

# 2-Phase Hybrid Stepping Motor Driver

## HIGH TORQUE, SILENT ROTATION SERVEX FSD2B2P12-01 DC24V

### Features

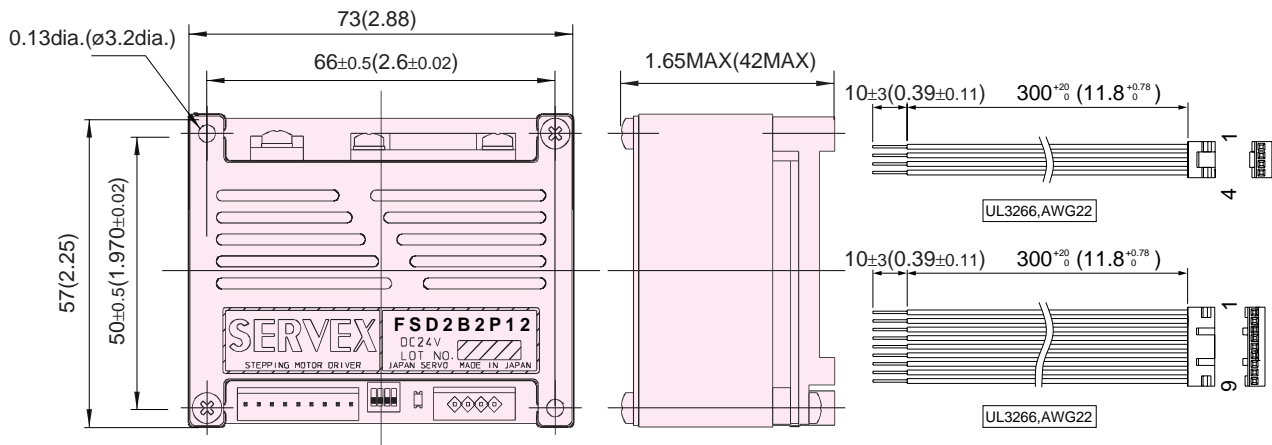
1. Ultra-compact driver measuring a mere 2.2 x 2.9 x 1.7 inches.
2. Bi-polar fixed-current driver.
3. Micro-stepping feature may be used to be selected from any one of 1/1 (full-step), 1/2 (micro-step), and 1/4 (micro-step) settings.
4. Through the use of 3-bit external signals, electric current settings may be specified to any one of a range of 8 different settings from 0.41-2A/phase power.
5. Input commands may be selected from either of direction-of-rotation separate serial

### Applicable motors

KH42HM2-951, 961	KH39EM2-851
KH42JM2-951, 961	KH39FM2-851
KH42KM2-951, 961	KH39GM2-851
KH56JM2-851, 951, 961	
KH56KM2-851, 951, 961	
KH56QM2-851, 951, 961	

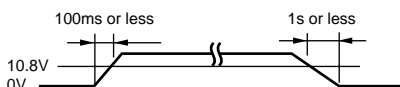


### Dimensions



### Power supply specifications

Motor Power supply voltage(VM) : 10.8V-33.0V



Motor output current; About 2A max.(different depending on the drive parameters of the motor being used)

### Connector specifications

	FSD2U2P12-01 side		User side		Maker
	Maker Model	Applicable Housing	Applicable terminal(real)		
CN3	IL-G-9P-S3T2-E	IL-G-9S-S3C2	IL-G-C2-SC-10000		J.A.E
CN2	IL-G-6P-S3T2-E	IL-G-6S-S3C2	IL-G-C2-SC-10000		J.A.E

### Required operating environment conditions

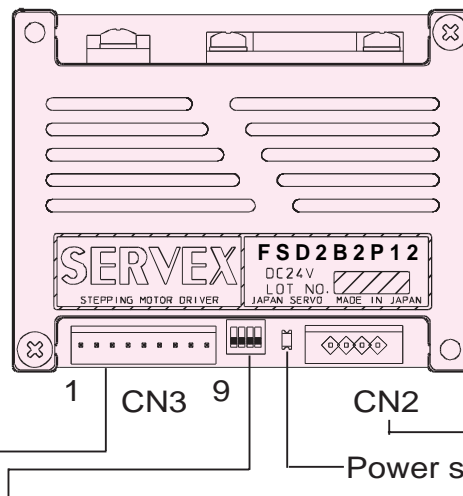
	In operation	At rest	Comments
Ambient temperature (°C)	0-+50	-20-60	
Ambient humidity(%)	35-85	35-85	Non condensation

## Functions, Setting and Connections

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Connector Name	Pin No.	Signal Name	Function
CN3	1	VM	Motor power supply(to be connected to 12-30V power supply)
	2	P.GND	Motor power supply GND
	3	CW	CW directional drive pulse and serial pulse signal input
	4	CCW	CCW directional drive pulse and direction-of-rotation signal input
		Motor current (A)	0.41 0.64 0.86 1.09 1.32 1.55 1.77 2.00
	7	C0	H L L H L H L H L L
	6	C1	H H L L H H L L L L
	5	C2	H H H H L L L L L L
	8	H.OFF	H. off (used to cut power to motor)
9	S.GND	Signal ground	

Connector Name	Pin No.	Signal Name	Function
CN2	1	A	Motor current(A)
	2	$\bar{A}$	Motor current( $\bar{A}$ )
	3	B	Motor current(B)
	4	$\bar{B}$	Motor current( $\bar{B}$ )

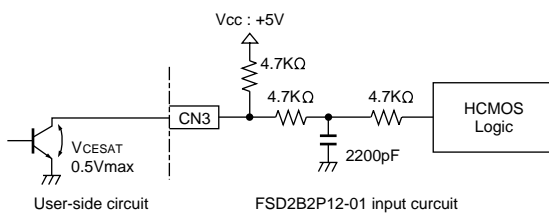


Power supply input display LED

Switch No.	Switch Name	Function	Switch position and operation	
			OFF	ON
1	SEL	Pulse input method settings	CW / CCW	Serial Pulse / DIR signal
2	SAVE	Selection of automatic motor power save feature	save	do not save
3	Step angle settings	Divisions	1 / 2	1 / 1
		MS0	ON	OFF
		MS1	ON	ON
4			OFF	OFF

### Input circuit

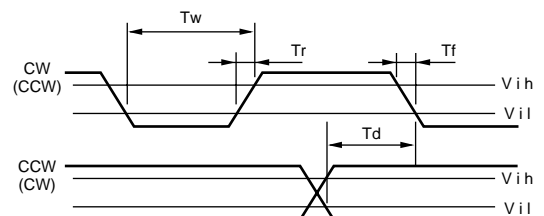
CW, CCW, C0, C1, C2, H. OFF



### Input signal specifications

Item	Signal	Specification	
		MIN	MAX
High level input voltage	Vih(V)	3.5	5.3
Low level input voltage	Vil(V)	0.0	0.8
Rise time	Tr(μs)	-	25
Fall time	Tf(μs)	-	15
Input pulse range	Twi(μs)	18	-
Direction of rotation change timing	Td(μs)	10	-

Note) Specified the voltage waveform between the user circuit ground and the FSD2B2P12-01 terminal



### Connector specifications

	FSD2B2P12-01 side		User side		Maker
	Maker Model	Applicable Housing	Applicable Housing	Applicable terminal(real)	
CN3	IL-G-9P-S3T2-E	IL-G-9S-S3C2	IL-G-C2-SC-10000		J.A.E
CN2	IL-G-4P-S3T2-E	IL-G-4S-S3C2	IL-G-C2-SC-10000		J.A.E