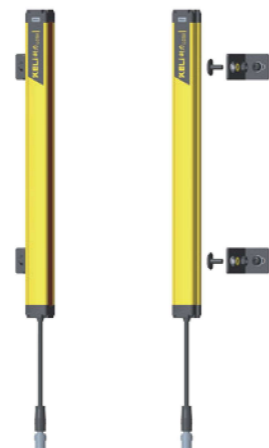


Installation method



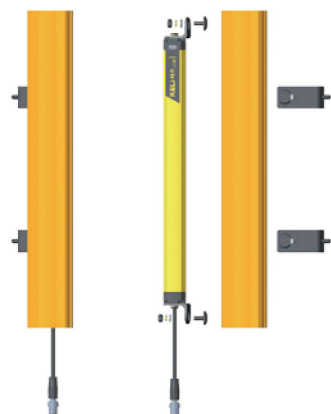
LCSII ZC mounting (ZC)

It is the installation method to fix LCSII light curtain at the body of machine tool through LCSII ZC-mounting bracket

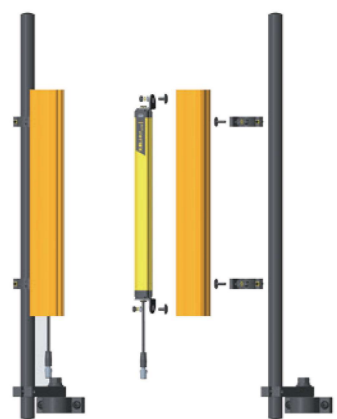
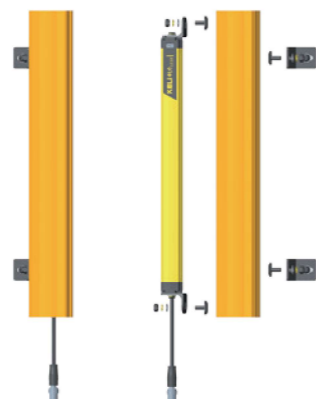


T groove mounting (TC)

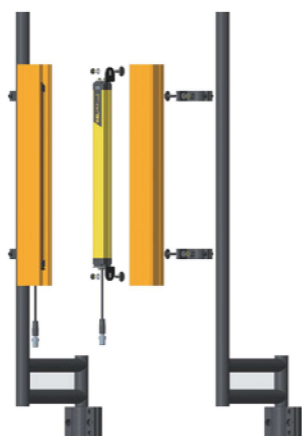
It is the installation method to fix LCSII light curtain at the body of machine tool through T-bolt and L-bracket.



Front and side installation with protective cover (FZC)



Pipe mounting bracket with protective cover (GF)



Double arm bracket with protective cover (SF)

CSR series safety relay module

ISO 13849-1(PL e)



Product description

CSR relay modules comply with EN/ISO 13849-1Cat.4/PLe safety requirements and are suitable for monitoring various signals at the industrial sites with high safety requirements—including emergency stop signals, safety door switch signals, safety light curtain signals, safety light curtain signals using pulse output and two-hand button signals.

Features

With forced guiding of relay contact, the monitoring is more effective and safer;

- CSR has smaller external dimensions, and it is connected using pluggable terminal for easy installation;
- CSR has two forms, namely 3 NO (normally open) and 1 NC (normally closed) outputs, and 2 NO (normally open) and 1 NC (normally closed) outputs, so its control ability is stronger.

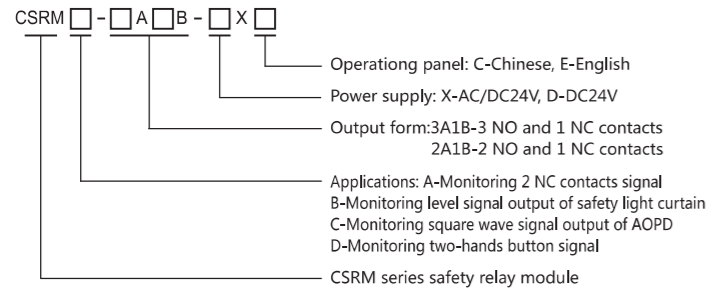
CSRMA – two-way normally closed switch monitoring

- Monitor two-way normally closed switch signal - emergency button, safety door switch;
- Monitor the short circuit between two ways of signals;
- Monitor the short circuit and open circuit of single switch, and lock it when the switches are inconsistent with each other;
- Automatic and manual resetting are adjustable. 2A1B module can detect the reset button in the manual reset mode and force single reset, and reset button must be disconnected before the next reset operation;
- With external device monitoring function, it can be used to monitor the failure state of relay that controls the hazardous parts of machine, such as contact adhesion.

CSRMC- pulse signal monitoring

- Monitor the safety light curtain output signal with pulse signal output;
- With narrow wave band filter design and center frequency of 4KHz, it can effectively avoid the false triggering of other interference signals;
- It adapts to Keli active opto-electronic KS02H and KS06 safety light curtain;
- Automatic and manual resetting are adjustable. 2A1B module can detect the reset button in the manual reset mode and force single reset, and reset button must be disconnected before the next reset operation;
- 2A1B module can achieve inhibition function;
- With external device monitoring function, it can be used to monitor the failure state of relay that controls the hazardous parts of machine, such as contact adhesion.

Specifications model



CSRMB-two-way transistor signal monitoring

- Monitor two-way transistor signals - photoelectric switch, safety light curtain, etc.;
- With the peripheral circuits, it can also be used to monitor the two ways of normally closed switch signals;
- With full-loop self-test, it can be locked when the two ways of signals are inconsistent with each other;
- It has a wider adaptability for the residual voltage of light curtain signal, and it can work stably when the residual voltage is greater than 10V;
- It can be used to monitor NPN signals and PNP signals, with a stronger adaptability;
- Automatic and manual resetting are adjustable. 2A1B module can detect the reset button in the manual reset mode and force single reset, and reset button must be disconnected before the next reset operation;
- 2A1B module can achieve inhibition function;
- With external device monitoring function, it can be used to monitor the failure state of relay that controls the hazardous parts of machine, such as contact adhesion.

CSRMD - Two-hand button monitoring

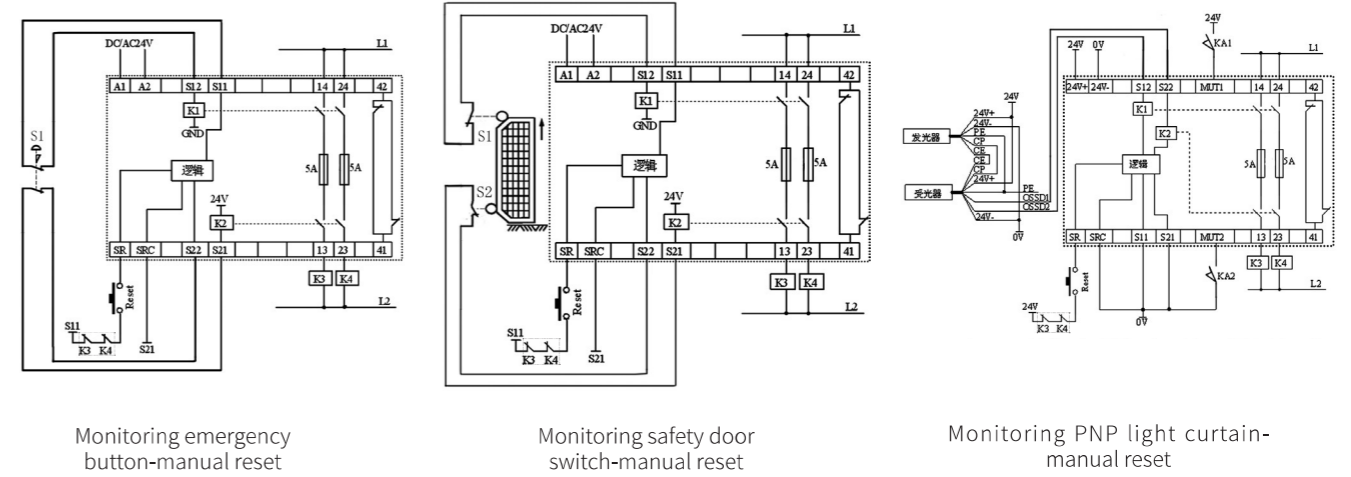
- Monitor two-hand button signal;
- Button signal consistency detection. When the two-hand button triggering time difference is greater than 0.5s, it is regarded as invalid trigger;
- With independent dual-loop work and full-loop self-test, it can be locked when the two ways of signals are inconsistent with each other;
- 2A1B module can achieve external device monitoring function, and it can be used to monitor the failure state of relay that controls the hazardous parts of machine, such as contact adhesion.

Technical parameters

Standards	ISO 13849-1 (PLe) 2004/108/EC (EMC Command) 2006/42/EC (Mechanical Safety Command)	
Environmental characteristics		
Environment temperature	Operating	-10°C~55°C(No frost or fog)
	Storage	-40°C~70°C
Environment humidity	Operating	35%RH~85%RH
	Storage	35%RH~95%RH
IP code	IP50	
Dimensions	110×100×24mm(The dimensions are 110×115×24mm when no-lock screw sealing and plug terminal block)	
Electrical characteristics		
Power supply	AC20.4V~26.4V or DC24V±10% (can only DC power supply can be used for 3A1B module and B module)	
Power consumption	≤ 3W (the power supply of supporting light curtain of C module is provided by the module; total power consumption: ≤ 10W)	
Load capacity	AC15: 5A/250V DC13: 5A/24V	
Response time	<10ms	
Dielectric strength	AC1500V, No breakdown or flashover for 60s	
Relay life	≥ 100 万次 (Electrical life)	

— Table43 —

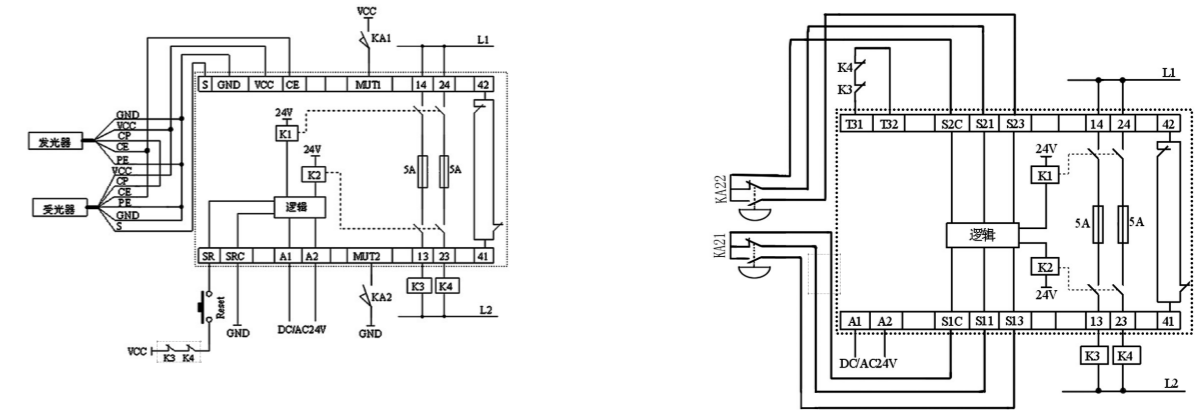
Typical wiring diagram



Monitoring emergency button-manual reset

Monitoring safety door switch-manual reset

Monitoring PNP light curtain-manual reset



Monitoring light curtain signal - manual reset

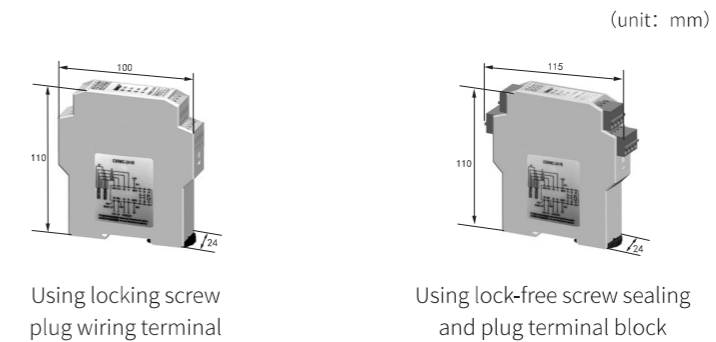
Monitoring two-hand button

Note: K3/K4 are load indications, including but not only relays; the dashed box indicates the wiring of external equipment monitoring. If you do not use this function, you can directly short-circuit it.

Note 2: KA1/KA2 is the indication of the travel switch, when KA1 and KA2 are closed, the inhibition function will be activated

Note 3: This figure shows the wiring example of KS06 type photoelectric protection device. When other types of photoelectric protection device are used, connect according to the requirements of the light curtain manual

Dimensions



Using locking screw plug wiring terminal

Using lock-free screw sealing and plug terminal block