

SCD*

SERVO-CONTROLLERS

SERIES 10

INTERFACES

- RS232-R485-CAN
- Encoder interface
- Strong anti-interference ability
- Isolation protection on communication port
- STO functions

FUNCTIONS

- Multiple axis synchronization
- Torque / force, speed, and positioning control
- Position feedback via incremental encoder: 2500ppr
- Position feedback via absolute encoder
- Position feedback via resolver

TECHNICAL CHARACTERISTICS

Supply voltage	1-phase or 3-phase 230Vac; 3-phase 400Vac;
Control circuit voltage	18~30Vdc;
Max 7 digital Input	12.5 – 30 V
Max 5 digital Output	Current 100mA (up to 800mA for brake control OUT)
Up to 2 analog Input	-10V~10V
Encoder signal output function	Optional: for multiple axis synchronization
Interfaces	RS232, RS485, CAN
Protection Function	YES. STO function

AMBIENT CHARACTERISTICS

Operating temperature	0~40°C
Storage temperature	-10°C~70°C
Humidity (non-condensing)	Below 90%RH
Protection class	IP20
Installation environment	Installed in a dust-free, dry and lockable environment (such as in an electrical cabinet)
Installation mode	Vertical installation
Altitude	No power limitation below 1000m
Atmospheric pressure	86kpa~106kpa



1 – IDENTIFICATION CODE

SCD		-			/	10	N	-		/	
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Servo
Controller
Type D

Rated Output Power (W/10)

- 157 = 1570 W
- 350 = 3500 W
- 440 = 4400 W
- 550 = 5500 W
- 750 = 7500 W

Current Rating ($A_{RMS} * 10$)

- C100** = 10 Arms (SCD157, SCD440)
- C70** = 7 Arms (SCD350)
- C130** = 13 Arms (SCD550)
- C180** = 18 Arms (SCD750)

Power Supply (V)

- T220** = 1-phase or 3-phase 220 Vac (SCD157)
- T380** = 3-phase 380 Vac (SCD350, SCD550, SCD750)

Series N.

Version

- N** = Standard Version

Interface

- N4** = RS232+ RS486
- C4** = RS232+ RS486+CANOpen
- R4** = RS232+ RS486+CANOpen+Support Motor with Resolver

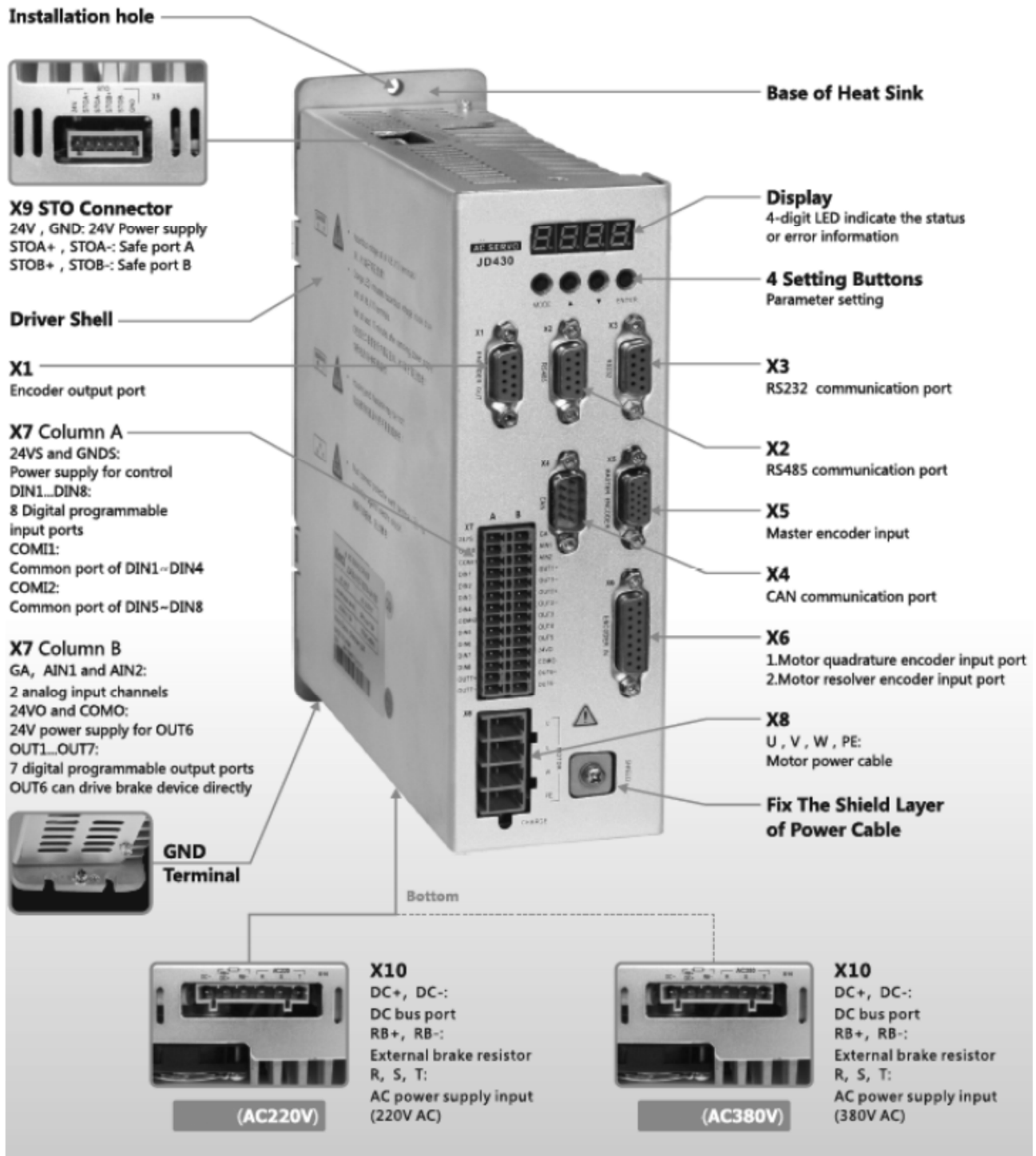
Project N. (when needed)

Dxxx



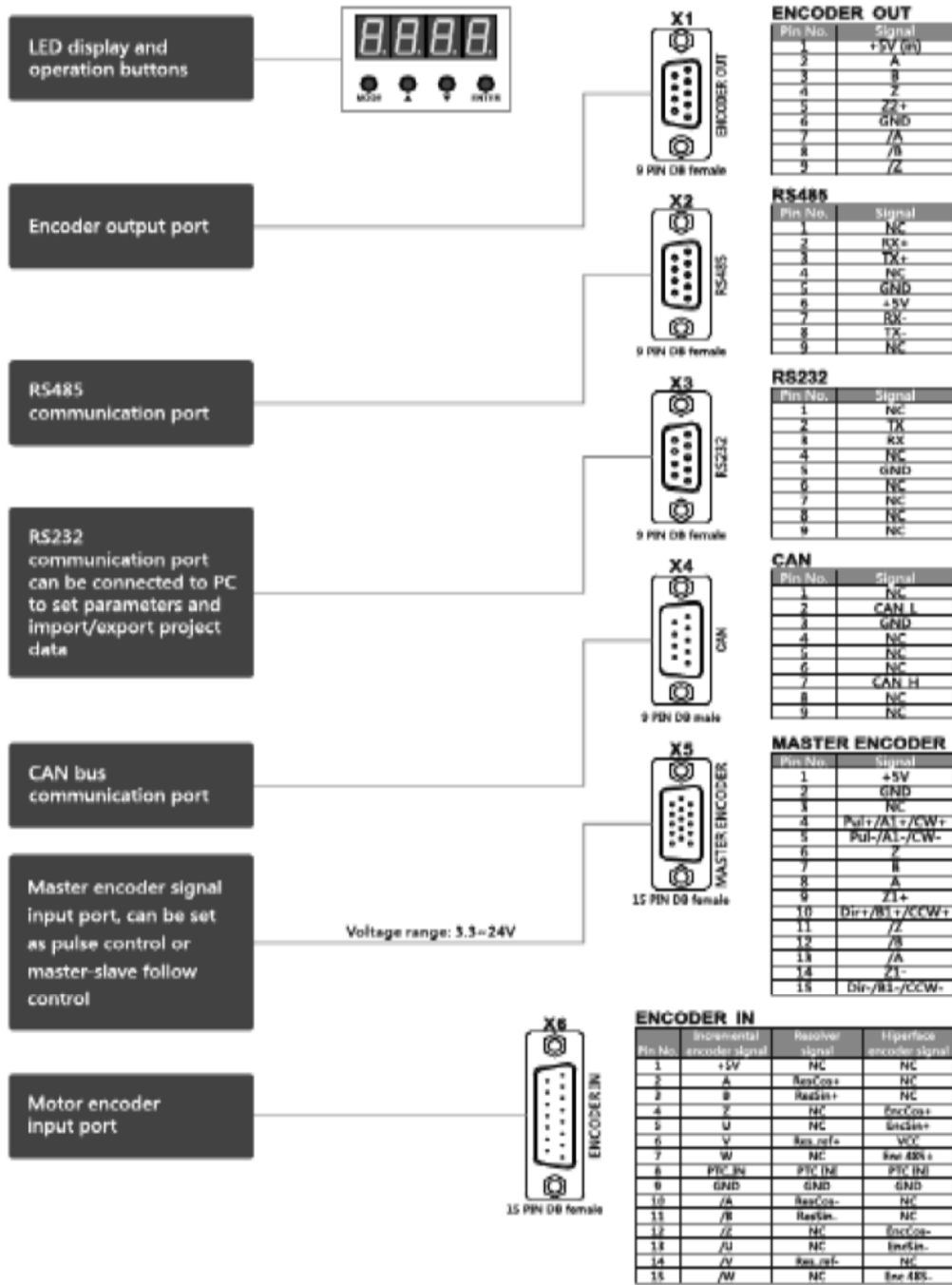
2- ELECTRICAL CHARACTERISTICS

2.1 – PANEL INTERFACE



Note: Suggested brake resistor: SCD157 39ohm/200W or 75ohm/100W, SCD350 75ohm/200W, SCD440 & SCD550 47ohm/500W. Choose the power of the brake resistor according to the application.

2.2 – PORT DESCRIPTION



**2.3 – ELECTRICAL FEATURES****SCD157**

Main supply voltage	Single-phase or 3-phase AC220V -20/+15% 47~63Hz
Control circuit voltage	18VDC~30VDC 1A
Max. continuous current	10A
Peak current(PEAK)	27,5A
Feedback signal	2500PPR (incremental encoder with 5V supply)
Brake chopper	Use an external braking resistor according to application, mainly in occasion of quick sto
Brake chopper threshold	DC380V±5V
Over-voltage alarming threshold	DC400V±5V
Under-voltage alarming threshold	DC200V±5V
Cooling method	Forced air cooling

SCD350

Main supply voltage	3-phase AC380V -20/+15% 47~63Hz
Control circuit voltage	18VDC~30VDC 1 A
Max. continuous current	7A
Peak current(PEAK)	25A
Feedback signal	2500PPR (incremental encoder with 5V supply)
Brake chopper	Use an external braking resistor according to application, mainly in occasion of quick stop
Brake chopper threshold	DC680V±5V
Over-voltage alarming threshold	DC700V±5V
Under-voltage alarming threshold	DC400V±5V
Cooling method	Forced air cooling

SCD440

Main supply voltage	3-phase AC380V -20/+15% 47~63Hz
Control circuit voltage	18VDC~30VDC 1 A
Max. continuous current	10 A
Peak current(PEAK)	35 A
Feedback signal	2500PPR (incremental encoder with 5V supply)
Brake chopper	Use an external braking resistor according to application, mainly in occasion of quick stop
Brake chopper threshold	DC680V±5V
Over-voltage alarming threshold	DC700V±5V
Under-voltage alarming threshold	DC400V±5V
Cooling method	Forced air cooling



SCD550

Main supply voltage	Three-phase AC380V -20/+15% 47~63Hz
Control circuit voltage	18VDC~30VDC 1A
Max. continuous current	13A
Peak current(PEAK)	45A
Feedback signal	2500PPR (incremental encoder with 5V supply)
Brake chopper	Use an external braking resistor according to application, mainly in occasion of quick stop
Brake chopper threshold	DC680V±5V
Over-voltage alarming threshold	DC700V±5V
Under-voltage alarming threshold	DC400V±5V
Cooling method	Forced air cooling

SCD750

Main supply voltage	Three-phase AC380V -20/+15% 47~63Hz
Control circuit voltage	18VDC~30VDC 1A
Max. continuous current	18A
Peak current(PEAK)	65A
Feedback signal	2500PPR (incremental encoder with 5V supply)
Brake chopper	Use an external braking resistor according to application, mainly in occasion of quick stop
Brake chopper threshold	DC680V±5V
Over-voltage alarming threshold	DC700V±5V
Under-voltage alarming threshold	DC400V±5V
Cooling method	Forced air cooling



2.4- CONTROL MODES

POSITION MODE

Max. frequency of input pulse	Differential signal: 500KPPS, Open-collector signal: 200KPPS
Pulse command mode	Pulse+direction, CCW+CW, (5V, if the input is 24V, the 2K resistor is needed) (do not support A+B phase)
Command smoothing	Low-pass filtering (Adjustable by internal parameter setting)
Feedforward gain	Adjustable by internal parameter setting
Electronic gear ratio	Setting range, Gear factor: -32768~32767, Gear divider: 1~32767, 1/50≤
Position loop sampling frequency	1KHz

SPEED MODE

Analog input voltage range	-10V~+10V (Resolution 12bit)
Input impedance	200K
Analog input sampling frequency	4KHz
Command source	External analog command / internal command
Command smoothing	Low-pass filtering (Adjustable by internal parameter setting)
Input voltage dead-zone setting	Adjustable by internal parameter setting
Input voltage offset setting	Adjustable by internal parameter setting
Speed limit	Adjustable by internal parameter setting
Torque limit	Adjustable by internal parameter setting / External analog command control
Speed loop sampling frequency	4KHz

TORQUE MODE

Analog voltage input range	-10V~+10V(Resolution 12bit)
Input impedance	200K
Input sampling frequency	4KHz
Command source	External analog command / internal command
Command smoothing	Low-pass filtering (Adjustable by internal parameter setting)
Speed limit	Adjustable by internal parameter setting / External analog command control
Input voltage dead-zone setting	Adjustable by internal parameter setting
Input voltage offset setting	Adjustable by internal parameter setting
Current sampling frequency	16KHz



2.3- DIGITAL INPUT/OUTPUT

Input specification	7 digital inputs, with COMI terminal for PNP (high level valid 12.5-30V) or NPN (low level valid) connection
Input function	Define freely according to requirement, supporting following functions: Driver enable, driver fault reset, driver mode control, proportional control, positive limit, negative limit, homing signal, reverse command, internal speed section control, internal positive section control, quick stop, start homing, active command, switch electronic gear ratio, switch gain
Output specification	5 digital outputs, OUT1~OUT4 current is 100mA, OUT5 current is 800mA, can drive brake device directly
Output function	Define freely according to requirement, supporting following functions: Driver ready, driver fault, position reached, motor at zero speed, motor brake, motor speed reached, Z signal, maximum speed obtained in torque mode, motor brake, position limiting, reference found, multi-position reached

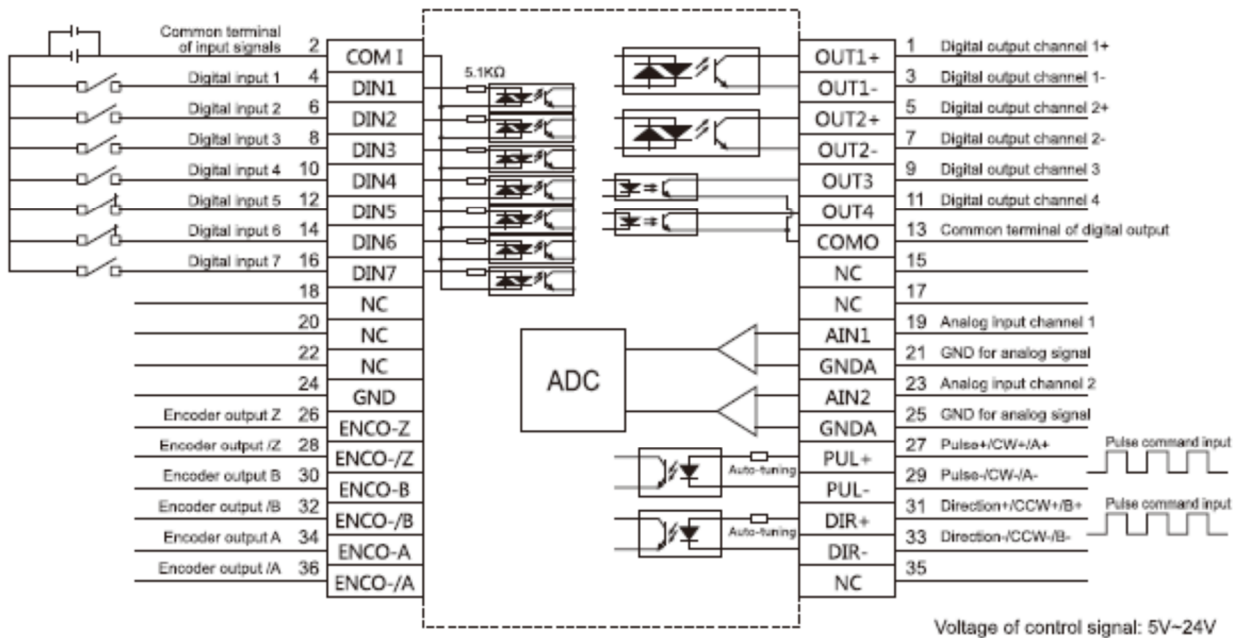
2.4- OTHER FEATURES

Protection functions	Over-voltage protection, under-voltage protection, motor over-heat protection(I2T), short-circuit protection, drive over-heat protection,etc.
Communication interface	RS232 (Connection with PC: 2-5, 3-1, 5-6)

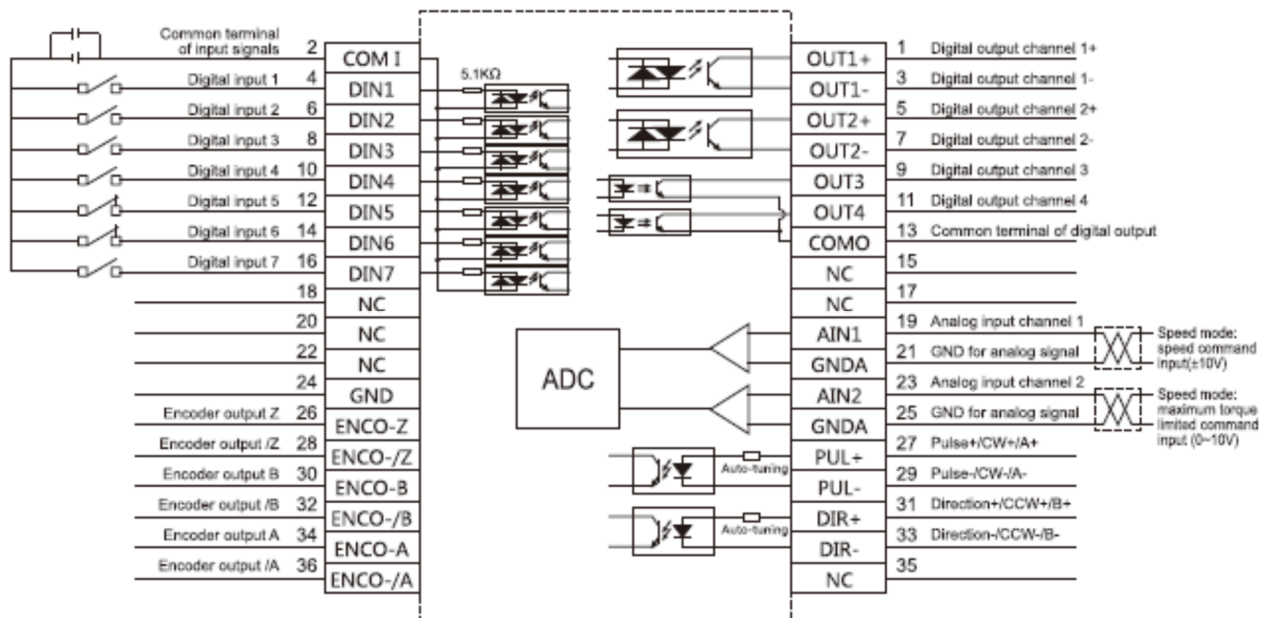


3- WIRING DIAGRAM

3.1- POSITION CONTROL MODE

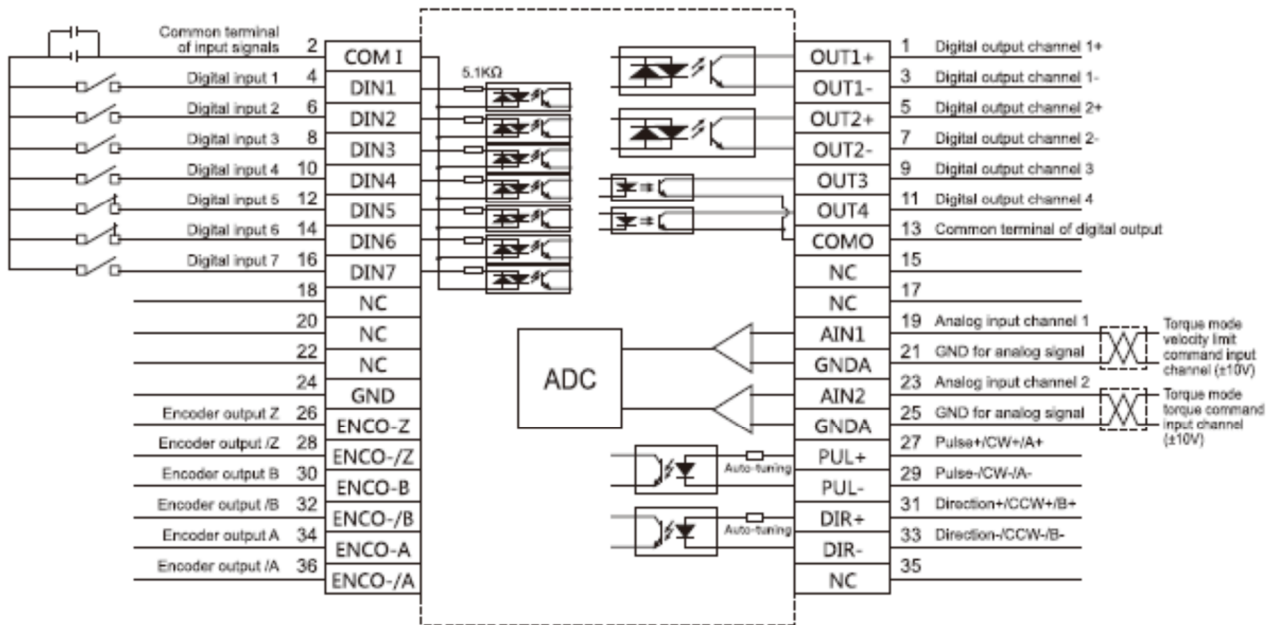


3.2-SPEED CONTROL MODE



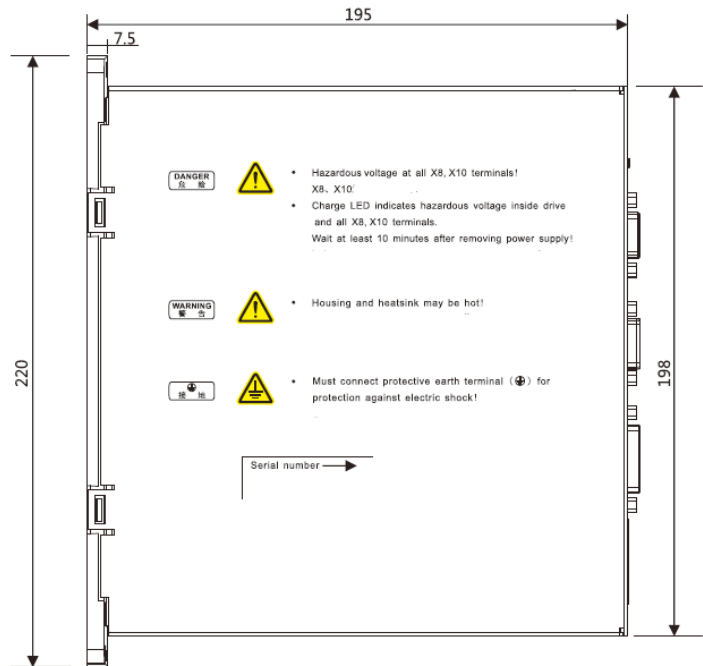
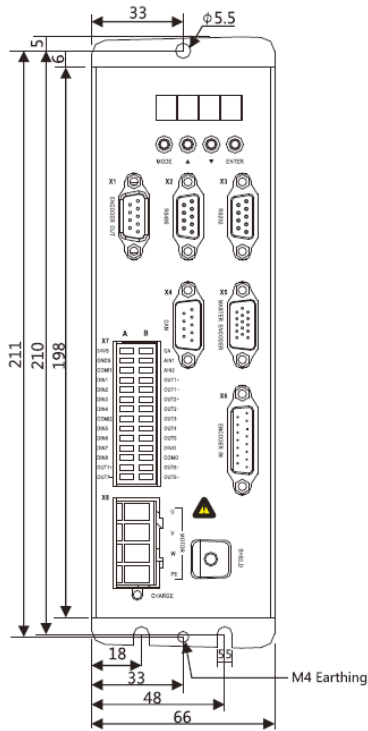


3.3-TORQUE CONTROL MODE



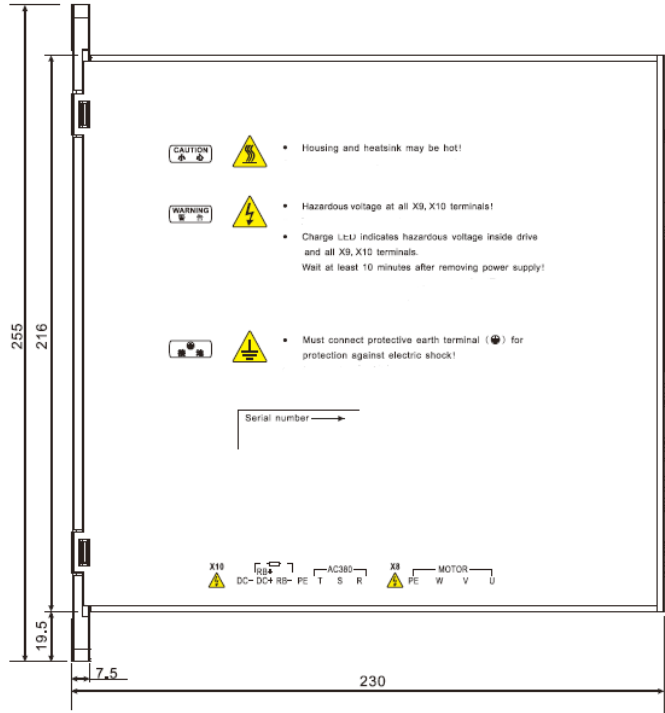
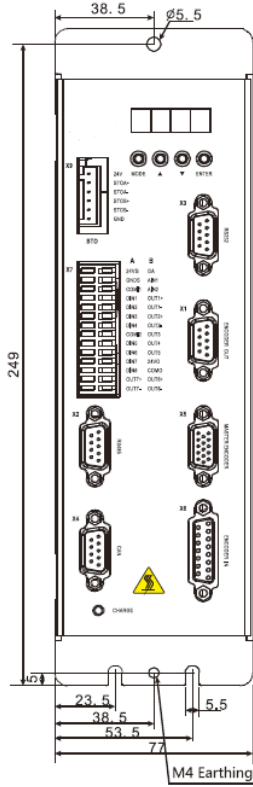
4- OVERALL AND MOUNTING DIMENSIONS

4.1- SCD157, SCD350



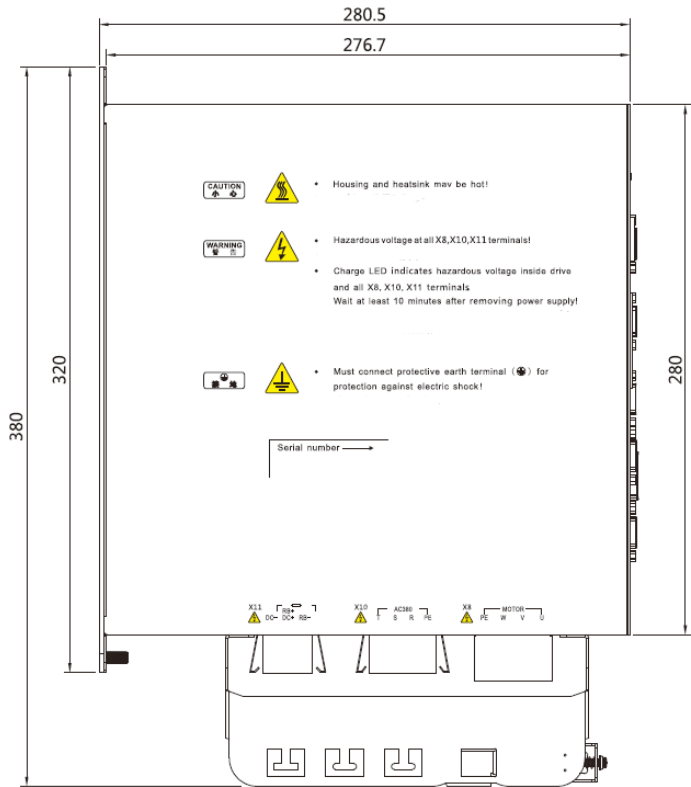
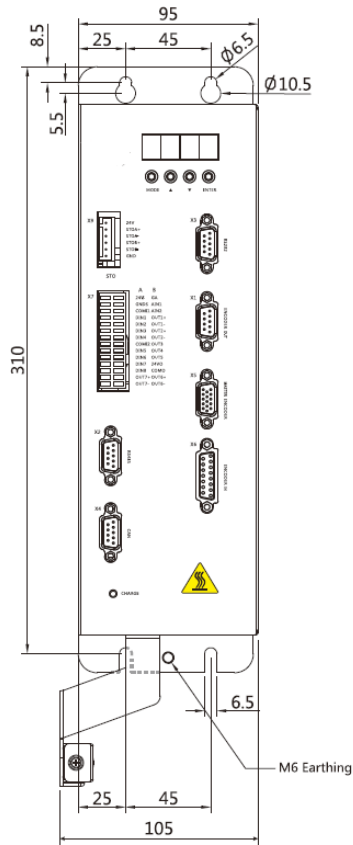


4.2- SCD440, SCD550





4.3- SCD750



DIPLOMATIC
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