

# TECHNICAL DATA SHEET

## SAFETY RELAY QSRN series



### Introduction to QSRN series safety relay

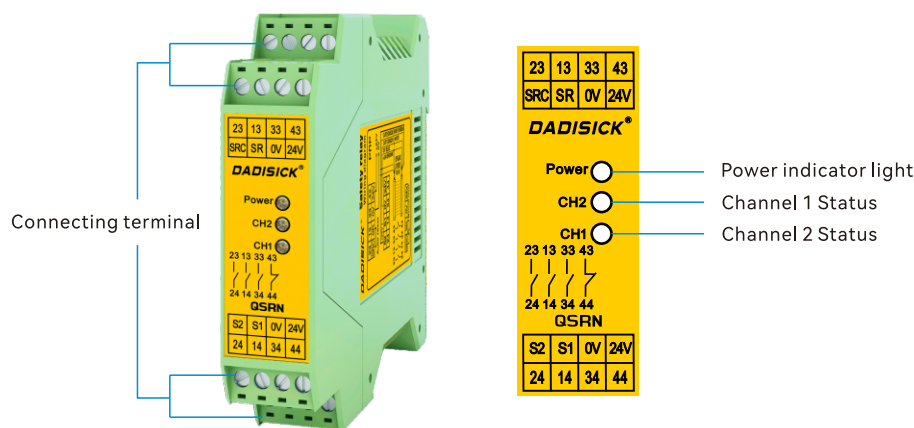
The QSRN safety relay module meets the safety requirements of EN/ISO13849-1Cat.4 and is suitable for monitoring various signals in industrial sites with high safety requirements – including emergency stop signals, safety door switch signals, safety light barrier signals, and safety light curtain signals.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

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

### QSRN - 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

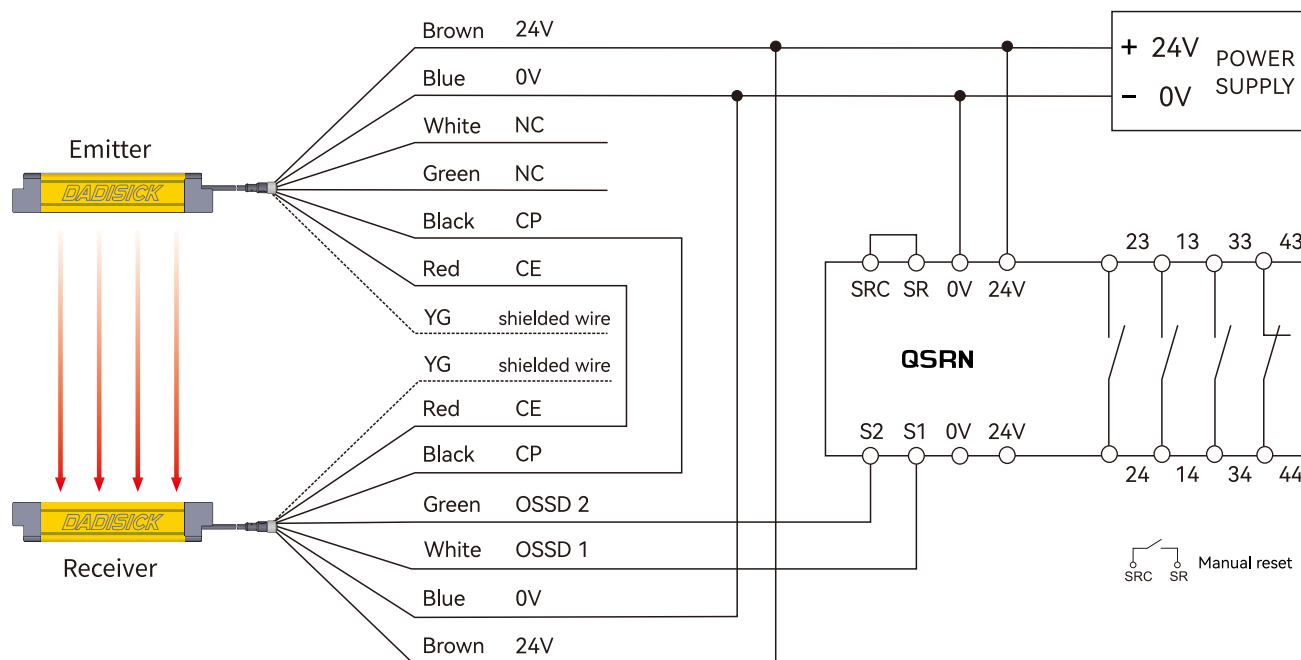


## Technical data

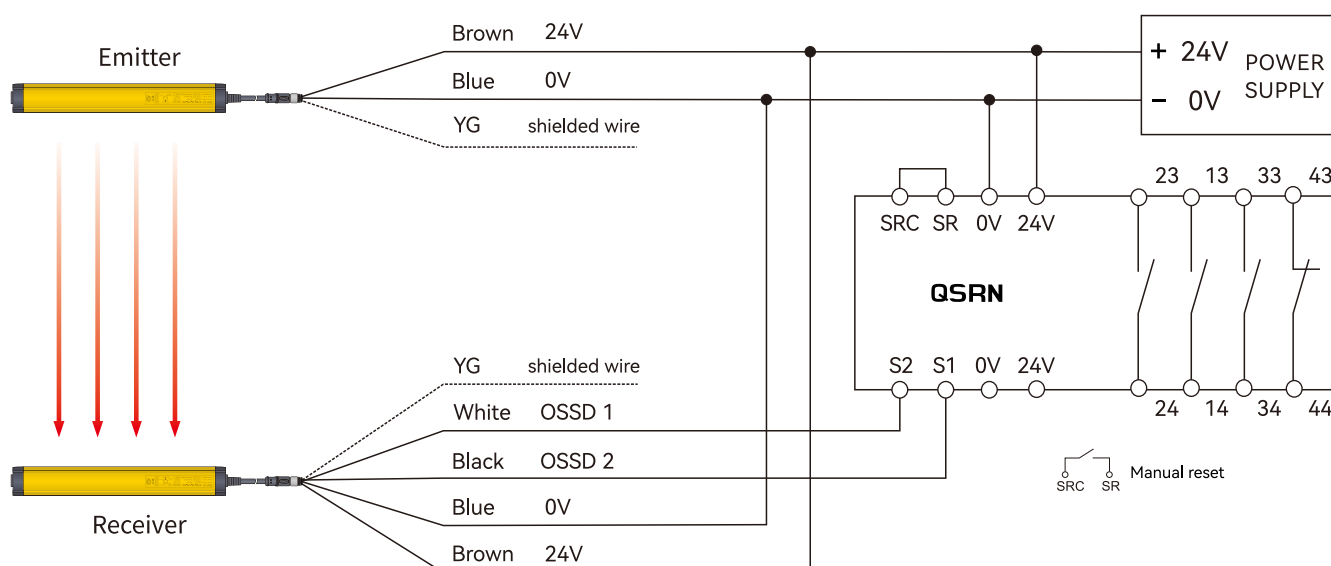
Power source	
Power supply	24V DC
Tolerance of voltage	+10%/-20%
Power dissipation	2.9 W
Output	
Relay safety output	3NO+1NC
Transistor signal output	<500mA 24V DC
Relay contact capacity	
AC-1	6A/250V AC/1500VA
AC-15	4A/240V AC
DG-1	6A/24V DC/150W
DG-13	4A/24V DC
Maximum switching capacity	12A(Distributed on all safety output contacts)
Contact resistance	<100mΩ
Minimum load	10mA/5V
Material of contact	AgSnO2+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

