COMPLETE PRODUCT DASHBOARD

SCHMERSAL SRB-NA-R-C.33-24V

Safety Monitoring Module

SUPPLY

24 V AC/DC

Complete-model supply designation

SAFETY OUTPUTS

3 NO

13-14, 23-24 and 33-34

AUXILIARY

1 NC

41-42 monitoring only

RESPONSE

20 / 50 ms

Pick-up / drop-out maximum

SAFETY LOOP POSITION

E-stop / guard → T11-T12 / T22 → **Safety logic** → 13-14 / 23-24 / 33-34 → Actuator

ENGINEERING BOUNDARY

Validate the complete sensor-logic-actuator safety function, the machine risk assessment and the physical unit's applicable instruction revision.

Technical data by engineering domain

Documented function	Safety evaluation of emergency-stop devices and positive-break guard-door switches
Rated operating voltage	24 V AC/DC for the complete SRB-NA-R-C.33-24V designation
Safety contacts	3 normally open enabling contacts: 13-14, 23-24 and 33-34
Auxiliary contact	1 normally closed monitoring contact: 41-42; not for safety enabling circuits
Input channels	T11-T12 and T11-T22
Reset input	T33-T34 for the external reset circuit
Feedback circuit	X1-X2 for positively guided downstream contactors or relays
AC frequency	50/60 Hz when operated from AC
Power consumption	2.5 VA maximum
Enabling contact load	230 V AC, 6 A resistive; suppress inductive loads appropriately
Monitoring contact load	24 V, 2 A resistive; suppress inductive loads appropriately
Response timing	Pick-up 20 ms maximum; drop-out 50 ms maximum
Operating temperature	-25 to +45 deg C
Terminal connection	Self-lifting screw terminals for 0.5 to 2.5 mm2 conductors in the 03/01 installation sheet
Status indication	UB supply, Ui internal supply, K1 channel 1 and K2 channel 2 LEDs

Integration and application map



Emergency-stop circuits

Evaluates emergency-stop command devices in a machine safety circuit and opens all three enabling paths when the monitored input opens.

Guard-door monitoring

Processes positive-break position-switch signals on sliding, hinged or removable guards using the documented single- or dual-channel arrangement.

Contactor supervision

Uses X1-X2 as a feedback circuit for positively guided downstream contactors or relays used for contact reinforcement.

Legacy safety-panel service

Supports exact-model maintenance where terminal identity, external reset behavior and the installed machine safety validation must be preserved.

SYSTEM MATCHING CHECK

Match the complete model, monitored-device arrangement, supply, reset method, feedback circuit, downstream contactors, instruction revision and machine risk assessment. A safety relay is one element of the overall safety function.

Engineering questions and acceptance answers

What supply is specified for SCHMERSAL SRB-NA-R-C.33-24V?

The complete -24V designation is listed for 24 V AC/DC. Verify the physical label and the applicable wiring document before energization.

Which contacts perform the safety function on SCHMERSAL SRB-NA-R-C.33-24V?

The three enabling circuits are 13-14, 23-24 and 33-34. The 41-42 auxiliary contact is for monitoring and must not be used as a safety enabling contact.

How are the two monitoring channels connected on SCHMERSAL SRB-NA-R-C.33-24V?

Channel 1 uses T11-T12 and channel 2 uses T11-T22. Select the single- or dual-channel wiring example that matches the validated machine safety design.

Where are reset and feedback wired on SRB-NA-R-C.33-24V?

The external reset circuit uses T33-T34. The X1-X2 feedback circuit supervises positively guided downstream contactors or relays.

What do the front LEDs indicate on SCHMERSAL SRB-NA-R-C.33-24V?

UB reports the operating supply, Ui reports the internal operating voltage, and K1 and K2 show the two internal safety-channel states.

What enabling-contact load is documented for SCHMERSAL SRB-NA-R-C.33-24V?

The installation sheet specifies 230 V AC at 6 A for a resistive load. Inductive loads require suitable suppression and circuit protection.

What response times apply to SCHMERSAL SRB-NA-R-C.33-24V acceptance testing?

Published values are up to 20 ms pick-up and up to 50 ms drop-out. Validate the complete sensor-logic-actuator stopping function for the installed machine.

Which checks are required before releasing SCHMERSAL SRB-NA-R-C.33-24V to service?

Confirm secure mounting, intact conductors and terminals, an undamaged enclosure, correct sensor response, correct relay response, reset operation and feedback-loop supervision.

RELEASE PRINCIPLE

Record the verified supply, input behavior, reset, feedback, all three enabling contacts and the final machine stopping response before release.

Product precautions

1. De-energize the module and every external contact circuit before installation, removal or conductor work.
2. Confirm the complete SRB-NA-R-C.33-24V designation and the physical unit's applicable instruction revision.
3. Use A1-A2 only with the documented 24 V AC/DC supply and verify the protective-earth requirement for the installed AC arrangement.
4. Keep the two monitoring channels on their documented terminals and do not improvise cross-short behavior from another SRB variant.
5. Use 41-42 only as the auxiliary monitoring contact; never place it in a safety enabling circuit.
6. Wire T33-T34 and X1-X2 according to the selected reset and feedback arrangement before commissioning.
7. Apply suitable suppression to inductive loads and keep every contact within the documented switching duty.
8. Function-test sensors, all three enabling contacts, downstream actuators, reset and feedback before release to service.

LED QUICK CHECK

UB: supply present | Ui: internal operating voltage | K1: channel 1 state | K2: channel 2 state

Source ledger and related portfolio

CANONICAL MANUFACTURER SOURCES

Schmersal / ELAN - SRB NA-R-C.33 Operating Instructions, English translation, 2009.

Schmersal USA - Guard Door and Emergency-Stop Safety Controllers SRB-NA-R-C.33, Installation Instructions, file iic33, 03/01.

Related products on ApterPower

SCHMERSAL SRB-NA-R-C.35-CH2A-24V — View SCHMERSAL SRB-NA-R-C.35-CH2A-24V page

Safety controller in the same legacy SRB product family

Siemens 3SK2122-1AA10 — View Siemens 3SK2122-1AA10 page

Configurable SIRIUS safety relay basic unit

Siemens 3RN2011-1BA30 — View Siemens 3RN2011-1BA30 page

SIRIUS thermistor motor protection relay

Talk to an Apter Power specialist

WHATSAPP / PHONE +86 180 3023 5313

EMAIL sales13@apterpower.com

WEBSITE www.apterpower.com

Share the exact model, installed circuit, required quantity and destination for a model-specific quotation.

SRB-NA-R-C.33-24V