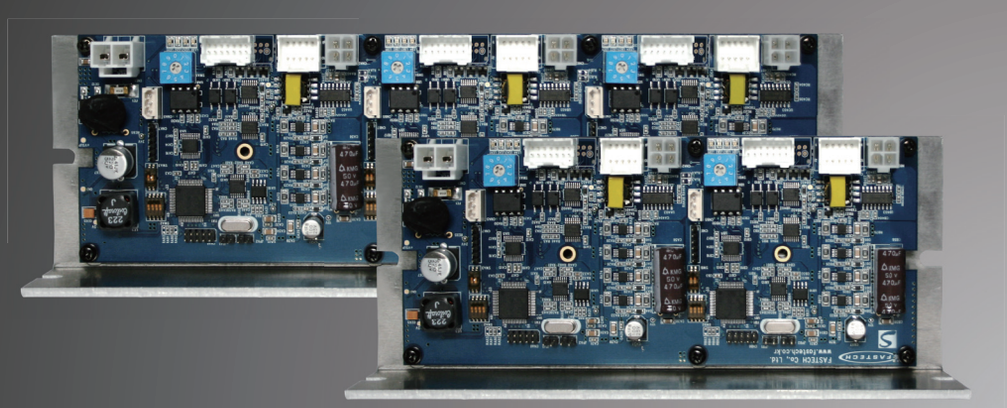
S-SERVO®

Stepping motor control system without step out

■ Feature

- **Compact Multi-axes Step Motor Drive.**
  (2axes, 3axes)
- **Completely free from the Concern of Loss of Position.**
  (Alarm Generation when Step-Out)
- **Perfect Positioning and Completion.**
  (Positioning Completion Signal Generation)
- **Don't Care what the Phase of Motor is.**
  (Position Accuracy only Related to Encoder Resolution)
- **Reduce the Motor Temperature and Energy Usage.**
  (Current Control According to load)
- **Torque Improvement by Boost Current Control.**
  (Max. 150% Current Control)

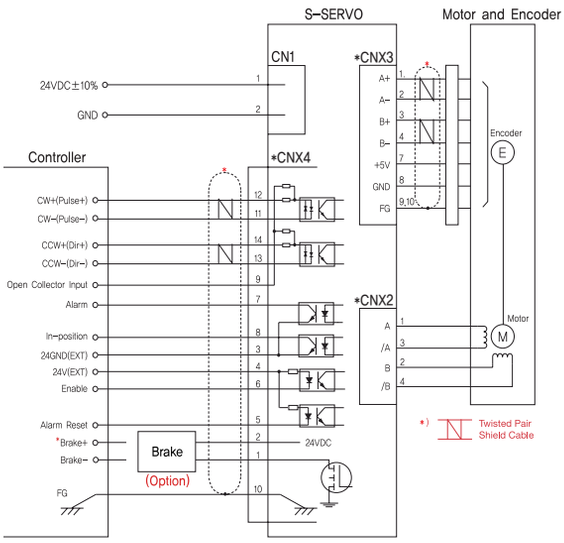
New products



■ Drive Specification

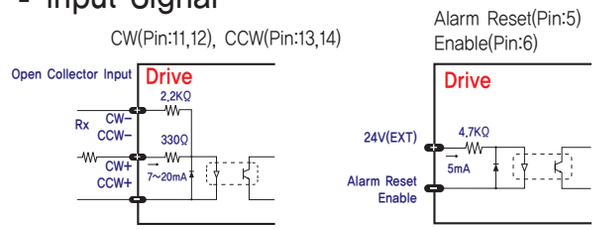
Specification/ Form	S-SERVO-2X	S-SERVO-3X
Input Voltage	24VDC ± 10%	
Current Consumption	Maximum 1A (Except motor current)	Maximum 1.5A (Except motor current)
Control Method	PWM operation method (By-polar operation)	
Motor Operation Current	0.5A~4.0A	
STOP Current	20%~100% (Setting by using GUI) When motor stop operation, 0.1 second after motor current will be set to STOP current value. STOP current value is a percentage of the rated current of motor. *Default : 50%	
Speed/Position Control Command	Pulse input (Photo-coupler input), (It can support both Line Drive and Open Collector method.)	
Maximum Input	500KHz (Duty 50%)	
Resolution	500 1,000 1,600 2,000 3,200 3,600 4,000 5,000 6,400 8,000 10,000 20,000 25,000 36,000 40,000 50,000 (Selectable by ROTARY switch)	
Pulse Input Method	1-Pulse/2-Pulse (Selectable by DIP switch)	
Motor Rotation Direction	CW/CCW (Selectable by DIP switch)	
Protection Functions	Over Current, Over Speed, Position Tracking Error, Over Load, Over Temperature, Over Regenerated Voltage, Motor Connection Error, Encoder Connection Error, Motor Voltage Error, In-Position Error, ROM Error, Position Overflow Error	
LED Display	Power(Green), Alarm(Red), In-Position(Yellow), Enable (Orange)	
In-Position Selection	0~63 (Selected by parameter by using RS232 communication) *Default : 0	
Position Gain Selection	0~63 (Selected by parameter by using RS232 communication) *Default : 3	
Input Signal	Motor Free/Alarm Reset (Photo-coupler output)	
Output Signal	In-Position, Alarm (Photo-coupler output)	
Ambient Temperature	0~50℃ (Non-condensing)	
Storage Temperature	-20~70℃ (Non-condensing)	
Humidity	35~85%RH (Non-condensing)	
Storage Humidity	10~90%RH (Non-condensing)	
Surrounding Environment	There should be no direct contact with corrosive gas, dust, water and oil	
Vib. Resist	0.5G	
Dimension (mm)	190(W)×80(D)×40(H)	260(W)×80(D)×40(H)
Weight(Except attachments)	270g	404g

■ Example of Connection (1axis connection)

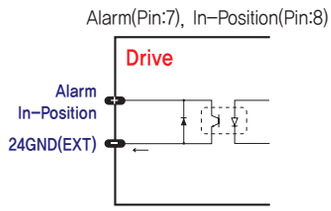


*X : Axis Number

■ Input Signal



■ Output Signal



■ LED Display

Indication	Color	Function	ON/OFF Condition
PWR	Green	Power Input Indication	LED is turned ON when power is applied
INP	Yellow	Complete Positioning Motion	Light on when Position Deviation lo-cated within preset value* from target position, after Position Commando Pulse Input is completed
EN	Orange	Motor Enable Status	Enable : Lights On, Disable : Lights Off
ALM	Red	Alarm Indication	Flash when protection function is activated (Identifiable which protection mode is activated by counting the blinking times)

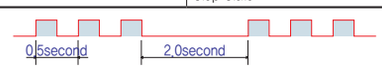
* Default = 0 Can be selected by parameter setting GUI

■ Resolution Setting

Position	Pulse/Rotation	Position	Pulse/Rotation	Position	Pulse/Rotation
0	500	6	4,000	C	25,000
1	1,000	7	5,000	D	36,000
2	1,600	8	6,400	E	40,000
3	2,000	9	8,000	F	50,000
4	3,200	A	10,000		
5	3,600	B	20,000		

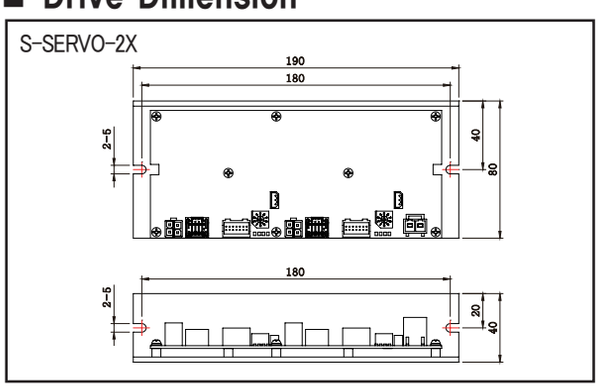
■ Protection Functions

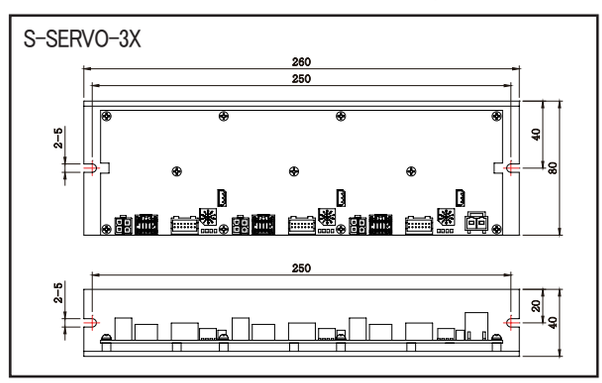
Times	Protection	Conditions
1	Over Current Error	The current through power devices in inverter exceeds the limit value
2	Over Speed Error	Motor speed exceed 3,000rpm
3	Position Tracking Error	Position error value is higher than 90° in motor run state
4	Over Load Error	The motor is continuously operated more than 5 second under a load exceeding the max. torque
5	Over Temperature Error	Inside temperature of drive exceeds 65℃
6	Over Regeneratived Voltage Error	Back-EMF more than 40V
7	Motor Connect Error	The power is ON without connection of the motor cable to drive
8	Encoder Connect Error	Cable connection error with Encoder connector in drive
9	Motor Voltage Error	Motor voltage less than 20V
10	In-Position Error	After operation is finished, a position error occurs
12	ROM Error	Error occurs in parameter storage device(ROM)
15	Position Overflow error	Position error value is higher than 90° in motor stop state



Alarm LED flash (ex: Position tracking error)

■ Drive Dimension





◎Accessories

- Power Connector
- I/O Signal Connector
- Motor Connector
- Encoder Connector

FASTECH

Fast, Accurate, Smooth Motion

FASTECH Co., Ltd.

Rm #1202, Bucheon Technopark 401 Dong, Yakdea-dong,
Wonmi-Gu, Bucheon-si, Gyeonggi-do, Rep. Of Korea (Zip)420-734
TEL : 82-32-234-6300,6301 FAX : 82-32-234-6302
E-mail : fastech@fastech.co.kr Homepage : www.fastech.co.kr

* Product information in this catalog based on date of July 2014.
The specification of product can be changed without pre-notification due to enhancements and improvements of product.

ⓒ Copyright 2014 FASTECH Co., Ltd. All Rights Reserved. July 17. 2014. Rev. 01