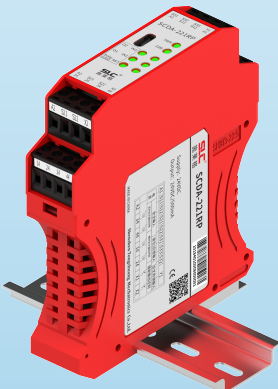
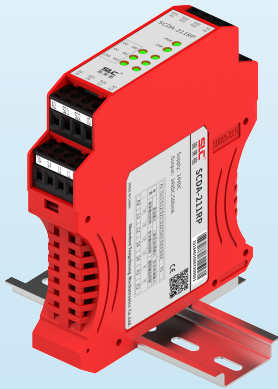




SCDA-324R SCDA-211R SCDA-221R SCDA-222R Safety relay module



Product overview

SCDA-324R series safety relays integrate multiple safety inputs and outputs to meet the requirements of today's increasingly complex safety control systems, and can be expanded and cascaded through simple AND/OR logic operations.

The module includes the following functions: 4 dual channel safety inputs, AND logic, OR logic 1 dual channel instantaneous safety output, 1 dual channel delay shutdown safety output (semiconductor transistor output). Multiple safety relays can be extended through AND logic and OR logic operations.

Four dual-channel safety inputs: You can configure four dual-channel safety sensor inputs, or two of them can be configured as dual-channel safety switches or emergency stop inputs.

2 double channel security output: 1 instantaneous double channel security output, 1 delay turn-off type double channel security output, the delay time is set by pressing the button.

Logic input :1 channel AND logic input, 1 channel OR logic input, logic operation input signal and safety relay input signal in SCDA-324R logic operation, according to the operation result control output, logic operation can be set by the key to close the corresponding function.

Reset: The safety relay can be set to automatic reset and manual reset by different wiring methods.

Auxiliary output: The safety relay has 4 auxiliary outputs, which are used to indicate the safety output or the entire system operation fault.

SCDA-324R series safety relays include SCDA-324R, SCDA-211R, SCDA-221R, SCDA-222R three types of safety relays, of which SCDA-211R and SCDA-221R are SCDA-324R safety relays subsets.

SCDA-211R implements single-channel dual-channel security input, single-channel dual-channel security output, and has two cascaded outputs. SCDA-211R can be connected to SCDA-324R as the basic control unit to achieve expansion and cascading.

The SCDA-221R can achieve single-channel dual-channel secure input and two-channel dual-channel secure output. Safety output 14/24 is instantaneous output (instantaneous on, instantaneous off); The safety output 34/44 is a delay turn-off type output (instantaneous open, delay turn-off), and the delay time of 34/44 delay turn-off can be configured through the USB port.

The SCDA-222R can achieve two dual-channel secure inputs and two dual-channel secure outputs. Safety output 14/24 is instantaneous output (instantaneous on, instantaneous off); The safety output 34/44 is a delay turn-off type output (instantaneous open, delay turn-off), and the delay time of 34/44 delay turn-off can be configured through the USB port.



SCDA-324R SCDA-211R SCDA-221R SCDA-222R Series safety relay modules

Features

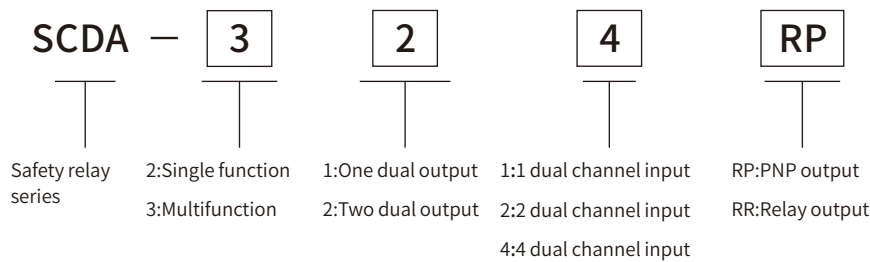
- ◆ Complies with ISO13849-1Cat4 category, safety class Plc.
- ◆ Multiple safety inputs, a total of 4 dual safety inputs.
- ◆ Multiple safety outputs, a total of 2 dual safety outputs, of which 1 dual channel can be configured as a delay shutdown output, and the delay time can be set.
- ◆ Multiple auxiliary outputs, each channel safety output has indication, and fault indication can also be realized.
- ◆ Support logic operation, can realize logical and, logic or, multiple sets of SCDA-324R cascade use or with SCDA-211R and other safety relays can be easily expanded.
- ◆ Automatic reset and manual reset through port configuration, no need to use different models of products .
- ◆ Transistor safety output, convenient access to safety PLC.
- ◆ Buttons and OLED display facilitate user parameter setting.

Technical parameters

Security level	
Standard	ISO 13849-1
Security classification	ISO 13849-1 PLe/Cat.4
Electrical parameters	
Power supply	24V DC±15%
Power consumption (without load)	2W
Response time (ON→OFF)	15ms
Recovery time (OFF→ON)	>50ms
Overvoltage category	II
Turn-off delay accuracy	±5%
Turn-off delay time	0, 0.1S~300S (0.1SPositive integer multiples)
Input high	>10V
Input low	<4.3V
OSSD1,OSSD2; OSSD3,OSSD4;	500mA
Safe output current	
Safe output conduction voltage drop	<3V(Safe output, auxiliary output)
Safe output turns off leakage current	<100µA(Safe output, auxiliary output)
Output mode	Transistor output
Auxiliary output mode	Transistor output
Output current	Max 150mA
Environmental and physical characteristics	
Protection	IP40/IP20
Operating temperature	-5...+55°C
Vibration resistance	10...55Hz,0.35mm
Impact resistance	10g,16ms,100 impacts
Installation	35mmDIN rail
Weight (g)	150g
Maximum conductor specifications	0.2...4mm ²

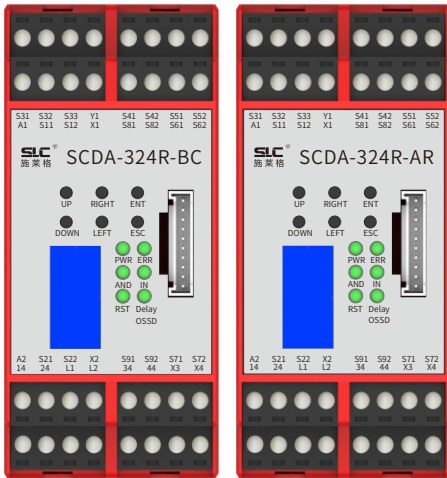
※Affected by product configuration and manufacturing process, the actual product size, weight may be different, please refer to the actual product

Selection guide



Model	Function description
SCDA-211RP	PNP type safety output with two cascade outputs, single dual channel safety input, single dual channel safety output safety relay
SCDA-221RP	PNP type safety output, single double channel safety input, two double channel safety output safety relays, of which 34, 44 can be configured as delay output by USB
SCDA-324RP-BC	Basic functions, only 4 dual-channel safety inputs, two dual-channel PNP type safety outputs
SCDA-324RP-AR	Full-featured with 4 dual-channel safety inputs, as well as logic functions (logic AND and logic OR), two dual-channel PNP-type safety outputs
SCDA-222RP	PNP type safety output, there are two double channel safety input, two double channel safety output

SCDA-324R Panel definition and description

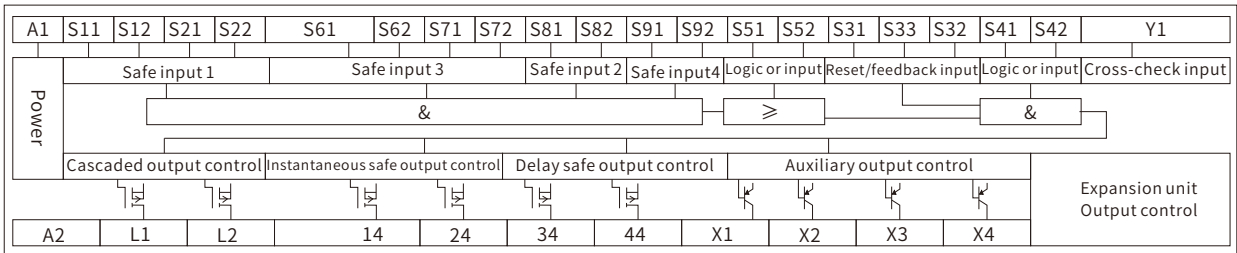


S31	S32	S33	Y1	S41	S42	S51	S52
A1	S11	S12	X1	S81	S82	S61	S62

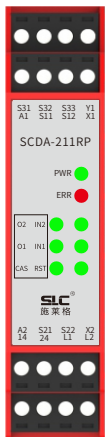
A2	S21	S22	X2	S91	S92	S71	S72
14	24	L1	L2	34	44	X3	X4

Signal	Instructions
UP	Up button
DOWN	Down button
LEFT	Left button
RIGHT	Right button
ENT	Confirm button
ESC	Cancel button
PWR	Power LED
ERR	Error LED
AND	Logic with LED
IN	Input LED
RST	Reset the LED
Delay OSSD	OSSD LED

SCDA-324R Internal join logic diagrams



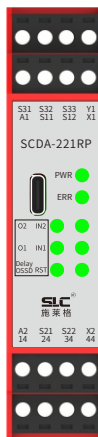
SCDA-211R and SCDA-221R panel definitions and descriptions



S31	S32	S33	Y1
A1	S11	S12	X1

Signal	Instructions
PWR	Power LED
ERR	Error LED
O1	OSSD1 LED
O2	OSSD2 LED
IN1	Enter 1 LED
IN2	Enter 2 LED
CAS	Cascade fault LED
RST	Reset the LED

A2	S21	S22	X2
14	24	L1	L2

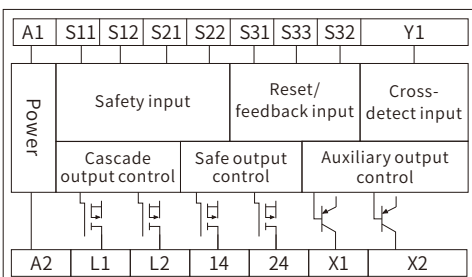


S31	S32	S33	Y1
A1	S11	S12	X1

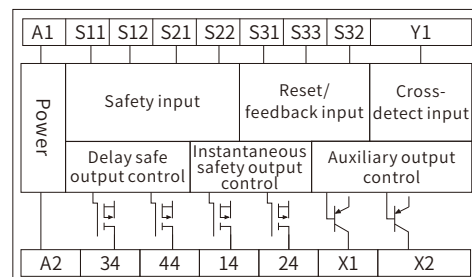
Signal	Instructions
PWR	Power LED
ERR	Error LED
O1	OSSD1 LED
O2	OSSD2 LED
IN1	Enter 1 LED
IN2	Enter 1 LED
Delay	OSSD3 LED
OSSD	OSSD4 LED
RST	Reset the LED

A2	S21	S22	X2
14	24	34	44

SCDA-211R Internal join diagrams



SCDA-221R Internal join diagrams



SCDA-222R panel definitions and descriptions

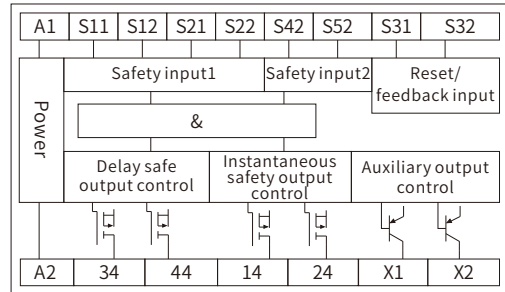


S31	S32	S42	S52
A1	S11	S12	X1

A2	S21	S22	X2
14	24	34	44

Signal	Instructions
PWR	Power LED
ERR	Error LED
O1	OSSD1 LED
O2	OSSD2 LED
IN1	Safety input 1 light
IN2	Safety input 2 light
Delay	OSSD3 LED
OSSD	OSSD4 LED
RST	Reset the LED

SCDA-222R Internal join logic diagrams



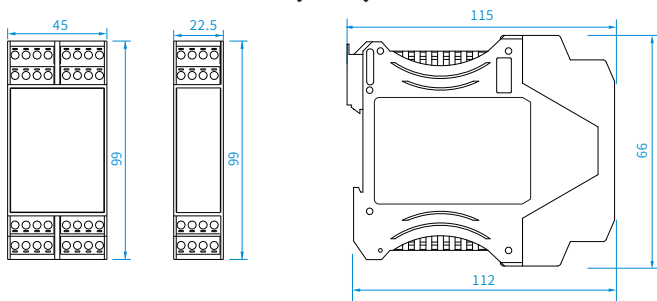
SCDA-324R、SCDA-211R、SCDA-221R interface definition

Signal name	Interface identification	Signal description	Signal direction
Power	A1	Power, +24V	
	A2	Power, 0V	
Safety input channel 1	S11,S21	CH1 safety switch is connected, two signal outputs are applied	O
	S12,S22	CH1Two signal inputsd	I
Safety input channel 3	S61,S71	CH3 safety switch is connected, two signal outputs are applied	O
	S62,S72	CH3 Two signal inputs	I
Safety input channel 2	S81,S82	CH2 Two signal inputs	I
Safety input channel 4	S91,S92	CH4 Two signal inputs	I
Feedback, reset	S31	Reset signal inputs	O
	S32	S31 and S32 for manual reset,S33 need connect 24V	I
	S33	S32connect 24V, If S31 and S33 are directly shorted, it will be auto reset ; If OSSD I output feedback is connected to this path, it is used for feedback signal input	I
Cross-faults Detect input	Y1	Safety input signal pulse detection enable signal, when floating, both safety input channel 1 and safe input channel 3 will detect input pulse; When Y1 is connected to 24V, safe input channel 1 and safe input channel 3 do not detect input pulses	I
Logic & input	S41,S42	Logic & input	I
Logic ≥ input	S51,S52	Logic ≥ input	I
Instantaneous safety output	14,24	Two channel Instantaneous safety output	O
Delayed safety output	34,44	Two delay shutdown outputs, the time is set by the button(SCDA-324R)	O
		Two channel Instantaneous safety output(SCDA-221R)	O
Cascade signals	L1,L2	Two cascaded output signals	O
Auxiliary output	X1	Indicates 14, 24 output status (anti-logic)	O
	X2	Indicates a system failure	O
	X3	Indicates 34, 44 output status (anti-logic)	O
	X4	Indicates S41, S42 (logical AND) status	O

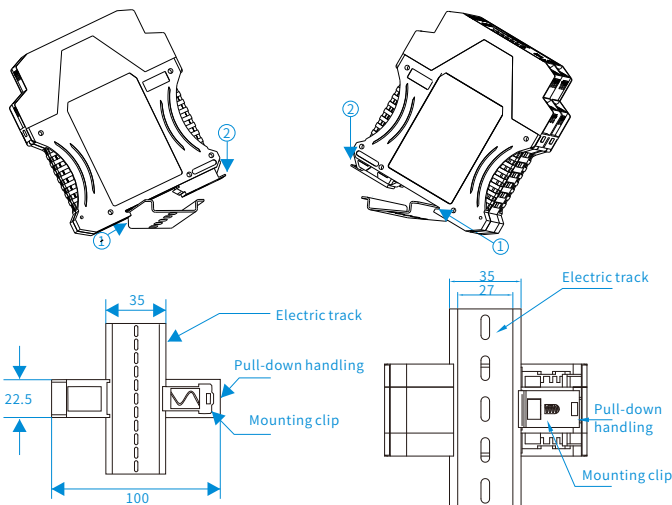
SCDA-222R interface definition

Signal name	Interface identification	Signal description	Signal direction	Notes
Power	A1	Power, +24V		
	A2	Power, 0V		
Safety input channel 1	S11,S21	CH1 safety switch is connected, two signal outputs are applied	0	When the Y1 mode is set to "With Input pulse Detection", the CH1 input detects the input pulse. If the Y1 mode is set to No input pulse detection, the CH1 input does not detect the input pulse.
	S12,S22	CH1Two signal inputsd	1	
Safety input channel 2	S42, S52	CH2 Two signal inputs	1	
Feedback, reset	S31	Reset signal inputs	0	
	S32	Indirect switches in S31 and S32 are used for reset control; When the automatic reset mode is set, the reset signal is effective when the connection between S31 and S32 is closed. When the manual reset mode is set, the action from open -> close -> open needs to be completed between S31 and S32, that is, the reset signal is valid.	1	
Instantaneous safety output	14, 24	Two channel Instantaneous safety output	0	
Delayed safety output	34,44	Two delay shutdown outputs	0	
Auxiliary output	X1, X2	Auxiliary outputs are used to indicate fault or relay operating status	0	

Exterior dimensions (mm)



Installation method



- 1.The fixed plastic card position of the SCDA series safety module is diagonally stuck to the side of the installation rail;
2. Put down the guide rail and press the SCDA series safety module, so that its hardware movable buckle is clasped to the other side of the guide rail.

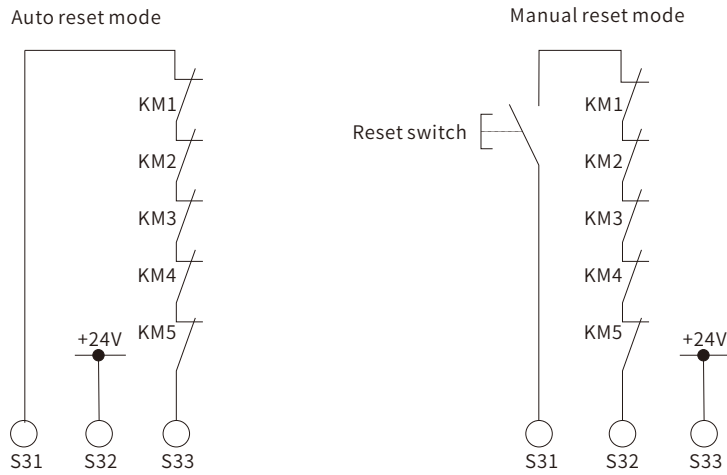
Function description: The safety relay module should be installed in the electronic control box with a protection type of IP54 or above, installed with a DIN rail (35mm) and fixed in the electronic control box.

※Subject to product configuration and manufacturing process, the actual size and weight of the product may be different, please refer to the actual product

SCDA-324R Safety relay function configuration

Auto-reset/manual reset configuration

Set the reset mode using auto-reset/manual reset input terminals S31, S32, and S33. Automatic reset mode is selected when terminal S32 is shorted to 24V, and manual reset mode is selected when terminal S33 is shorted to 24V.



Cross-fault detection configuration

Cross-fault detection	Connection		
OFF	Use secure input channel 1	Equivalent to safety level 2	
		Equivalent to safety level 3	
ON		Equivalent to safety level 4	

SCDA-222R safety relay function configuration

Automatic reset/Manual reset configuration

The reset mode of the SCDA-222R is set using the PC setting software. The setting screen is as follows.

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Language

SCDA-324R series safety relay software setup

Product type

Output delay shutdown s

Aux1 indicate

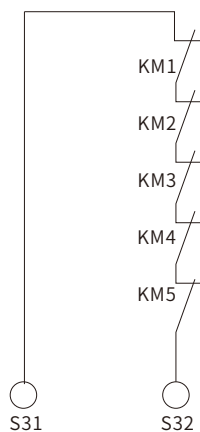
Aux2 indicate

Reset mode

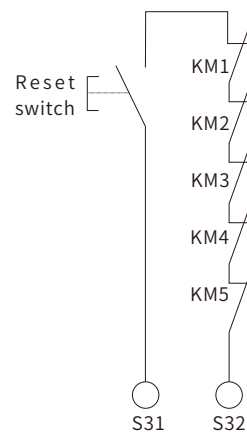
Y1 mode

Serial port selection

Automatic reset mode

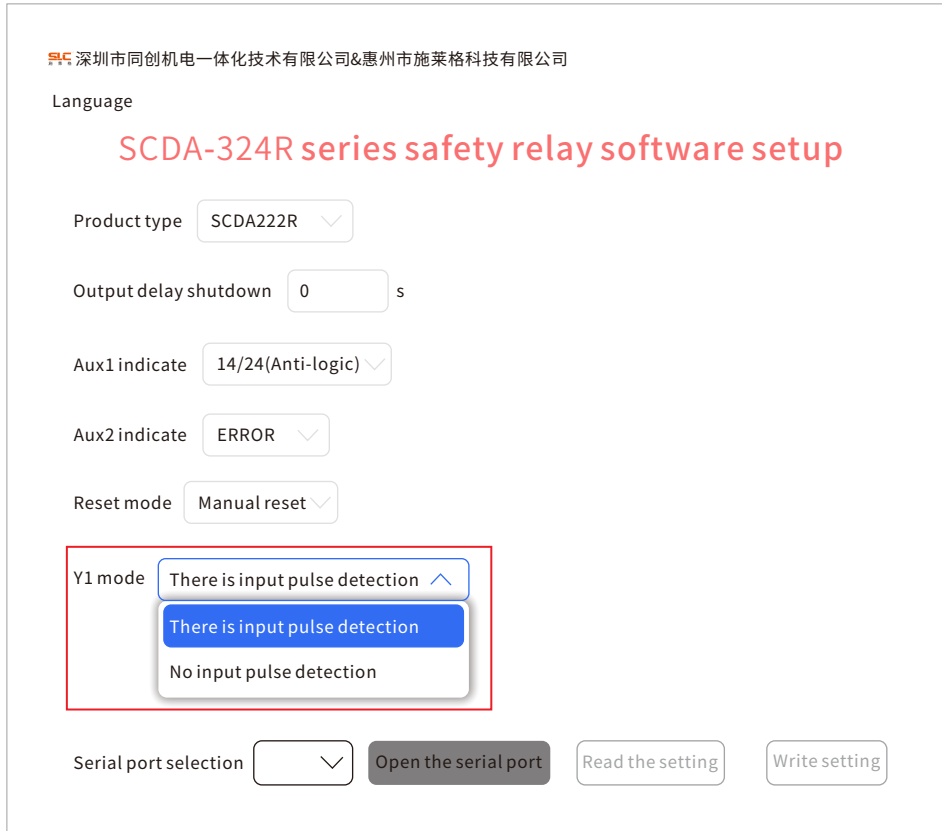


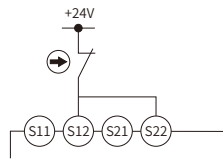
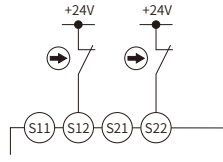
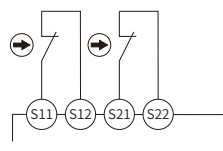
Manual reset mode



Cross-fault detection configuration

The SCDA 222R's "Input Cross Fault Detection" is set using the PC setup software, and the setting screen is as follows.



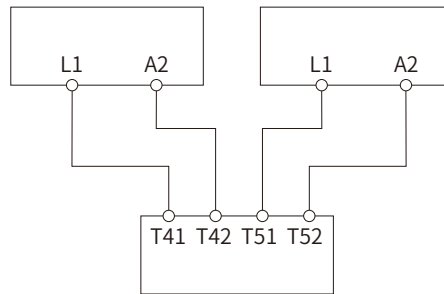
Cross-fault detection	Connection		
OFF	Use secure input channel 1	Equivalent to safety level 2	
		Equivalent to safety level 3	
ON		Equivalent to safety level 4	

Logical operation configuration

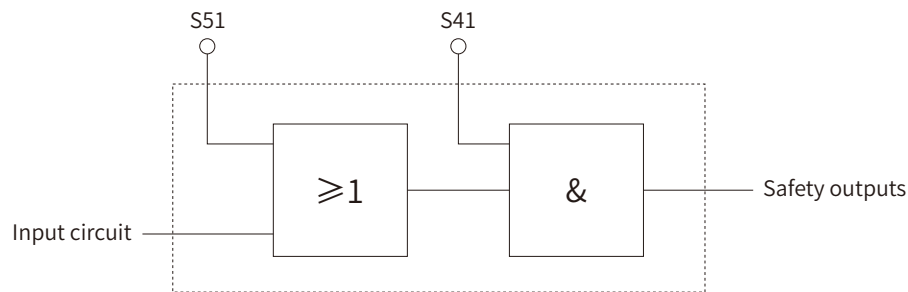
Logic operations include logic AND and logic OR operations, S41 and S42 are logic and input terminals, and S51 and S52 are logic or input terminals.

Logic AND and logic OR can be enabled and disabled through the human-machine interface. When safety relays are used separately without cascading and expansion functions, it is necessary to turn off logic AND and logic OR.

When the safety relay has a logic and logic OR signal input, in order for the function to function properly, it is necessary to activate the logic and logic OR. Please refer to menu settings for specific settings.



The 4-channel dual channel input signal first performs OR operation with the cascaded input OR, and then performs AND operation with the cascaded input AND, as shown in the following figure. Note: When using OR logic operation, the corresponding 4-channel dual channel input signal can be bypassed by other settings. It should be particularly noted that after the safety relay is bypassed, its corresponding input no longer has detection function.



Menu settings

The safety relay can be set and displayed with relevant device parameters through buttons and OLED according to requirements. At present, the main parameters that can be set include: "Logic AND" function on/off setting, "Logic OR" function on/off setting, delay time setting for delayed shutdown output, password setting, etc. When entering the setting interface, a password is required to prevent unauthorized personnel from changing the settings.

Output delay off-time setting

The delay shutdown time is set through the man-machine interface, when the delay time is set to 0, the delay shutdown output and the instantaneous output are synchronized, and the shutdown delay can be set from a minimum of 0.1s to a maximum of 300s, and a step of 0.1s is set, and the specific setting of the parameter delay shutdown time setting content.

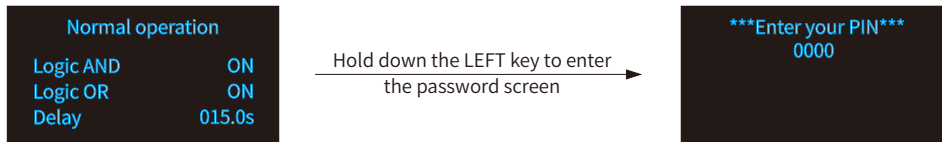


Warn

- ◆ Modifying settings changes the state of the system, can be dangerous, and requires authorized personnel to operate;
- ◆ After successful setting, the relay will turn off the output, restart, and the new setting function can take effect, so the operation must be ensured during the setting process;
- ◆ During the setting process, please ensure that the relay power supply is stable, and abnormal power failure may cause configuration errors.

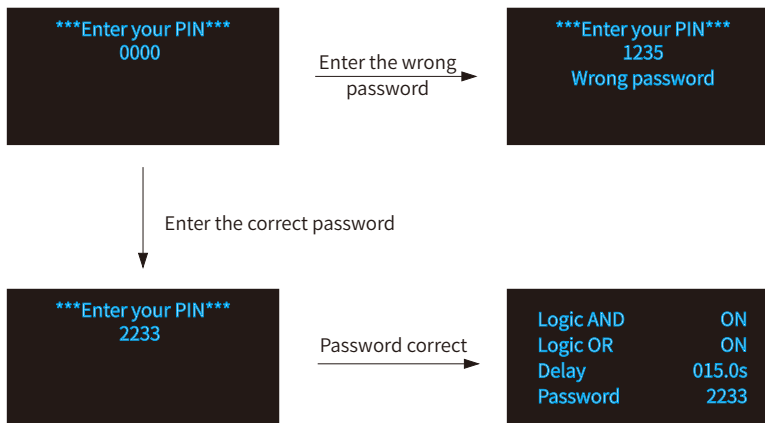
Normal working interface

After the system initialization is successful, enter the normal working interface, which displays the current system input configuration information. Long press and hold the "LEFT" button to enter the password input field of the function settings.



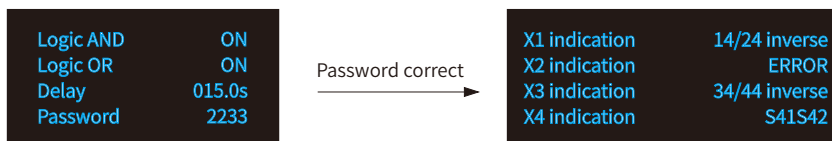
Password interface

Need to enter the correct password to access the main screen. The default password is 2233. Enter "UP" and "DOWN" to adjust the number, and "LEFT" and "RIGHT" to adjust the number. If you enter an incorrect password, "Incorrect password" is displayed. If you enter a correct password, the main setting screen is displayed.



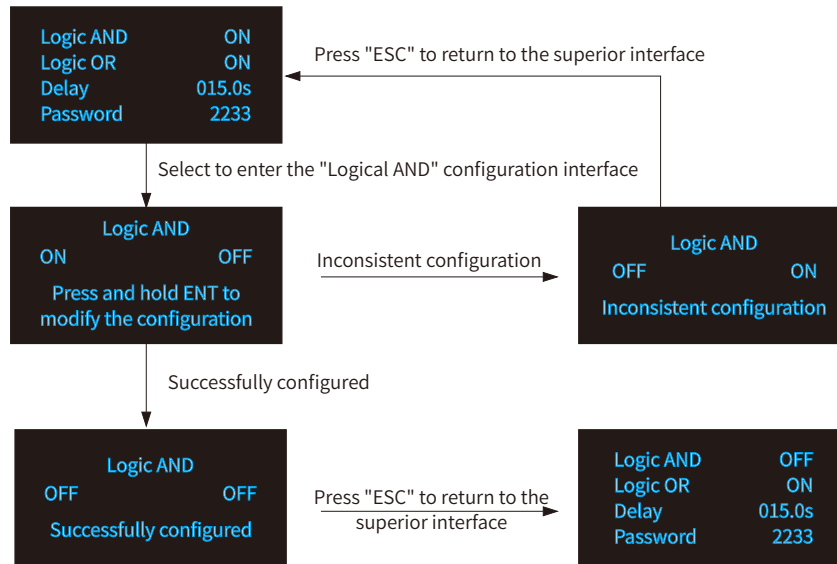
Set options interface

There are a total of 8 options in the setting options interface, which are "logic AND" on/off configuration, "logic OR" on/off configuration, output delay time configuration, password configuration, X1 indication configuration, X2 indication configuration, X3 indication configuration, and X4 indication configuration. Type the "UP" and "DOWN" keys to select the desired function options, and then type the "ENT" key to enter the corresponding function setting interface.



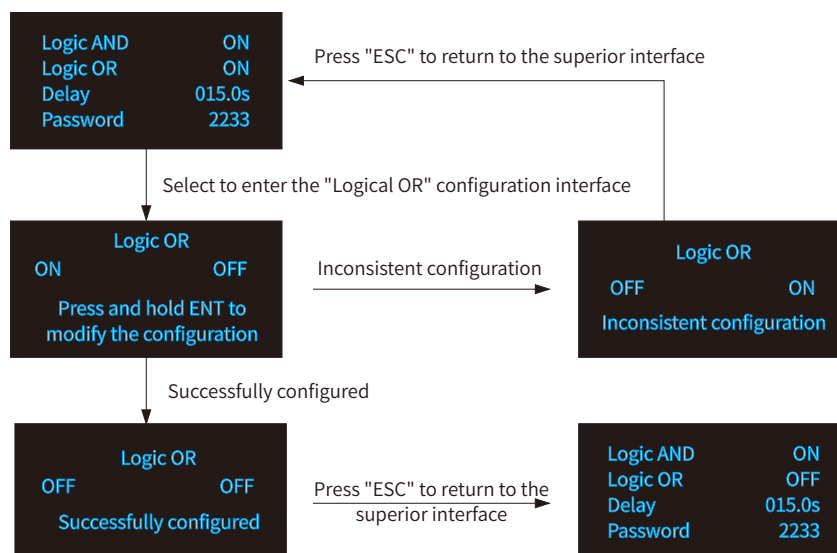
Set Logic AND

After selecting to enter the "Logic AND" setting interface, double verification is required during setting. In the setting interface, "ON" indicates that the "Logic AND" function is on, and "OFF" indicates that the "Logic AND" function is off. The factory default setting for SCDA-324R-AR is ON. Typing the "UP" or "DOWN" keys will enable or disable this function. Typing the "Left" or "Right" keys will select the configuration position. After configuration, long press and hold the "ENT" key to verify the consistency of the left and right configurations. If the left and right configurations are inconsistent, a prompt "Configuration inconsistency" will be displayed. If the left and right configurations are consistent, the configuration can be successful. OLED will prompt "Configuration successful" or "Configuration failed". The example of "Logic AND" configuration is shown in the following figure.



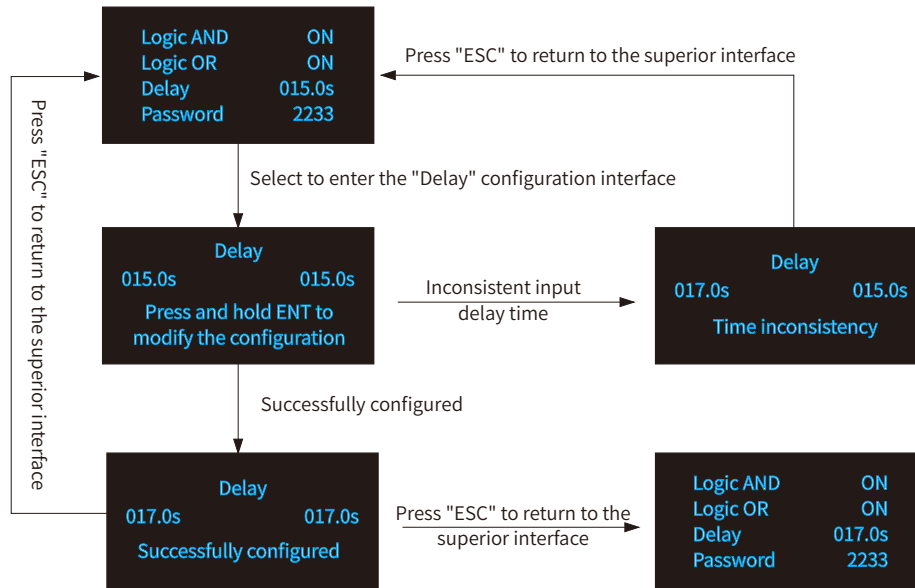
Logical OR setting

After selecting to enter the "Logical OR" setting interface, double verification is required during setting. "ON" in the setting interface indicates that the "Logical OR" function is on, and "OFF" indicates that the "Logical OR" function is off. The factory default setting for SCDA-324R-AR is OFF. Type the "UP" or "DOWN" keys to enable or disable this function, and type the "Left" or "Right" keys to select the configuration location. After configuration, long press and hold the "ENT" key to verify the consistency of the left and right configurations. If the left and right configurations are inconsistent, a prompt "Configuration inconsistency" will be displayed. If the left and right configurations are consistent, the configuration can be successful. OLED will prompt "Configuration successful" or "Configuration failed". The example of "Logical OR" configuration is shown in the following figure.



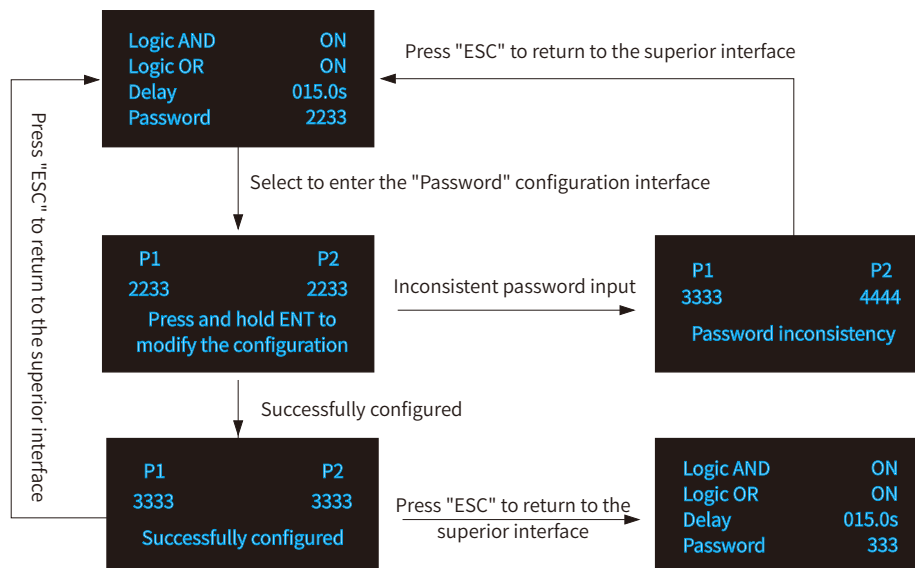
Set the output shutdown delay time

After entering the "Delay" setting interface, the current output delay time will be displayed. Double verification is required during setting. The time number can be adjusted using the "UP" and "DOWN" keys, and the number position can be adjusted using the "Left" and "Right" keys. After long pressing the "ENT" key, the consistency of the left and right input numbers will be verified first. If the input numbers are inconsistent, a prompt of "Configuration Inconsistent" will be displayed. If the input numbers are consistent, the configuration can be successful. The LED will prompt "Configuration Successful" or "Configuration Failed". The SCDA-324R-AR factory default setting is 10 seconds, and an example of delay setting is shown in the following figure.



Password settings

After entering the "Password" setting interface, the current password will be displayed. Double verification is required during setting. Adjust the password number using the "UP" and "DOWN" keys, and adjust the position of the password number using the "Left" and "Right" keys. After long pressing the "ENT" key, the consistency of the left and right passwords will be verified first. If the left and right passwords are inconsistent, a prompt of "configuration inconsistency" will be displayed. If the input numbers are consistent (cannot be "0000"), the configuration can be successful. OLED will prompt "setting successful" or "setting failed". The example of password setting is shown in the following figure.

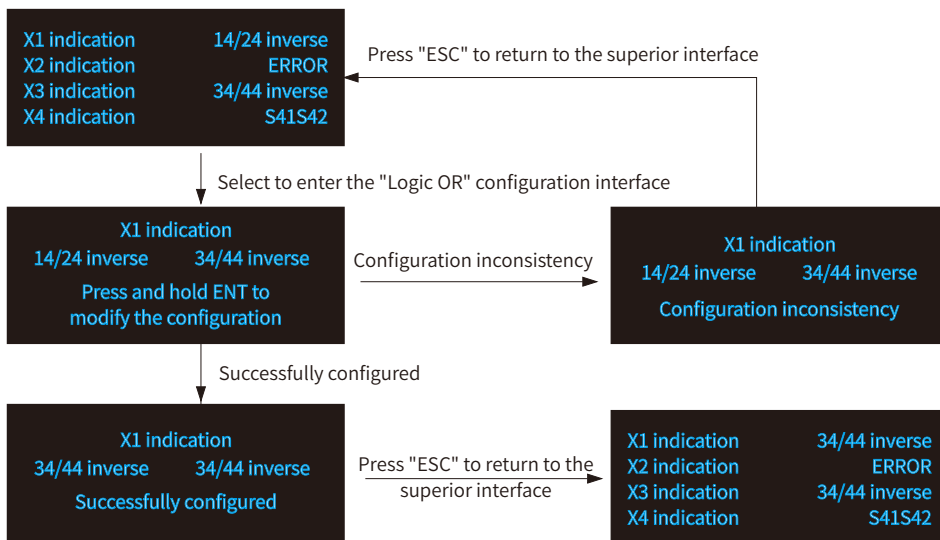


"X1 indicator" setting (X2, X3, X4 indications are similar)

In the setting interface, "14/24 anti" means that the output status of the "X1 indication" setting is opposite to the state of the 14/24 output (for example, if the 14/24 output is turned off, the X1 output will be turned on; The 14/24 output is on, and the X1 output is off). Type "UP" AND "DOWN" keys to adjust the type of X1 indication, and type "LEFT" and "RIGHT" keys to select the configuration position. After configuration, after pressing and holding the "ENT" button, the consistency of the left and right configurations will be verified first, if the left and right configurations are inconsistent, it will prompt "configuration is not possible", if the left and right configurations are successful, the configuration can be successful, and the OLED will prompt "configuration successful" or "configuration failure".

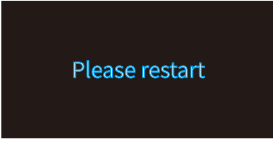
	Type	illustrate
X1 indication	Not indicated	X1 is always off
	14/24	X1 output is same as 14/24 output (14/24 output is on, X1 output is on, and vice versa)
	34/44	X1 output is same as 34/44 output (34/44 output is on, X1 output is on, and vice versa is off)
	L1/L2	X1 output is same as L1/L2 output (L1/L2 output is on, X1 output is on, and vice versa)
	S12/S22	X1 output is same as S12/S22 input (S12/S22 input is active, X1 output is on, and vice versa)
	S81/S82	X1 output is same as S81/S82 input (S81/S82 input is active, X1 output is on, otherwise off)
	S62/S72	X1 output is same as S62/S72 input (S62/S72 input is active, X1 output is on, and vice versa)
	S91/S92	X1 output is same as S91/S92 input (S91/S92 input is valid, X1 output is on, and vice versa)
	S41	X1 output is same as S41 input (S41 input is valid, X1 output is on, and vice versa)
	S51	X1 output is same as S51 input (S51 input is active, X1 output is on, and vice versa)
	ERROR	X1 output is consistent with product fault state (when product fails, X1 output is turned on and turned off)
	14/24 anti-logic	X1 output is in opposite state to 14/24 output (14/24 output is on, X1 output is off, and vice versa)
	34/44 anti-logic	X1 output is in opposite state to 34/44 output (34/44 output is on, X1 output is off, and vice versa)
	L1/L2 anti-logic	X1 output is in opposite state to L1/L2 output (L1/L2 output is on, X1 output is off, and vice versa)
	S12/S22 anti-logic	X1 output is in opposite state of S12/S22 input (S12/S22 input is valid, X1 output is off, and vice versa)
	S81/S82 anti-logic	X1 output is in opposite state to S81/S82 input (S81/S82 input is valid, X1 output is off, and vice versa)
	S62/S72 anti-logic	X1 output is in opposite state to S62/S72 input (S62/S72 input is valid, X1 output is off, and vice versa)
	S91/S92 anti-logic	X1 output is in opposite state of S91/S92 input (S91/S92 input is valid, X1 output is off, and vice versa)
	S41 anti-logic	X1 output is in opposite state to S41 input (S41 input is valid, X1 output is off, and vice versa)
	S51 anti-logic	X1 output is in opposite state to S51 input (S51 input is valid, X1 output is off, and vice versa)
	ERROR anti-logic	X1 output is opposite of product failure state (when product fails, X1 output is turned off and turned on vice versa)

The following figure shows an example of the X1 Indication configuration.



Restart prompt

After the configuration is completed, you need to restart the device configuration to take effect, and pressing the "ESC" key will prompt "Please restart" the device.

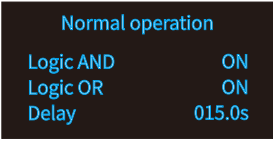


Please restart

Display and common troubleshooting

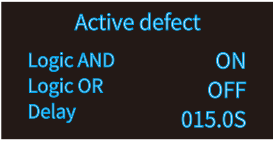
SCDA324R OLED display

After the product is powered on, if there is no fault in self-diagnosis, the OLED will display "normal operation" and display the current configuration status of the product. "ON" means the function is on, and "OFF" means the function is turned off. As shown in the following figure.



Normal operation
 Logic AND ON
 Logic OR ON
 Delay 015.0s




















If the product is powered on to diagnose the fault or the fault is detected during normal operation, the OLED will display "Operation fault fly, at this time, you need to analyze the fault type according to the indication of the LED."



Active defect
 Logic AND ON
 Logic OR OFF
 Delay 015.0S




















SCDA324R LED display

The SCDA324R has a total of 6 LED indicators. The function of each lamp is indicated in the following table.

logotype	LED status	LED status	Product status description	Remark
ERR		On	No output	
		Flash up	System failure	A failure occurs inside the system
		Off	Output	
PWR		On	Power supply is normal	Supply voltage is in the normal range
		Slow flash	Power supply abnormal	Supply voltage is out of range
AND		On	The "logic &" input yes	
		Off	The "logic &" input none	
		Flash up	The "logic &" input detects an exception	
IN		On	Security input has	
		Off	Secure input none	
		Slow flash	The two safety input channels are inconsistent	
		Flash up	Safety input detection is abnormal	
RST		On	1.During automatic reset, when the S33 terminal is ON, it is always on 2.During manual reset,when the S32 terminal is ON, it is always on	
		Off	1.During automatic reset, when the S33 terminal is OFF, it is always off 2.During manual reset,when the S32 terminal is OFF, it is always off	
		Flash up	Reset signal detects abnormalities	
Delay OSSD		On	Outputs (14、24、34、44、L1、L2) are all on	
		Off	Outputs (14、24、34、44、L1、L2) are all off	
		Flash up	Outputs (14、24、34、44、L1、L2) detects anomalies	
		Slow flash	Auxiliary output (X1、X2、X3、X4) is abnormal	
























SCDA211R LED display

SCDA211R has a total of 8 LED indicators. The function of each lamp is indicated in the following table.

logotype	LED status	LED status	Product status description	Remark
ERR		On	No output	
		Flash up	System failure	A failure occurs inside the system
		Off	Output	
PWR		On	Power supply is normal	Supply voltage is in the normal range
		Slow flash	Power supply abnormal	Supply voltage is out of range
IN1		On	S12 input yes	
		Off	S12 input none	
		Slow flash	S12、S22 channels are inconsistent	
IN2		Flash up	S12 input detects an exception	
		On	S22 input yes	
		Off	S22 input none	
		Slow flash	S12、S22 channels are inconsistent	
RST		Flash up	S22 input detects an exception	
		On	1.During automatic reset, when the S33 terminal is ON, it is always on 2.During manual reset,when the S32 terminal is ON, it is always on	
		Off	1.During automatic reset, when the S33 terminal is OFF, it is always off 2.During manual reset,when the S32 terminal is OFF, it is always off	
O1		Flash up	Reset signal detects abnormalities	
		On	OSSD1 (14) output opens	
		Off	OSSD1 (14) output is off	
		Flash up	OSSD1 (14) output detects anomalies	
O2		Slow flash	X1 auxiliary output is abnormal	
		On	OSSD2 (24) output opens	
		Off	OSSD2 (24) output is off	
		Flash up	OSSD2 (24) output detects anomalies	
CAS		Slow flash	X2 auxiliary output is abnormal	
		On	L1、L2 Cascade output opens	
		Off	L1、L2 Cascade outputs are off	
		Flash up	L1、L2 Cascaded outputs detect anomalies	


























SCDA221R LED display instructions

There are a total of 8 LED indicators in the SCDA221R, and the function indication of each light is shown in the table below.

logotype	LED status	LED status	Product status description	Remark
ERR		On	No output	
		Flash up	System failure	Internal failure occurred within the system
		Off	Outputs normal	
PWR		On	Power supply normal	Power supply is between 16.5V~30V
		Slow flash	Power supply abnormal	Supply voltage is out of range
IN1		On	S12 input normal	
		Off	S12 input none	
		Slow flash	S12 and S22 channels are inconsistent	
		Flash up	S12 input detection abnormality	
IN2		On	S22 input normal	
		Off	S22 input none	
		Slow flash	S12 and S22 channels are inconsistent	
		Flash up	S22 input detection abnormality	
RST		On	1.During automatic reset, when the S33 terminal is ON, it is always on 2.During manual reset,when the S32 terminal is ON, it is always on	
		Off	1.During automatic reset, when the S33 terminal is OFF, it is always off 2.During manual reset,when the S32 terminal is OFF, it is always off	
O1		Flash up	Reset detection abnormal	
		On	OSSD1 (14) output on	
		Off	OSSD1 (14) output off	
		Flash up	OSSD1 (14) outputs abnormal detection	
O2		On	OSSD2(24) output on	
		Off	OSSD2 (24) output off	
		Flash up	OSSD2 (24) outputs abnormal detection	
Delay OSSD		On	34、44 output on	
		Off	34、44 output off	
		Flash up	34、44 outputs abnormal detection	

SCDA222R LED display instructions

There are a total of 8 LED indicators in the SCDA222R, and the function indication of each light is shown in the table below.

logotype	LED status	LED status	Product status description	Remark
ERR		On	No output	
		Flash up	System failure	Internal failure occurred within the system
		Off	Outputs normal	
PWR		On	Power supply normal	Power supply is between 16.5V~30V
		Slow flash	Power supply abnormal	Supply voltage is out of range
IN1		On	S12、S22 input normal	
		Off	S12、S22 input none	
		Slow flash	S12 and S22 channels are inconsistent	
		Flash up	S12 or S22 input detection abnormality	
IN2		On	S42、S52 input normal	
		Off	S42、S52 input none	
		Slow flash	S42 and S52 channels are inconsistent	
		Flash up	S42 or S52 input detection abnormality	
RST		On	When the S32 terminal is ON(that is S31 and S32 are connected),the port is steady on	
		Off	When the S32 terminal is OFF(that is S31 and S32 are disconnected),the terminal is off	
		Flash up	Reset detection abnormal	
O1		On	OSSD1 (14) output on	
		Off	OSSD1 (14) output off	
		Flash up	OSSD1 (14) outputs abnormal detection	
O2		On	OSSD2(24) output on	
		Off	OSSD2 (24) output off	
		Flash up	OSSD2 (24) outputs abnormal detection	
Delay OSSD		On	34、44 output on	
		Off	34、44 output off	
		Flash up	34、44 outputs abnormal detection	

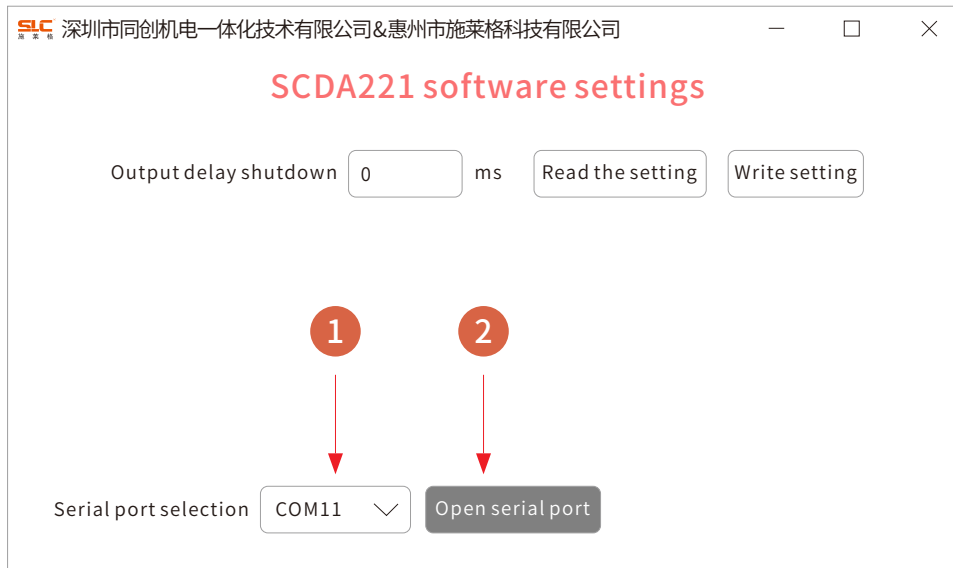
SCDA221 safety relay setup instructions

The SCDA221 can set the delay time of 34 and 44 output delay shutdown through PC software, and the specific setting steps are as follows.

1. Use the "USB Type-C cable" to connect the PC and SCDA221 relay.
2. SCDA221 is powered on.
3. Open the SCDA221 .exe setting software.
(The interface is shown on the right) .

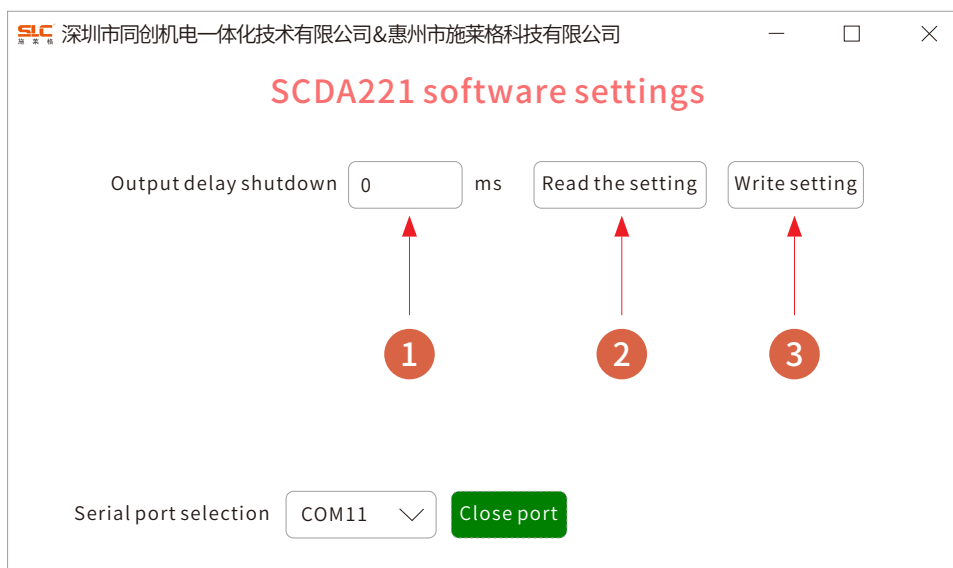


4. The SCDA221 setting interface is shown in Pn below, open the communication serial port, the steps are as follows.
 - ① Select the serial port connected to SCDA221;
 - ② Click the "Open Serial Port" button;



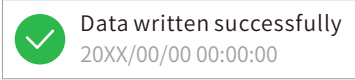
5. Set parameters.

- ① In the edit box, you can enter the time (unit ms) of "Output Delay Off";
- ② Click the "Read Settings" button to read the current "Output Delay Off" time of SCDA-221RP;
- ③ Click the "Write Settings" button to set the current "Output Delay Off" time of SCDA-221RP.



6. After clicking the "Write Settings" button, if the setting is successful, the upper right corner of the PC interface will prompt "Data Write Successful".

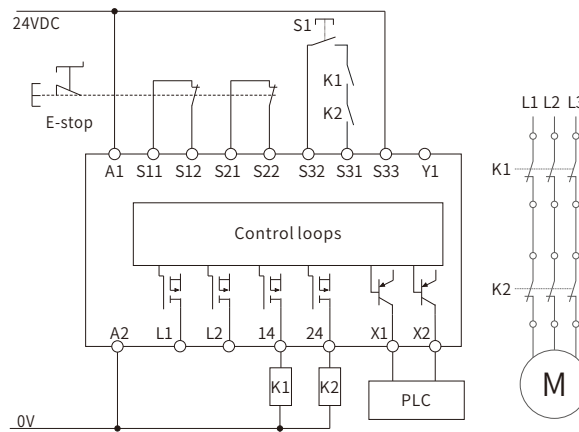
If you prompt for other content, it means that the setting is successful, please set it again.



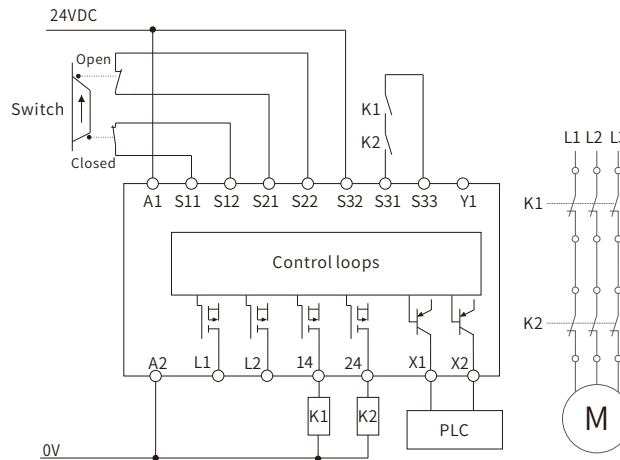
7. After the setting is completed, please power off and restart.

Typical application wiring diagram description

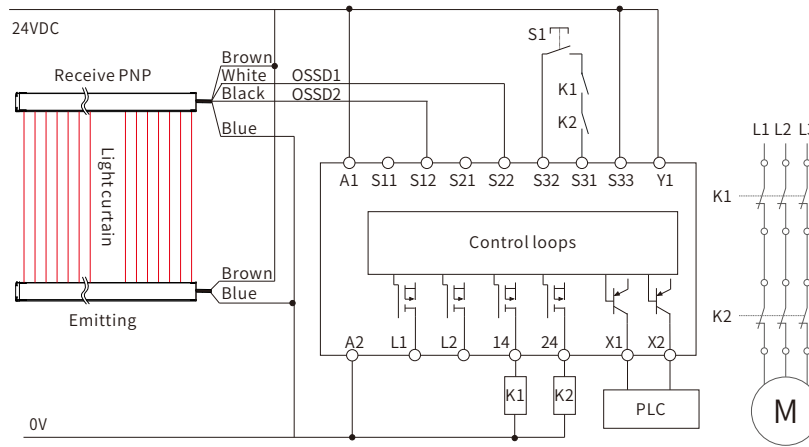
SCDA-211RP connected to a dual-channel E-stop with manual reset with output monitoring



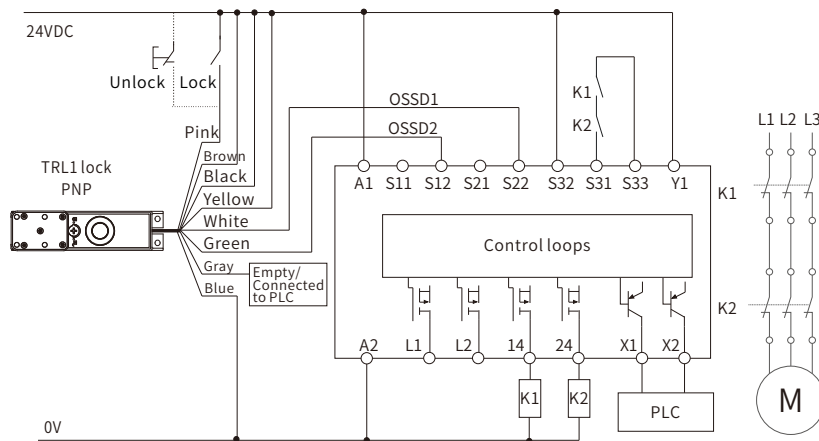
The SCDA-211RP is connected to a dual-channel safety machine with automatic reset with output monitoring



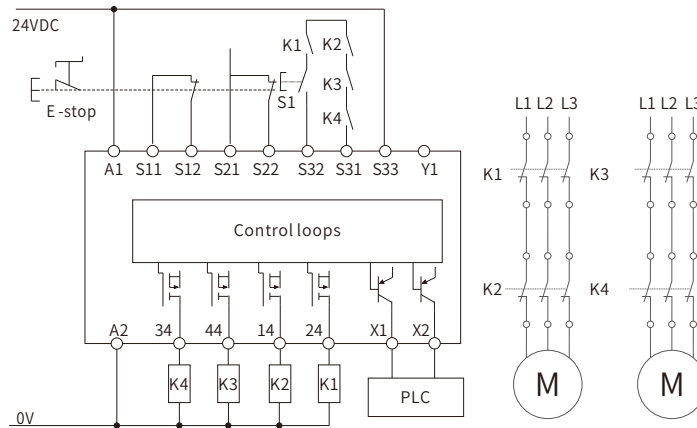
The SCDA-211RP is connected to a Type4 safety light curtain with manual reset with output monitoring



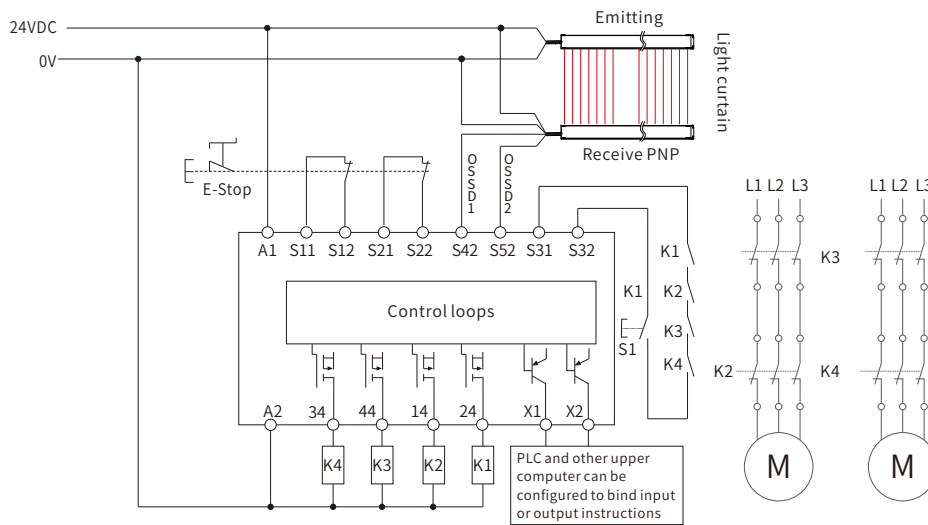
The SCDA-211RP is connected to an RFID security protection lock and automatic reset with output monitoring



SCDA-221RP is connected to a two-road emergency stop, drives two motors, and has a manual reset with output monitoring

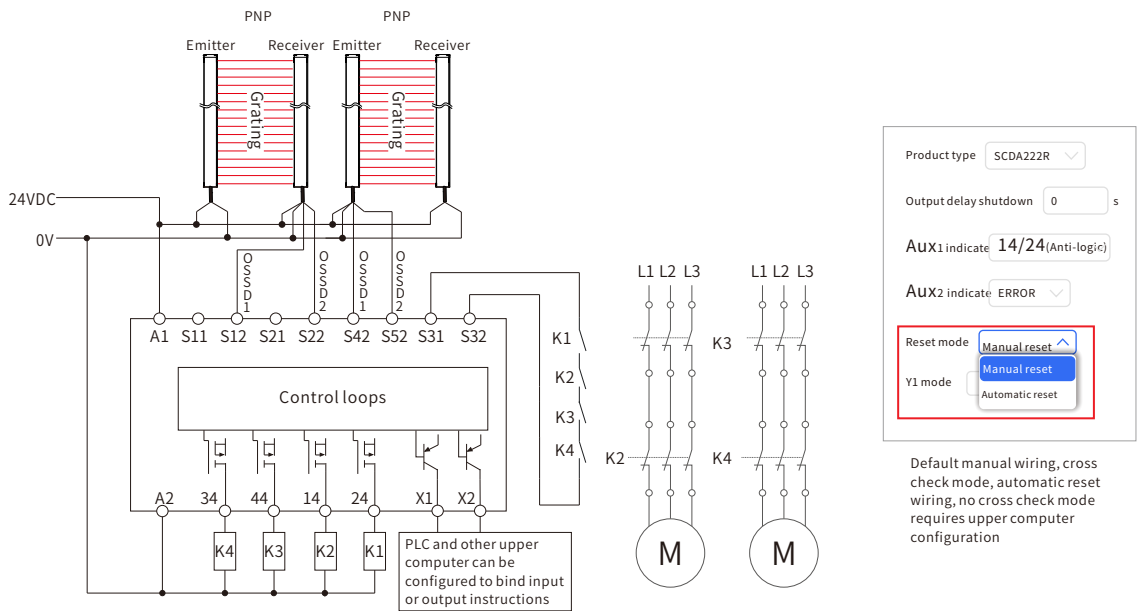


SCDA-222RP is connected to dual channel emergency stop and safety light curtain, driving two motors, with manual reset with output monitoring

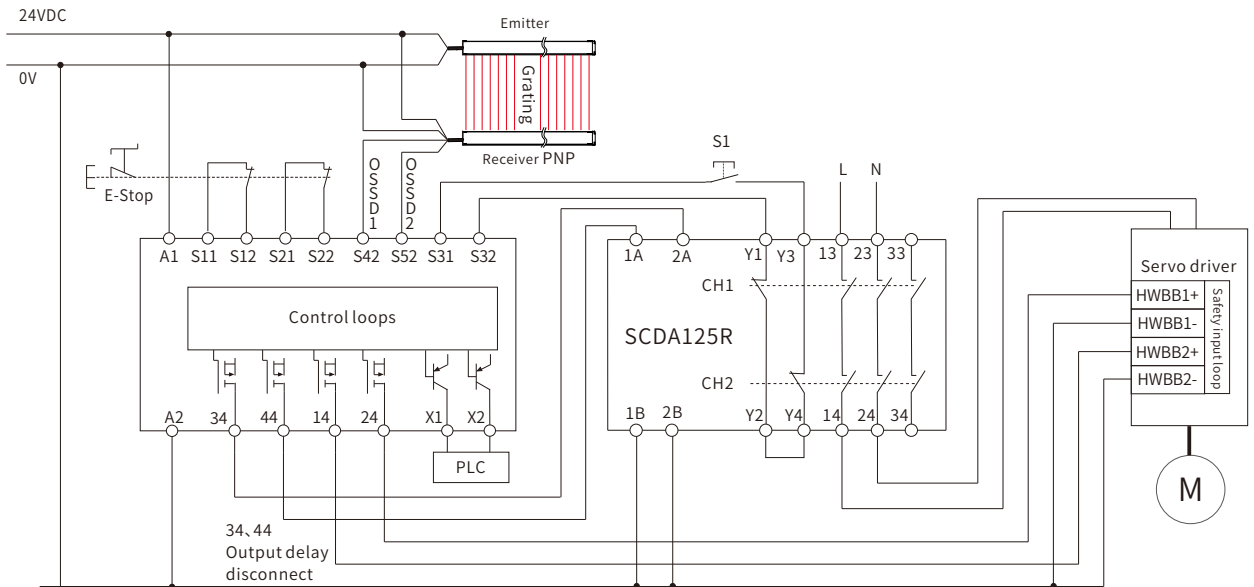


SCDA-324R SCDA-211R SCDA-221R SCDA-222R
Series safety relay modules

SCDA-222RP two sets of safety light curtains, driving two motors, with automatic reset for output monitoring



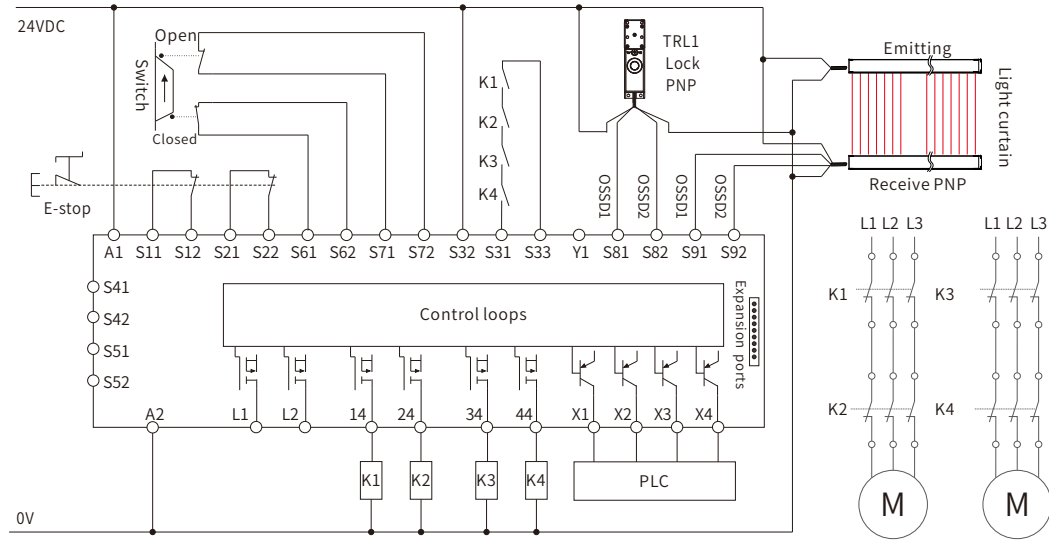
SCDA-222RP is connected to a dual channel emergency stop and safety light curtain, driving the servo driver to instantly stop and delay power outage, with manual reset with output monitoring



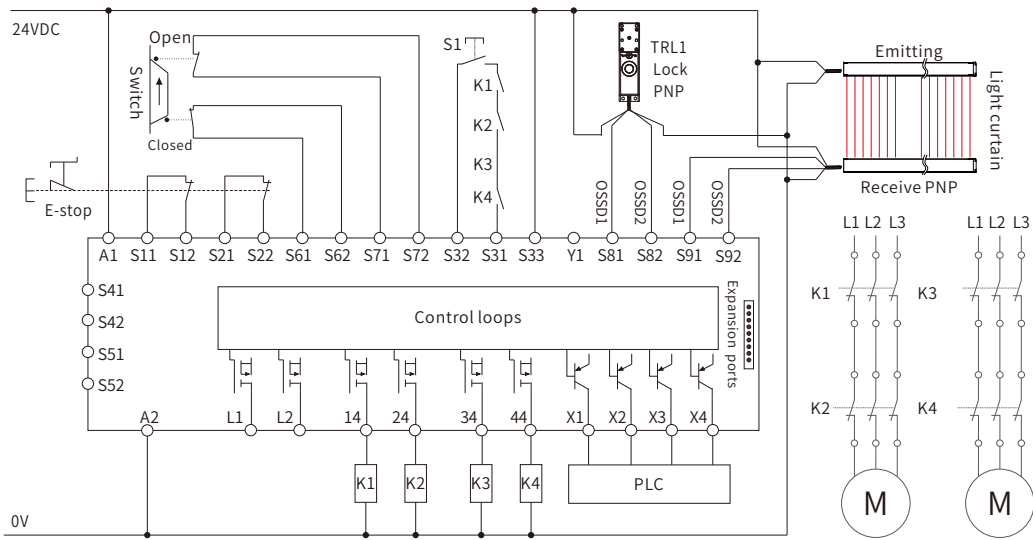
Note:

1. X1 and X2 auxiliary outputs can be configured with binding input or output instructions on the upper computer;
2. The delayed disconnection output time needs to be set by the upper computer;
3. The wiring mode needs to be automatically reset, and the upper computer is configured with an automatic reset mode. The S1 switch is cancelled and the direct wiring mode is changed;
4. The maximum output current of the safety relay is 250 volts, 3A.

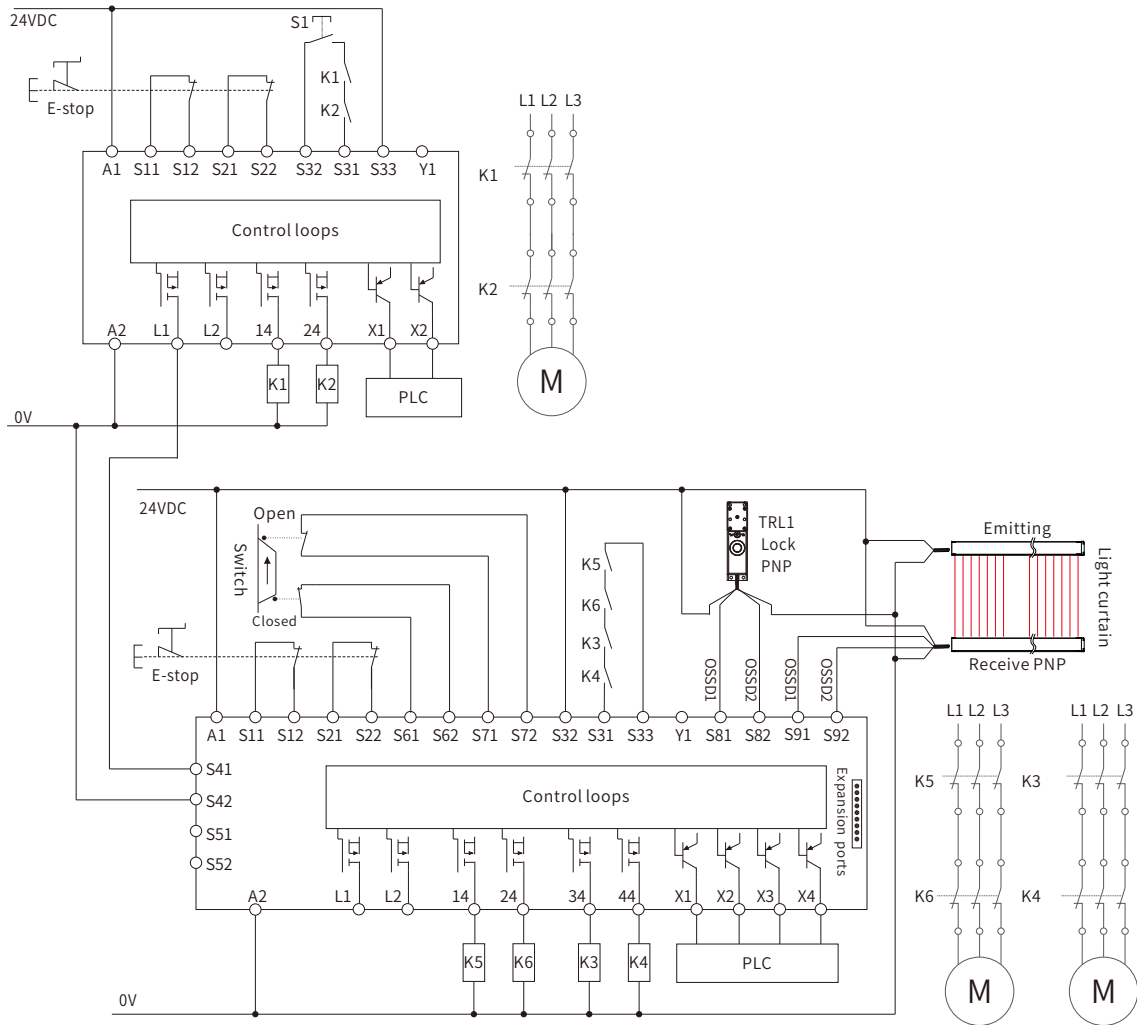
SCDA-324RP is connected to dual-channel emergency stop, dual-channel safety dam, dual-channel safety light curtain and dual-channel safety protection lock, automatic reset, input signal cross-fault detection, output monitoring



SCDA-324RP is connected to dual-channel emergency stop, dual-channel safety dam, dual-channel safety light curtain and dual-channel safety protection lock, manual reset, input signal cross-fault detection, output monitoring



SCDA324RP and SCDA-211RP cascade and logic operations



Cascade SCDA-211RP with two sets of SCDA-324RP

