

MOTION CONTROLLER INTRODUCTION



- Stand Alone Stepper Electronics
OPEN LOOP Type / CLOSED LOOP Type
- Integrated Stepper Electronics
OPEN LOOP Type / CLOSED LOOP Type
- Stand Alone BLDC Electronics
CLOSED LOOP Type

Stand Alone Stepper Electronics

OPEN LOOP TYPE

- Pulse input type of Open Loop Step Motor Drive
- Microstep resolution can be set through DIP switch setting
- Output current can be set through DIP switch setting
- Protection alarm output
- Smooth filtering, Soft-Start function implementation
- Certified CE and RoHS



DS-OLS2-FPD



DS-OLS22-FPD



DS-OLS4-FPD



DS-OLS8-FPD

	DS-OLS2-FPD	DS-OLS22-FPD	DS-OLS4-FPD	DS-OLS8-FPD
POWER SUPPLY	18 – 36 VDC	12 – 48 VDC	20 – 50 VDC	24 – 72 VDC
RATED OUTPUT CURRENT	2.2 A	3.0 A	4.2 A	7.8 A
INTERFACE		Step & direction (1 pulse) or CW / CCW (2 pulse)		
INPUT / OUTPUT SIGNAL	3 differential inputs 1 differential output	3 differential inputs	3 differential inputs 2 digital outputs	3 differential inputs 1 digital output
APPLICABLE MOTOR	<input type="checkbox"/> 14/20/28/35/42 mm	<input type="checkbox"/> 14/20/28/35/42/57 mm	<input type="checkbox"/> 42/57/60 mm	<input type="checkbox"/> 57/60/86 mm
SIZE	86 x 55 x 20 mm	92.5 x 56 x 21 mm	118 x 75 x 25 mm	118 x 78 x 34 mm
WEIGHT	90g	96g	250g	300g



DS-OLS10-FSC

- Analog input type of Open Loop Step Motor Drive
- Internal operation speed can be set through DIP switch setting

- RS-485 communication type of Open Loop Step Motor Drive
- Supporting up to 30 axes connection control through MODBUS-RTU protocol communication
- Command mode selectable(PULSE / RS-485 communication)
- Supporting up to 102,400 microstep resolution
- Various parameters can be set through DINGS' Tuner Pro GUI
- Various error detection functions
- Certified CE and RoHS



DS-OLS7-FRS4



DS-OLS8-FRS4

	DS-OLS10-FSC
POWER SUPPLY	24 – 48 VDC
RATED OUTPUT CURRENT	4.5 A
INTERFACE	Analog 0 – 10 VDC
INPUT / OUTPUT SIGNAL	3 digital inputs
APPLICABLE MOTOR	<input type="checkbox"/> 14/20/28/35/42/57/60 mm
SIZE	118 x 78 x 34 mm
WEIGHT	300g

	DS-OLS7-FRS4	DS-OLS8-FRS4
POWER SUPPLY	24 – 48 VDC	24 – 72 VDC
RATED OUTPUT CURRENT	3.2 A	6.5 A
INTERFACE	PULSE (1/2 pulse) or RS-485 MODBUS-RTU	
INPUT / OUTPUT SIGNAL	2 differential inputs 1 digital output	3 differential inputs 1 digital output
APPLICABLE MOTOR	<input type="checkbox"/> 14/20/28/35/42 mm	<input type="checkbox"/> 57/60/86 mm
SIZE	94 x 77 x 27 mm	118 x 78 x 34 mm
WEIGHT	175g	300g

Stand Alone Stepper Electronics

CLOSED LOOP TYPE

- RS-485 communication type of Closed Loop Step Motor Drive
- Supporting up to 30 axes connection control through MODBUS-RTU protocol communication
- Supporting ABS Encoder (Biss-C Type, Single-16bit / Multi-16bit) [DS-CLS10-FRS4-1A]
- Command mode selectable (PULSE / RS-485 communication)
- Dedicated drive with Force Control Function [DS-CLS9-FRS4-01]
- Various parameters can be set through DINGS' Tuner Pro GUI
- Certified CE and RoHS



DS-CLS9-FRS4

DS-CLS9-FRS4-01
[Force Control]

DS-CLS10-FRS4



DS-CLS10-FRS4-1A

POWER SUPPLY	24 – 48 VDC	24 – 72 VDC
RATED OUTPUT CURRENT	4.5 A	6.0 A
INTERFACE	PULSE (1/2 pulse) or RS-485 MODBUS-RTU	
INPUT / OUTPUT SIGNAL	2 differential inputs 5 digital inputs 3 encoder signal inputs (Differential) 4 digital outputs 3 encoder signal outputs (Differential)	2 differential inputs 5 digital inputs 3 encoder signal inputs (Differential) 3 digital outputs 1 brake output 3 encoder signal outputs (Differential)
APPLICABLE MOTOR	<input type="checkbox"/> 14/20/28/35/42/57/60 mm	<input type="checkbox"/> 57/60/86 mm
SIZE	134 x 77 x 34 mm	156 x 97 x 33.5 mm
WEIGHT	350g	376g

- PWM constant current bipolar micro-stepping drive
- Support CANopen / EtherCAT communication protocol, support control mode PP, PV, HM, PT / PP, PV, HM, CSP, CVS
- Optically isolated inputs
- Motor short circuit protection, under-voltage protection, over-voltage protection, over-current protection, etc.
- Exquisite design, low noise and low vibration



DS-CLS9-FCAO



DS-CLS9-FETC

POWER SUPPLY	24 – 48 VDC
RATED OUTPUT CURRENT	6.5 A
INTERFACE	CANopen
INPUT / OUTPUT SIGNAL	EtherCAT
APPLICABLE MOTOR	<input type="checkbox"/> 14/20/28/35/42/57/60/86 mm
SIZE	156 x 97 x 33.5 mm
WEIGHT	500g

Stand Alone Stepper Electronics CLOSED LOOP TYPE

- Supports up to 2-axis control
- Support EtherCAT communication protocol, support control mode PP, PV, HM, PT / PP, PV, HM, CSP, CVS
- Optically isolated inputs
- Motor short circuit protection, under-voltage protection, over-voltage protection, over-current protection, etc.
- Exquisite design, low noise and low vibration



DS-CLS9-FETC-2I
[I=INC Encoder]



DS-CLS9-FETC-2A
[A=ABS Encoder/Biss-C type]

POWER SUPPLY	24 – 48 VDC
RATED OUTPUT CURRENT	6.5 A
INTERFACE	EtherCAT
INPUT / OUTPUT SIGNAL	4 digital inputs x 2 2 digital outputs x 2 1 brake output x 2
APPLICABLE MOTOR	<input type="checkbox"/> 14/20/28/35/42/57/60/86 mm
SIZE	156 x 97 x 34 mm
WEIGHT	500g

- Maximum support for 4-axes control
- Adapted to open/closed-loop for two-phase stepper motors, three-phase stepper motors and five-phase stepper motors.
- Support EtherCAT communication protocol, support control mode PP, PV, HM, PT / PP, PV, HM, CSP, CVS
- Optically isolated inputs
- Motor short circuit protection, under-voltage protection, over-voltage protection, over-current protection, etc.
- Exquisite design, low noise and low vibration



DS-CLS3-FETC-4I

POWER SUPPLY	24 – 36 VDC
RATED OUTPUT CURRENT	3.0 A
INTERFACE	EtherCAT
INPUT / OUTPUT SIGNAL	4 digital inputs 2 digital outputs
APPLICABLE MOTOR	<input type="checkbox"/> 14/20/28/35/42/57/60/86 mm
SIZE	144 x 106 x 31 mm
WEIGHT	450g

Integrated Stepper Electronics

OPEN LOOP TYPE

- Integrated Open Loop Step Motor Drive
- Supporting Pulse input, RS-485 MODBUS-RTU, CANopen
- Applicable to 42mm general step motor, Hollow shaft motor and all DINGS' Linear actuators (E, N, C, K)
- Various parameters can be set through DINGS' Tuner Pro GUI
- Certified CE and RoHS



POWER SUPPLY	24 – 36 VDC		
RATED OUTPUT CURRENT	3.0 A		
INTERFACE	Pulse input RS-485 MODBUS-RTU	CANopen	
INPUT / OUTPUT SIGNAL	2 differential inputs 2 digital inputs 1 digital output	4 digital inputs 1 digital output	
APPLICABLE MOTOR	<input type="checkbox"/> 42 mm		
SIZE	42.2 x 42.2 x 25.2 mm		
WEIGHT	60g		

- Integrated Open Loop Step Motor Drive
- Supporting Pulse input, RS-485 MODBUS-RTU, CANopen , Analog speed input
- Applicable to 57mm general step motor, Hollow shaft motor and all DINGS' Linear actuators (E, N, C, K)
- Various parameters can be set through DINGS' Tuner Pro GUI
- Certified CE and RoHS



POWER SUPPLY	24 – 48 VDC		
RATED OUTPUT CURRENT	5.6 A		
INTERFACE	Pulse input RS-485 MODBUS-RTU	CANopen	Analog Speed Command
INPUT / OUTPUT SIGNAL	2 differential inputs 2 digital inputs 1 digital output	4 digital inputs 1 digital output	3 digital inputs 1 analog input
APPLICABLE MOTOR	<input type="checkbox"/> 57 mm		
SIZE	56.2 x 56.2 x 25.4 mm		

Integrated Stepper Electronics

CLOSED LOOP TYPE

- Integrated Closed Loop Step Motor Drive
- Supporting RS-485 MODBUS-RTU
- Applicable to general step motor and DINGS' External Type Linear Actuator
- Total 4 origin methods including origin sensor, Z-phase output, limit sensor and torque origin
- Various parameters can be set through dedicated Ezi-Motion GUI program
- 64 Position Table Functions
- Certified CE and RoHS



DS-CL28-SA



DS-CL28-IPD/IRS4



DS-CL42-SA

POWER SUPPLY	24 VDC		
RATED OUTPUT CURRENT	1.0 A		
INTERFACE	RS-485 MODBUS-RTU		
INPUT / OUTPUT SIGNAL	4 digital inputs	3 digital inputs 1 digital output	7 digital inputs 3 digital outputs
APPLICABLE MOTOR	<input type="checkbox"/> 28 mm		

Stand Anole BLDC Electronics

CLOSED LOOP TYPE

- Velocity control drive for BLDC motors
- Supporting analog input, RS-485 MODBUS-RTU
- Speed control



DS-OLBS2-FRS4



DS-OLBS4-FRS4



DS-OLBS6-FSC



DS-OLBS8-FRS4

POWER SUPPLY	12 – 24 VDC	24 – 48 VDC
RATED OUTPUT CURRENT	5 A [100W]	10 A [200W]
INTERFACE		RS-485 MODBUS-RTU
INPUT / OUTPUT SIGNAL	2 digital inputs 1 analog input	3 digital inputs 2 digital outputs 1 analog input
APPLICABLE MOTOR	BLDC : □ 42/57 mm	BLDC : □ 57/60 mm
SIZE	86 x 55 x 20.5 mm	118 x 75.5 x 34 mm
		BLDC : □ 60/86 mm
		BLDC : □ 86 mm
		151 x 96.5 x 48 mm
		165 x 102 x 67 mm

- Closed Loop Position Control drive for BLDC motors
- Supporting Pulse input, RS-485 MODBUS-RTU
- Position, Speed and Torque control
- Tuning and various parameter setting through operation panel



DS-CLBS8-FRS4

- Closed Loop drive for BLDC and Voice Coil motors
- Supporting CANopen and EtherCAT
- Position, Speed and Torque control
- CiA 301 Application layer and CiA 402 Device profile for drive and motion control
- Auto tuning and various parameter setting through DINGS' SERVO STUDIO



DS-CLBS2-FETC



DS-CLBS2-FCAO



DS-BVM-FETC / FCAO



DS-BVS-FETC / FCAO

POWER SUPPLY	24 – 48 VDC
RATED OUTPUT CURRENT	17 A [400W]
INTERFACE	EtherCAT
INPUT / OUTPUT SIGNAL	2 differential inputs 4 digital inputs 3 digital outputs 1 analog input
APPLICABLE MOTOR	BLDC : □ 42/57/60/86 mm
SIZE	145 x 63 x 113 mm

POWER SUPPLY	12 – 48 VDC		
RATED OUTPUT CURRENT	6 A [Max.12 A]	3 A (Max. 6A)	10 A (Max. 20A)
INTERFACE	EtherCAT	CANopen	FETC : EtherCAT FCAO : CANopen
INPUT / OUTPUT SIGNAL	6 digital inputs 2 digital outputs	6 digital inputs 2 digital outputs 1 analog input	
APPLICABLE MOTOR	Slotless BLDC : Ø 28/36/42 mm BLDC : □ 42/57/60/86 mm	Slotless BLDC : Ø 16/22/28 mm VCM : Ø 25.4/30 mm	Slotless BLDC : Ø 28/36/42 mm BLDC : □ 42/57/60/86 mm
SIZE	162 x 84 x 30 mm	67 x 42.5 x 28 mm	110 x 73 x 31 mm