SAFETY-MONITORING DOSSIER

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

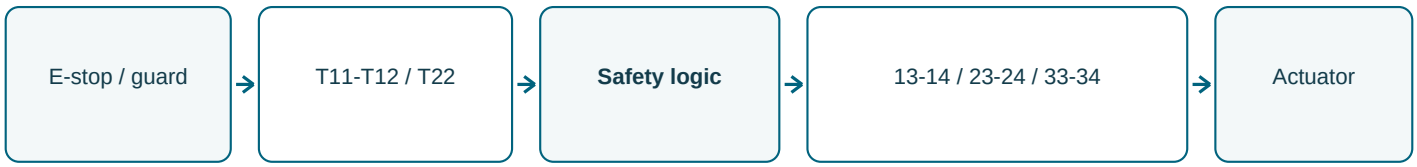
Safety Monitoring Module

24 V AC/DC | 3 safety contacts | Emergency stop / guard

Documented role

SCHMERSAL SRB-NA-R-C.33-24V evaluates emergency-stop command devices and positive-break guard-door switches inside a machine safety circuit. Opening either monitored input causes the three enabling circuits to open.

Functional position

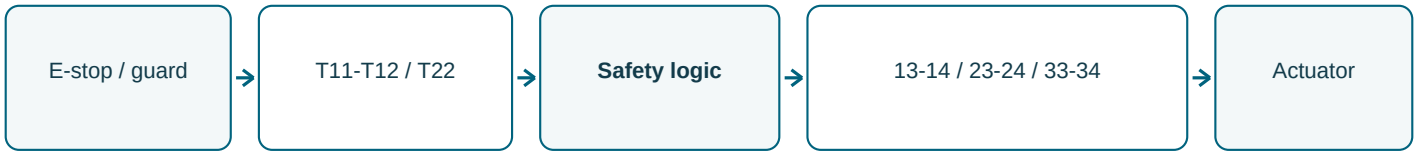


ENGINEERING BOUNDARY

This reference consolidates exact-model technical evidence. The machine builder remains responsible for validating the complete sensor-logic-actuator safety function, applicable standards and the physical unit's instruction revision.

Terminal architecture and signal path

Use the wiring example that matches the validated single- or dual-channel machine design.



SUPPLY

- A1 - operating supply
- A2 - supply return
- PE - functional earth where required

MONITORED INPUTS

- T11-T12 - input channel 1
- T11-T22 - input channel 2

START AND FEEDBACK

- T33-T34 - external reset
- X1-X2 - feedback circuit

OUTPUTS

- 13-14 - first enabling circuit
- 23-24 - second enabling circuit
- 33-34 - third enabling circuit
- 41-42 - auxiliary monitoring contact

AUXILIARY CONTACT LIMIT

Contact 41-42 is a monitoring output only and must not be used in a safety enabling circuit.

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

Configuration, diagnostics and release logic

1	**Identity**	Match the complete model and the installed instruction revision.
2	**Isolation**	De-energize A1-A2 and all external contact circuits.
3	**Inputs**	Verify T11-T12 and T11-T22 against the machine safety drawing.
4	**Reset**	Confirm the selected external reset wiring at T33-T34.
5	**Feedback**	Verify X1-X2 supervises the intended positively guided contactors.
6	**Outputs**	Test 13-14, 23-24 and 33-34; observe 41-42 separately.
7	**Indication**	Confirm UB, Ui, K1 and K2 follow the expected operating sequence.
8	**Release**	Record the controlled functional test of sensors, logic and actuators.

LED QUICK CHECK

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

Engineering questions

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.

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

Canonical source record

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.

Talk to an Apter Power specialist

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

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