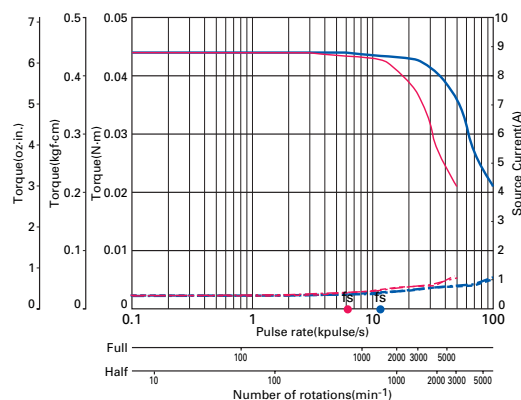
● DP22F351□ : 24V



103F3505-70□□

Source voltage : DC24V-Operating current : 0.75A/phase
 — Pull-out torque($JL_1=0.33 \times 10^{-4} \text{ kg-m}^2$ [1.80 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

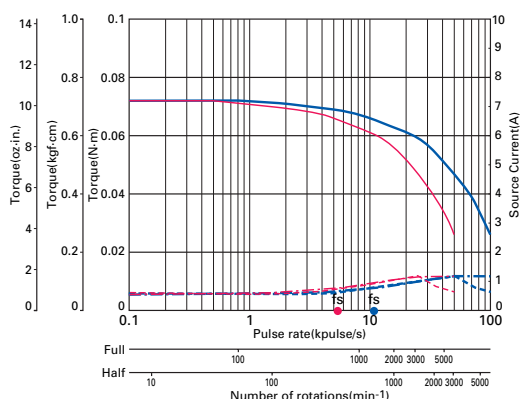
● DP22F351□ : 36V



103F3505-70□□

Source voltage : DC36V-Operating current : 0.75A/phase
 — Pull-out torque($JL_1=0.33 \times 10^{-4} \text{ kg-m}^2$ [1.80 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

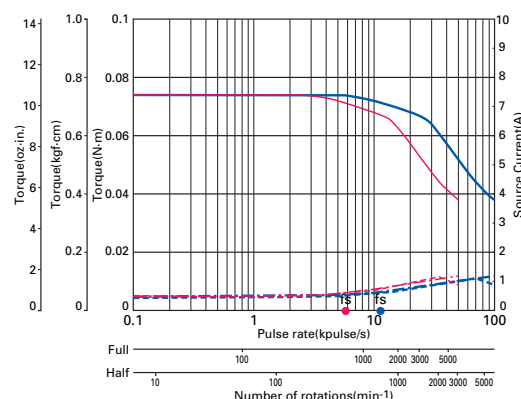
● DP22F356□ : 24V



103F3515-70□□

Source voltage : DC24V-Operating current : 0.75A/phase
 — Pull-out torque($JL_1=0.33 \times 10^{-4} \text{ kg-m}^2$ [1.80 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

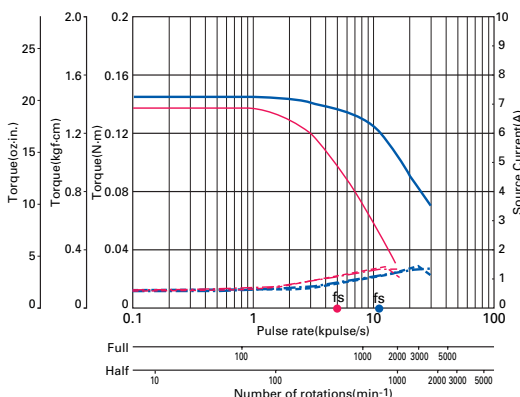
● DP22F356□ : 36V



103F3515-70□□

Source voltage : DC36V-Operating current : 0.75A/phase
 — Pull-out torque($JL_1=0.33 \times 10^{-4} \text{ kg-m}^2$ [1.80 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

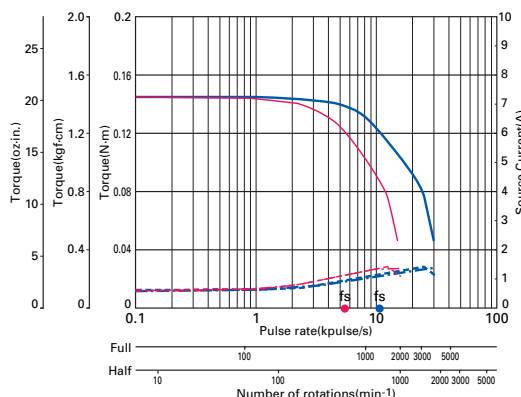
● DP22F551□ / DP22F551S-XB : 24V



103F5505-70□□/103F5505-70XB41

Source voltage : DC24V-Operating current : 0.75A/phase
 — Pull-out torque($JL_1=0.33 \times 10^{-4} \text{ kg-m}^2$ [1.80 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

● DP22F551□ / DP22F551S-XB : 36V

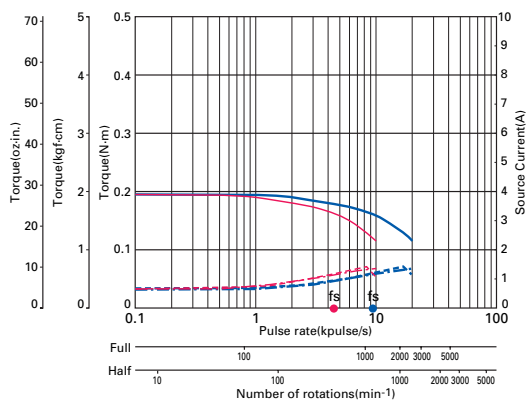


103F5505-70□□/103F5505-70XB41

Source voltage : DC36V-Operating current : 0.75A/phase
 — Pull-out torque($JL_1=0.33 \times 10^{-4} \text{ kg-m}^2$ [1.80 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

● DP22F552□ / DP22F552S-XB : 24V



103F5508-70□□/103F5508-70XB41

Source voltage : DC24V-Operating current : 0.75A/phase

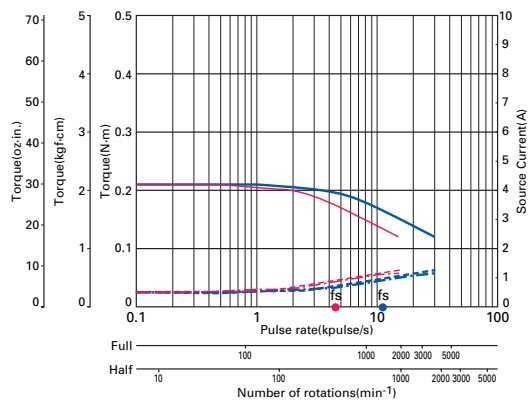
— Pull-out torque($JL_1=0.94 \times 10^{-4} \text{ kg-m}^2$ [5.14 oz-in²] Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

fs : No load maximum starting pulse rate

■ Full-step ■ Half-step

● DP22F552□ / DP22F552S-XB : 36V



103F5508-70□□/103F5508-70XB41

Source voltage : DC36V-Operating current : 0.75A/phase

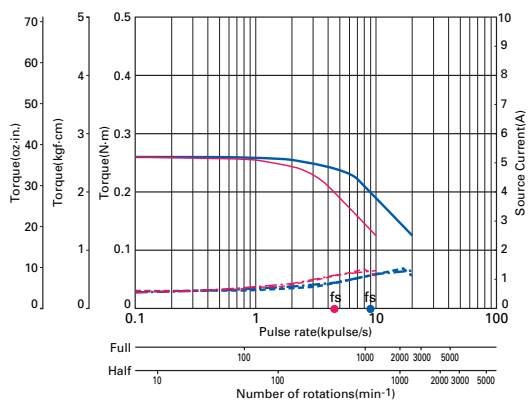
— Pull-out torque($JL_1=0.94 \times 10^{-4} \text{ kg-m}^2$ [5.14 oz-in²] Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

fs : No load maximum starting pulse rate

■ Full-step ■ Half-step

● DP22F554□ / DP22F554S-XB : 24V



103F5510-70□□/103F5510-70XB41

Source voltage : DC24V-Operating current : 0.75A/phase

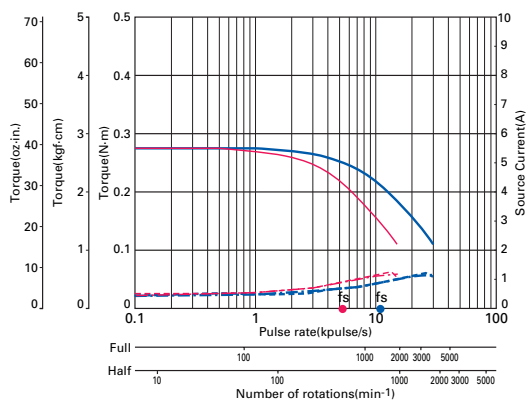
— Pull-out torque($JL_1=0.94 \times 10^{-4} \text{ kg-m}^2$ [5.14 oz-in²] Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

fs : No load maximum starting pulse rate

■ Full-step ■ Half-step

● DP22F554□ / DP22F554S-XB : 36V



103F5510-70□□/103F5510-70XB41

Source voltage : DC36V-Operating current : 0.75A/phase

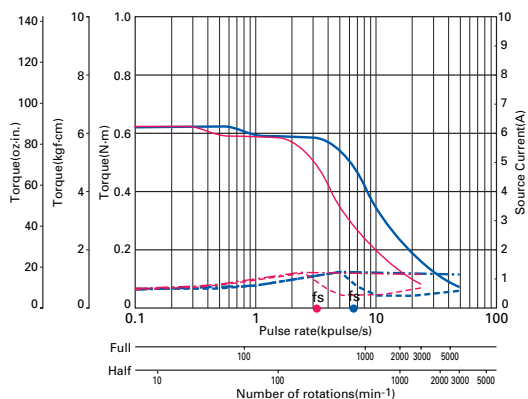
— Pull-out torque($JL_1=0.94 \times 10^{-4} \text{ kg-m}^2$ [5.14 oz-in²] Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

fs : No load maximum starting pulse rate

■ Full-step ■ Half-step

● DP22F781□ : 24V



103F7851-70□□

Source voltage : DC24V-Operating current : 0.75A/phase

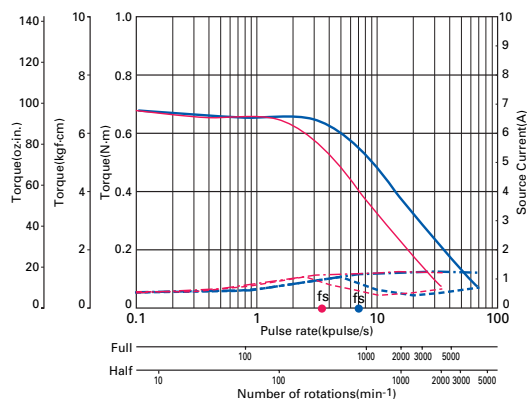
— Pull-out torque($JL_1=0.94 \times 10^{-4} \text{ kg-m}^2$ [5.14 oz-in²] Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

fs : No load maximum starting pulse rate

■ Full-step ■ Half-step

● DP22F781□ : 36V



103F7851-70□□

Source voltage : DC36V-Operating current : 0.75A/phase

— Pull-out torque($JL_1=0.94 \times 10^{-4} \text{ kg-m}^2$ [5.14 oz-in²] Use the rubber coupling)

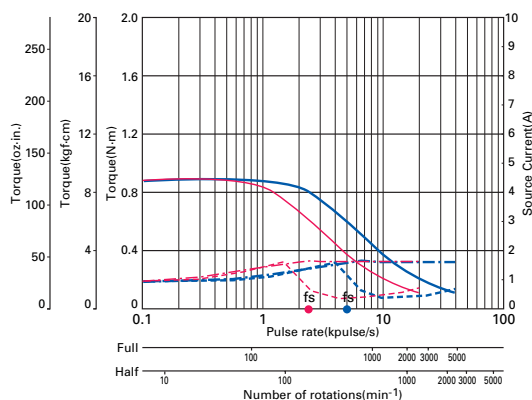
--- Source current($T_L=MAX$) --- Source current($T_L=0$)

fs : No load maximum starting pulse rate

■ Full-step ■ Half-step

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

● DP22F782 □ : 24V



103F7852-70 □ □

Source voltage : DC24V · Operating current : 0.75A/phase

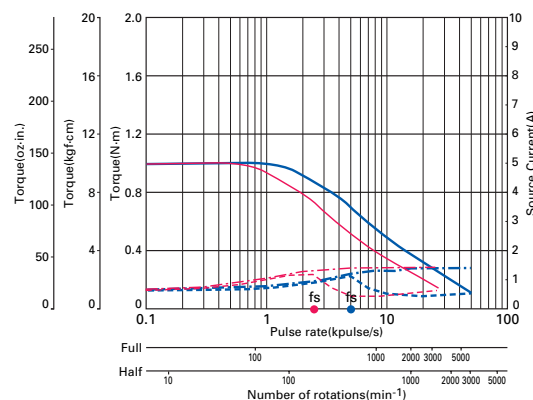
— Pull-out torque ($JL_1=2.6 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [14.22 oz-in²]) Use the rubber coupling)

--- Source current ($T_L=MAX$) --- Source current ($T_L=0$)

fs : No load maximum starting pulse rate

■ Full-step ■ Half-step

● DP22F782 □ : 36V



103F7852-70 □ □

Source voltage : DC36V · Operating current : 0.75A/phase

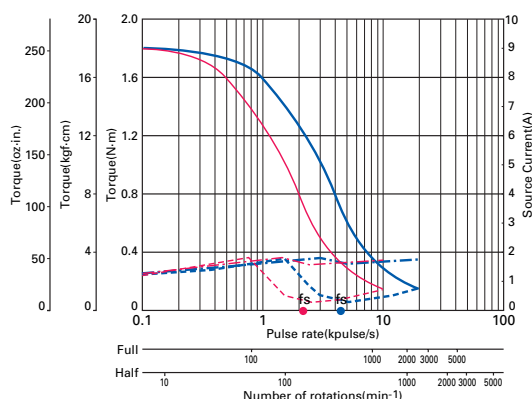
— Pull-out torque ($JL_1=2.6 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [14.22 oz-in²]) Use the rubber coupling)

--- Source current ($T_L=MAX$) --- Source current ($T_L=0$)

fs : No load maximum starting pulse rate

■ Full-step ■ Half-step

● DP22F783 □ : 24V



103F7853-70 □ □

Source voltage : DC24V · Operating current : 0.75A/phase

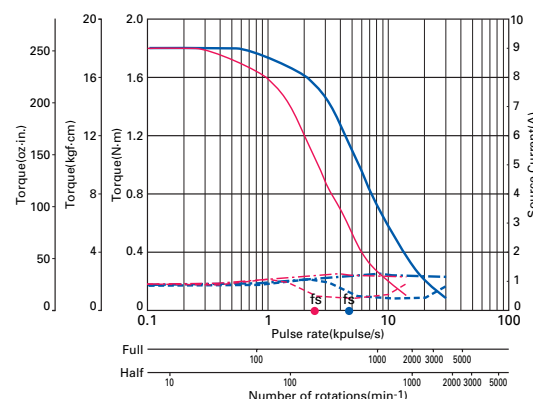
— Pull-out torque ($JL_1=7.4 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [40.46 oz-in²]) Use the rubber coupling)

--- Source current ($T_L=MAX$) --- Source current ($T_L=0$)

fs : No load maximum starting pulse rate

■ Full-step ■ Half-step

● DP22F783 □ : 36V



103F7853-70 □ □

Source voltage : DC36V · Operating current : 0.75A/phase

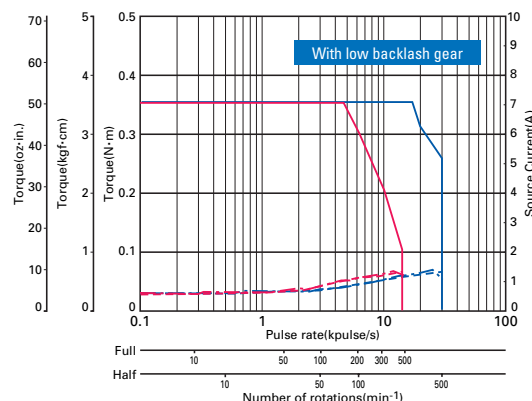
— Pull-out torque ($JL_1=7.4 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [40.46 oz-in²]) Use the rubber coupling)

--- Source current ($T_L=MAX$) --- Source current ($T_L=0$)

fs : No load maximum starting pulse rate

■ Full-step ■ Half-step

● DP22F551 □ -CX3.6 : 24V



103F5505-70CXA □

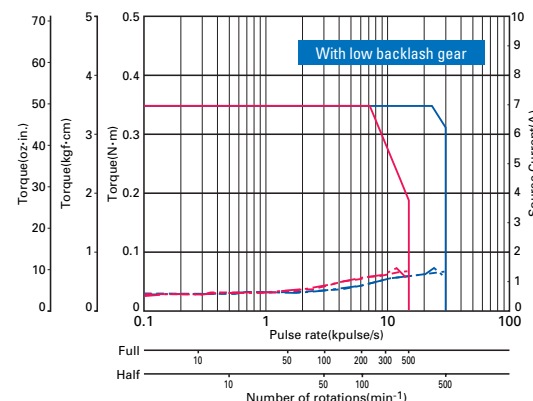
Source voltage : DC24V · Operating current : 0.75A/phase

— Allowable torque ($JL_1=0.94 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [5.14 oz-in²]) Use the rubber coupling)

--- Source current ($T_L=MAX$) --- Source current ($T_L=0$)

■ Full-step ■ Half-step

● DP22F551 □ -CX3.6 : 36V



103F5505-70CXA □

Source voltage : DC36V · Operating current : 0.75A/phase

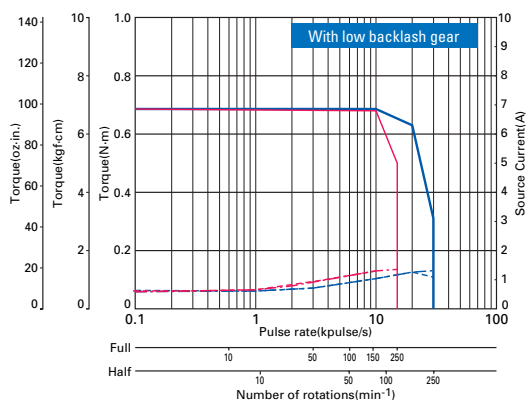
— Allowable torque ($JL_1=0.94 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [5.14 oz-in²]) Use the rubber coupling)

--- Source current ($T_L=MAX$) --- Source current ($T_L=0$)

■ Full-step ■ Half-step

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

● DP22F551□-CX7.2 : 24V



103F5505-70CXB□

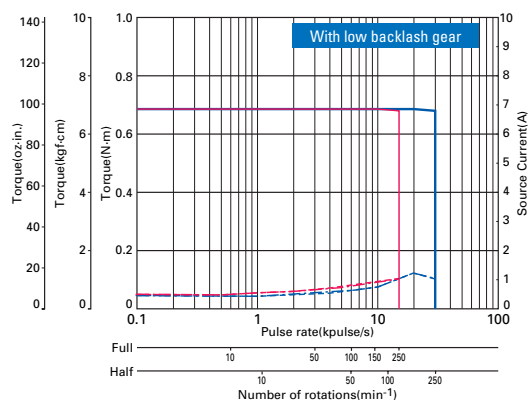
Source voltage : DC24V-Operating current : 0.75A/phase

— Allowable torque($JL_1=0.94 \times 10^{-4} \text{kg-m}^2$ [5.14 oz-in²]) Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

■ Full-step ■ Half-step

● DP22F551□-CX7.2 : 36V



103F5505-70CXB□

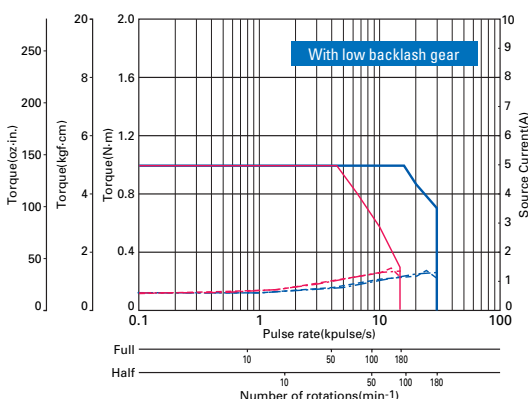
Source voltage : DC36V-Operating current : 0.75A/phase

— Allowable torque($JL_1=0.94 \times 10^{-4} \text{kg-m}^2$ [5.14 oz-in²]) Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

■ Full-step ■ Half-step

● DP22F551□-CX10 : 24V



103F5505-70CXE□

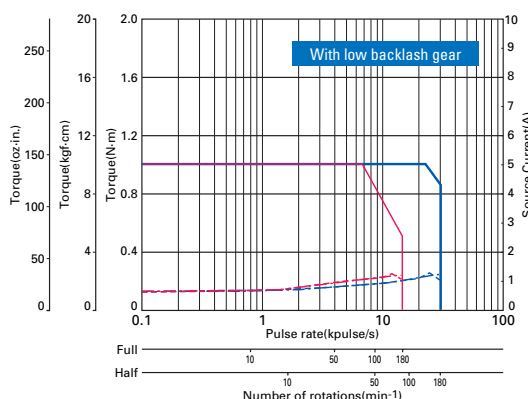
Source voltage : DC24V-Operating current : 0.75A/phase

— Allowable torque($JL_1=2.6 \times 10^{-4} \text{kg-m}^2$ [14.22 oz-in²]) Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

■ Full-step ■ Half-step

● DP22F551□-CX10 : 36V



103F5505-70CXE□

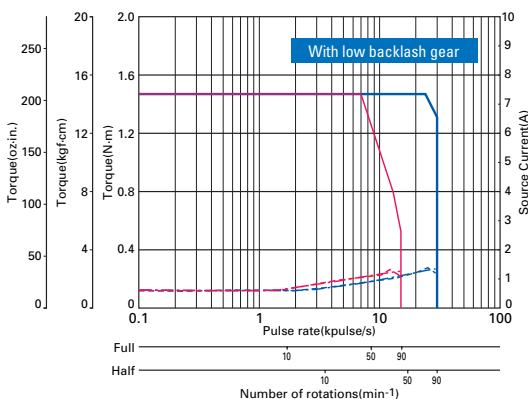
Source voltage : DC36V-Operating current : 0.75A/phase

— Allowable torque($JL_1=2.6 \times 10^{-4} \text{kg-m}^2$ [14.22 oz-in²]) Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

■ Full-step ■ Half-step

● DP22F551□-CX20 : 24V



103F5505-70CXG□

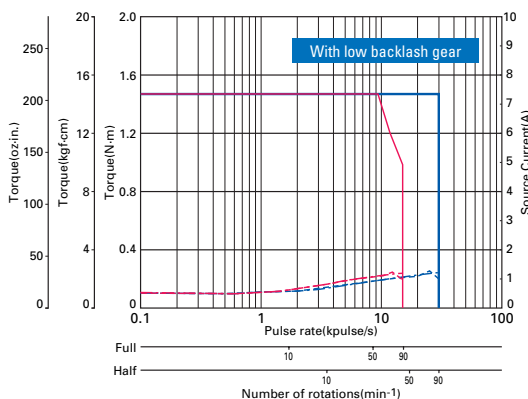
Source voltage : DC24V-Operating current : 0.75A/phase

— Allowable torque($JL_1=2.6 \times 10^{-4} \text{kg-m}^2$ [14.22 oz-in²]) Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

■ Full-step ■ Half-step

● DP22F551□-CX20 : 36V



103F5505-70CXG□

Source voltage : DC36V-Operating current : 0.75A/phase

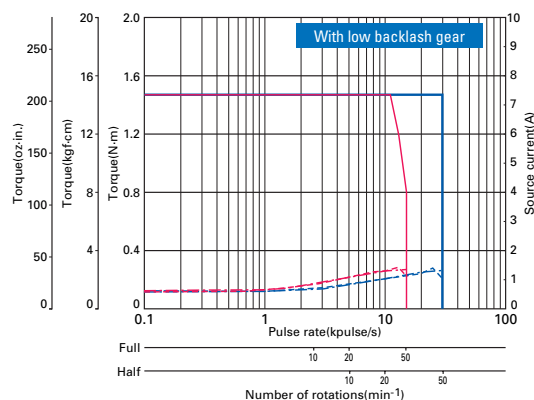
— Allowable torque($JL_1=2.6 \times 10^{-4} \text{kg-m}^2$ [14.22 oz-in²]) Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

■ Full-step ■ Half-step

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

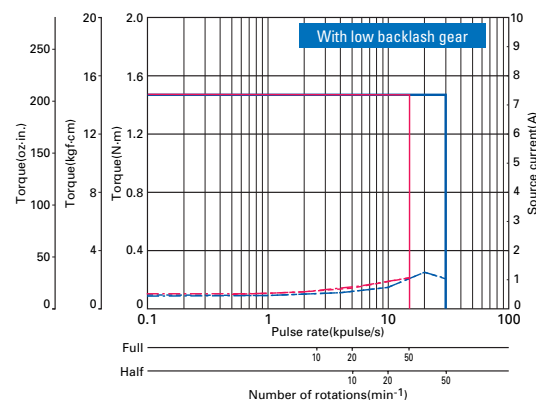
● DP22F551 □ CX30 : 24V



103F5505-70CXJ □

Source voltage : DC24V · Operating current : 0.75A/phase
 — Allowable torque ($JL_1=2.6 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [14.22 oz-in²]) Use the rubber coupling)
 - - - Source current ($T_L=MAX$) - - - Source current ($T_L=0$)
 ■ Full-step ■ Half-step

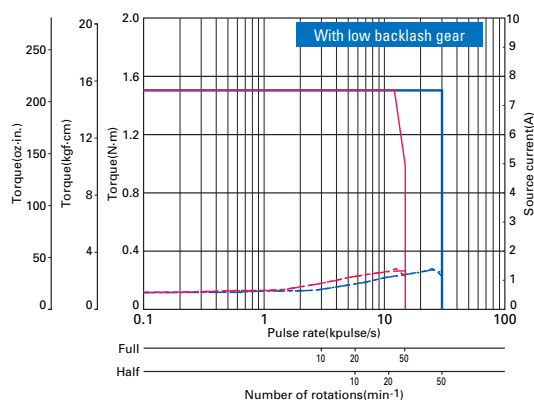
● DP22F551 □ CX30 : 36V



103F5505-70CXJ □

Source voltage : DC36V · Operating current : 0.75A/phase
 — Allowable torque ($JL_1=2.6 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [14.22 oz-in²]) Use the rubber coupling)
 - - - Source current ($T_L=MAX$) - - - Source current ($T_L=0$)
 ■ Full-step ■ Half-step

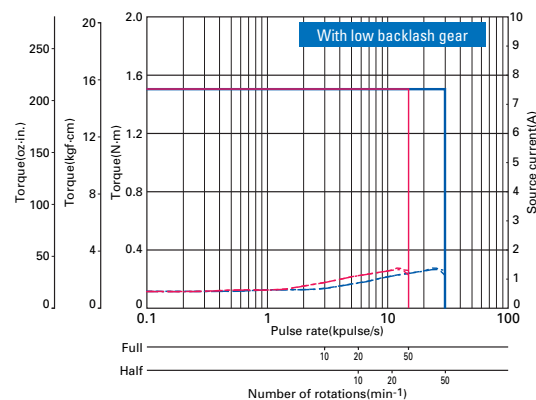
● DP22F551 □ CX36 : 24V



103F5505-70CXK □

Source voltage : DC24V · Operating current : 0.75A/phase
 — Allowable torque ($JL_1=2.6 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [14.22 oz-in²]) Use the rubber coupling)
 - - - Source current ($T_L=MAX$) - - - Source current ($T_L=0$)
 ■ Full-step ■ Half-step

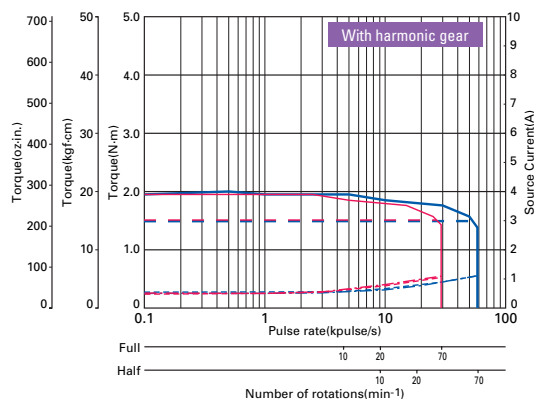
● DP22F551 □ CX36 : 36V



103F5505-70CXK □

Source voltage : DC36V · Operating current : 0.75A/phase
 — Allowable torque ($JL_1=2.6 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [14.22 oz-in²]) Use the rubber coupling)
 - - - Source current ($T_L=MAX$) - - - Source current ($T_L=0$)
 ■ Full-step ■ Half-step

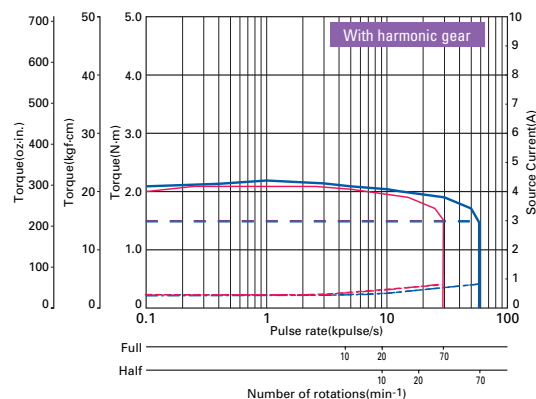
● DP22F351 □ HX50 : 24V



103F3505-70HXL □ ■ Full-step ■ Half-step

Source voltage : DC24V · Operating current : 0.75A/phase
 — Instantaneous allowable torque ($JL_1=7.4 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [40.46 oz-in²]) Use the rubber coupling)
 — Allowable torque ($JL_1=7.4 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [40.46 oz-in²]) Use the rubber coupling)
 - - - Source current ($T_L=MAX$) - - - Source current ($T_L=0$)

● DP22F351 □ HX50 : 36V

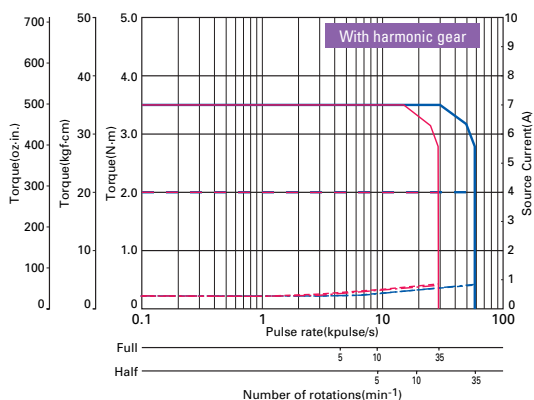


103F3505-70HXL □ ■ Full-step ■ Half-step

Source voltage : DC36V · Operating current : 0.75A/phase
 — Instantaneous allowable torque ($JL_1=7.4 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [40.46 oz-in²]) Use the rubber coupling)
 — Allowable torque ($JL_1=7.4 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [40.46 oz-in²]) Use the rubber coupling)
 - - - Source current ($T_L=MAX$) - - - Source current ($T_L=0$)

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

● DP22F351□-HX100 : 24V



103F3505-70HXM□ Full-step Half-step

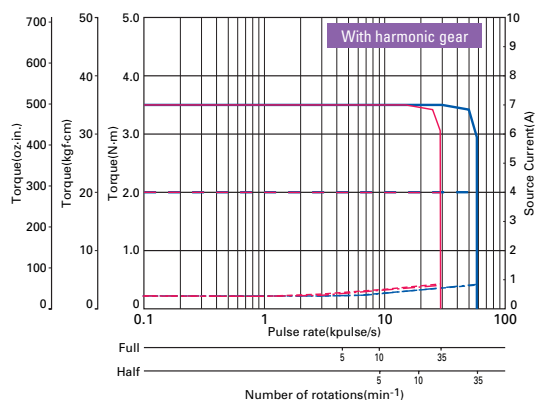
Source voltage : DC24V-Operating current : 0.75A/phase

— Instantaneous allowable torque($JL_1=15.3 \times 10^{-4} \text{ kg-m}^2$ [83.65 oz-in²]) Use the rubber coupling)

— Allowable torque($JL_1=15.3 \times 10^{-4} \text{ kg-m}^2$ [83.65 oz-in²]) Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

● DP22F351□-HX100 : 36V



103F3505-70HXM□ Full-step Half-step

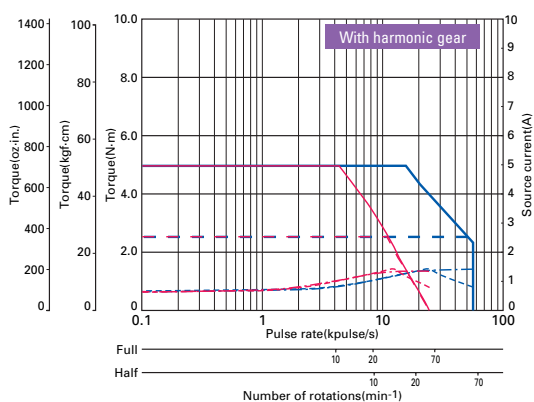
Source voltage : DC36V-Operating current : 0.75A/phase

— Instantaneous allowable torque($JL_1=15.3 \times 10^{-4} \text{ kg-m}^2$ [83.65 oz-in²]) Use the rubber coupling)

— Allowable torque($JL_1=15.3 \times 10^{-4} \text{ kg-m}^2$ [83.65 oz-in²]) Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

● DP22F551□-HX50 : 24V



103F5505-70HXL□ Full-step Half-step

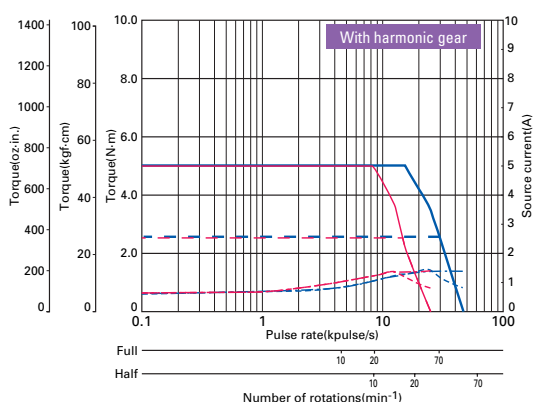
Source voltage : DC24V-Operating current : 0.75A/phase

— Instantaneous allowable torque($JL_1=15.3 \times 10^{-4} \text{ kg-m}^2$ [83.65 oz-in²]) Use the rubber coupling)

— Allowable torque($JL_1=15.3 \times 10^{-4} \text{ kg-m}^2$ [83.65 oz-in²]) Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

● DP22F551□-HX50 : 36V



103F5505-70HXL□ Full-step Half-step

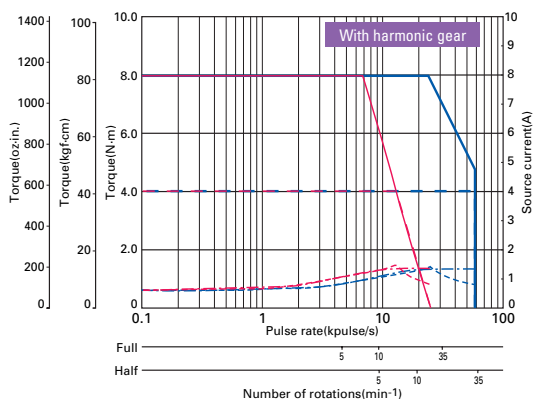
Source voltage : DC36V-Operating current : 0.75A/phase

— Instantaneous allowable torque($JL_1=15.3 \times 10^{-4} \text{ kg-m}^2$ [83.65 oz-in²]) Use the rubber coupling)

— Allowable torque($JL_1=15.3 \times 10^{-4} \text{ kg-m}^2$ [83.65 oz-in²]) Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

● DP22F551□-HX100 : 24V



103F5505-70HXM□ Full-step Half-step

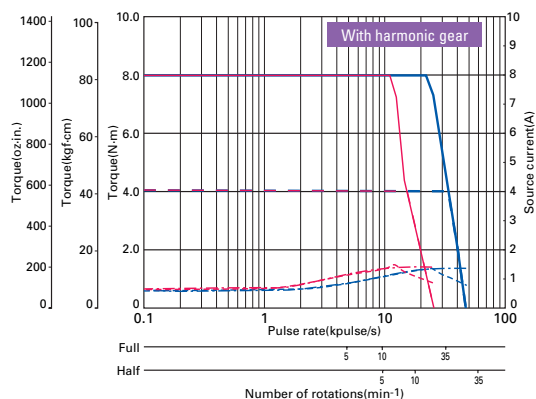
Source voltage : DC24V-Operating current : 0.75A/phase

— Instantaneous allowable torque($JL_1=43 \times 10^{-4} \text{ kg-m}^2$ [235.10 oz-in²]) Use the rubber coupling)

— Allowable torque($JL_1=43 \times 10^{-4} \text{ kg-m}^2$ [235.10 oz-in²]) Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

● DP22F551□-HX100 : 36V



103F5505-70HXM□ Full-step Half-step

Source voltage : DC36V-Operating current : 0.75A/phase

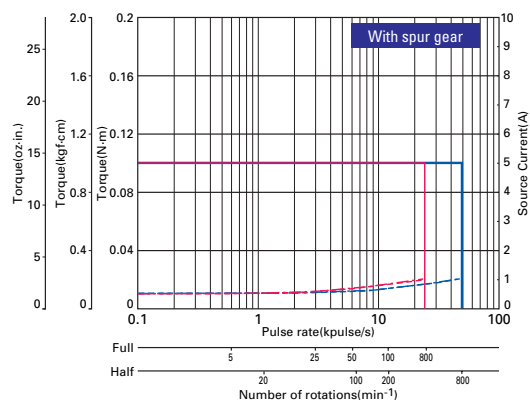
— Instantaneous allowable torque($JL_1=43 \times 10^{-4} \text{ kg-m}^2$ [235.10 oz-in²]) Use the rubber coupling)

— Allowable torque($JL_1=43 \times 10^{-4} \text{ kg-m}^2$ [235.10 oz-in²]) Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

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

● DP22F351□-GX3.6 : 24V



103F3505-70GXA□□

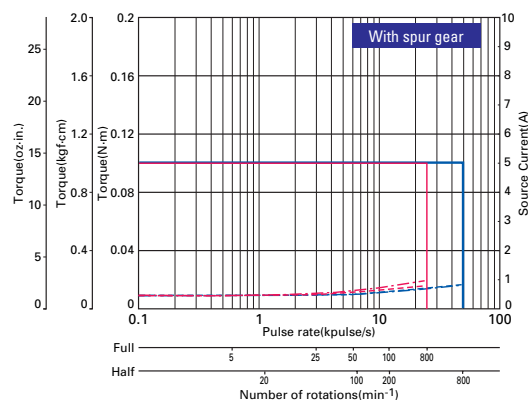
Source voltage : DC24V·Operating current : 0.75A/phase

— Allowable torque($JL_1=0.33 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [1.80 oz-in²] Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

■ Full-step ■ Half-step

● DP22F351□-GX3.6 : 36V



103F3505-70GXA□□

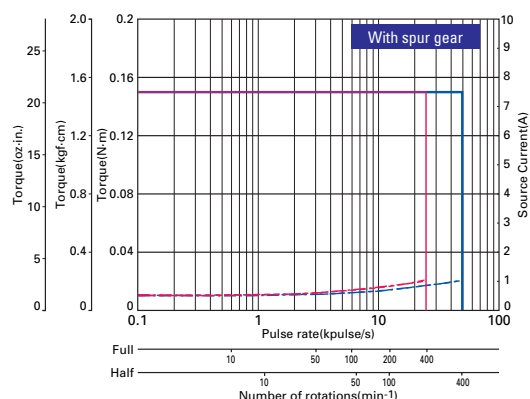
Source voltage : DC36V·Operating current : 0.75A/phase

— Allowable torque($JL_1=0.33 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [1.80 oz-in²] Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

■ Full-step ■ Half-step

● DP22F351□-GX7.2 : 24V



103F3505-70GXB□□

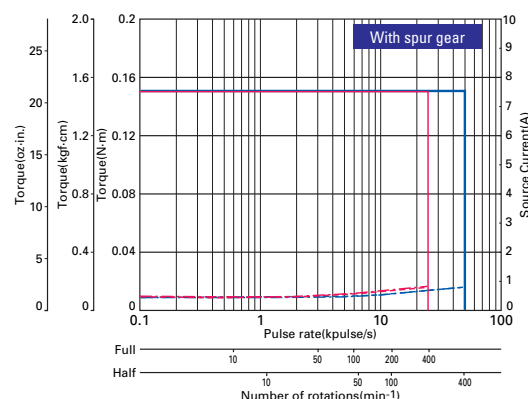
Source voltage : DC24V·Operating current : 0.75A/phase

— Allowable torque($JL_1=0.33 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [1.80 oz-in²] Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

■ Full-step ■ Half-step

● DP22F351□-GX7.2 : 36V



103F3505-70GXB□□

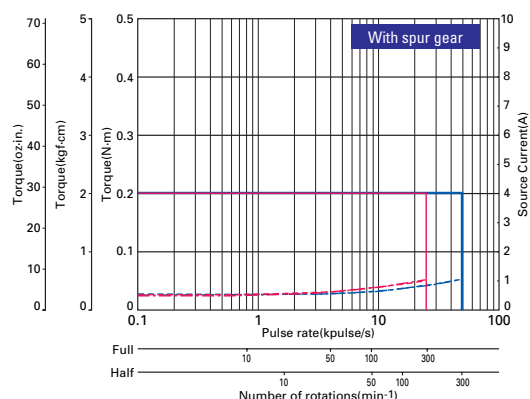
Source voltage : DC36V·Operating current : 0.75A/phase

— Allowable torque($JL_1=0.33 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [1.80 oz-in²] Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

■ Full-step ■ Half-step

● DP22F351□-GX10 : 24V



103F3505-70GXE□□

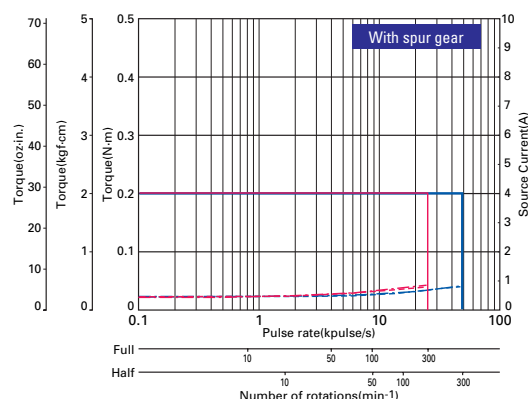
Source voltage : DC24V·Operating current : 0.75A/phase

— Allowable torque($JL_1=0.94 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [5.14 oz-in²] Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

■ Full-step ■ Half-step

● DP22F351□-GX10 : 36V



103F3505-70GXE□□

Source voltage : DC36V·Operating current : 0.75A/phase

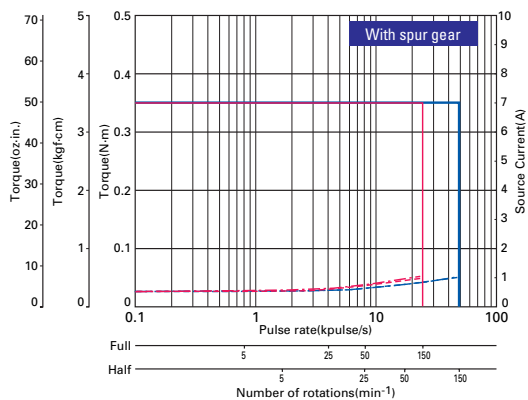
— Allowable torque($JL_1=0.94 \times 10^{-4} \text{ kg} \cdot \text{m}^2$ [5.14 oz-in²] Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

■ Full-step ■ Half-step

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

● DP22F351□-GX20 : 24V



103F3505-70GXG□

Source voltage : DC24V-Operating current : 0.75A/phase

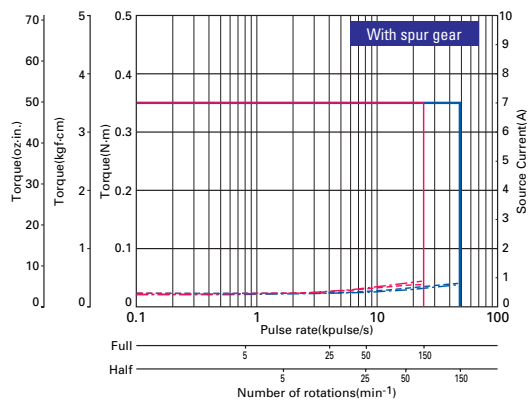
— Allowable torque($JL_1=0.94 \times 10^{-4} \text{ kg-m}^2$ [5.14 oz-in²] Use the rubber coupling)

--- Source current($T_L=MAX$)

--- Source current($T_L=0$)

■ Full-step ■ Half-step

● DP22F351□-GX20 : 36V



103F3505-70GXG□

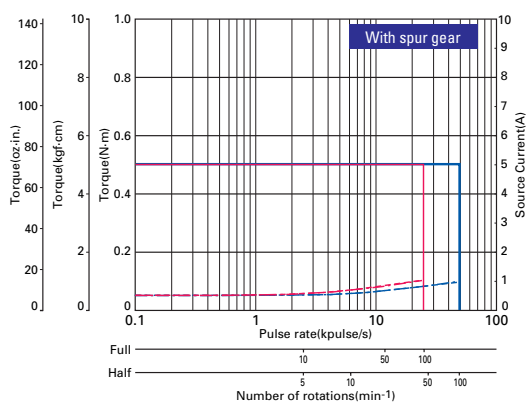
Source voltage : DC36V-Operating current : 0.75A/phase

— Allowable torque($JL_1=0.94 \times 10^{-4} \text{ kg-m}^2$ [5.14 oz-in²] Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

■ Full-step ■ Half-step

● DP22F351□-GX30 : 24V



103F3505-70GXJ□

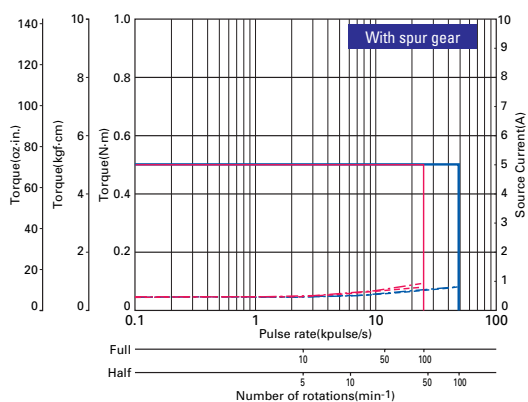
Source voltage : DC24V-Operating current : 0.75A/phase

— Allowable torque($JL_1=0.94 \times 10^{-4} \text{ kg-m}^2$ [5.14 oz-in²] Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

■ Full-step ■ Half-step

● DP22F351□-GX30 : 36V



103F3505-70GXJ□

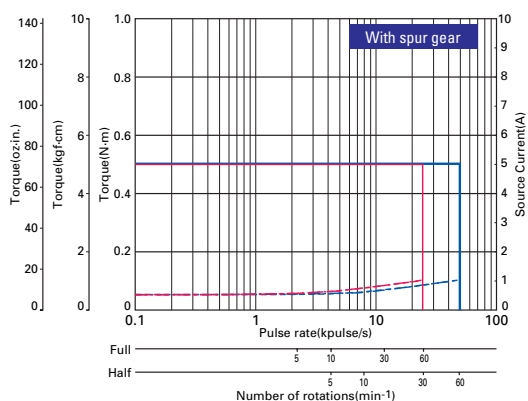
Source voltage : DC36V-Operating current : 0.75A/phase

— Allowable torque($JL_1=0.94 \times 10^{-4} \text{ kg-m}^2$ [5.14 oz-in²] Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

■ Full-step ■ Half-step

● DP22F351□-GX50 : 24V



103F3505-70GXL□

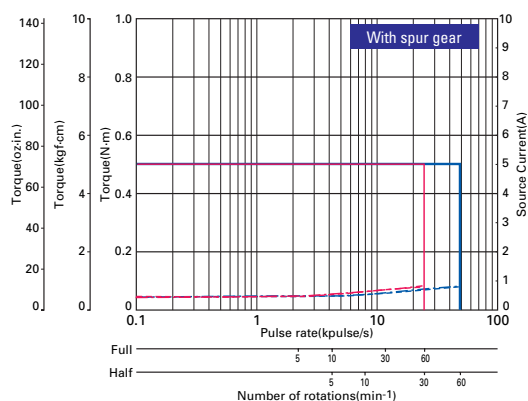
Source voltage : DC24V-Operating current : 0.75A/phase

— Allowable torque($JL_1=0.94 \times 10^{-4} \text{ kg-m}^2$ [5.14 oz-in²] Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

■ Full-step ■ Half-step

● DP22F351□-GX50 : 36V



103F3505-70GXL□

Source voltage : DC36V-Operating current : 0.75A/phase

— Allowable torque($JL_1=0.94 \times 10^{-4} \text{ kg-m}^2$ [5.14 oz-in²] Use the rubber coupling)

--- Source current($T_L=MAX$) --- Source current($T_L=0$)

■ Full-step ■ Half-step