Application

The contact extension FMSC-R / 2R is used for extension,
Contact amplification and galvanic isolation of electronic
Safety outputs (OSSDs).
This allows to switch different potentials
and electric circuits, even with high loads.

The device offers depending on the type:
- FMSC-R offers a relay function according to
  PL e according to ISO 13849-1.
- FMSC-2R offers two relay functions according to
  PL e according to ISO 13849-1.

3 NO contacts are provided per relay function,
In addition, there is an NC contact for monitoring.

Scope of operation

- Integration of electronic safety outputs
  into other potentials, without loss of safety

- 1 or 2 safety circuits each with 3 undelayed positively driven
  safety contacts

- Feedback circuit for relay monitoring at the control unit

- Diagnostic LEDs for the switching status of the safety contacts
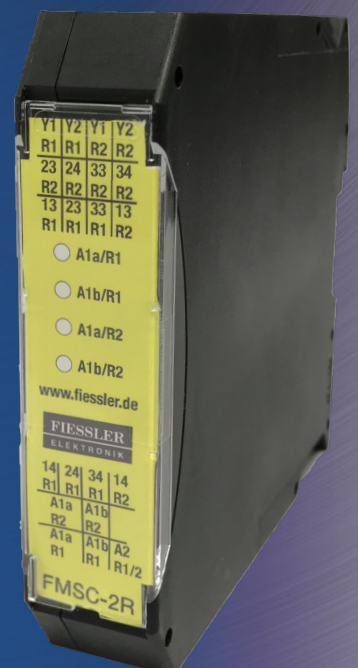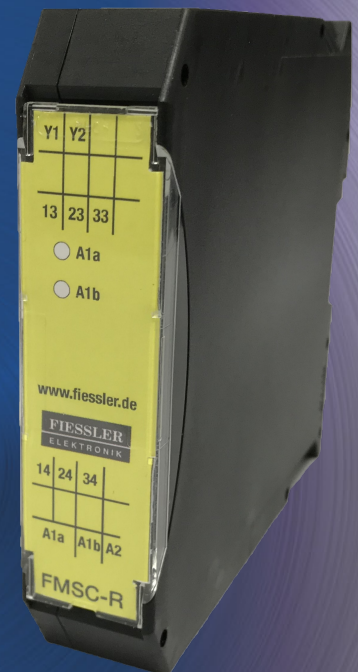
Product recommendation

Suitable accessories for safe contact expansion FMSC-R

 can be found at

www.fiessler.de

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ELEKTRONIK

FMSC-R/2R

safe
contact extension

Technical specification — FMSC-R / 2R

	FMSC-R / 2R
Power supply	24V DC
Tolerance range	18 ... 30,0 V DC max. 10% voltage ripple
Output contact	safety contact: 3 / 6
Braking capacity at 240V AC 13 14, 23 24	Imin: 0,01A, Imax: 8A resistive
Braking capacity at 160V AC 33 34	Imin: 0,01A, Imax: 8A resistive
Braking capacity at 24V DC 13 14, 23 24, 33 34	Imin: 0,01A, Imax: 8A
Recommended external Supply circuit fuse	T1,0A
Recommended external break contact fuse	8A slow

Times — FMSC-R / 2R

	FMSC-R / 2R
Trigger time	12 ms
Fall time	8 ms

mechanical specification — FMSC-R / 2R

	FMSC-R / 2R
Terminal connection	screw type
Design size (hxbxt) without connectors	114,5mm x 22,5mm x 99mm
Installation on top hat rail	DIN 50 022
weight (without connectors)	130g
Operating temperatur	-40°C...+80°C
Mechanical lifetime	$>20 \times 10^{6}$

Operation modes — FMSC-R / 2R

Input circuit	FMSC-R	FMSC-2R
Safety controller FMSC	SO1, 0V → A1a, A1b, A2 (FMSC-R)	SO1, SO2, 0V → A1a/R1, A1b/R1, A1a/R, A1b/R2, A2 R1/2 (FMSC-2R)
safety devices like Light curtains from ULxT and BLxT series	SO1, SO2, 0V → A1a, A1b, A2 (FMSC-R)	OSSD1, OSSD2, 0V OSSD1, 0V OSSD2 → A1a/R1, A1b/R1, A1a/R, A1b/R2, A2 R1/2 (FMSC-2R)

Feedback circuit

Ixx are inputs of the safety device that monitor the feedback loop.

	FMSC-R	FMSC-2R
	24V DC → Y1, Y2; Ixx/EDM (FMSC/xLVT)	24V DC → Y1/R1, Y1/R2, Y2/R1, Y2/R2; Ixx/EDM, Ixx/EDM (FMSC/xLVT) (FMSC-2R)
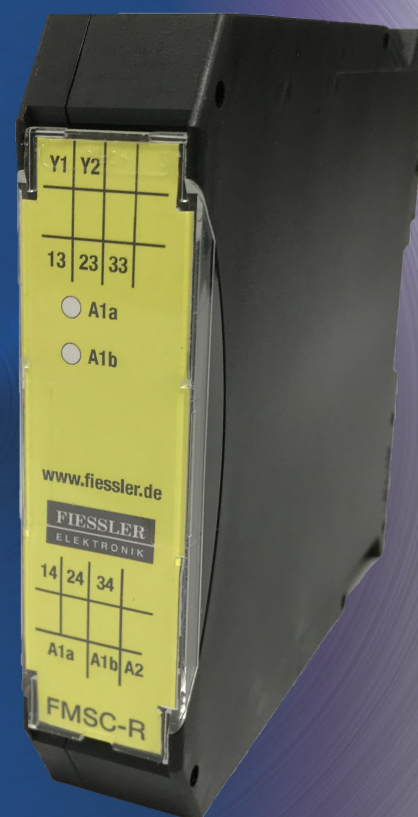
Features and benefits   FMSC-R

- **One** relay function PL e according to ISO 13849-1.

- 3 NO contacts and 1 NC contact

- 2 diagnostic LEDs

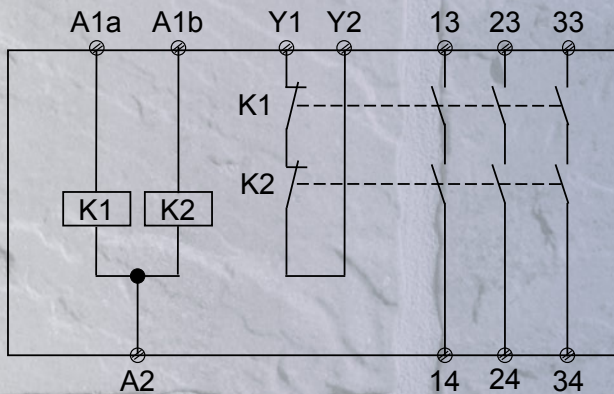**FIESSLER**
E L E K T R O N I K

FMSC-R / 2R
safe contact
extension

technical data
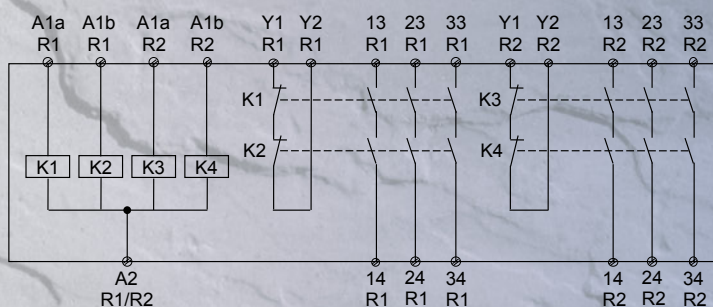
Block diagram   FMSC-R

Features and benefits   FMSC-2R

- **Two** relay functions PL e according to ISO 13849-1.

- Each channel: 3 NO contacts and 1 NC contact
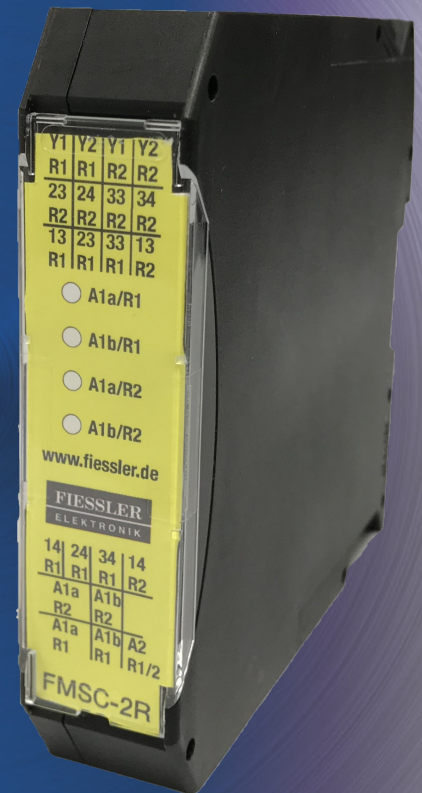
- 2 diagnostic LEDs
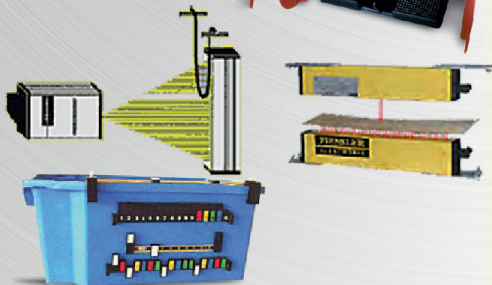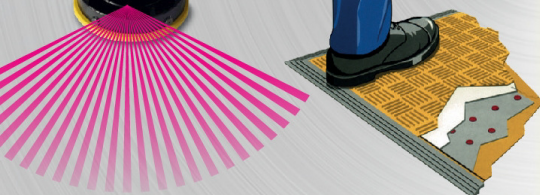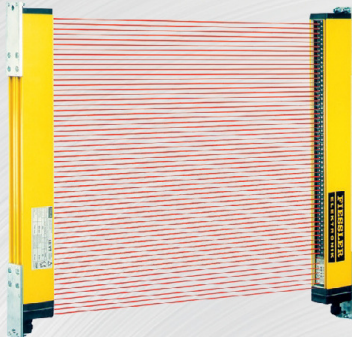
Block diagram   FMSC-2R

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The delivery programme

Innovative solutions

Safety light curtains

Type 4, SIL 3, PL e

high range up to 60 m

Very short response time as of 2 ms

Blanking and cascading

Type 2, SIL 1, PL c

Protective field height up to 2500 m

Finger and hand guard, entrance protection

Safety controller integrated

AKAS® press brake safety system

fully automatic adjustment after tool change

laser-optics safety light grid

innovative finger guard through continuous bending without stop

FMSC safety PLC

Emergency shutdown (fast shut down) max. 0.5 ms

Expandable with up to 16 expansion modules

Easiest programming

Cat 4, SIL 3, PL e

Safety contact mats

Type 3, SIL 2, PL d

Series connection of up to ten mats

Load capacity up to 2000N

single component casting also in several colors

individual sizes and shapes

Polyurethane, aluminum or Stainless steel surface with integrally cast ramp rail available

Safety laser scanner

Cat 3, SIL 2, PL d

Protective field 4 m, range 7 m

Metering section 50 m range

Easy assembly

Warning field 15 m

Several programmable sections

Safety foot pedals

Single-pedal or double-pedal

Controlling, detecting and measuring

Measuring light curtains

Loop sensors

Directional counting light barriers

Hole detectors

Encoding strips

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