



# SCDA-M08 Series Safety Relay Module



## Product overview

The SCDA-M08 safety module converts eight parallel safety input signals into two PNP-type safety outputs.

The input signal can be either a passive switching signal or an OSSO transistor signal

The safe input signal of each channel consists of two independent input signals A and B, SCDA-M08 will detect the consistency of the two signals, only if the two signals are in unison transition, the input is considered the correct signal, otherwise the output will be turned off.

## Peculiarity

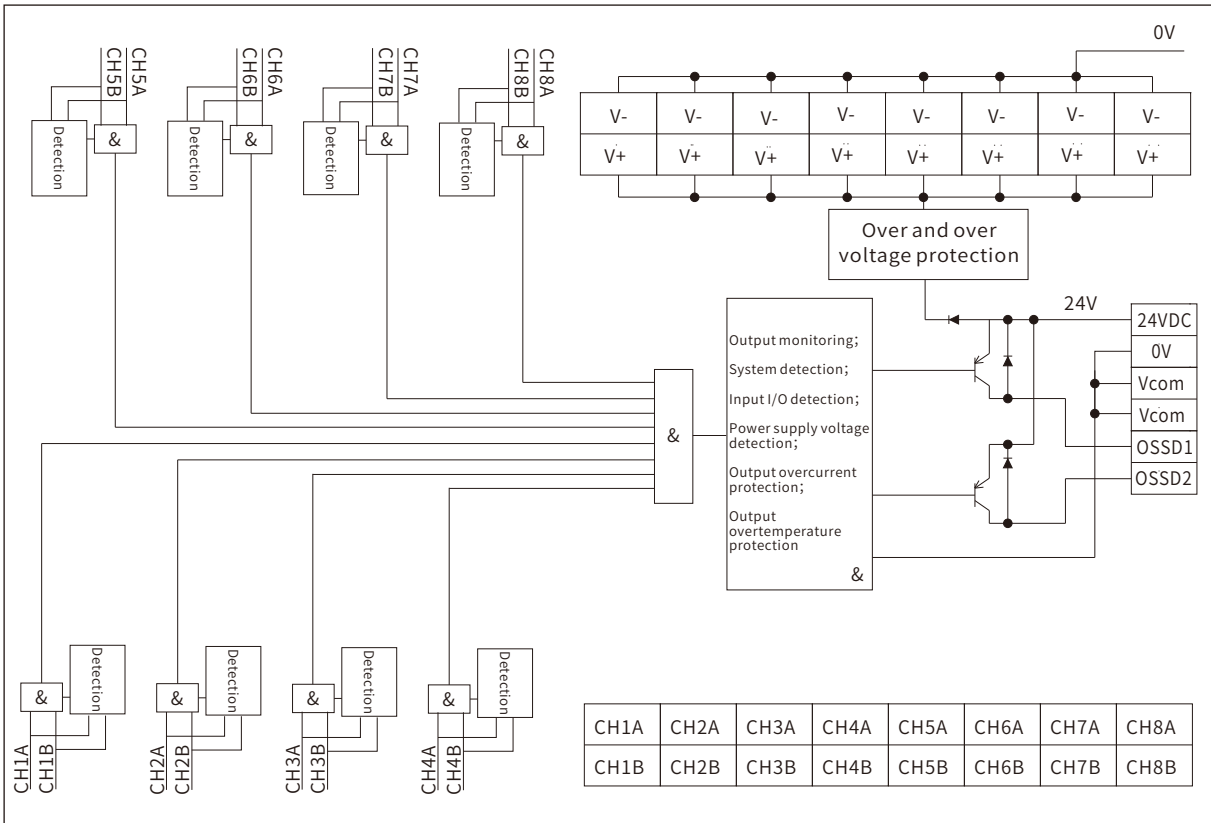
- ◆ Up to 8 channels of safe input are possible
- ◆ Three-digit parallel status display, on-site troubleshooting, simple and easy
- ◆ It can be used in a wide range to support switching signal input and OSSO transistor signal input
- ◆ Two safety outputs with output monitoring

## Technical parameters

Technical indicators	Parameter
Supply voltage classification	24V±15%
Power consumption	2W
Startup time	1S
Response time	10ms
Disconnect recovery time	40ms
OSSO1 and OSSD2 output voltages	Output voltage $V_{in}-1.5V$
OSSO1 and OSSD2 shutdown residual voltage	<3.0V
OSSO1 and OSSD2 300mA maximum output current	300mA
CH1A,CH1B CH2A,CH2B CH3A,CH3B CH4A,CH4B CH5A,CH5B CH6A,CH6B CH7A,CH7B CH8A,CH8B input voltages	The high level is greater than 10V The low level is less than 3V

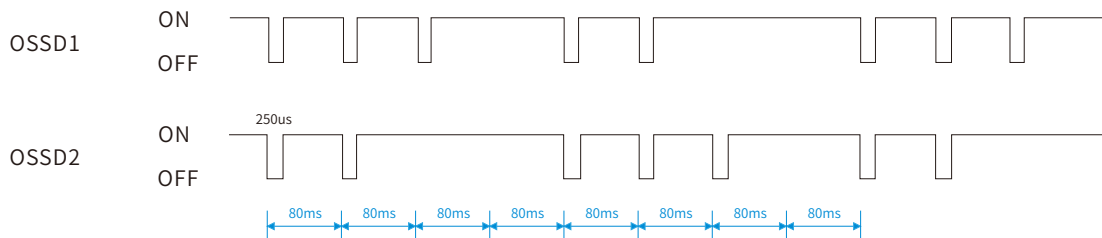


## SCDA-M08 block diagram

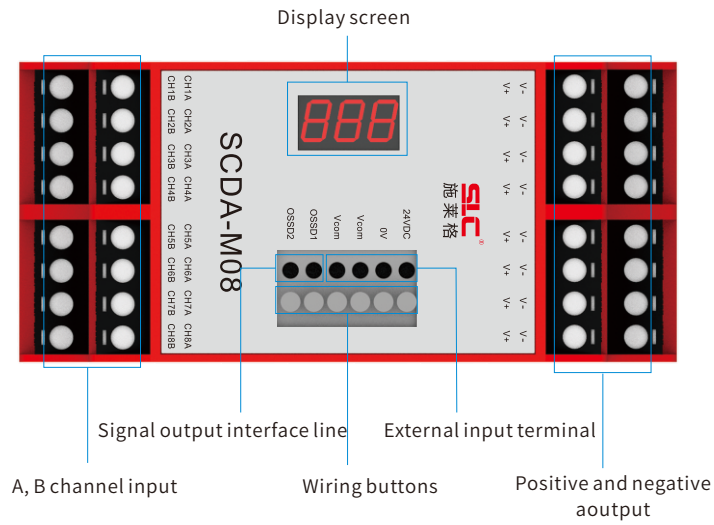


## OSSO outputs a self-diagnostic function

The SCDA-M08 security module has OSSD output self-diagnosis function. During the on-period of the OSSD output of the safety module, the internal control timing control of the security module actively turns off the OSSD1 and OSSD2 outputs in sequence without periodicity. During the short shutdown of OSSD1 or OSSD2, the internal timing control unit of the security module detects whether the OSSD1 or OSSD2 level has flipped, and if the flip occurs, the corresponding OSSD switch is in normal working condition; If the OSSD is not detected as flipping, the corresponding OSSD fails, and the system will immediately shut down both OSSDs to ensure functional safety. Therefore, when the SLC grating connection load is PLC or a fast smart device with MCU control, the self-test pulse needs to be filtered out in the program, and the following figure is the timing diagram of the self-diagnosis output waveform of the safety module.



### Panel description










### Interface definition

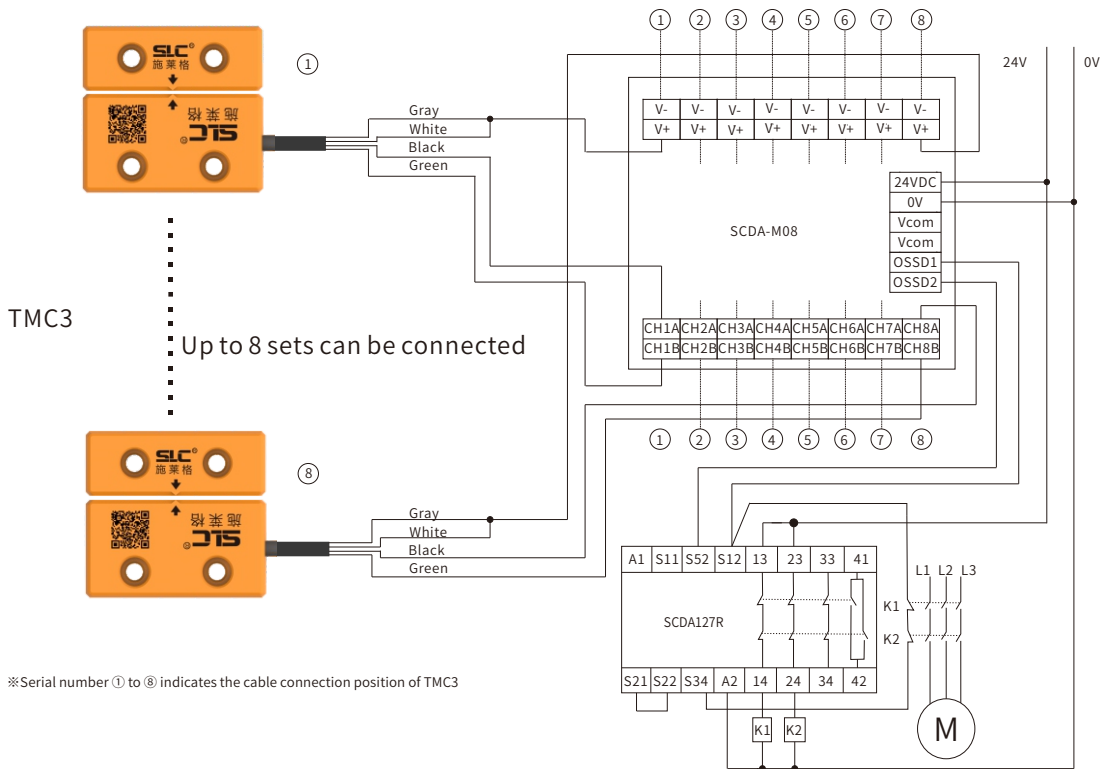
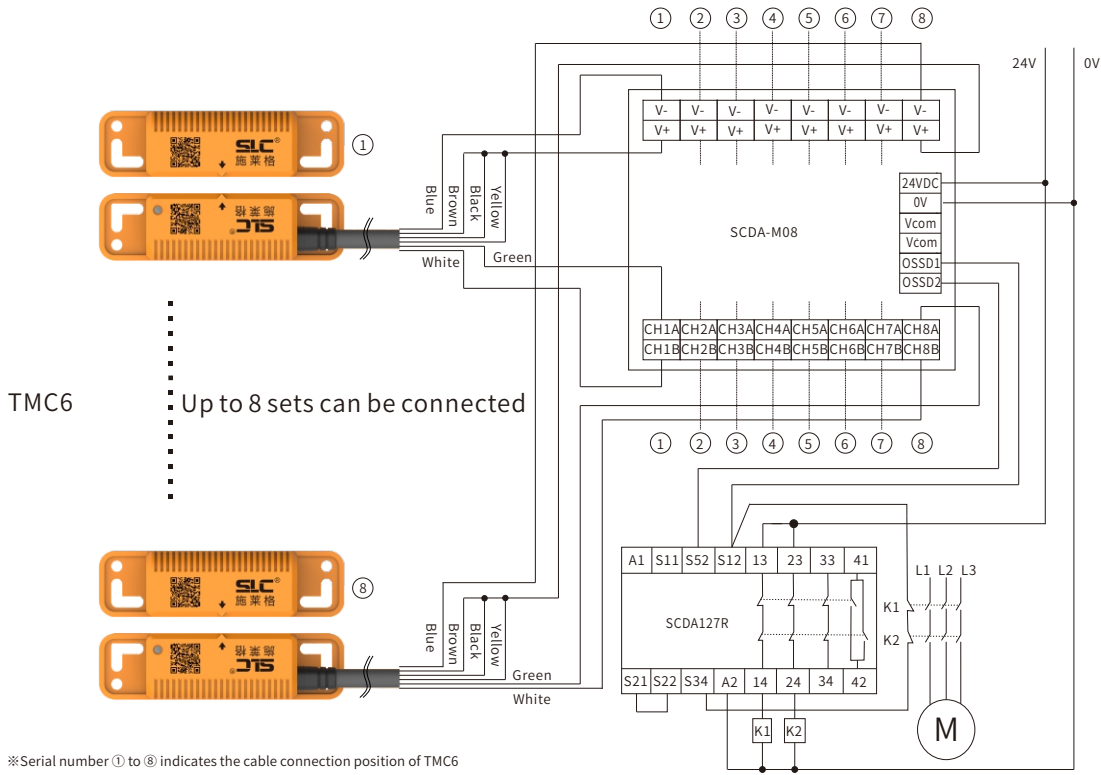
Signal	Illustrate
+24VDC	Power input 24VDC
0V	Power input 0V
Vcom	For the outside
CH1A, CH2A CH3A, CH4A CH5A, CH6A CH7A, CH8A	1-8 A-channel inputs
CH1B, CH2B CH3B, CH4B CH5B, CH6B CH7B, CH8B	1-8 B-channel inputs
V+	Connection switches A+
V-	Connection switches B-
	+0V

### Display and troubleshot common faults

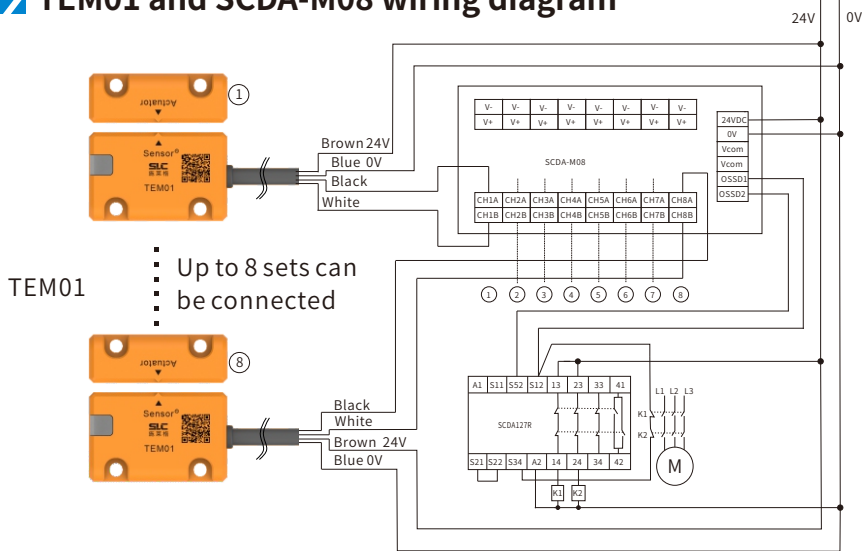
SCDA adopts a 3-digit seven-segment digital tube display, which displays rich content and is convenient for troubleshooting. When both input and output are working normally, "ON" is displayed; If the input or output is abnormal, the system detects common faults and displays fault codes, as shown in the following table, which is very convenient for troubleshooting during field wiring and commissioning. When there are multiple channels in the input, the channel with a low channel sequence number is displayed first, and the display channel fault can be directly troubled when troubleshooting the fault.

Display	Failure cause	Exclusion method
	Normal working, there is output	N/A
	No input, the number 01-08, indicates the channel number	Check the input signal
 1HZ flash	Enter out of sync, the numbers 01-08, for the channel number	Check the input signal
	Enter the channel fault, the numbers 01-08, indicating the channel number	The input path detects damage to the circuit
	Drive pipe failure	Check the outputs for short circuits (short to ground, short to the power supply, or short to each other), or the drive tube is damaged
	Output overload	Check the load
	Power supply abnormal	Check the power supply

## TMC series and SCDA-M08 application wiring diagram

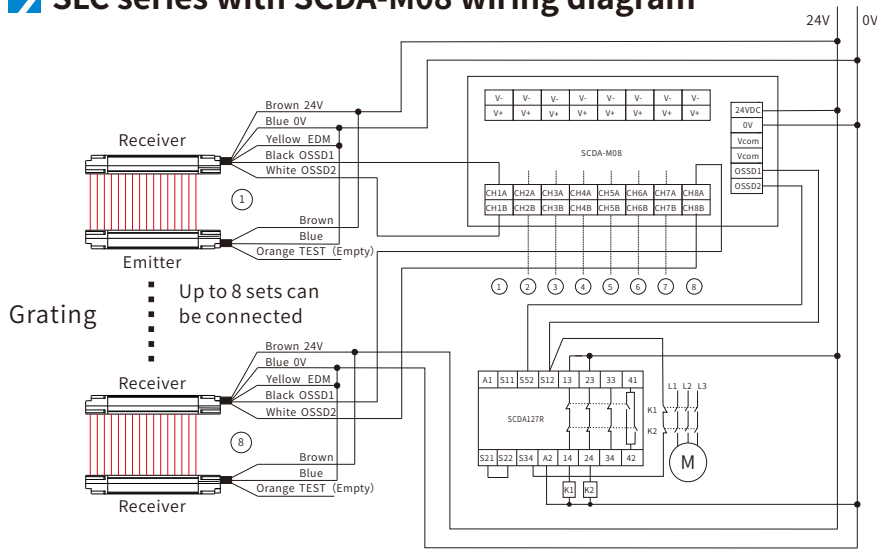


### TEM01 and SCDA-M08 wiring diagram



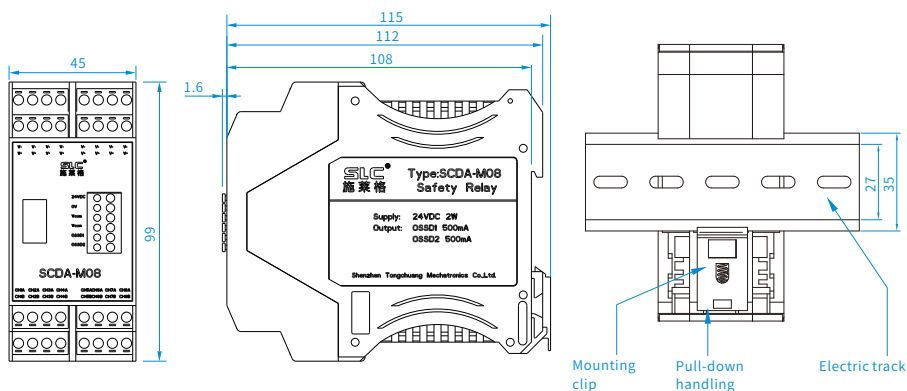
※Serial number ① to ⑧ indicates the cable connection position of TEM01

### SLC series with SCDA-M08 wiring diagram



※Serial number ①~⑧ indicates the grating wiring position

### Installation method



1. The fixed plastic card position of the SCDA-M08 is diagonally stuck to the side of the installation rail;
2. Put down the guide rail and press the SCDA-M08, so that its hardware movable buckle is clasped to the other side of the guide rail.

