

# 3-Phase Hybrid Stepping Motor Driver

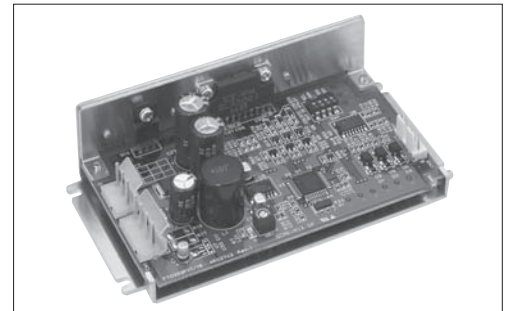
HIGH TORQUE, SILENT ROTATION  
SERVEX FTD3S3P17-01 DC24V

## Features

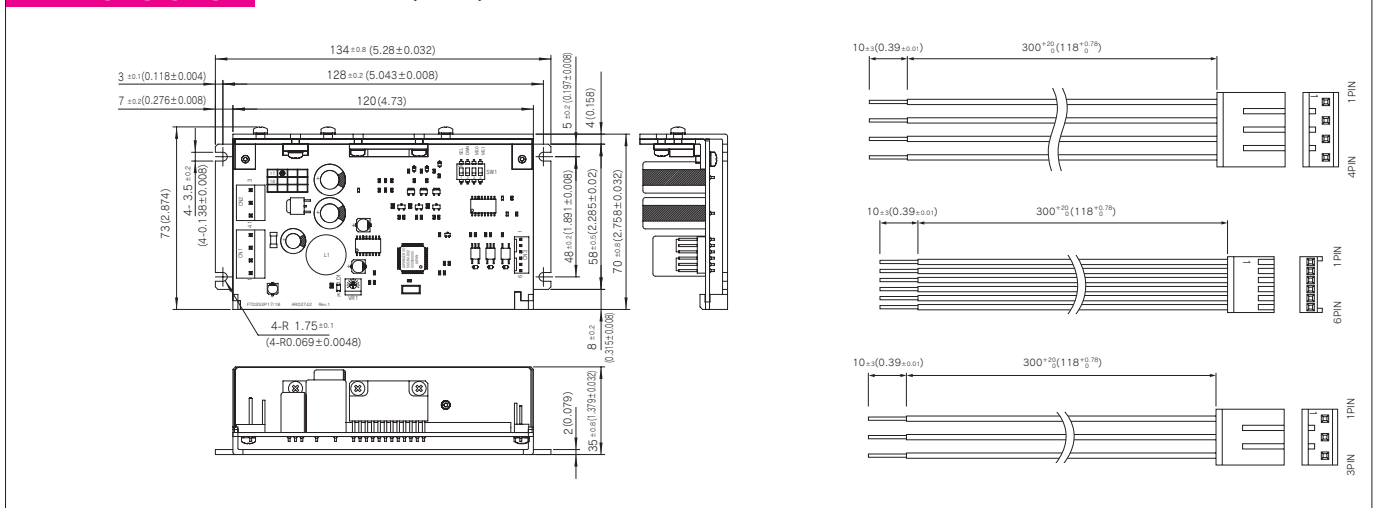
1. The micro step driver operates with low noise.
2. Step angles of 1/8, 1/4, 1/2 and 1/1 can be chosen.
3. High torque and high speed response achieved using constant current driver.
4. Input commands may be selected from either direction-of-rotation separate serial pulse signals or a combination of directional signals and pulse signals.
5. Reduced current (40 to 60%) function to prevent overheating during holding.

## Applicable motors

See page 29



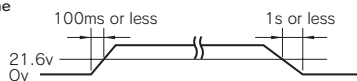
## Dimensions Unit = mm(inch)



## Power supply specifications

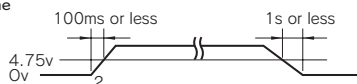
Motor power supply voltage(VM) : 21.6V~26.4V

Start up time



Logic power supply voltage(5VDC) : 5V±5%

Start up time



Motor output current; About 3A max.(different depending on the drive parameters of the motor being used)

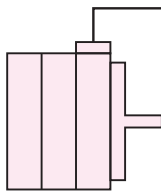
## Connector specifications

	FTD3S3P17-01 side		User side		Maker
	Model	Applicable housing	Applicable terminal	(real)	
CN <sub>1</sub>	5281-04A	5258-04	5168T or 5168TL		Molex
CN <sub>2</sub>	5281-03A	5258-03	5168T or 5168TL		Molex
CN <sub>3</sub>	5045-06A	5051-06	5159T or 5159TL		Molex

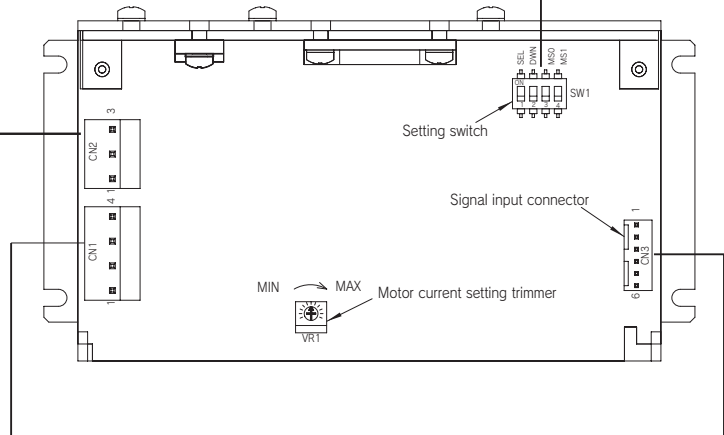
## Functions, Setting and Connections

Switch No.	Name	Function	Setting and operation					
1	SEL	Pulse input direction	OFF	CW/CCW pulse input				
			ON	Serial pulse/rotational direction	CCW terminal= "H," Rotation in CCW direction CCW terminal= "L," Rotation in CW direction			
3	DWN	Selection of automatic motor current save function	OFF	ENABLE After the time set by To and T1 elapsed, motor output is reduced to 70% of the VR1.				
			ON	NOT ENABLE				
4	MS0	Setting for the number of microstep divisions	Number of divisions	1/8	1/4	1/2	1/1	
			MS0	ON	OFF	ON	OFF	
5	MS1	Setting for the number of microstep divisions	MS1	ON	ON	OFF	OFF	

Motor connector wire(accessory)



Connector No.	Terminal No.	Name	Function
CN2	1	MOTOR W	To be connected W phase of 3-phase motor
	2	MOTOR V	To be connected V phase of 3-phase motor
	3	MOTOR U	To be connected U phase of 3-phase motor



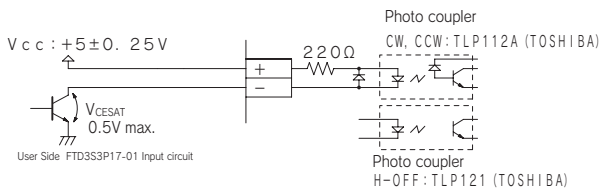
Power source connector

Connector No.	Terminal No.	Name	Function
CN1	1	5VDC	Logic circuit power supply +5V
	2	GND	Logic circuit GND
	3	VM	Motor power supply 24V
	4	COM	Motor power supply GND (connected to GND within board)

Signal input connector

Connector No.	Terminal No.	Name	Function
CN3	1	CW	CW direction drive pulse or serial pulse signal input
	2	GND	Ground for CW
	3	CCW	CCW direction drive pulse or direction signal input
	4	GND	Ground for CCW
	5	H.OFF	Motor output off(motor free)
	6	GND	Ground for H.OFF56

## Input circuit



## Input signal specifications

Item	Signal	Specification	
		MIN	MAX
High level input voltage	Vih(V)	4.0	Vcc
Low level input voltage	Vil(V)	0.0	0.5
Rise time	Tr(μs)	—	5.0
Fall time	Tf(μs)	—	5.0
Low level maintenance	Tw(μs)	10	—
High level maintenance	Twh(μs)	10	—

Note)Specified the voltage waveform between the user circuit ground and theFSD3S3P17-01terminal

