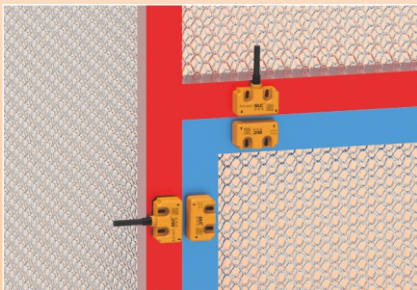




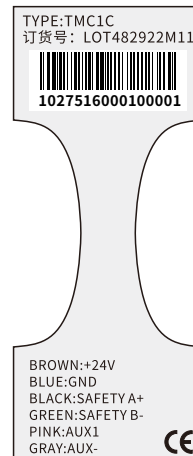
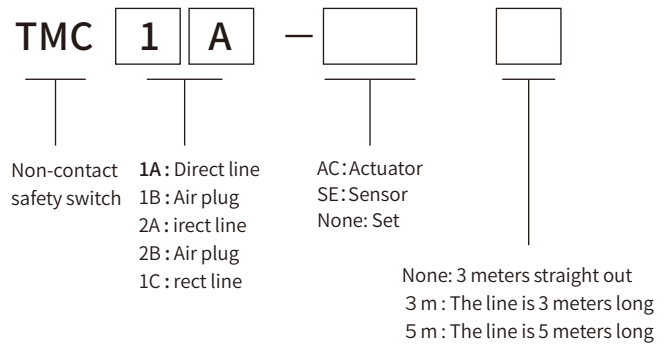
TMC1 / TMC2 series non-contact magnetic coded safety switches



Functional features

In the design of TMC1/TMC2 magnetic code safety switch, multiple magnetic sensitive elements are combined. These magnetic sensitive elements must be triggered in a specific order in order to work normally. The non-contact execution is performed Iso13849-1, SIL3, PLc. Category 4.

Model specification

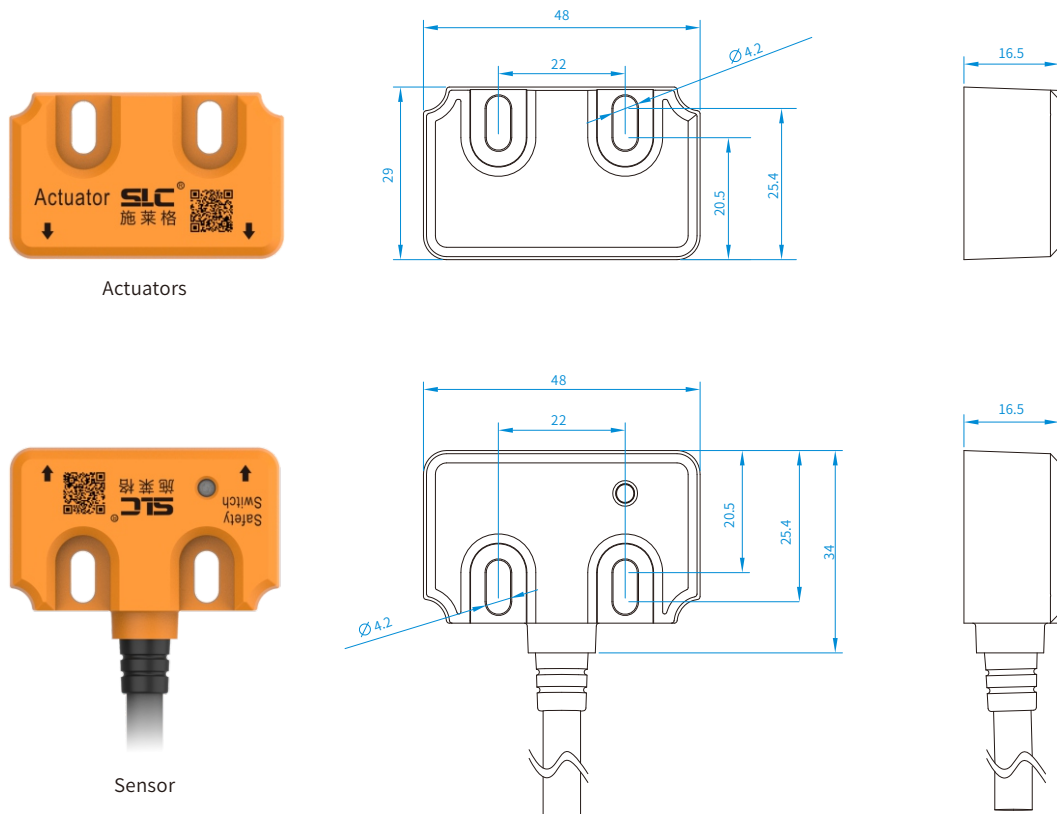


Selection table

Description	Contact		Cable type	Model			Package number (Actuators+Sensor)
	Safety	Uxiliary		Sensor	Actuators	Actuators+Sensor	
Magnetically coded safety	2N.C	1N.O	Direct 3M cable	TMC1A-SE	TMC1A-AC	TMC1A	LOT482922M21
Magnetically coded safety	2N.C		Direct 3M cable	TMC2A-SE	TMC2A-AC	TMC2A	LOT482922M20
Magnetically coded safety	1N.C	1N.O	Direct 3M cable	TMC1C-SE	TMC1C-AC	TMC1C	LOT482922M11
Magnetically coded safety	2N.C	1N.O	TMC1B-3M	TMC1B-SE	TMC1B-AC	TMC1B	LOT482922E21
Magnetically coded safety	2N.C		TMC2B-3M	TMC2B-SE	TMC2B-AC	TMC2B	LOT482922E20

- ※ 1.The standard wire is 3 meters. If you need a longer cable, please choose the air plug type, such as tmc1b-3m suffix 3M to replace the corresponding line length: tmc1b-3m, tmc1b-5m
- 2.It is recommended that one or more magnetic-coded safety switches in series be used in conjunction with safety relay modules.
- 3.The above models are suitable for NPN /PNP output signal.

Installation dimensions

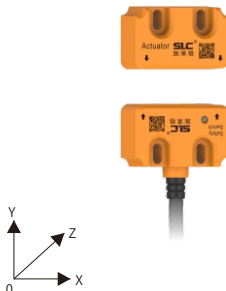

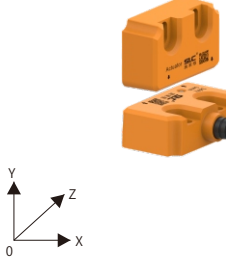



※Depending on the product configuration and manufacturing process, the actual product size and weight may vary, please refer to the actual product.

Technical parameters

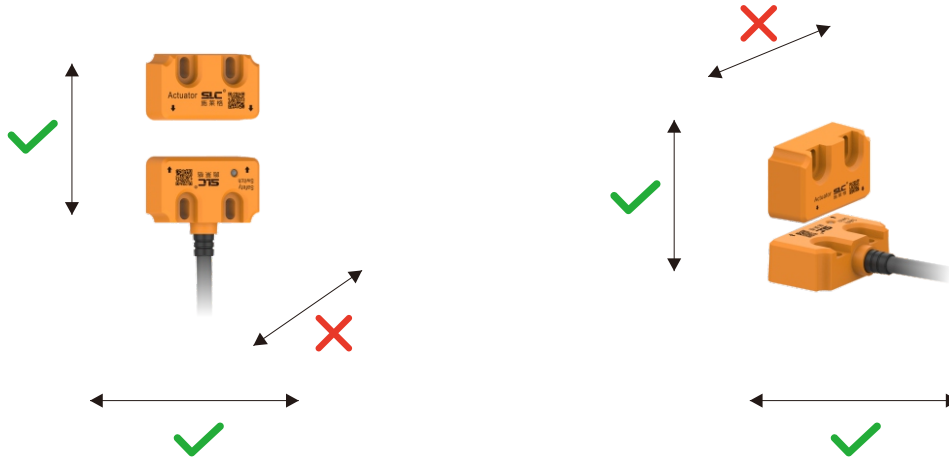
Security level	
Safety grade standard	ISO13849-1, IEC/EN60947-5-3
Security classification	3 types of switches conforming to ISO 13849-1; Dual channel interlock is suitable for class 3 or 4 systems
Output	
Safety output	2个N.C Solid state relay
Aux output	1个N.O, Solid state relay (non-safe output)
Round way	Direct out line(TMC1A); Out line with air plug (TMC1B)
Technical parameters	
Working distance (horizontal)	Make.Min: 10mm; Break.Max: 24mm
Working distance (vertical plane)	Make.Min: 6mm; Break.Max: 20mm
Typical tolerance	$\pm 4\text{mm}$
Working voltage	24VDC $\pm 15\%$
Working current	50mA
Output current (maximum)	200mA
Response time	5ms
Protection grade	IP67(Can be customized IP69K)
Operating frequency	1Hz
Working temperature	-10~+55°C
Relative humidity	5%~95%
Material	UL certified thermoplastics

Alignment diagram

	Misalignment deviatio	Make	Break	On the schematic
Horizontal alignment (Z deviation 0)	The deviation is in the X direction $\pm 4\text{mm}$ range	Y direction sensing distance 0~10mm	Y direction sensing distance > 24mm	
	The deviation is in the X -10mm~-4mm and 4mm~10mm range	The Y direction induction decreases exponentially from 10mm to 0		
Horizontal alignment (X deviation 0)	The deviation is in the Z direction $\pm 4\text{mm}$ range	Y direction sensing distance 0~10mm		
The vertical alignment (Z deviation 0)	The deviation is in the X -16mm~-8mm and 8mm~16mm range	Y direction sensing distance 0~6mm	Y direction sensing distance > 20mm	
	The deviation is in the X -20mm~-16mm and -8mm~-4mm range and 4mm~8mm and 16mm~20mm range	The Y direction induction decreases exponentially from 6mm to 0		
The vertical alignment (X deviation $\pm 12\text{mm}$)	The deviation is in the Z $\pm 4\text{mm}$ range	Y direction sensing distance 0~6mm		

TMC1 TMC2
SERIES NON - CONTACT MAGNETIC CODED SAFETY SWITCHES

> Approach direction

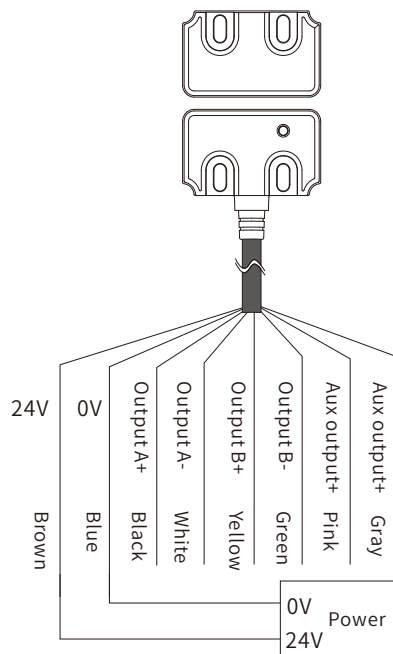


> Indicator light displays status description

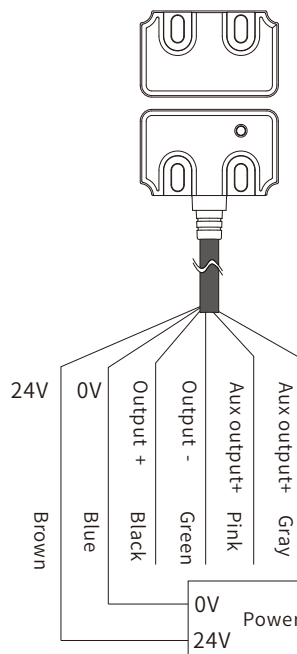
LED display	Output state		Aux output	Statements
	Main output A	Main output B		
Red on	---	---	Make	No actuator or incomplete alignment
Green on	Make	Make	Break	Actuator alignment
Green flash	Make	Make	Break	Actuator alignment, black output line not connected to power supply

> Wiring definition

◆ Definition of double connection



◆ Single line connection definition



◆ Definition of double circuit connection

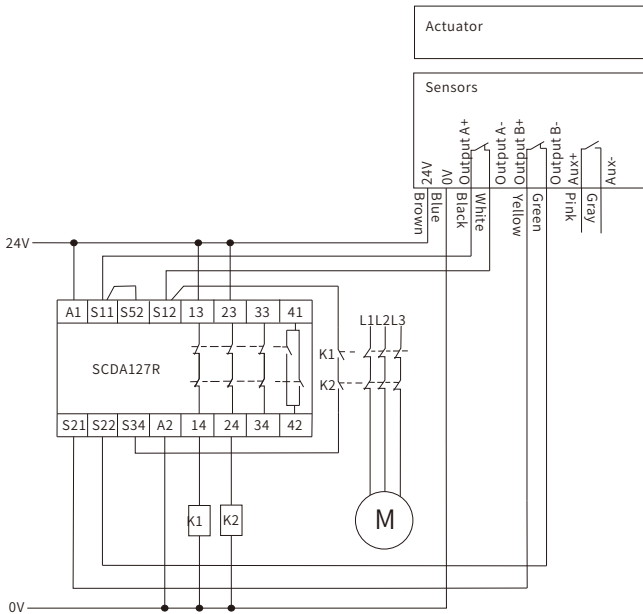
No.	Signal definition	Color	Illustrate
1	24V	Brown	Power +
2	0V	Blue	Power -
3	Output A+	Black	Safety output A+
4	Output A-	White	Safety output A-
5	Output B+	Yellow	Safety output B+
6	Output B-	Green	Safety output B-
7	Aux output +	Pink	Non-safety output+
8	Aux output -	Gray	Non-safety output-

◆ Single circuit wiring definition

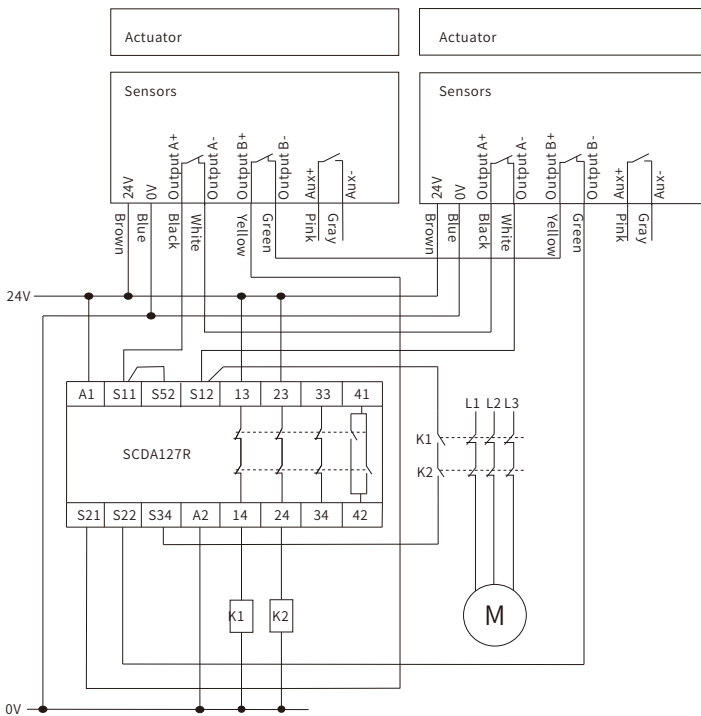
No.	Signal definition	Color	Illustrate
1	24V	Brown	Power +
2	0V	Blue	Power -
3	Output +	Black	Safety output +
4	Output -	Green	Safety output -
5	Aux output +	Pink	Non-safety output+
6	Aux output -	Gray	Non-safety output-

Application wiring example

Single switch wiring diagram



Schematic diagram of a multi-switch cascade connection line



Warn

- ◆ The normally closed output cannot be used as a safe output.
- ◆ Please confirm the wiring in the power off state.
- ◆ Please confirm that the variation of power supply voltage is not beyond the rated range.
- ◆ The power supply must have output over pressure protection function.
- ◆ Not used in flammable and explosive environments.