Description of S Series Products

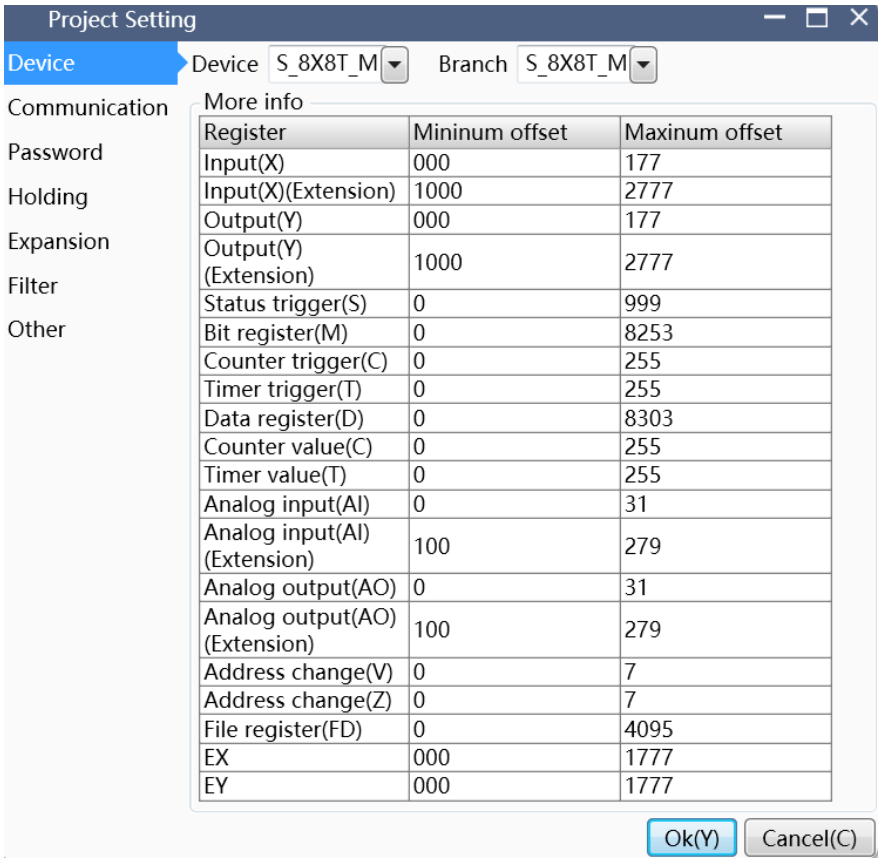
Content

I. CAN Communication Configuration in SamSoar2022

(1) Host CAN Communication

For CAN communication, when using direct plug-in connection, it is recommended to use a baud rate of 100 kbps or higher to improve communication speed. For terminal remote connection with a bus length of 25m, a baud rate of 500 kbps or lower is recommended. It is advisable to use a thicker shielded twisted-pair cable; a 100 Ω terminating resistor should be connected to the bus (it can be connected between the upper two pins or lower two pins of the side plug port, and there is also a small terminating resistor module available as an option, with the arrow pointing upward).

1. Open the programming software, in the "Setting" menu bar, click the "Project Setting" button in the "Setting" area. 

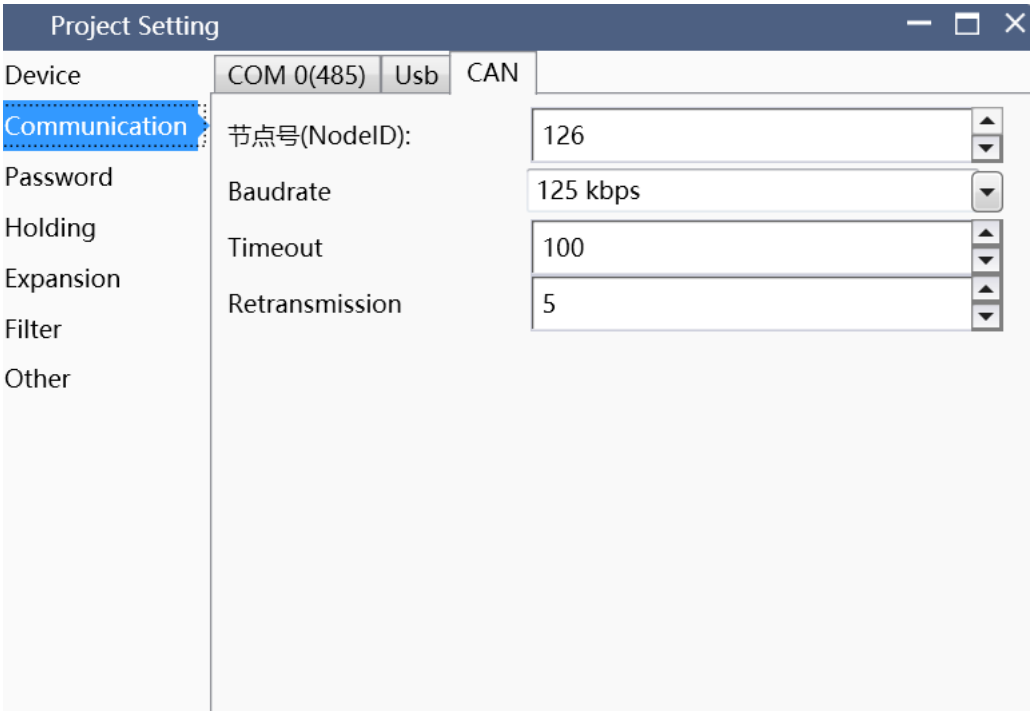


Register	Mininum offset	Maxinum offset
Input(X)	000	177
Input(X)(Extension)	1000	2777
Output(Y)	000	177
Output(Y) (Extension)	1000	2777
Status trigger(S)	0	999
Bit register(M)	0	8253
Counter trigger(C)	0	255
Timer trigger(T)	0	255
Data register(D)	0	8303
Counter value(C)	0	255
Timer value(T)	0	255
Analog input(AI)	0	31
Analog input(AI) (Extension)	100	279
Analog output(AO)	0	31
Analog output(AO) (Extension)	100	279
Address change(V)	0	7
Address change(Z)	0	7
File register(FD)	0	4095
EX	000	1777
EY	000	1777

(Figure 1.1 Project Setting)

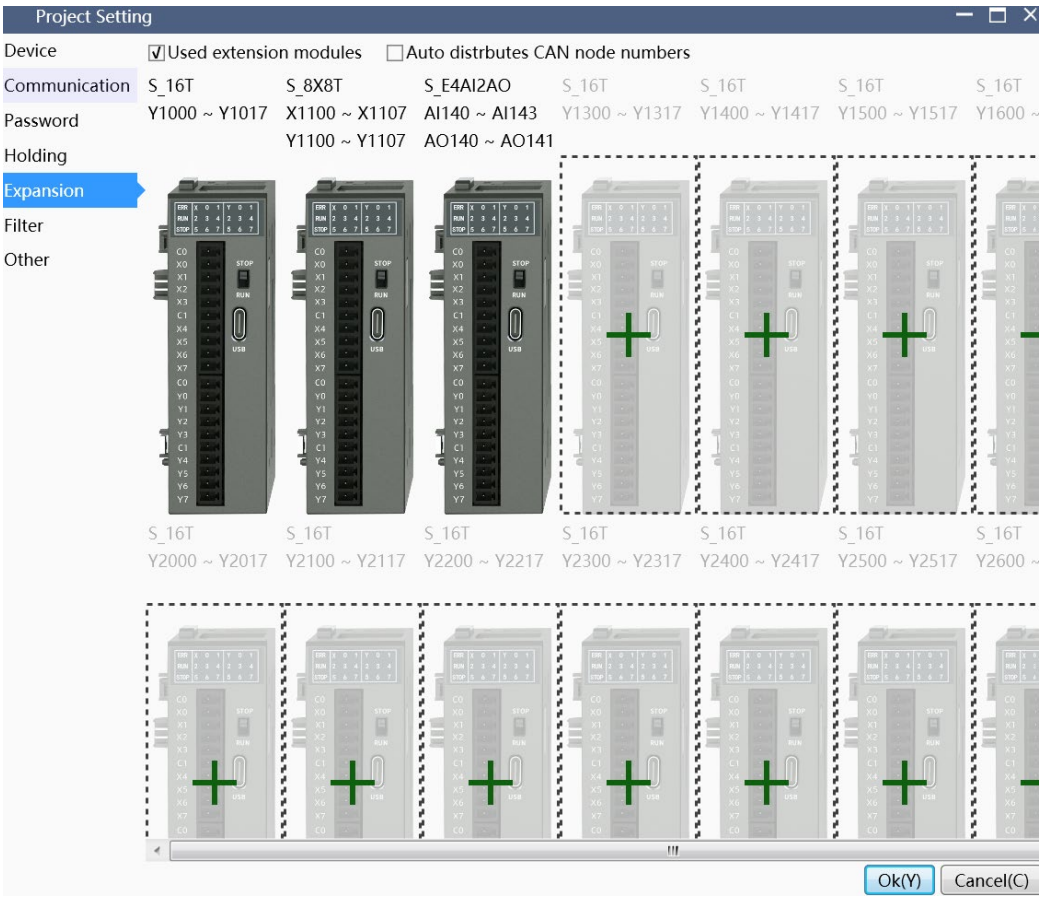
2. Select "Communication Parameters" to switch to the "Communication Parameters" setting page, as shown in Figure 1.2. Configure the node ID and baud rate under the CAN tab; the module's filtering settings are currently in the "Filter Settings" tab under Project Setting. This configuration is crucial: the node ID corresponds to the X/Y offset address in the host

configuration, independent of the position in the CAN network (unlike previous expansion modules that were automatically numbered by insertion position). A single CAN network must use the same baud rate; otherwise, it will not only fail to connect to the host but also interfere with all transmissions on the bus.

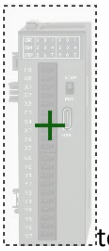


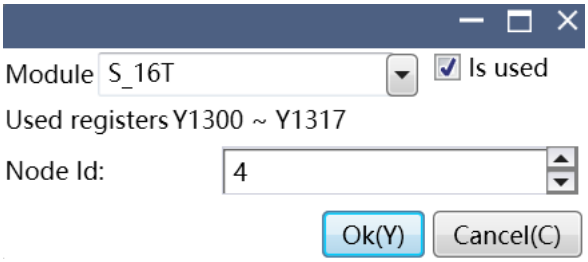
(Figure 1.2 Communication Parameters Setting)

3. Select "Expansion Modules" to switch to the "Expansion Modules" setting page, as shown in Figure 1.3. In the Project Setting interface, select the "Expansion Modules" tab on the left and check "Enable Expansion Modules".



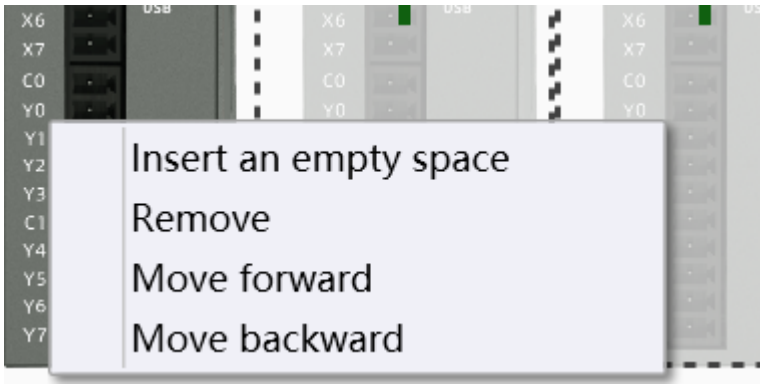
(Figure 1.3 Expansion Modules Setting)

4. Click the add box directly  to manually add the corresponding model module, as shown in Figure 1.4. When in use, after adding the corresponding model, set the node ID in Figure 1.4 to match that of the model, and check "Enable". The registers used are also displayed on this interface.



(Figure 1.4 Add Module)

5. Right-click any module to bring up the right-click menu, as shown in Figure 1.5.



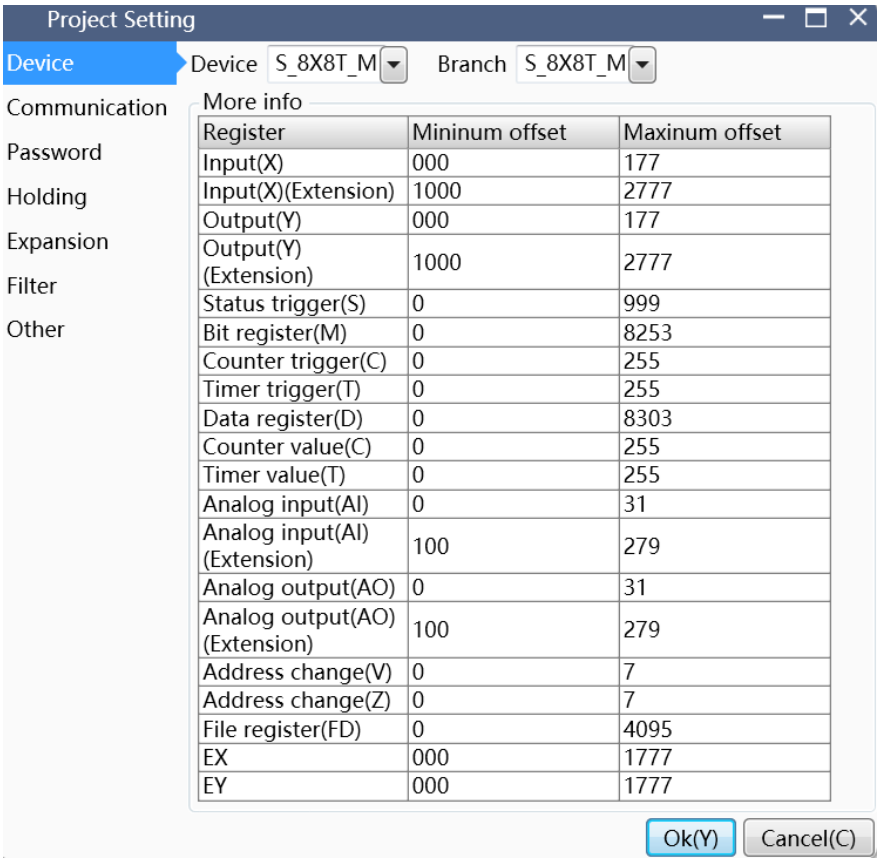
(Figure 1.5 Right-Click Menu)

- Insert New Empty Slot: Insert an empty slot before the current module, moving the current module back by one unit.
- Delete: Delete this module, with subsequent modules moving forward by one unit.
- Move Forward: Swap data between the current module and the previous one.
- Move Backward: Swap data between the current module and the next one.

(2) Slave CAN Communication

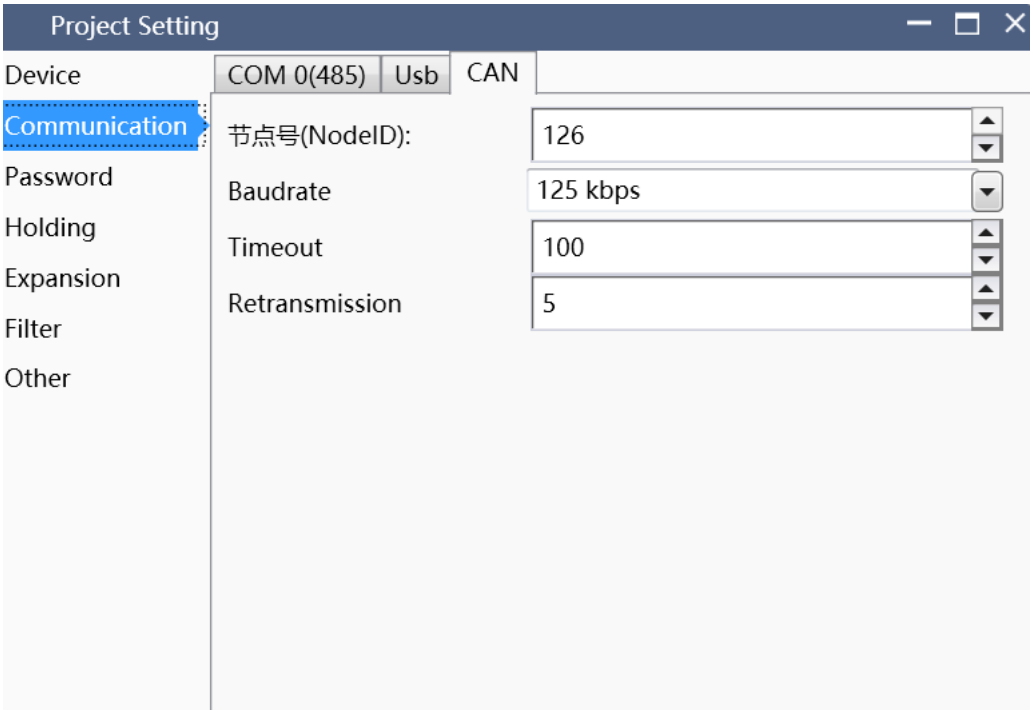
Modules communicate with the host via the CAN interface, supporting side direct plug-in or back terminal remote access to the bus. For direct plug-in connection, a baud rate of 100 kbps or higher is recommended to improve communication speed. For terminal remote connection with a bus length of 25m, a baud rate of 500 kbps or lower is recommended. Use a thicker shielded twisted-pair cable; a 100Ω terminating resistor should be connected to the bus (between the upper two pins or lower two pins of the side plug port, with an optional small terminating resistor module, arrow pointing upward).

1. Open the programming software, in the "Setting" menu bar, click the "Project Setting" button in the "Setting" area. 



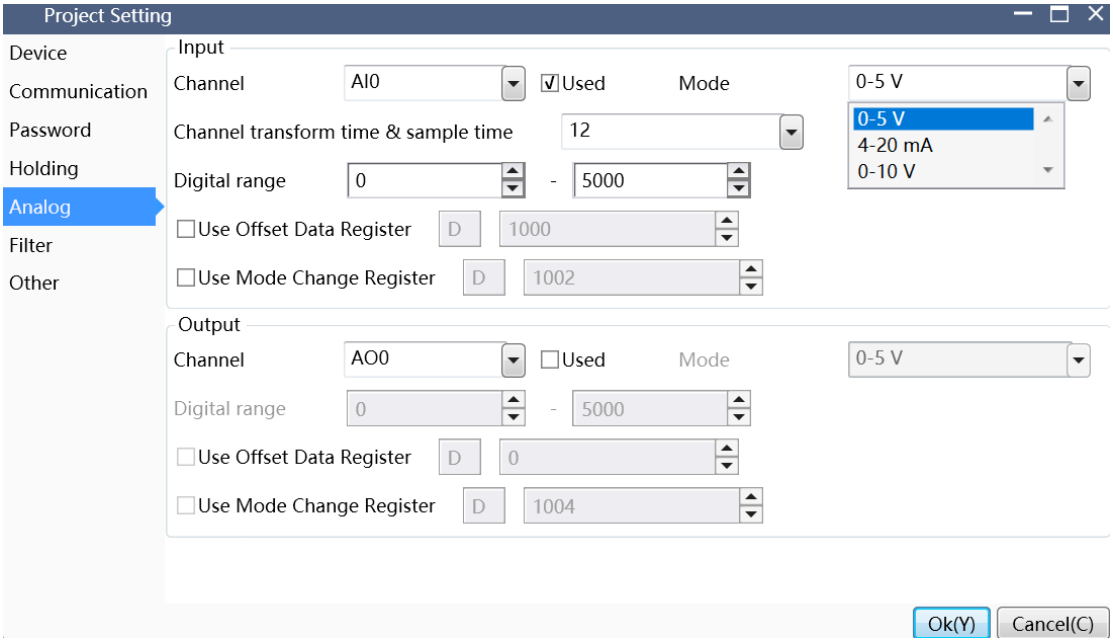
(Figure 2.1 Project Setting)

2. Select "Communication Parameters" to switch to the "Communication Parameters" setting page, as shown in Figure 2.2. Configure the node ID and baud rate under the CAN tab; the module's filtering settings are in the "Filter Settings" tab under Project Setting. This configuration is critical: the node ID corresponds to the X/Y offset address in the host configuration, independent of the CAN network position (unlike previous expansion modules auto-numbered by insertion). A single CAN network must use the same baud rate; otherwise, host connection will fail and interfere with bus transmissions.



(Figure 2.2 Communication Parameters Setting)

3. For analog modules, configure their parameters. Click the drop-down box next to "Channel" in the input section to switch channels. Check "Enable" to activate the channel; different channels have parameters including mode, average sampling count, and digital range, as shown in Figure 2.3.



(Figure 2.3 Parameter Configuration)

Parameters to set before use:

[1] Enable: The activation switch; the channel will be scanned only when checked, and related parameters take effect.

[2] Mode: Measurement object. For temperature, options include K-type thermocouple, T-type thermocouple, PT100, and NI120. For current/voltage analogs, options are 0-5V, 4-20mA, 0-10V (input) and 0-5V, 4-20mA, 0-10V (output).

[3] Channel Conversion & Sampling Count: Data acquisition count for the channel. A larger value improves filtering and anti-interference but increases scanning time. Options: 25ms/ch (12), 50ms/ch (18), 75ms/ch (24), 100ms/ch (30).

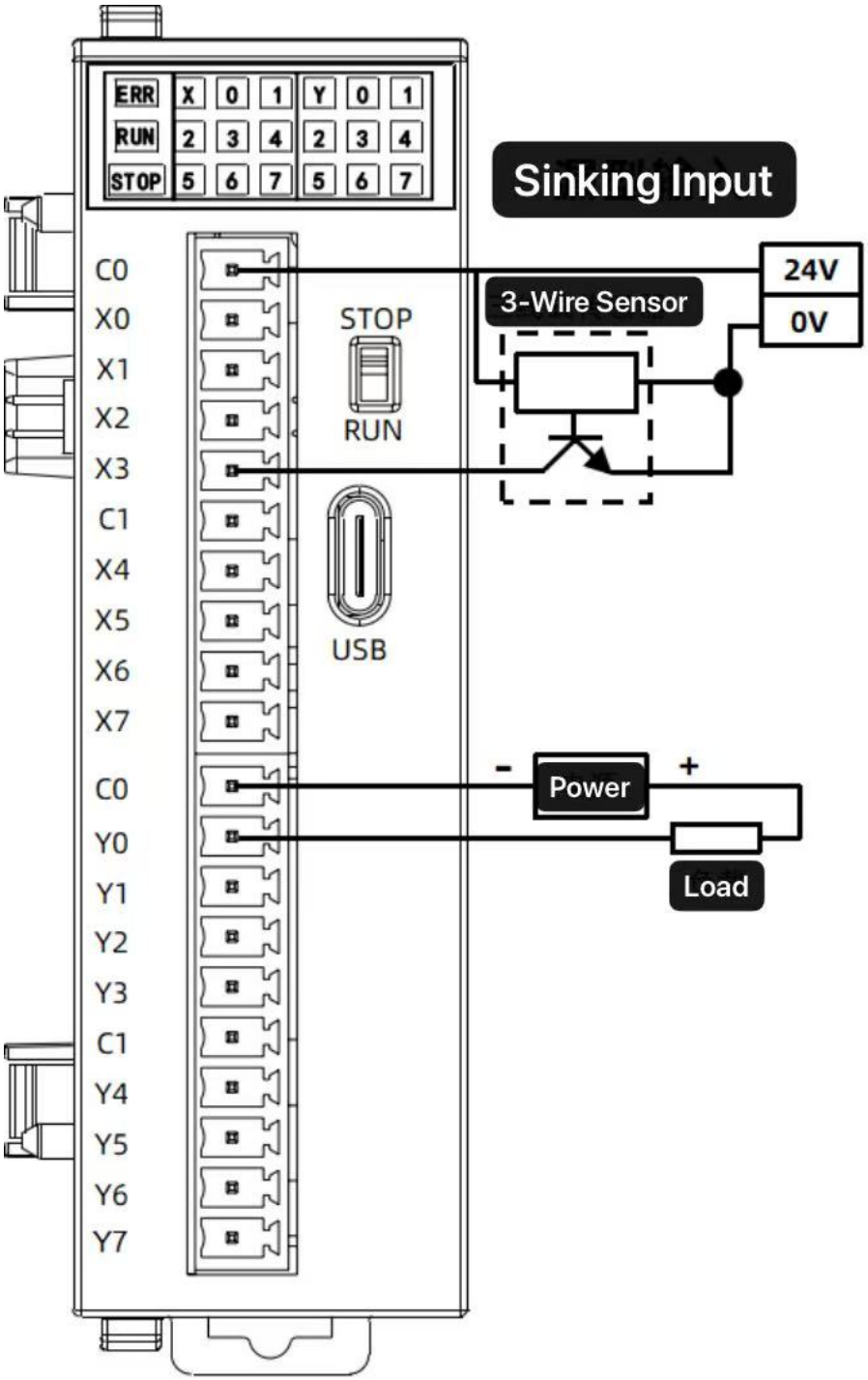
[4] Digital Range: The value mapping range of the raw collected data (voltage). For example, in 0~5V mode, the S-E4AI4T expansion module uses a default digital range of 0~5000 (in 1mV units, equivalent to 0~5000mV).

[5] Data Offset Register: Use the PLC's D register for manual compensation of measurement results (added to AI0, AI1, AI2, AI3). Check to enable.

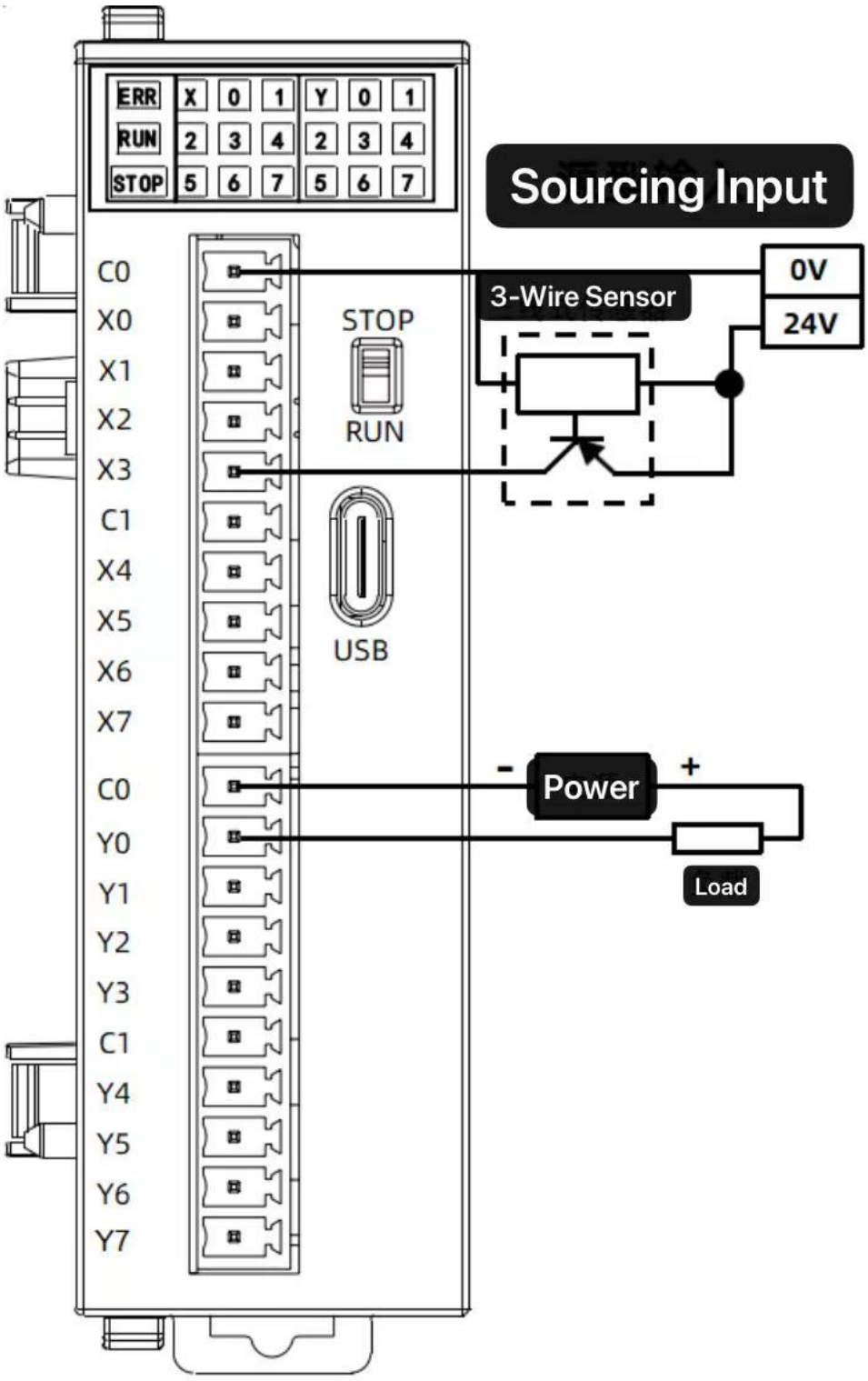
[6] Mode Change Register: Use the PLC's D register to change the mode in [2]. When enabled, a D register value of 0 corresponds to 0~5V, 1 to 4~20mA, and 2 to 10V.

II. Wiring Diagrams for Digital Signals

Taking a 3-wire sensor connected to input X3 as an example, the wiring diagram for sink input is shown in Figure 3.1, and for source input in Figure 3.2. The wiring diagram for output Y0 is attached to both figures.



(Figure 3.1 Sink Input)



(Figure 3.2 Source Input)

Notes

1. The upper parameter configuration takes effect only after downloading (non-online download

mode).

2. Toggle the switch to STOP and back to RUN; activated channels will re-initialize data based on configured parameters.

3. In analog modules, if the measured temperature exceeds the range, no sensor is connected, or the sensor is disconnected, the measurement result (AIx) will display 32767, indicating overrange, no load, or a fault (disconnection).

4. In analog modules, if "Mode Change Register" is checked, the mode drop-down menu is disabled; the mode corresponds to the value in the D register, with the default range of the changed mode. For example, if the D register value is 0, the mode is 0~5V with a default digital range of 0~5000 (1mV units). If the value is 2, the mode is 0~10V with a range of 0~10000 (1mV units).

5. The host checks all configured modules on power-up. For failed checks, reconnection is attempted. Special register word D8190 records the result: each bit (from LSB to MSB) represents the reconnection status of modules 1 to 16, with 1 indicating failure. Special register word D8191 records the communication status of all modules (1 = online, 0 = timeout).

6. Special register word D8192 records the local node ID; D8193 records the local baud rate (Kbps); D8189 indicates CAN bus load. A load near or exceeding 100 means low-priority nodes may fail to communicate, requiring a higher bus baud rate or lower IO switching frequency to reduce burst communication.

7. When an S series PLC is used as an expansion module, outputs are controlled by the host by default and cannot be forced or controlled via ladder diagrams (otherwise, word D8176 reports error 124). For autonomous control, set special register M8000; host-transmitted outputs no longer directly control the module but store Y status in module word D8000 (bit by bit). Meanwhile, host X1000-X1007 (to X2700-X2707) are no longer transmitted directly from the slave's X but read from the slave's D8016.

8. Set M8000 when using Y outputs.

9. Set module M8000 for high-speed outputs; D8000 and D8016 enable automatic high-speed data/logic interaction with the host. Host Y1000-Y1017 to Y1040-Y1057 are mapped to the slave's D8000 to D8002 via PDO; the slave's D8016 to D8018 are mapped to host X1000-X1017 to X1040-X1057. Resetting M8000 resets all pulse commands. To use independent high-speed outputs with other outputs controlled by the host, set special register M8001.

10. CAN is suitable for fast transmission of small amounts of data, so only IO data of the module is automatically transmitted between the module and the host.

11. The default node ID is 126.

12. "Expansion Modules" settings are only available for host models (models without "E" in the name).

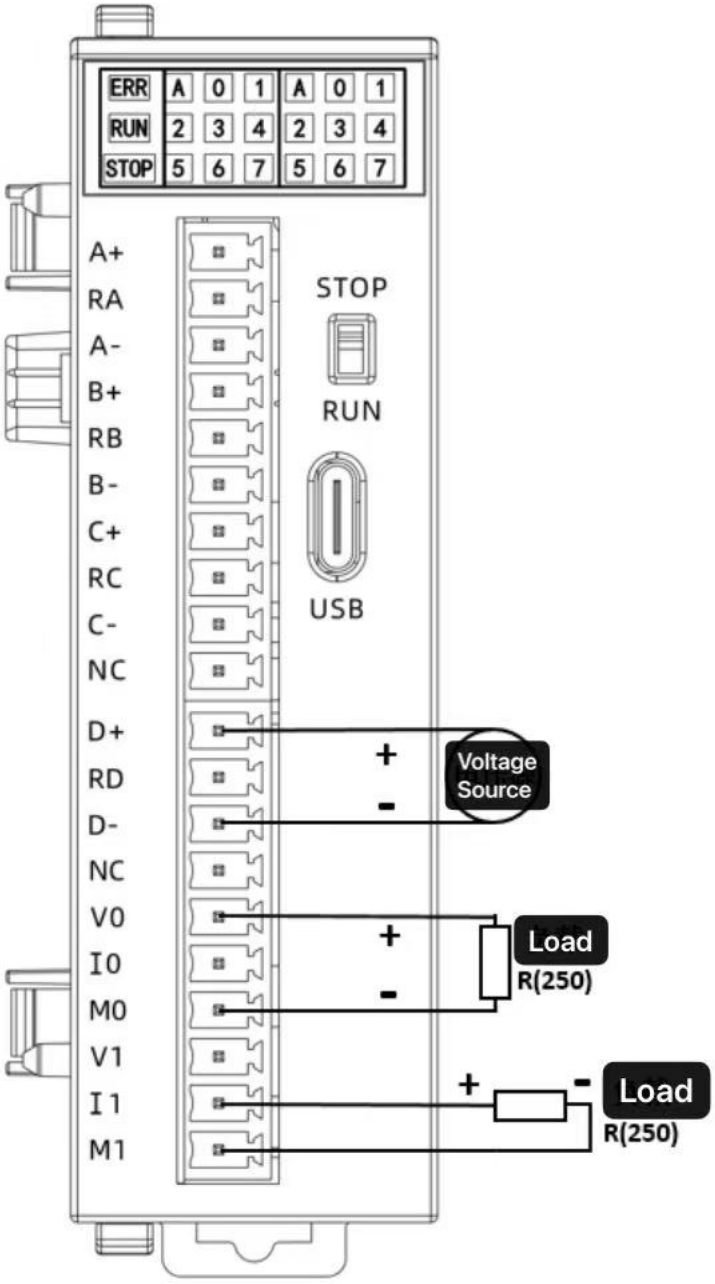
13. Power-off hold registers are M8116 and M8117. M8116 = 0 for automatic power-off hold; M8116 = 1 for manual hold. In manual mode, set M8117 to 1 to save data.

Expansion Module S-E4AI2AO

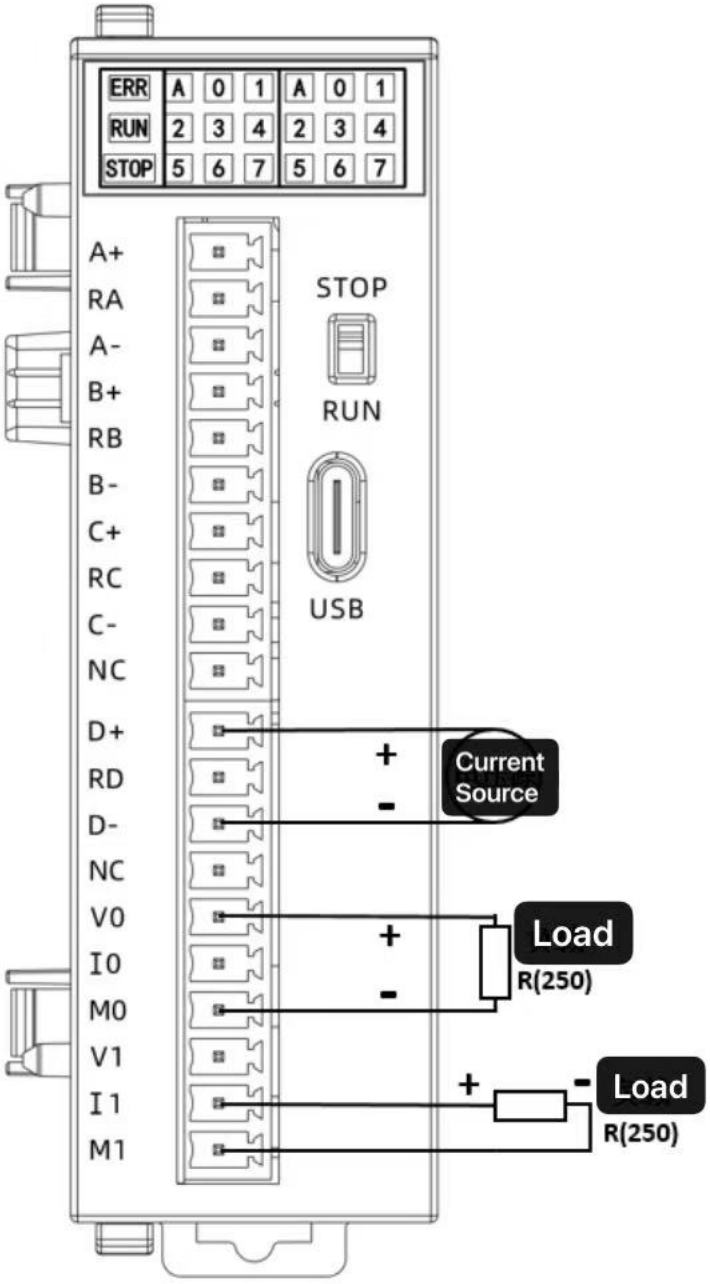
1. Wiring Diagrams

For voltage measurement mode (0~5V/0~10V), take channel D as an example: connect the positive pole of the voltage source to D+ and the negative pole to D-, as shown in Figure 1(a). For current measurement mode (4~20mA), connect the positive pole of the current source to both D+ and RD, and the negative pole to D-, as shown in Figure 1(b).

For the first analog output channel: in voltage output mode (0~5V/0~10V), connect the positive pole of the load to V0 and the negative pole to M0, as shown in Figure 1(a)(b). For the second analog output channel: in current output mode (4~20mA), connect the positive pole of the load to I1 and the negative pole to M1, as shown in Figure 1(a)(b).
Terminal descriptions are listed in Table 1.



(Figure 1(a) Wiring Diagram for Voltage Input Mode)



(Figure 1(b) Wiring Diagram for Current Input Mode)

	Chanel	Terminal Name	Signal Name
Analog Input	CH0	A+	A analog +
		RA	Short with A+ for current input
		A−	A analog −
	CH1	B+	B analog +
		RB	Short with B+ for current input
		B−	B analog −
	CH2	C+	TC analog +

		RC	Short with TC+ for current input
		C-	TC analog -
	CH3	D+	TD analog +
		RD	Short with TD+ for current input
		D-	TD analog -
Analog Output	CH0	I0	Current analog output
		V0	Voltage analog output
		M0	Analog ground
	CH1	I1	Current analog output
		V1	Voltage analog output
		M1	Analog ground
Unused	Unused	NC	Floating

Table 1 Terminal Descriptions

2. Module Features and Specifications

The S-E4AI2AO analog input/output module converts 4-channel analog input values (voltage/current) into digital values and transmits them to the PLC main unit, and converts 2-channel digital output values from the PLC main unit into analog quantities for output.

- 4-channel analog input: freely selectable between voltage (0~5V, 0~10V) or current (4~20mA) input.
- 2-channel analog output: freely selectable between voltage (0~5V, 0~10V) or current (4~20mA) output.
- 16-bit high-precision analog input.
- 12-bit analog output.
- Isolation between analog and digital power supplies.

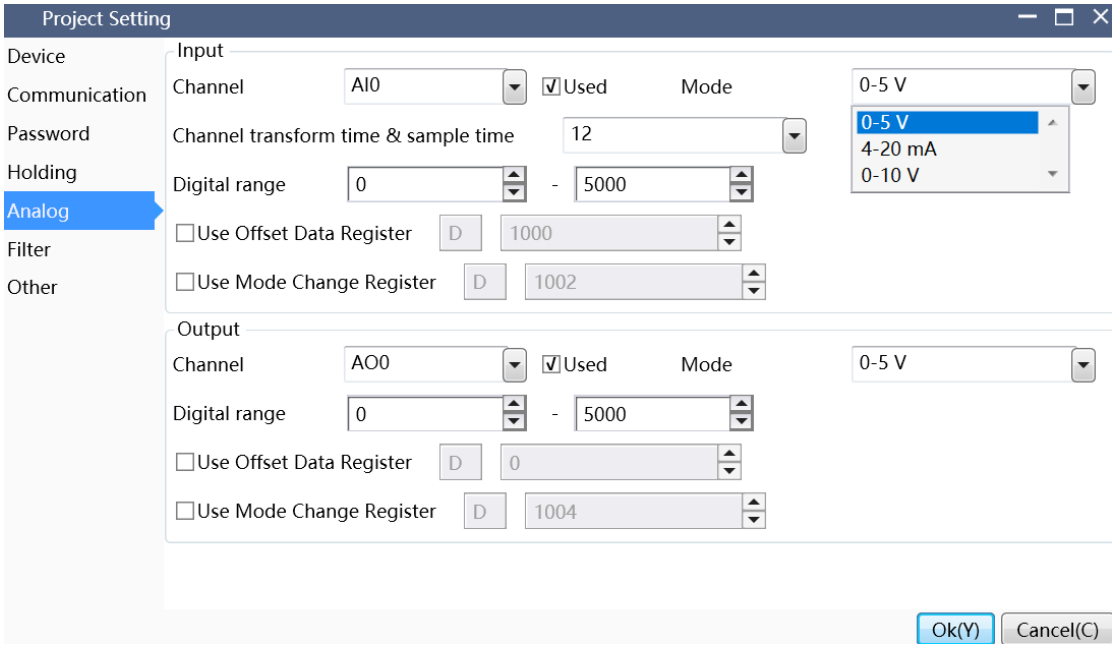
Module specifications are listed in Table 2.

Item	Voltage Input	Current Input	Voltage Output	Voltage Output
Analog Input Range	0～5V、 0～10V	4～20mA	0～5V、 0～10V	4～20mA
Resolution	1/65535（ 16Bit）		1/4096（12Bit）	
Comprehensive Accuracy	±0.1%		±0.5%	
Impedance	>=50K	250Ω	>=2K	<350Ω
Analog Power Supply	DC5V±10%， 100mA			

Table 2 Module Specifications

3. Parameter Configuration

For the S-E4AI2AO module, after checking "Enable Channel" for AI channels, you can select the measurement mode. In 0~5V mode, the default digital range is 0~5000 (in mV), representing the measurement result within 0~5000mV. This default value is the original measurement result, and linear scaling can be done by adjusting the digital range as needed, as shown in Figure 2.



(Figure 2 Parameter Configuration for S-E4AI2AO Module)

Similarly, in 4~20mA mode, the default digital range is 4000~20000 (in uA); in 0~10V mode, the default digital range is 0~10000 (in mV). The same applies to AO channels.

Parameters to set before use:

[1] Enable: Activation switch. The channel will be scanned only when checked, and related parameters take effect.

[2] Mode: Measurement/output type. Options for current/voltage analog include 0-5V, 4-20mA, and 0-10V.

[3] Channel Conversion & Sampling Count: Data acquisition times. A larger value improves filtering and anti-interference but increases scanning time. Options: 25ms/ch (12), 50ms/ch (18), 75ms/ch (24), 100ms/ch (30).

[4] Digital Range: Mapping range of raw measurement data (voltage). For example, in 0~5V mode for AI channels, the default range is 0~5000 (1mV unit), corresponding to 0~5V.

[5] Data Offset Register (AI channels only): Use the module's D register for manual compensation (added to AI0~AI3). Check to enable.

[6] Mode Change Register: Use the module's D register to switch modes. For AI channels: 0=0~5V, 1=4~20mA, 2=0~10V. For AO channels: 0=0~5V, 1=0~10V, 2=4~20mA. Check to enable.

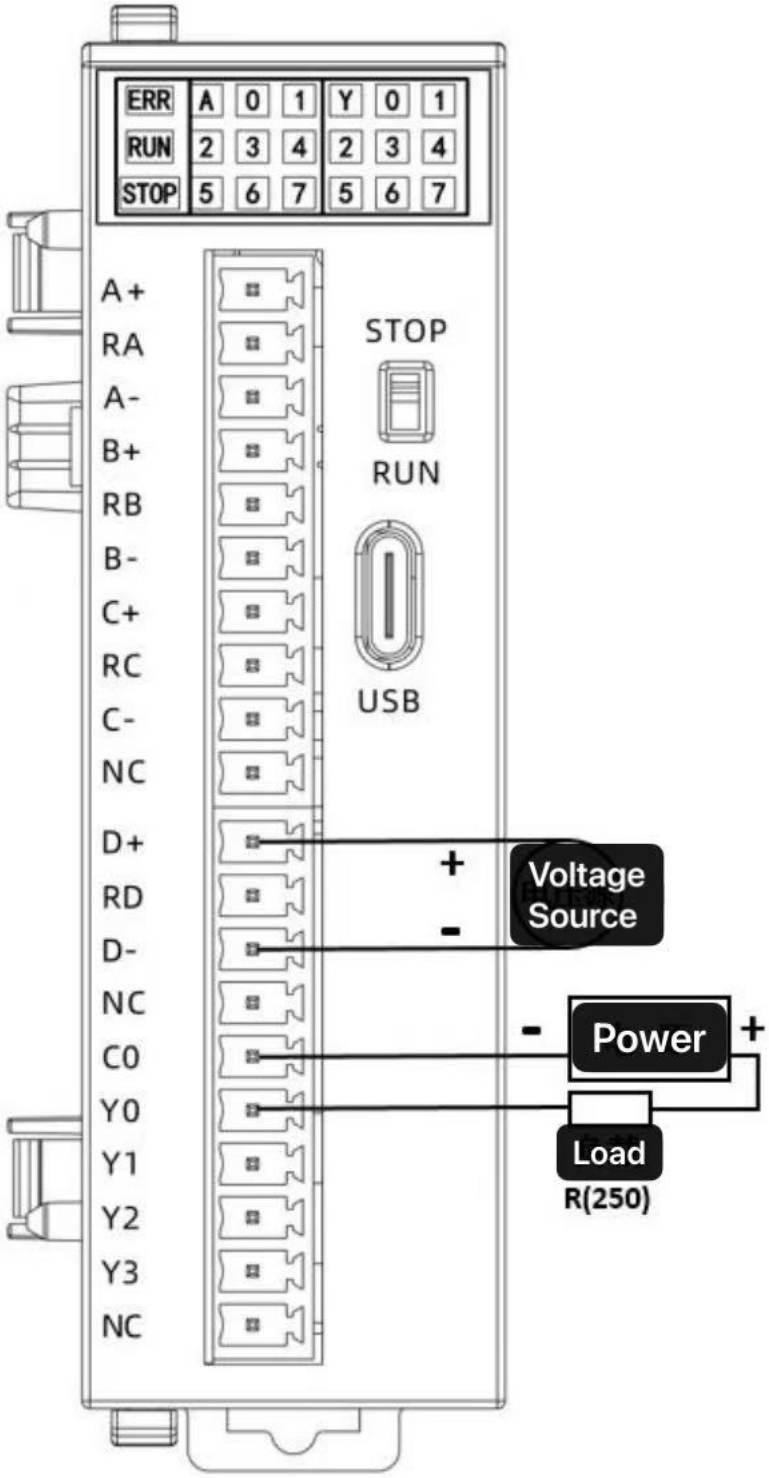
Notes:

1. After checking "Mode Change Register", the mode drop-down menu is disabled. The mode is determined by the D register value, with the default range of the corresponding mode. For example, if the D register is 0, the mode is 0~5V with a range of 0~5000mV; if 2, it is 0~10V with a range of 0~10000mV.
2. Toggle the switch to STOP and back to RUN; enabled channels will re-initialize data based on configured parameters.
3. The module cannot be hot-swapped. Power off before installation/removal. Initialization is performed on power-up, followed by configuration via expansion addition (or auto-detection).
4. Upper parameter configuration takes effect only after downloading (non-online download).
5. Analog output (AO) has no data offset register.
6. Mode sequences differ between AI and AO channels: AI (0=0~5V, 1=4~20mA, 2=0~10V); AO (0=0~5V, 1=0~10V, 2=4~20mA).

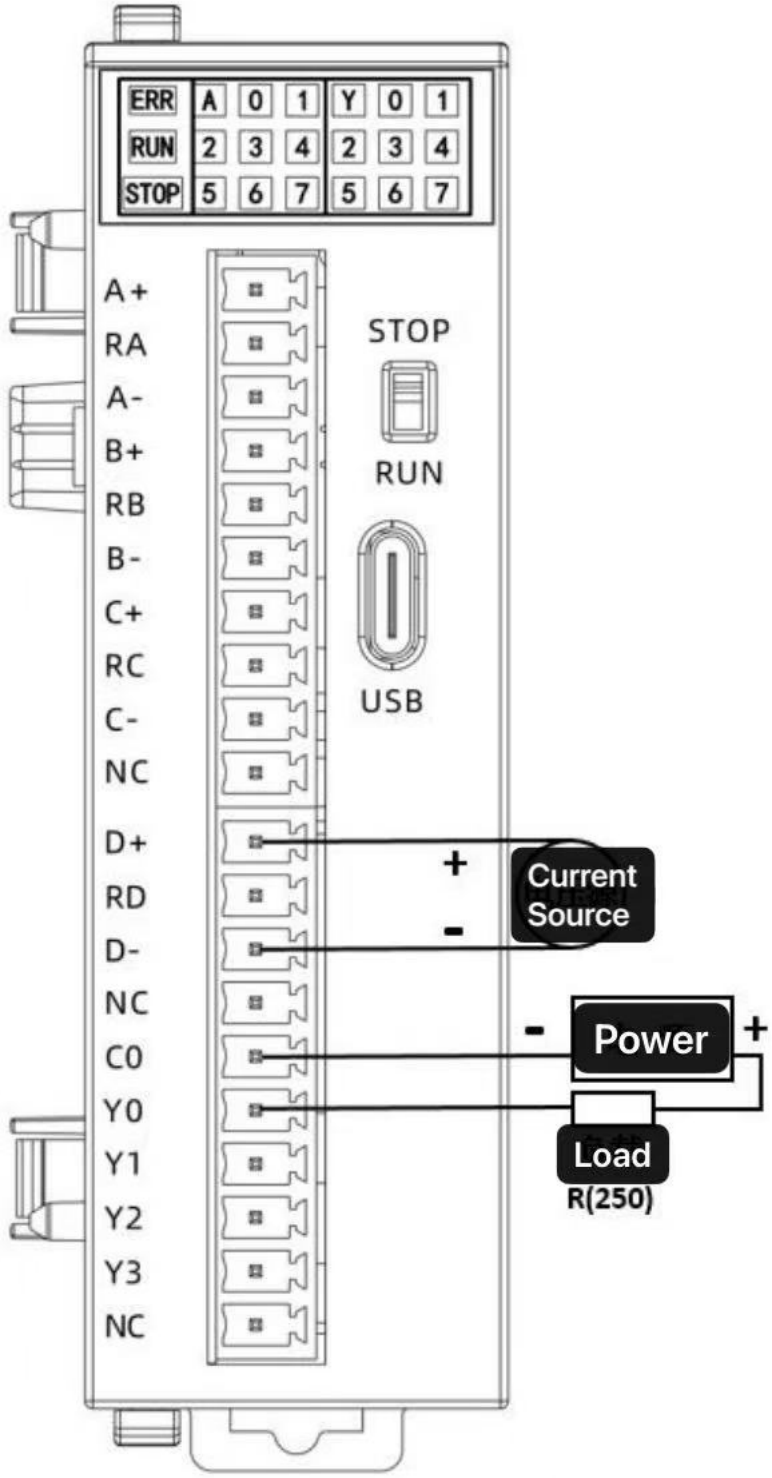
Expansion Module S-E4AI4T

1. Wiring Diagrams

For voltage measurement mode (0~5V/0~10V), take channel D as an example: connect the positive pole of the voltage source to D+ and the negative pole to D-, as shown in Figure 1(a). For current measurement mode (4~20mA), connect the positive pole of the current source to both D+ and RD, and the negative pole to D-, as shown in Figure 1(b). The wiring diagram for Y ports is shown in Figure 1. Terminal descriptions are listed in Table 1.



(Figure 1(a) Wiring Diagram for Voltage Mode)



(Figure 1(b) Wiring Diagram for Current Mode)

	Channel	Terminal Name	Signal Name
Analog Input	CH0	TA+	TA analog +
		TAA	Short with TA+ for current input
		TA-	TA analog -
	CH1	TB+	TB analog +
		TBA	Short with TB+ for

			current input
		TB-	TB analog -
	CH2	TC+	TC analog +
		TCA	Short with TC+ for current input
		TC-	TC analog -
	CH3	TD+	TD analog +
		TDA	Short with TD+ for current input
		TD-	TD analog -
Digital Output	CH0	C0	Common terminal (ground)
		Y0	Transistor output
		Y1	Transistor output
		Y2	Transistor output
		Y3	Transistor output
Unused	Unused	NC	Floating

Table 1 Terminal Descriptions

2. Module Features and Specifications

The S-E4AI4T analog input module converts 4-channel analog input values (voltage/current) into digital values and transmits them to the PLC main unit.

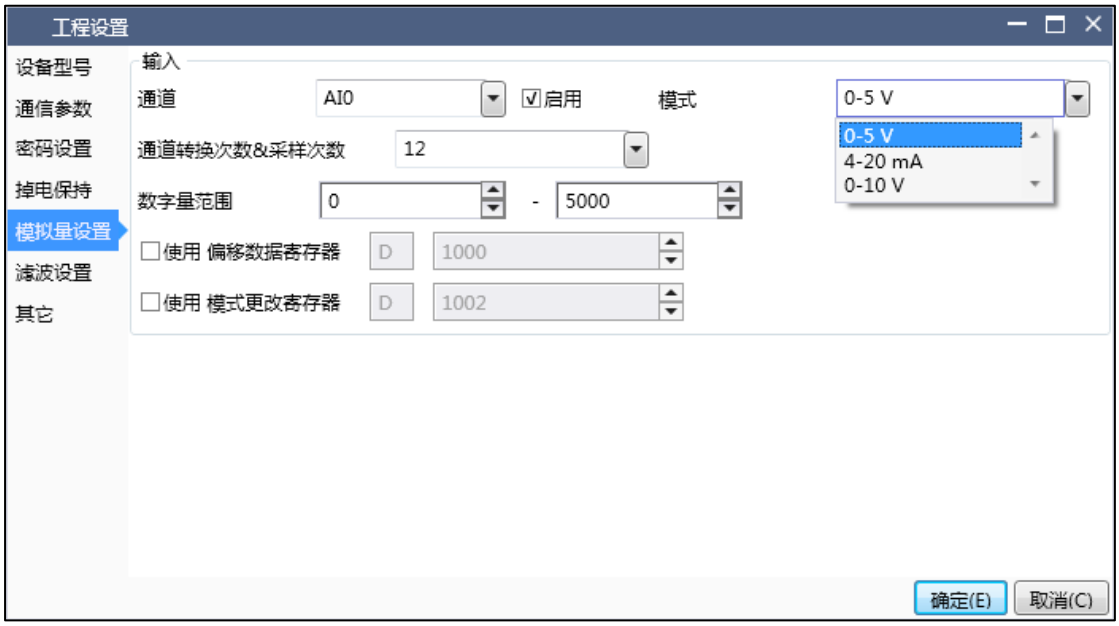
- 4-channel analog input: selectable between voltage (0~5V, 0~10V) or current (4~20mA) input.
- 16-bit high-precision analog input.
- Isolation between analog and digital power supplies.

Item	Voltage Input	Current Input
Analog Input Range	0～5V、 0～10V	4～20mA
Resolution	1/65535（ 16Bit）	
Comprehensive Accuracy	±0.1%	
Conversion Speed	1ms/channel	
Analog Power Supply	DC5V±10%， 100mA	

Table 2 Module Specifications

3. Parameter Configuration

The configuration of S-E4AI4T is similar to analog modules, with differences in modes: after checking "Enable Channel", select the measurement mode. In 0~5V mode, the default digital range is 0~5000 (in mV), representing the measurement result within 0~5000mV. This default value is the raw measurement result, and linear scaling can be done by adjusting the digital range as needed, as shown in Figure 2.



(Figure 2 Parameter Configuration for S-E4AI4T)

Similarly, in 4~20mA mode, the default digital range is 4000~20000 (in uA); in 0~10V mode, it is 0~10000 (in mV).

Parameters to set before use:

[1] Enable: Activation switch. The channel is scanned only when checked, and related parameters take effect.

[2] Mode: Measurement type, selectable from 0-5V, 4-20mA, 0-10V for current/voltage.

[3] Channel Conversion & Sampling Count: Data acquisition times. Higher values improve filtering/anti-interference but increase scanning time. Options: 25ms/ch (12), 50ms/ch (18), 75ms/ch (24), 100ms/ch (30).

[4] Digital Range: Mapping range of raw data. For example, 0~5V mode uses 0~5000 (1mV unit), corresponding to 0~5V.

[5] Data Offset Register: Use the PLC's D register for manual compensation (added to AI100~AI113). Check to enable.

[6] Mode Change Register: Use the PLC's D register to switch modes (0=0~5V, 1=4~20mA, 2=0~10V). Check to enable.

Notes:

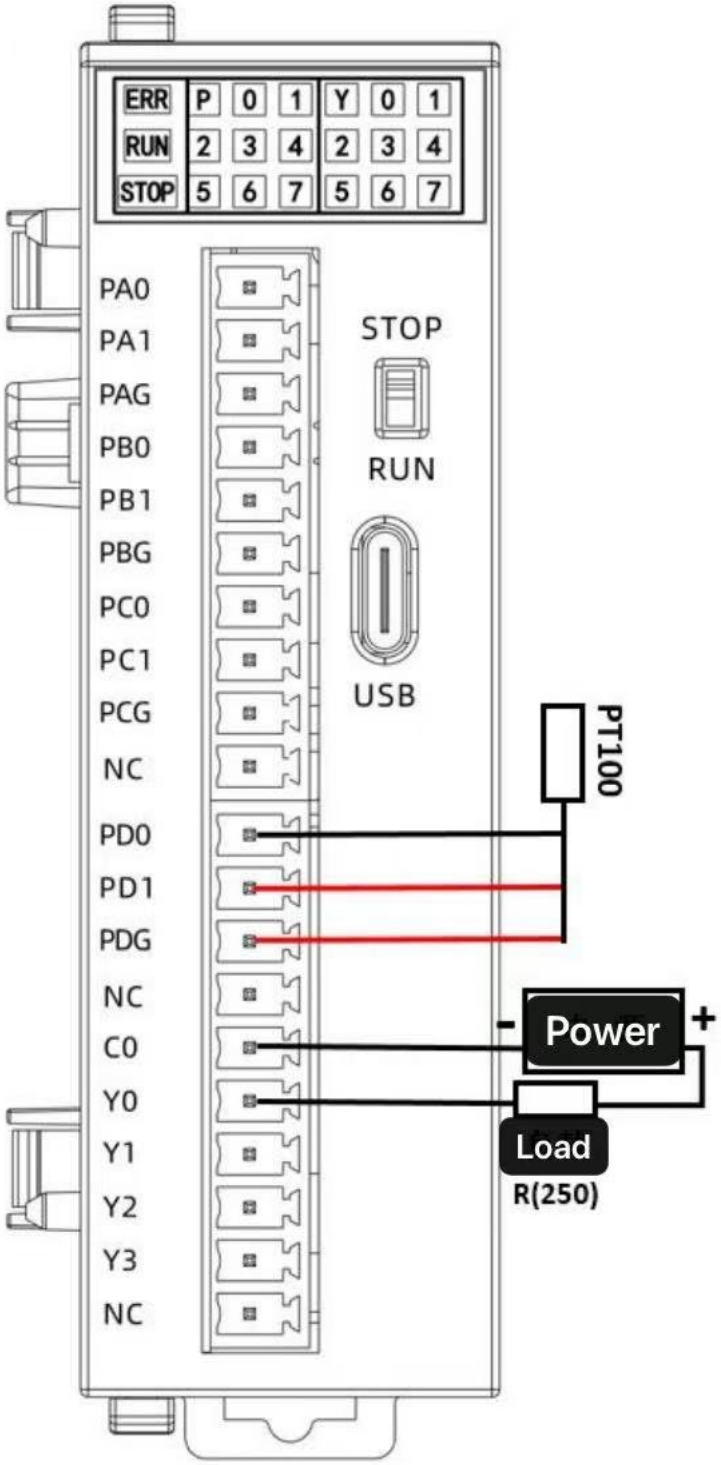
1. After checking "Mode Change Register", the mode dropdown is disabled; mode is determined by the D register value, with the default range of the selected mode (e.g., D=0 → 0~5V, range 0~5000mV).
2. Toggle the switch to STOP then RUN to re-initialize channels with configured parameters.
3. The module cannot be hot-swapped; power off before installation/removal. Initialization runs on power-up, followed by configuration via expansion/addition (or auto-detection).

4. Upper parameter configuration takes effect only after non-online download.

Expansion Module S-E4PT4T

1. Wiring Diagrams

The S-E4PT4T module supports 4-channel PT100/NI120 measurement. For 3-wire PT100, connect two terminals of the same color to PA1 and PAG. For 4-wire PT100, connect any two same-color terminals to PA0, and the other two to PA1 and PAG. The wiring diagram for 3-wire PT100 (PD channel) and Y0 is shown in Figure 1. Terminal descriptions are listed in Table 1.



(Figure 1 Wiring Diagram for S-E4PT4T)

	Channel	Terminal Name	Signal Name
Analog Input	CH0	PA0	CH0 Thermal Resistance Input
		PA1	CH0 Thermal Resistance Input Common
		PAG	CH0 Thermal

			Resistance TA0 - Same Color Terminal (3-Wire)
	CH1	PB0	CH1 Thermal Resistance Input
		PB1	CH1 Thermal Resistance Input common
		PBG	CH1 Thermal Resistance TA1 - Same Color Terminal (3-Wire)
	CH2	PC0	CH2 Thermal Resistance Input
		PC1	CH2 Thermal Resistance Input common
		PCG	CH2 Thermal Resistance TA2 - Same Color Terminal (3-Wire)
	CH3	PD0	CH3 Thermal Resistance Input
		PD1	CH3 Thermal Resistance Input common
		PDG	CH3 Thermal Resistance TA3- Same Color Terminal (3-Wire)
Digital Output	CH0	C0	Common Terminal Grounding
		Y0	Transistor output
		Y1	Transistor output
		Y2	Transistor output
		Y3	Transistor output
Unused	Unused	NC	Floating

Table 1 Terminal Descriptions

2. Module Features and Specifications

The S-E4PT4T analog input module converts 4-channel temperature analog values into digital values and transmits them to the PLC main unit.

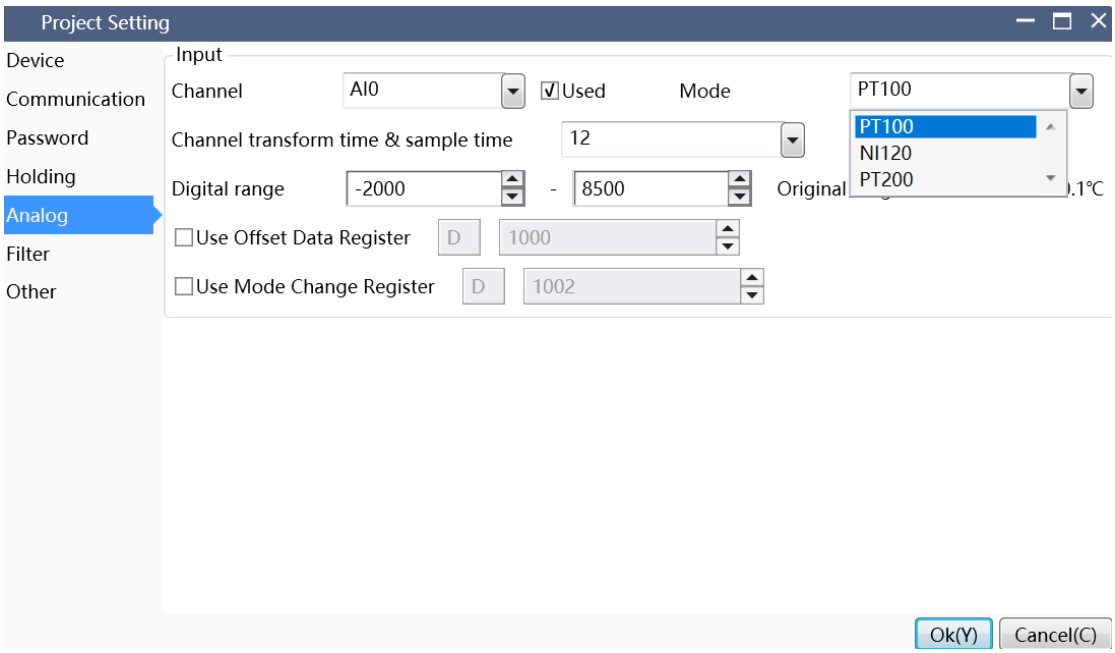
- 4-channel temperature analog input: supports PT100 and NI120.
- Each channel allows temperature offset adjustment for measurement results.
- Each channel supports configurable conversion speed and sampling count.
- Isolation between analog and digital power supplies.

Item	PT100	NI120
Input Range	-200~850℃	
Resolution	1/65535（16 Bit）	
Comprehensive Accuracy	±1℃	
Special Functions	Wire break detection, temperature offset setting	
Analog Power Supply	DC5V±10%, 100mA	

Table 2 Module Specifications

3. Parameter Configuration

The configuration of S-E4PT4T is identical to "Analog Settings". After checking "Enable Channel", select the measurement mode. In PT100 mode, the default digital range is -2000~8500 (in 0.1℃), representing -200~850℃, as shown in Figure 2.



(Figure 2 Parameter Configuration for S-E4PT4T)

Similarly, in NI120 mode, the default digital range is -2000~8500 (in 0.1℃).

Parameters to set before use:

[1] Enable: Activation switch. The channel is scanned only when checked.

[2] Mode: Measurement type, selectable from PT100 and NI120.

[3] Channel Conversion & Sampling Count: Data acquisition times (options: 25ms/ch (12), 50ms/ch (18), 75ms/ch (24), 100ms/ch (30)).

[4] Digital Range: Fixed mapping range for temperature. For PT100, it is -2000~8500 (0.1℃ unit, -200~850℃) and cannot be modified.

[5] Data Offset Register: Use the PLC's D register for manual compensation (added to AI0~AI3). Check to enable.

[6] Mode Change Register: Use the PLC's D register to switch modes (0=PT100, 1=NI120). Check to enable.

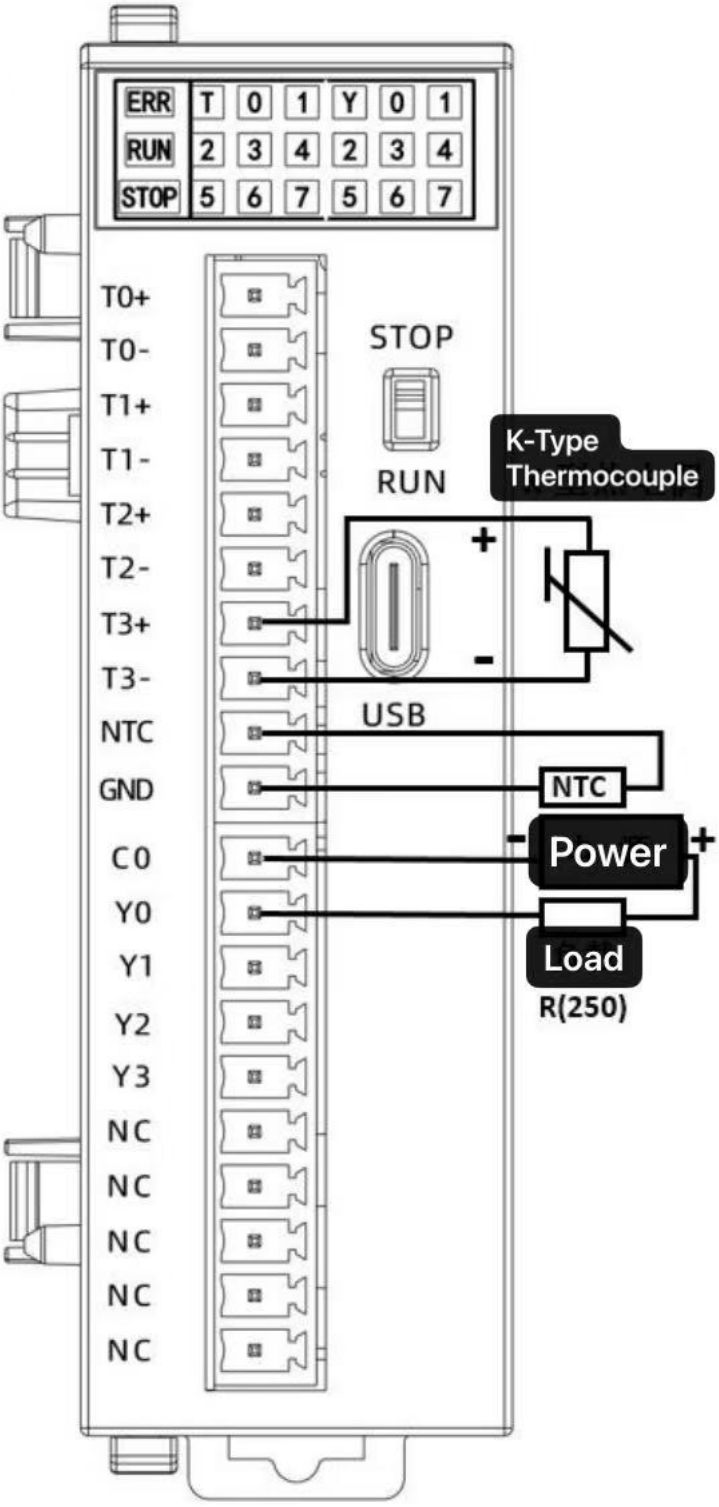
Notes:

1. Overrange, no sensor, or wire break causes AIx to display 32767.
2. After checking "Mode Change Register", mode is determined by the D register value (e.g., D=0 → PT100, range -2000~8500).
3. Toggle the switch to STOP then RUN to re-initialize channels.
4. No hot-swapping; power off before installation.
5. Configuration takes effect after non-online download.

Expansion Module S-E4TC4T

1. Wiring Diagrams

Take channel T3 as an example: for K/T-type thermocouples, connect the positive (+) and negative (-) terminals to T3+ and T3-, as shown in Figure 1. Terminal descriptions are listed in Table 1.



(Figure 1 Wiring Diagram for S-E4TC4T)

	Channel	Terminal Name	Signal name
Analog Input	CH0	T0+	Positive (+) terminal of K/T thermocouple (CH0)
		T0-	Negative (-) terminal

			of K/T thermocouple (CH0)
	CH1	T1+	Positive (+) terminal of K/T thermocouple (CH1)
		T1-	Negative (-) terminal of K/T thermocouple (CH1)
	CH2	T2+	Positive (+) terminal of K/T thermocouple (CH2)
		T2-	Negative (-) terminal of K/T thermocouple (CH2)
	CH3	T3+	Positive (+) terminal of K/T thermocouple (CH3)
		T3-	Negative (-) terminal of K/T thermocouple (CH3)
Digital Output	CH0	C0	Common terminal ground
		Y0	Transistor output
		Y1	Transistor output
		Y2	Transistor output
		Y3	Transistor output
Unused	Unused	NC	Floating

Table 1 Terminal Descriptions

2. Module Features and Specifications

The S-E4TC4T analog input module converts 4-channel temperature analog values into digital values and transmits them to the PLC main unit.

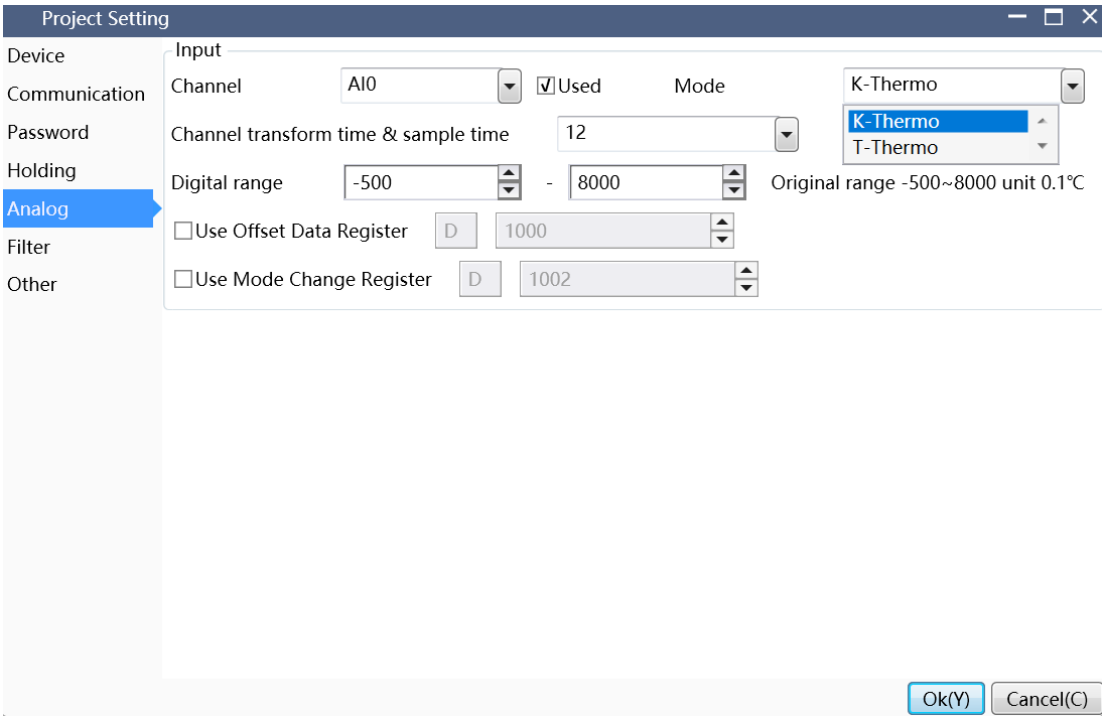
- 4-channel temperature analog input: supports K-type and T-type thermocouples.
- Each channel allows temperature offset adjustment.
- Each channel supports configurable conversion speed and sampling count.
- Isolation between analog and digital power supplies.

Item	K-type Thermocouple	T-type Thermocouple
Input Range	-50~800℃	-260~400℃
Resolution	1/65535（16 Bit）	
Comprehensive Accuracy	±1℃	
Special Functions	Wire break detection, temperature offset setting	
Analog Power Supply	DC5V±10%, 100mA	

Table 2 Module Specifications

3. Parameter Configuration

The configuration of S-E4TC4T is similar to analog modules. After checking "Enable Channel", select the measurement mode. In K-type thermocouple mode, the default digital range is -500~8000 (in 0.1℃), representing -50~800℃, as shown in Figure 2.



(Figure 2 Parameter Configuration for S-E4TC4T)

Similarly, in T-type thermocouple mode, the default digital range is -2600~4000 (in 0.1℃).

Parameters to set before use:

[1] Enable: Activation switch. The channel is scanned only when checked.

[2] Mode: Measurement type, selectable from K-type and T-type thermocouples.

[3] Channel Conversion & Sampling Count: Data acquisition times (options: 25ms/ch (12), 50ms/ch (18), 75ms/ch (24), 100ms/ch (30)).

[4] Digital Range: Fixed mapping range for temperature. For K-type, it is -500~8000 (0.1℃ unit, -50~800℃) and cannot be modified.

[5] Data Offset Register: Use the PLC's D register for manual compensation (added to AI100~AI113). Check to enable.

[6] Mode Change Register: Use the PLC's D register to switch modes (0=K-type, 1=T-type). Check to enable.

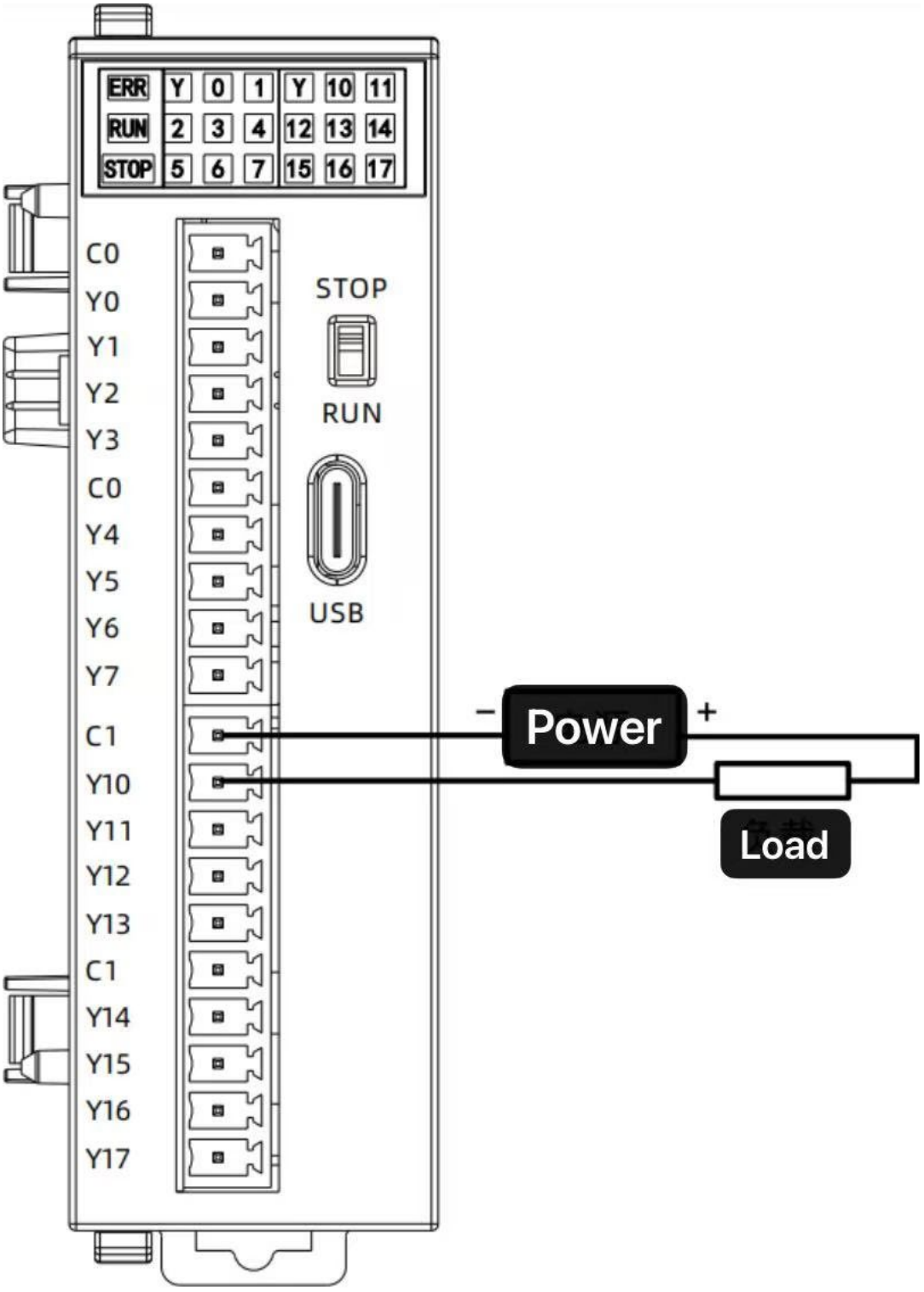
Notes:

1. Overrange, no sensor, or wire break causes AIx to display 32767.
2. After checking "Mode Change Register", mode is determined by the D register value (e.g., D=0 → K-type, range -500~8000).
3. Toggle the switch to STOP then RUN to re-initialize channels.
4. No hot-swapping; power off before installation.
5. Configuration takes effect after non-online download.
6. If terminals are touched during wiring/use, wait until the cold junction temperature stabilizes with the environment for accurate measurements.

Expansion Module S-E16T

1. Wiring Diagrams

S-E16T is a transistor output expansion module, usable as a slave or standalone. It has 16 output ports (Y0~Y17): Y0~Y7 share COM port C0, and Y10~Y17 share COM port C1. The wiring diagram for Y10 is shown in Figure 1.



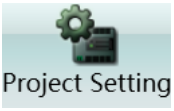
(Figure 1 Wiring Diagram for S-E16T)

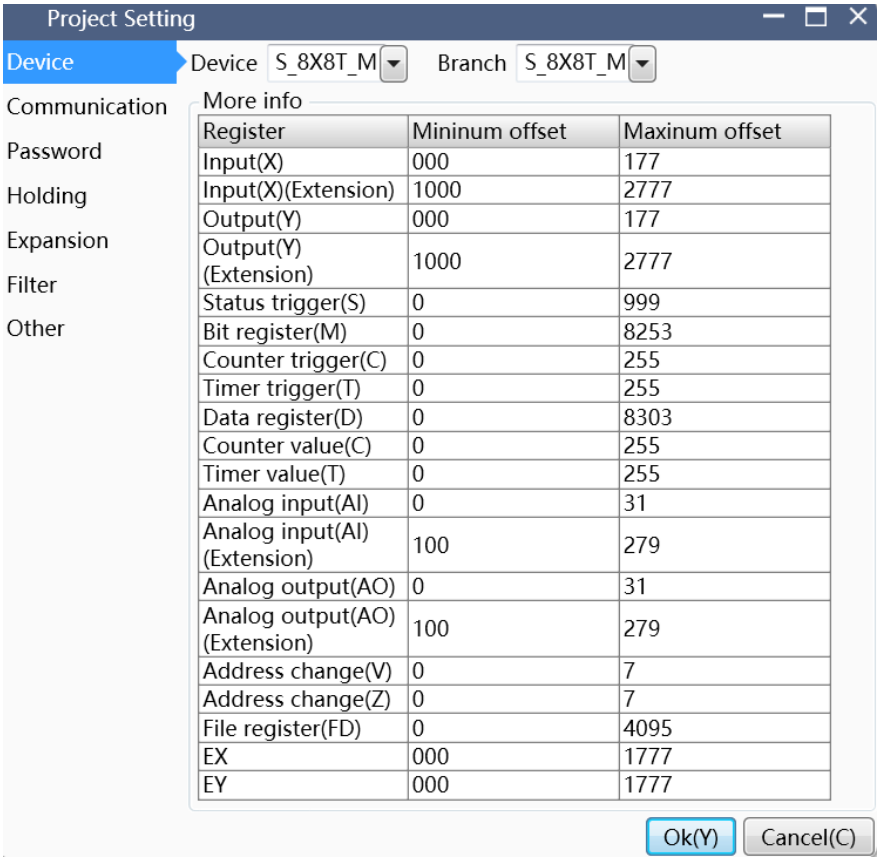
2. CAN Communication Configuration

The module communicates with the host via CAN, supporting side direct plug-in or back terminal

remote access. For direct plug-in, use ⩾100kbps; for 25m remote connections, use ⩽500kbps. Use a thick shielded twisted-pair cable with a 100Ω terminating resistor (connect between upper/lower pins of the side port; optional resistor module with arrow up).

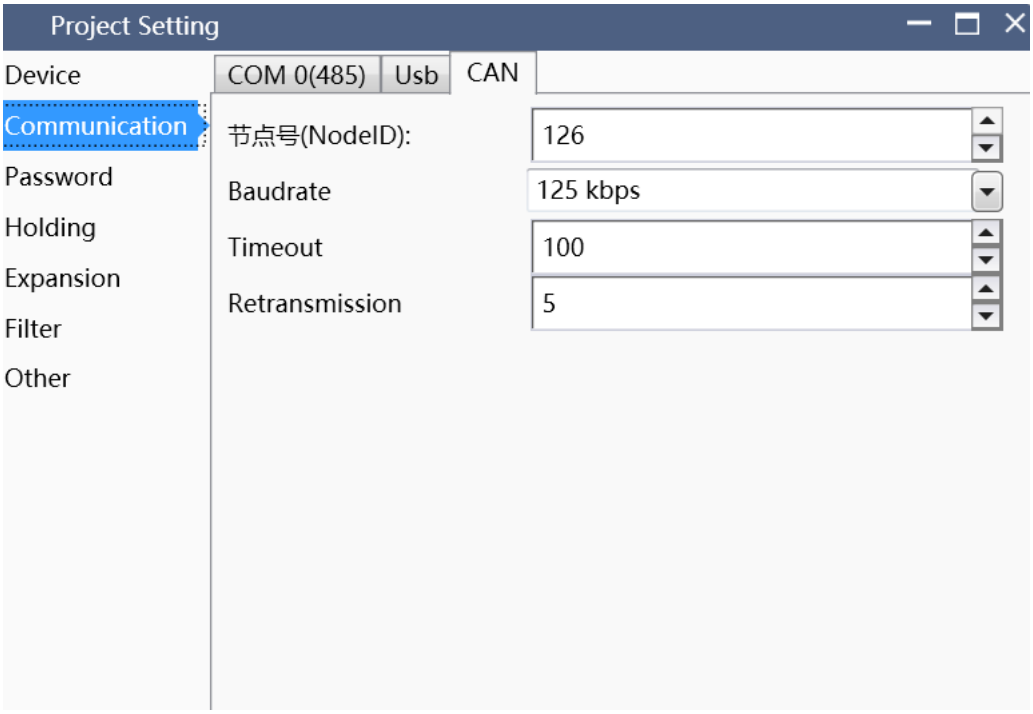
1. Open the programming software, go to "Setting" → "Project Setting"





(Figure 2.1 Project Setting)

2. Select "Communication Parameters" to configure node ID and baud rate under the CAN tab. Filter settings are in "Filter Settings". Node ID corresponds to the host's X/Y offset (independent of CAN network position). Use the same baud rate for the entire CAN network (Figure 2.2).



(Figure 2.2 Communication Parameter Setting)

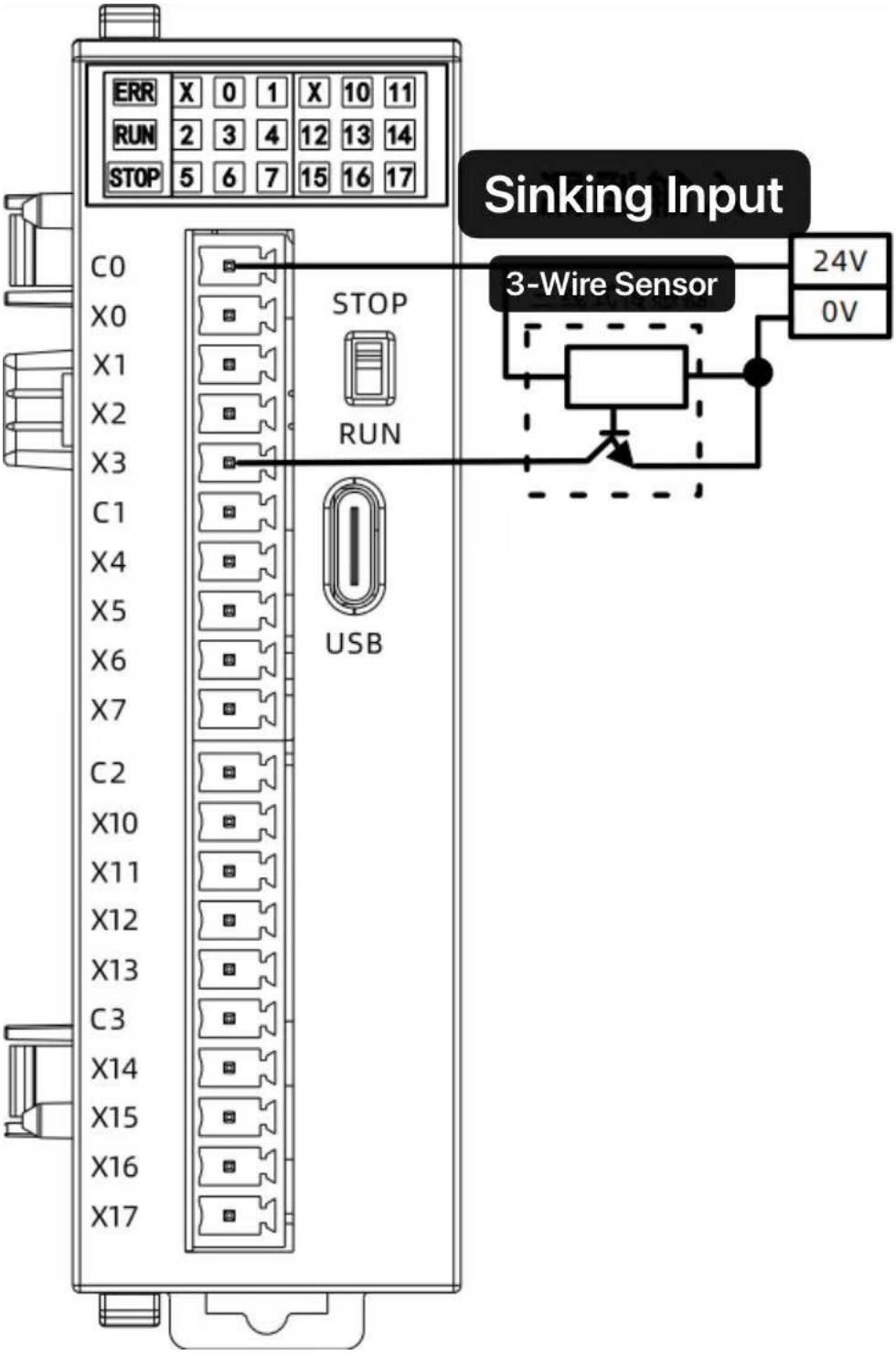
Notes:

1. This module acts only as a slave in CAN communication.
2. Toggle the switch to STOP then RUN to re-initialize channels.
3. Configuration takes effect after non-online download.
4. Special registers: D8192 (node ID), D8193 (baud rate, Kbps), D8189 (CAN bus load; >100 indicates overload, requiring higher baud rate or lower IO frequency).
5. As an expansion module, outputs are host-controlled by default; forced/ladder control triggers error 124 in D8176. For autonomous control, set M8000: host outputs are stored in D8000, and host X1000~X2707 are read from slave D8016.
6. Set M8000 when using Y outputs.
7. CAN transmits only module IO data.
8. Default node ID is 126.
9. Power-off hold registers: M8116 (1=manual hold) and M8117 (set to 1 with a rising edge to save data, auto-reset to OFF; avoid frequent saving).

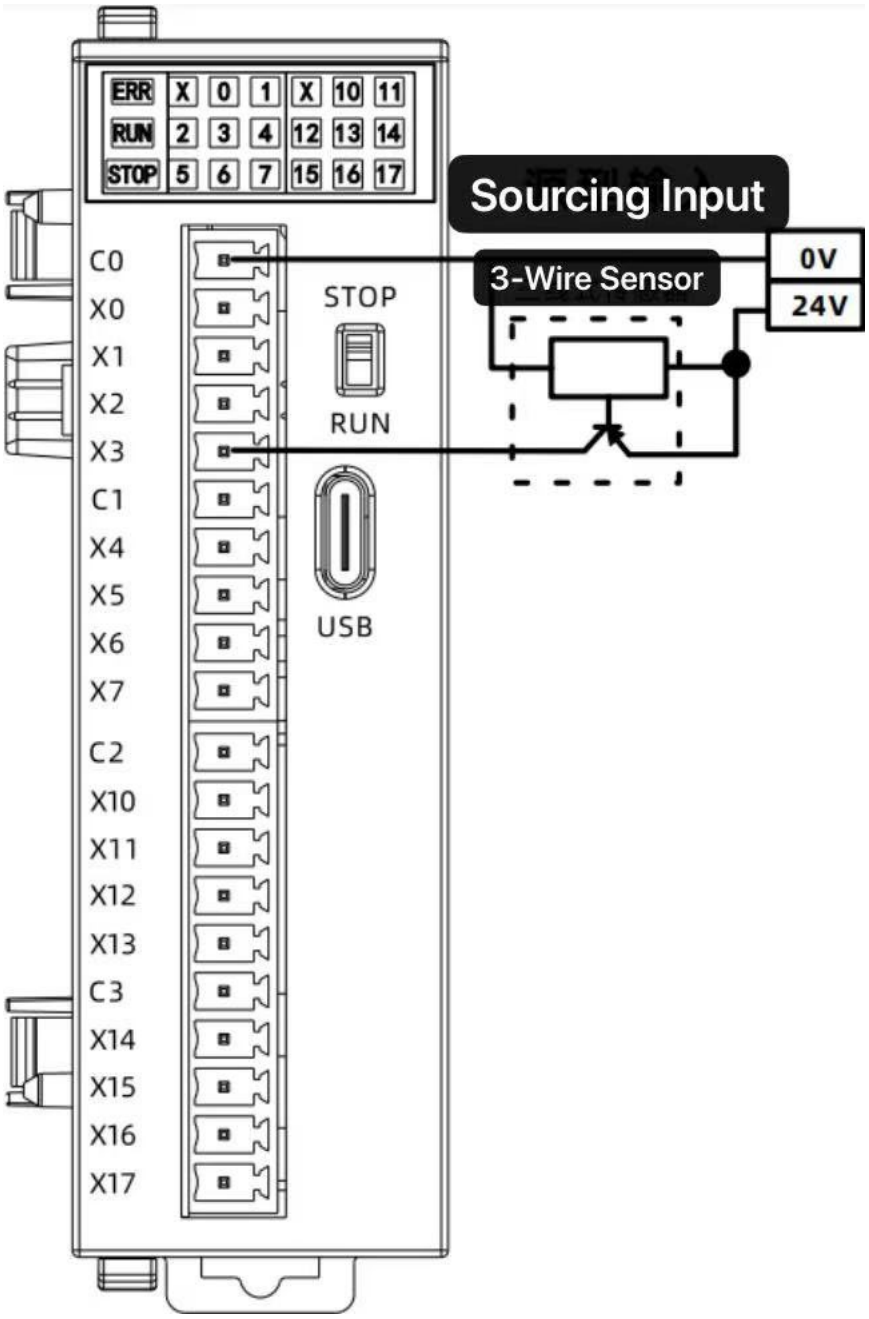
Expansion Module S-E16X-C

1. Wiring Diagrams

S-E16X-C is a digital input expansion module, usable as a slave or standalone. It has 16 input ports (X0~X17) with COM ports: X0~X3 (C0), X4~X7 (C1), X10~X13 (C2), X14~X17 (C3). The wiring diagrams for sink input (X3 with 3-wire sensor) are shown in Figure 1.1, and for source input in Figure 1.2.



(Figure 1.1 Sink Input Wiring Diagram)

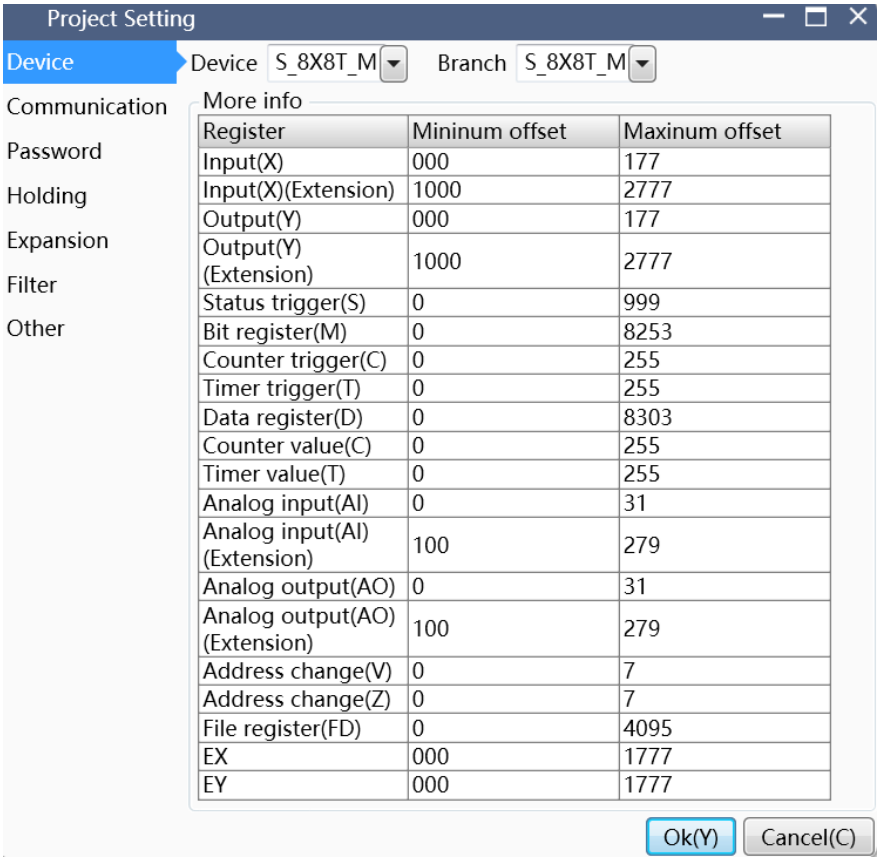


(Figure 1.2 Source Input Wiring Diagram)

2. CAN Communication Configuration

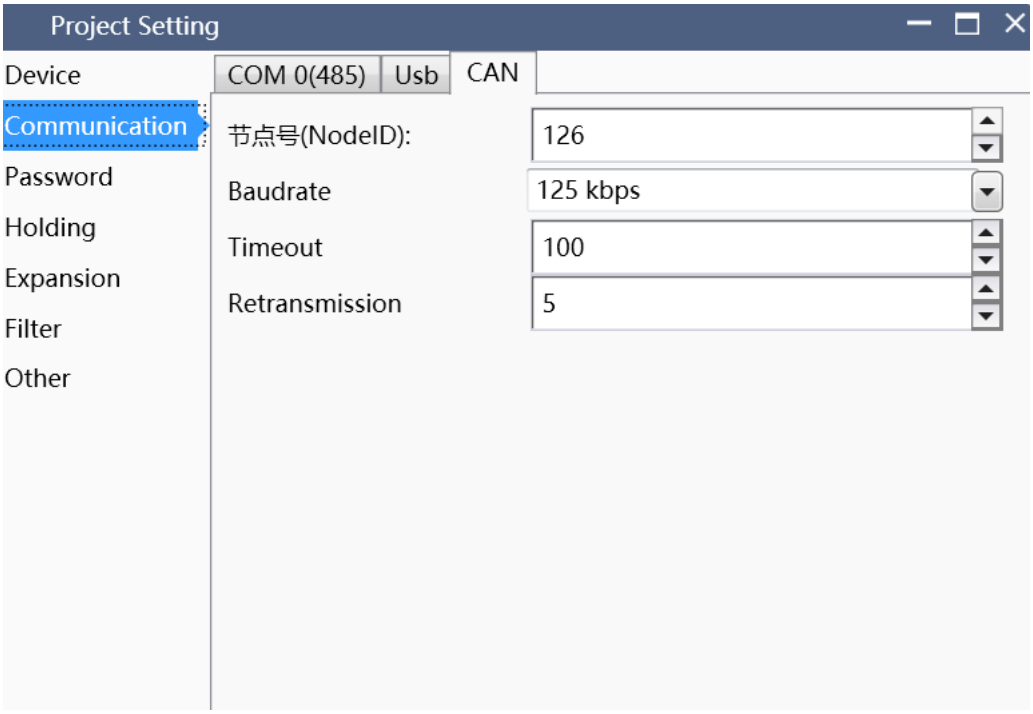
The module communicates with the host via CAN, supporting side direct plug-in or back terminal remote access. For direct plug-in, use ⩾100kbps; for 25m remote connections, use ⩽500kbps. Use a thick shielded twisted-pair cable with a 100Ω terminating resistor (connect between upper/lower pins of the side port; optional resistor module with arrow up).

1. Open the programming software, go to "Setting" → "Project Setting"



(Figure 2.1 Project Setting)

3. Select "Communication Parameters" to configure node ID and baud rate under the CAN tab. Filter settings are in "Filter Settings". Node ID corresponds to the host's X/Y offset (independent of CAN network position). Use the same baud rate for the entire CAN network.



(Figure 2.2 Communication Parameter Setting)

Notes:

1. This module acts only as a slave in CAN communication.
2. Toggle the switch to STOP then RUN to re-initialize channels.
3. Configuration takes effect after non-online download.
4. Special registers: D8192 (node ID), D8193 (baud rate, Kbps), D8189 (CAN bus load; >100 indicates overload).
5. As an expansion module, outputs are host-controlled by default; forced/ladder control triggers error 124 in D8176. For autonomous control, set M8000: host outputs are stored in D8000, and host X1000~X2707 are read from slave D8016.
6. Set M8000 when using Y outputs.
7. CAN transmits only module IO data.
8. Default node ID is 126.
9. Power-off hold registers: M8116 (1=manual hold) and M8117 (set to 1 with a rising edge to save data, auto-reset to OFF; avoid frequent saving).
10. No 485 communication.