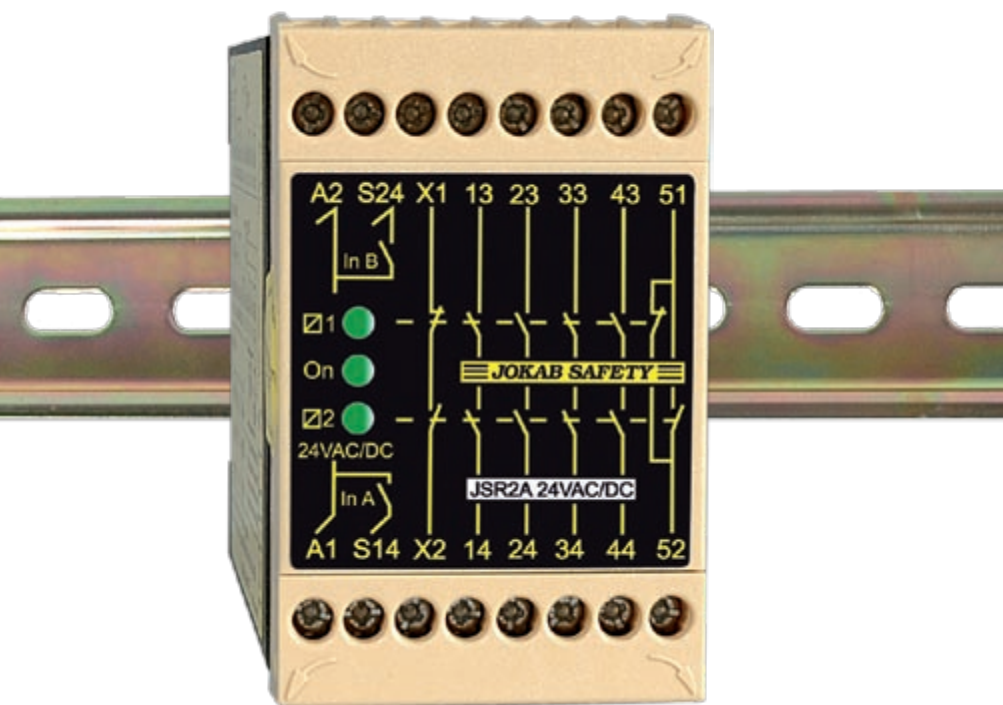


Expansion relay

JSR2A



More outputs

The JSR2A expansion relay is used to provide increased switching capacity and number of safety outputs to a safety relay. This means that an unlimited number of dangerous machine operations and functions can be stopped from one safety relay.

Greater current switching capacity

The JSR2A Expansion relay enables switching of up to 10 amps (AC/DC) per output contact.

Safety level

The JSR2A has twin stop functions, that is, two relays with mechanically positively guided contacts. A monitored stop function is achieved by connecting the test output (terminals X1 and X2) to the test or reset input on the safety relay which is to be expanded.

Regulations and standards

The JSR2A is designed and approved in accordance with appropriate directives and standards. See technical data.

Connection examples

For examples of how our safety relays can solve various safety problems, please see the section "Connection examples".

Approvals:

TÜV Nord  


Expansion relay with:

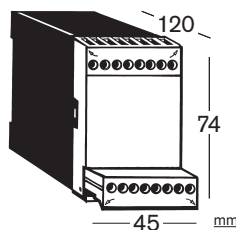
More safe outputs
Greater current switching capacity
Information output

Features:

Switching capacity of up to 10 A/250V per output
Width 45 mm
LED function indication
4 NO/1 NC relay outputs
5 supply versions
Supply 24 VDC/VAC, 48 VAC, 115 and 230 VAC
Quick release connector blocks

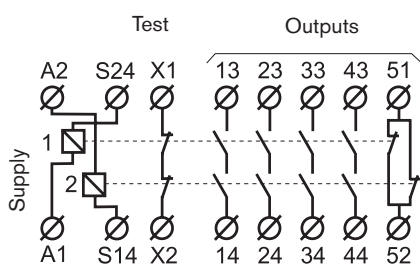
Technical data – JSR2A	
Manufacturer	ABB AB/Jokab Safety, Sweden
Article number/Ordering data	JSR2A 10 A 24 AC/DC 2TLJ010027R0100 JSR2A 10 A 115 AC 2TLJ010027R0400 JSR2A 10 A 230 AC 2TLJ010027R0500
Colour	Black and beige
Supply A1 - A2	24 VDC/AC, 48, 115, 230 VAC + 15%, 50-60 Hz
Power consumption	2,7W/2,4-4 VA
Relay Outputs	4 NO + 1 NC
Max. switching capacity	
Resistive load AC	8A/230 VAC/1840 VA 10A/115VAC/48VAC/24VAC/ 1840 VA
Inductive load AC	AC15 230VAC 4A (NO-contact) 1.5A (NC-contact)
Resistive load DC	8A/24 VDC/192 W
Inductive load DC	DC13 24VDC 1.2A (NO/NC-contact)
Max. total switching capacity:	16A distributed on all contacts
Min. load	10mA/10V/100mW (if load on contact has not exceeded 100 mA)
Contact material	AgSnO ₂ + Au flash
Fuses Output (External)	6A gL (8A fast if short-circuit current >500A)
Conditional short-circuit current (1 kA)	10A gG
Max. Input wire res. at nom. voltage	24 VDC/VAC: 100 Ohm 48/115/230 VAC: 200 Ohm
Mechanical operational Life	>10 ⁷ operations
Response time at	
deactivation (input- output)	<25 ms
activation (input - output):	<15 ms
Terminals (removable)	
Max. screw torque	1 Nm

Connection Area (max.)	
Single strand	1 x 4 mm ² or 2 x 1.5 mm ² /12AWG
Conductor with socket contact	1 x 2.5 mm ² or 2 x 1 mm ²
Mounting	35 mm DIN-rail
Protection class terminals	
Enclosure	IP 40 IEC 60529
Terminals	IP 20 IEC 60529
LED indication	
On 	Supply voltage
	Output relays 1 and 2
Impulse Withstand Voltage	2.5kV
Pollution Degree	2
Operating temperature range	-10°C to +55°C (with no icing or condensation)
Operating humidity range	35% to 85%
Weight	313 g
Performance (max.)	
Functional test: The relays must be cycled at least once a year	Category 4/PL e (EN ISO 13849-1:2008) SIL 3 (EN 62061:2005) PFH _d 1.55E-08
Conformity	2006/42/EC, 2006/95/EC, 2004/108/EC EN 954-1:1996, EN 62061:2005 EN ISO 13849-1:2008



Connector blocks are detachable (without cables having to be disconnected)

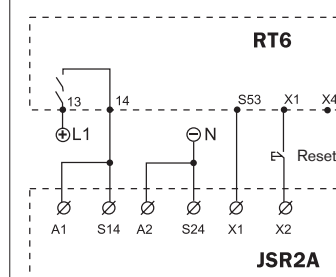
Technical description – JSR2A



The JSR2A has to be connected to a suitable safety relay in order to fulfill the necessary safety requirements (see chapter "Connection examples"). The Safety Relay controls and monitors the JSR2A unit. (The JSR2A can be connected for single or dual channel operation - see Electrical connection diagrams below). When the inputs to S14 and S24 close, internal relays K1 and K2 are activated. A stop signal is given, K1 and K2 drop, if the inputs are opened or during power failure.

To check that both the K1 and K2 relays drop during a stop signal they must be monitored. This is achieved by connecting X1 and X2 to the test or reset input on the safety relay which is expanded. K1 and K2 have mechanically positively guided contacts, therefore, if one of the output contacts should stick closed then the relay's contact in X1-X2 cannot be closed thus preventing a new ready signal being given to the safety relay.

Electrical connection – JSR2A



One channel expansion of RT6 with JSR2A connected for manual reset.

Dual channel expansion of RT6 with JSR2A connected for automatic reset.

