

TECHNICAL DATA SHEET

SAFETY RELAY DK-QSRN & DK-QSRP series



Introduction to DK-QSRN / DK-QSRP series safety relay

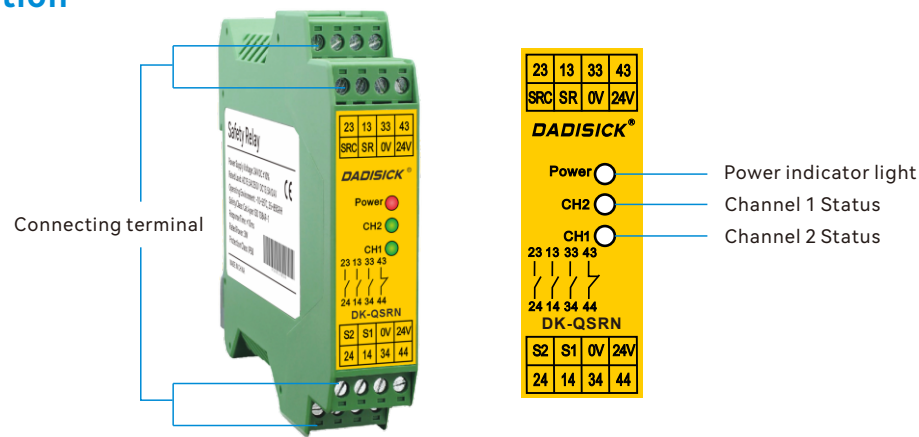
The DK-QSRN/P safety relay module meets the safety requirements of EN/ISO13849-1Cat.4 and is suitable for monitoring various signals in industrial sites with high safety requirements – including emergency stop signals, safety door switch signals, safety light barrier signals, and safety light curtain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

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

DK-QSRN / DK-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

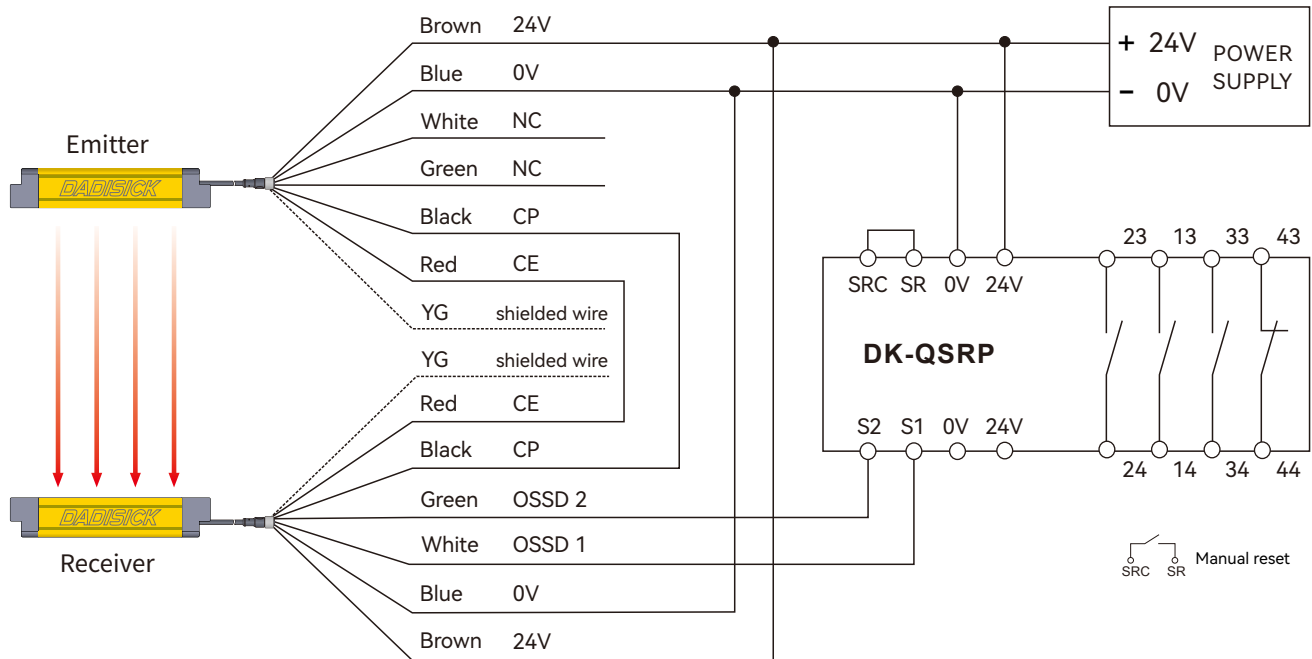


Technical data

Product model	DK-QSRN	DK-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 DK-QSRP safety relay wiring diagram

