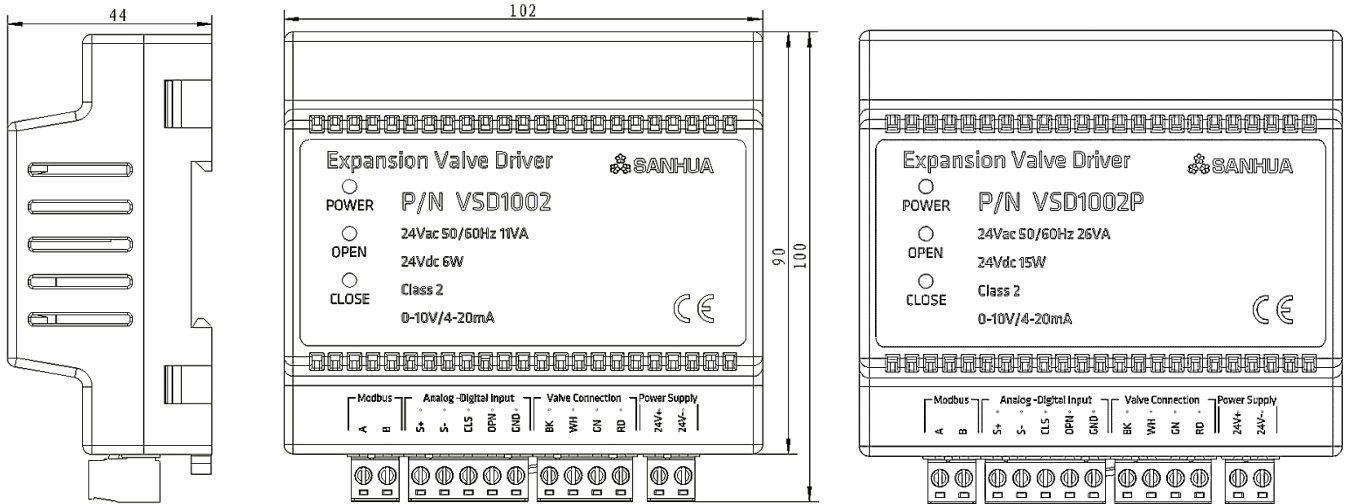




1. Dimension



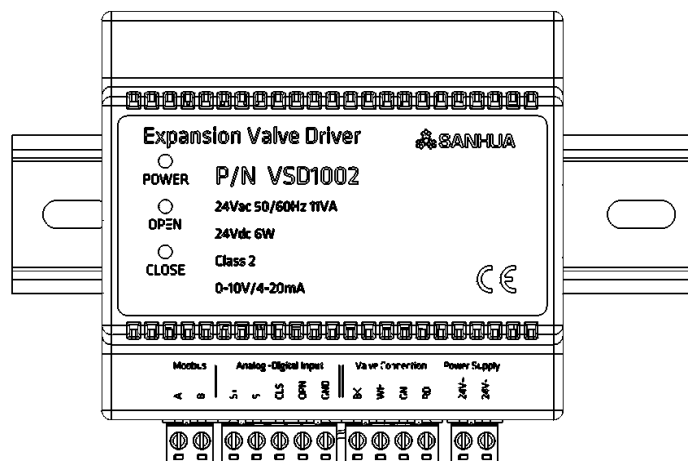
2. Installation

Slide rail mounting

Mounting VSD1002 to DIN35 slide rail through the buckle on shell. Please install in a control cabinet to avoid moisture and dust.

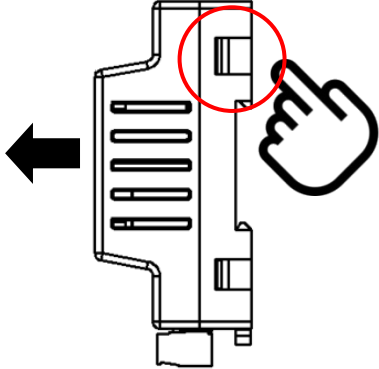
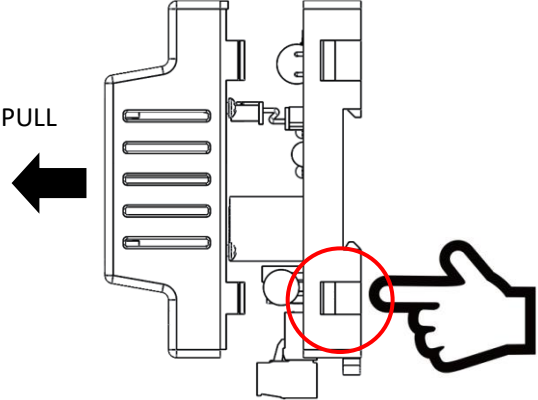
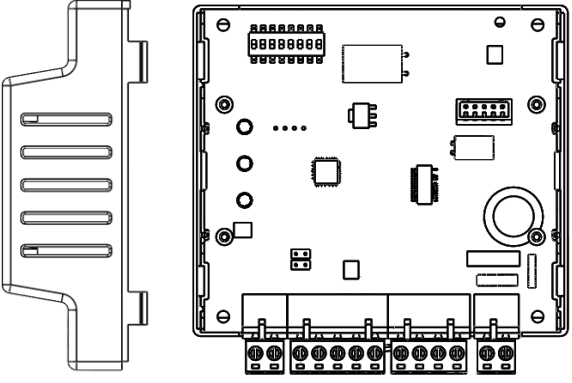
Wiring method

Use 28~12AWG cable (0.08 ~ 2.5 mm²) and torque recommend 0.35~0.44Nm



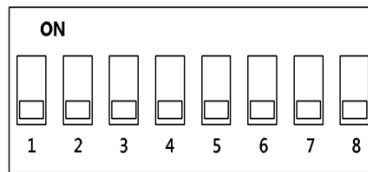
3. Shell open

The upper and below panels of controller shell are connected by 4 buckles, DIP SW and jumper are on the internal PCB, please follow below steps to open the shell:

<p>1</p>		<p>Step 1:</p> <p>Squeezes the larger buckle on the side, and lift the upper panel up until buckle separated.</p>
<p>2</p>		<p>Step 2:</p> <p>Repeat step 1 on smaller buckle, pull out the connected XHP terminal, The upper and below panels are separated.</p>
<p>3</p>		<p>Step 3:</p> <p>DIP switches and jumpers are located on the PCB board.</p>

4. DIP SW and Jumper setting

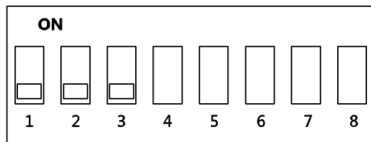
All DIP switches are OFF state in default



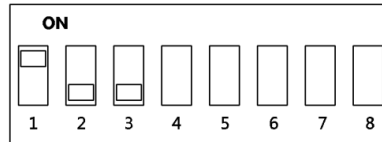
4.1 EEV model selecting

DIP SW 1-3 is used to set the type of EEV

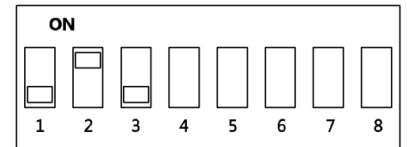
DIP SW	Setting		
1	OFF	ON	OFF
2	OFF	OFF	ON
3	OFF	OFF	OFF
pulse	2700	3500	3800
VPF model	VPF12.5 / VPF25 / VPF50	VPF100	VPF150 / VPF250 / VPF400



2700 pulses (VPF12.5/25/50)



3500 pulses (VPF100)



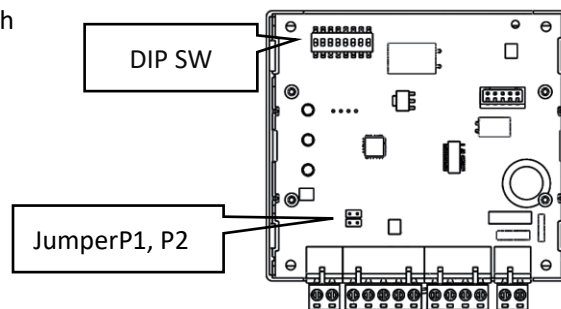
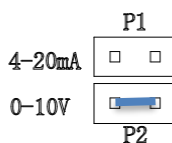
3800 pulses (VPF150/250/400)

4.2 Drive mode selecting

DIP SW 4-8 is used to set the drive mode

DIPSW	OFF	ON	Description
4	Bipolar	-	Motor drive mode
5	Positive	Reverse	Motor rotation direction
6	0-10V	4-20mA	Conjunction with jumper P1, P2
7	200pps	-	Excitation rate
8	I1	-	Current (RMS)

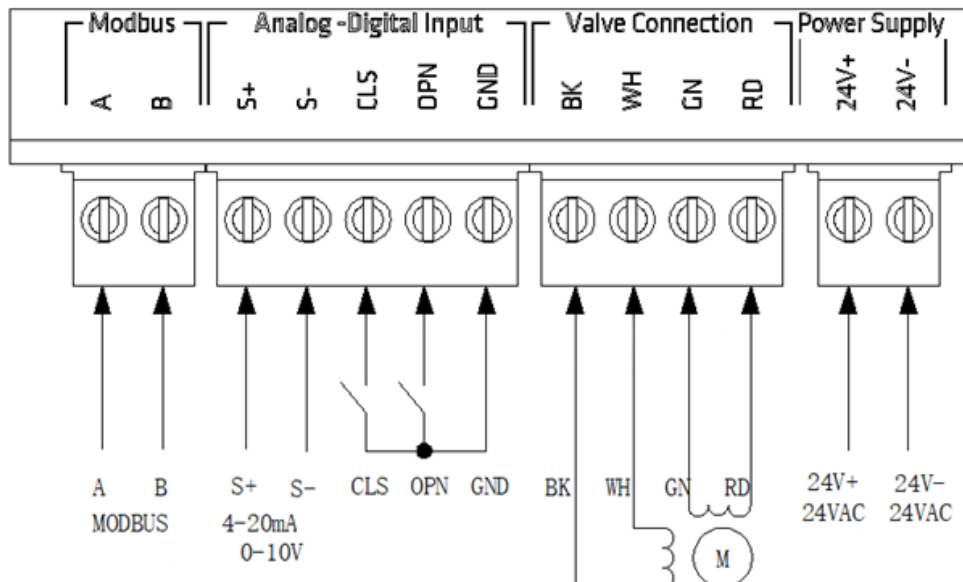
Jumper P1, P2: Used in conjunction with DIP SW 6 to set the analog signal type



5. Wiring guide

WARNING: Do not apply power to VSD10 until wiring is completed and remove power before making wiring changes.
Do not connect 24V or GND to ground at the same time; do not short-circuit terminal S- and 24V-
Use 28~12AWG cable and torque recommend 0.35~ 0.44 Nm

Name	Function	Details
485 A	MODBUS A	
485 B	MODBUS B	
S+	Analog+	Select voltage or current input via DIP switch
S-	Analog-	
CLS	Force close	External switch and GND form a switch (Dry contact, do not apply voltage)
OPN	Force open	External switch and GND form a switch (Dry contact, do not apply voltage)
GND	Analog ground	Connect with OPN and CLS
BK(BLACK)	B+	Bipolar stepper motor
WH(WHITE)	B-	
GR(GREEN)	A+	
RD(RED)	A-	
24V+	Power 24V +	24VAC or 24VDC universal
24V-	Power 24V -	



6. Communication settings

Item	Description
Transmission line connection	Multiple line
Communication method	RS485 (2-wire, half-duplex)
Baud-rate	Default 9600BPS
Parity, Data, Stop bit	None, 8 data, 1 stop
Protocol Type	Modbus RTU Mode
Function Code	Read Hold Registers (0×03) /Preset Single Register (0×06)
Max. Read Word	32word
Cable type	Twisted pair shielded wire 2 x (0.2~0.5 mm ²) or more
Poll interval	100ms

Addr.	Description	Unit	Read/Write	Min	Max.	Default	Remarks	
40000	Step difference	P	R			0	=Setting step-current step	
40001	Current step	P	R			0		
40007	Open percentage	0.1%	R			0		
40010	On/Off status	-	R			0	0=Off 1=On	
40011	DIP SW status	-	R			0		
	bit0	Max. steps						000=2700 001=3500 010=3800
	bit1							
	bit2							
	bit3	Motor polarity					0	0=Bipolar 1= N/A
	bit4	Motor direction					0	0= Positive 1= Reverse
	bit5	Voltage/Current					0	0=Voltage 1=Current
	bit6	Drive speed					0	0= Default value 1= Customize
	bit7	Drive current					0	0= Default value 1= N/A
40012	Enforce open/close	-	R			0		
	bit0						1= Enforce open	
	bit1						1= Enforce close	
40013	Alarm code	-	R			0		
40016	Input voltage	0.01	R			0		
40017	Input Current	0.01	R			0		
40100	Steps setting	P	R/W	0	9999	8888	8888= Analog signal control Can not set outpace max. steps	
40120	ID address	1	R/W	1	32	1		

40121	Baud rate	-	R/W	12	1152	96	12 = 1200 24 = 2400 48 = 4800 96 = 9600 192 = 19200 384 = 38400 1152 = 115200
40141	Reset to default	-	R/W			0	1= Restore to defaults and restart
40142	Communication control orders	-	R/W			0	1= Motor off 2= Enforce open 3= Enforce close 4444= Valve reset to zero point
40153	Hardware version	0.01	R			21	
40154	Software version	0.01	R			101	
40159	Model	-	R			10020	10020 = VSD1002 10029 = VSD1002P

If you change the baud rate, the driver need be power off and restart to take effect.