

TECHNICAL DATA SHEET

SAFETY RELAY QSRN & QSRP series



Introduction to QSRN/QSRP series safety relay

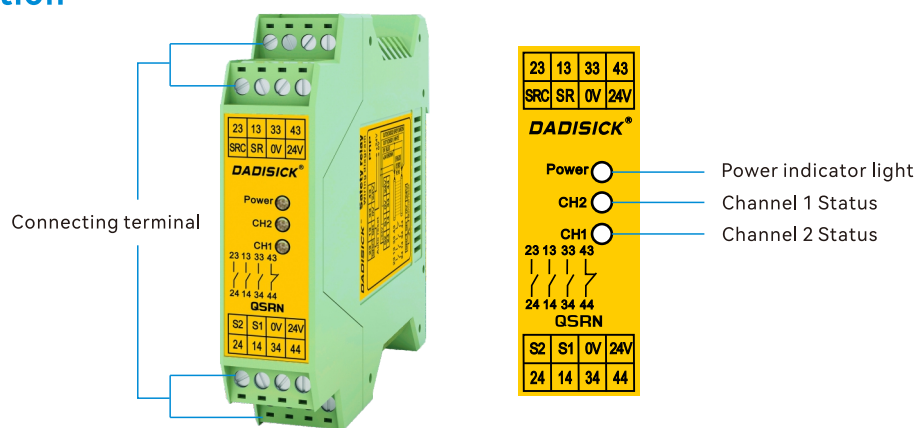
The QSRN/QSRP safety relay module meets the safety requirements of EN/ISO13849-1Cat.4 and is suitable for monitoring various signals in industrial sites with high safety requirements – including emergency stop signals, safety door switch signals, safety light barrier signals, and safety light curtain signals. Outside the two-hand button signal.

- Forced guidance of the relay contacts makes monitoring more efficient and safer.
- QSRN/QSRP has a smaller external size and is pluggable for easy installation.
- QSRN/QSRP has 3 normally open, 1 normally closed, a total of 4 sets of control output signals, and the control ability is stronger.

QSRN/QSRP – Two-way transistor signal monitoring

- Monitor two transistor signals – power off switch, safety light barrier, etc.
- With the peripheral circuit, the monitoring of the two normally closed switch signals can also be realized.
- Full loop self-test, lock when the two signals are inconsistent.
- It has a wider applicability to the residual voltage of the grating signal, and it can work stably when the residual voltage is greater than 10V.
- It can monitor NPN signal and PNP signal, and has stronger adaptability.
- Automatic, manual reset is adjustable. In the manual reset mode, the reset button can be detected, a single reset is forced, and the next reset operation can be performed after the reset button is turned off.

Board description

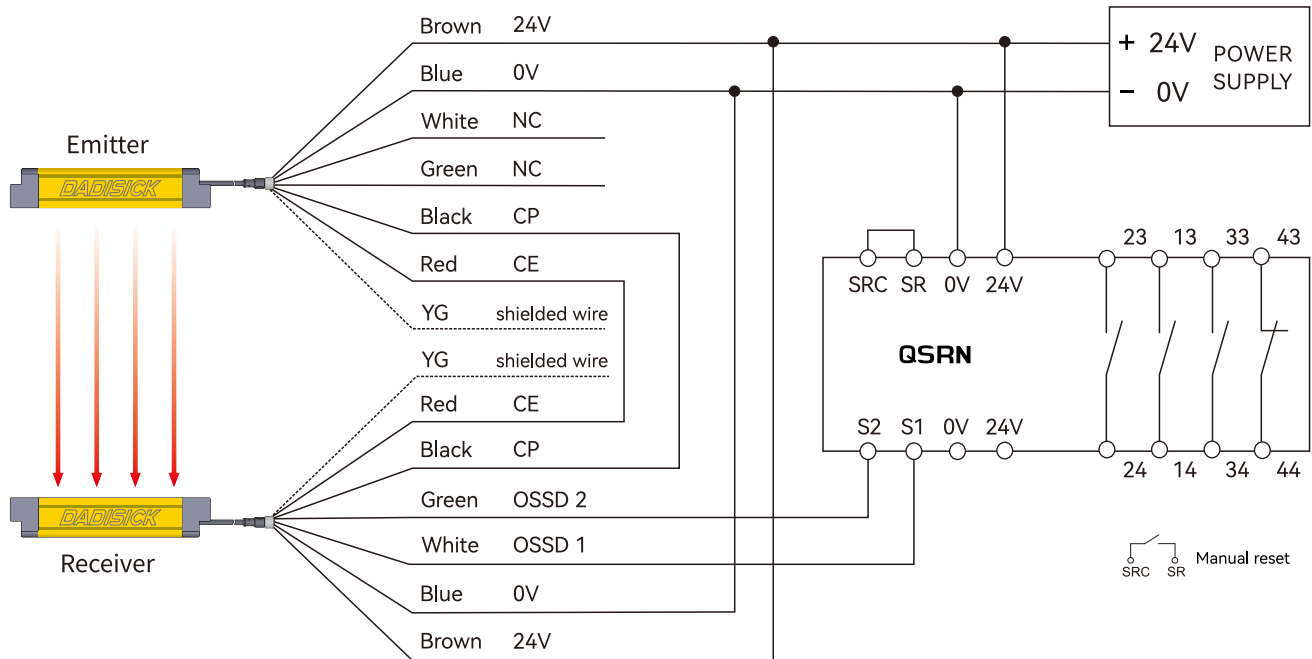


Technical data

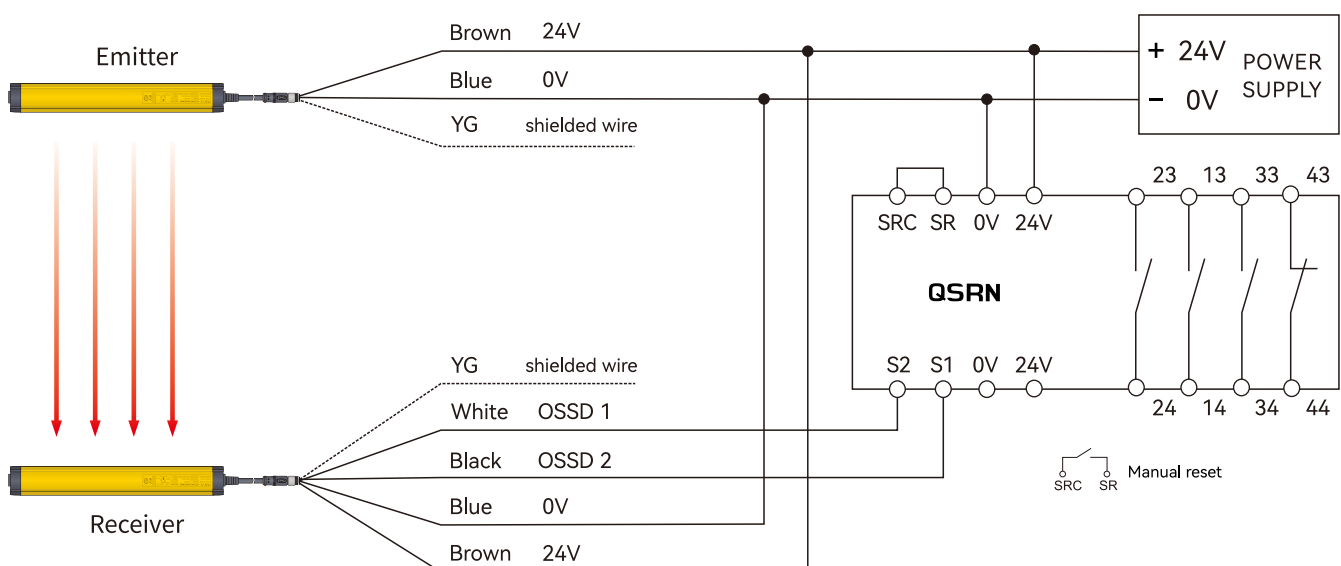
Product model	QSRN	QSRP
Safety output	NPN	PNP
Power supply	24V DC	
Tolerance of voltage	+10%/-20%	
Power dissipation	2.9 W	
Output		
Relay safety output	3NO+1NC	
Transistor signal output	<500mA 24V DC	
Relay contact capacity		
AC-1	6A/250V AC/1500VA	
AC-15	4A/240V AC	
DG-1	6A/24V DC/150W	
DG-13	4A/24V DC	
Maximum switching capacity	12A(Distributed on all safety output contacts)	
Contact resistance	<100mΩ	
Minimum load	10mA/5V	
Material of contact	AgSnO ₂ +0.2μmAu	
General parameter		
Output fuse (external)	5A gL/gG	
Release response time	<30ms(From input to output)	
Check the resistance at the end of the Input component(touch edge/carpet)	1kΩ~10kΩ	
Electrical life	80,000 times	
Class of pollution	2	
Operating temperature	-25°C~ 85°C	
Operating humidity	35%-85%(No ice or condensation)	
Impulse withstand voltage	2.5kV	
Level of protection	Enclosure IP30, terminal IP20, recommended for installation in cabinet or enclosure IP54	
Storage temperature	-40°C~ 105°C	
Shell material	Flame retardant PA66	
Size	117mm×100mm×22.5mm	

Explanation of typical wiring diagram

1. Safety light curtain connected to safety relay 2 circuit safety output wiring diagram



2. Optical synchronous safety light curtain connection QSRN safety relay wiring diagram



Overall dimensions

Unit: mm

