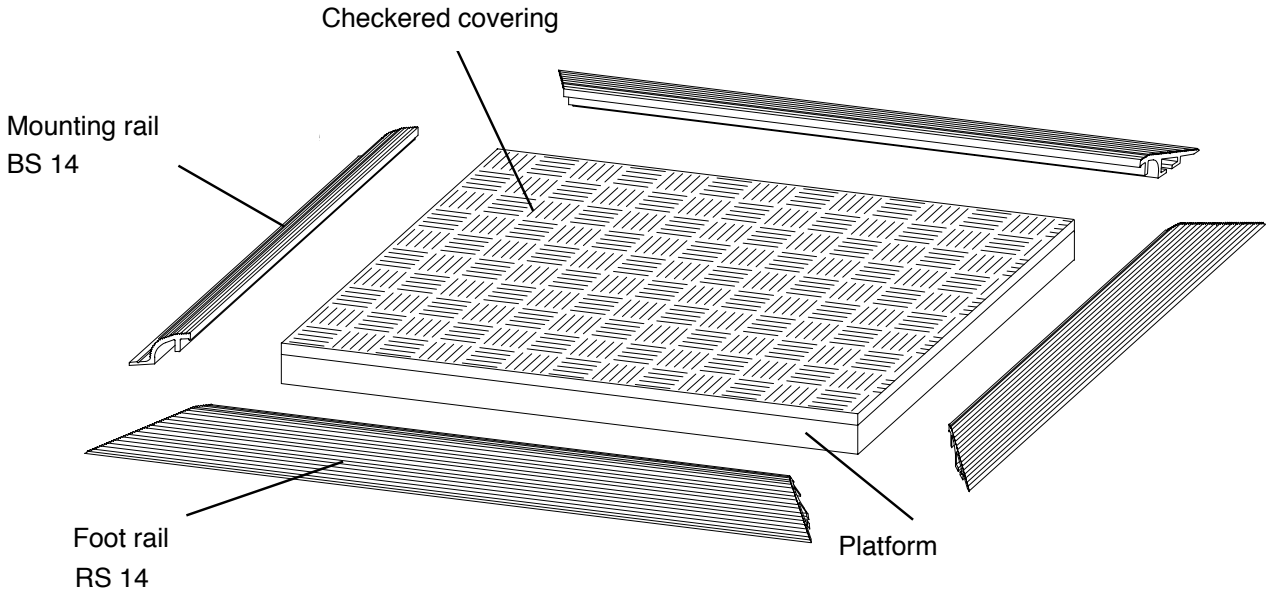
FIESSLER ELEKTRONIK

Data sheet

Safety contact mat STM



The safety contact-mat STM is used for safeguarding sections in hazardous areas of working for machinery, e.g. presses, robots and other types of swiveling equipment. Walking on the mat triggers a control signal to the immediate- stop device of the potentially hazardous motion. This quick-action contact-making is made possible by surface-area switch on the inside of the mat that is encased in polyurethane to ensure impermeability to water. A platform made of plastic or metal serves as the carrier. The surface can be protected by adhesion-bonding an anti-slip rubber covering to thereby give high grip to the surface. Checkered surfaces in aluminum or high-grade steel can be used for high mechanical demands placed on the upper mat surface. Special evaluation units monitor the switching function of the reliable safety contact-making mats.

Safety category Type 3

Individual sizes available

Up to 10 mats in series connectable

Very short response time - Static load up to 2000 N

Rubber,- Aluminium- or Stainless steel surfaces available

TÜV

ZERT
DIN EN ISO 9001
Reg.Nr. 96007

UL LISTED

CE

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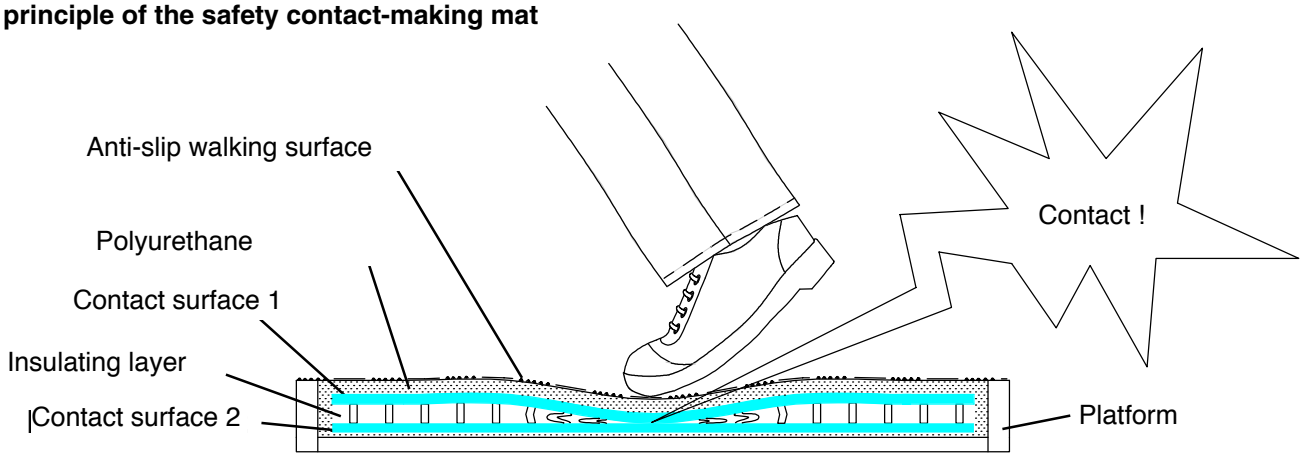
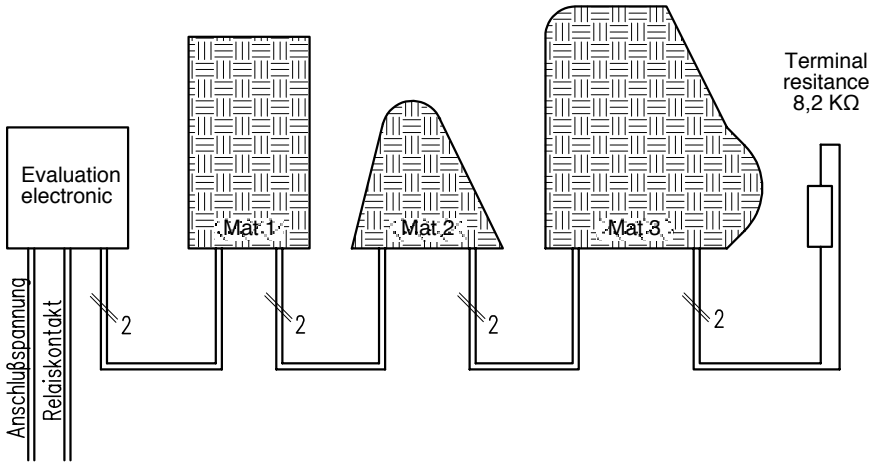
The principle of the safety contact-making mat



The structure

The basic design of the STM safety contact mat is a platform made of PVC, aluminum or stainless steel that provides good protection against a wet underground. A surface-area switch is installed in this platform in a sandwich-type construction and includes two two-core cable connections to the outside. The switch consists of two conductive plates that are separated from each other by a perforated insulating layer. This structure is encased in polyurethane for permanent protection against moisture. Special anti-slip coverings made of rubber or metal can be added at the factory for mats for the walking surface, as well as for specific environmental conditions such as oils, acids and lye's. Fixation to the floor is by means of special foot rails or by using a mounting rail made of aluminum. A mounting frame can be supplied for laying flush with the floor.



Observe under all circumstances:

- Up to 10 contact-making mats wired in series may be connected to one evaluation unit. The maximum total area shall thereby not exceed 10 m2!
- The total conductor routing shall not exceed 75 m.
- The 8.2 KΩ terminal resistance must be connected to the last mat when several mats are connected in series!
- Please inquire separately for mats with recesses or special shapes.

Signal processing

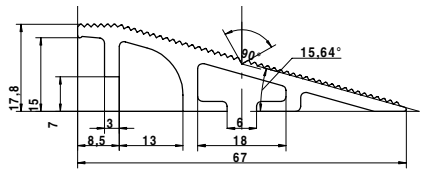
The STM safety contact-making mat is fitted with two two-core connecting cables and offers the possibility of connecting several mats in series up to a maximum total area of 10 m2. One end of the cable is connected to the evaluation electronics and the terminal resistance is connected to the other end (prepared accordingly at the factory). The electronics now monitor the entire conductor route, including the mats, through to the terminal resistance. The contact-making surfaces make contact in the event of external forces acting on the mat and the resistance is bridged. This immediately causes a signal within the electronics that is then given as a potential-free output for contact-making by the relay. The entire switching arrangement is monitored at the same time for cable rupture or manipulation.

Technical specifications for safety contact mats

Max. dimensions:	2500 mm x 1400 mm
Standard dimensions:	1000 mm x 750 mm
	1000 mm x 1000 mm
	1000 mm x 1500 mm
Construction height:	10 mm without covering
	14,5 mm with covering
Weight:	approx. 15 kg/m² (without covering)
Inactive border:	max. 10 mm on all sides
Switching pressure:	Round body 80 mm ∅ = approx. 150 N
Static load:	max. 2000 N over 80 mm ∅ *
Response time:	max. 25 ms * *** Tested according to EN 1760-1**
Switching cycles:	mind. 1,5 Mio.*
Material:	Polyurethane, yellow
Protection class:	IP 65
Temperature range:	0 °C bis + 60 °C
Chem. resistance:	Oils, greases - good
	10 % acid - resistant
	10 % lye - resistant
Maintenance:	The mat is maintenance-free.
	Functional testing on an annual basis is recommended
Connecting cable:	Standard: Non-pluggable, 2 x 0,34 PU-Cover black
	Also available in versions with M8 plug-in connections

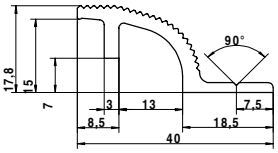
Technical spezification foot rail RS 14

Material:	Aluminium AlMgSi 0,5
Standard Delivery lengths:	2 m / 6m
Weights:	approx. 788 g/ per m



Technical spezification mounting rail BS 14

Material:	Aluminium AlMgSi 0,5
Standard Delivery lengths:	2 m / 6m
Weights:	approx. 408 g/ per m



Delivery program

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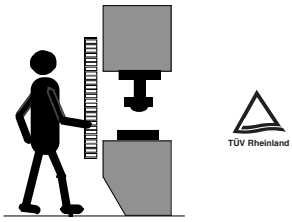
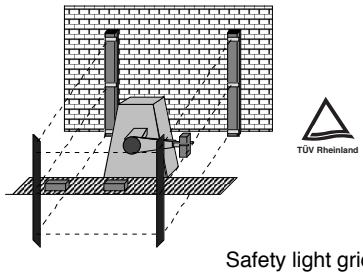
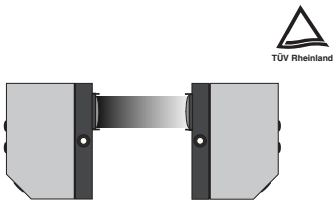


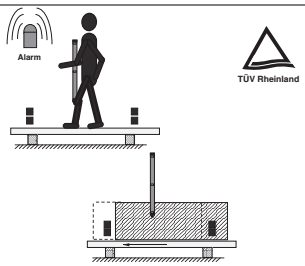
Safety light curtain



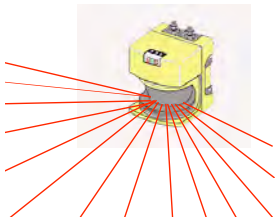
Safety light grid



Single safety light beam

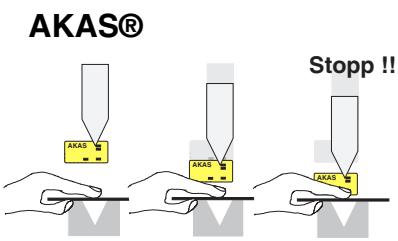


Saftey light grid with muting function



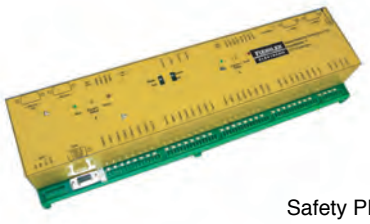
Proximity scanner

Safety mats

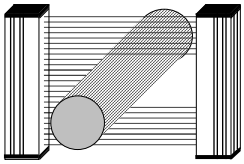


Press brake safety system

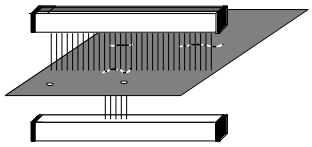
Safety foot pedal



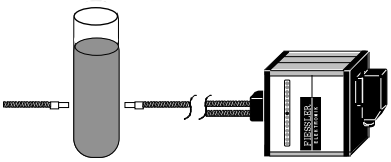
Safety PLC
Safety controllers



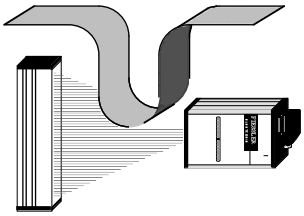
Measuring and controlling light curtains



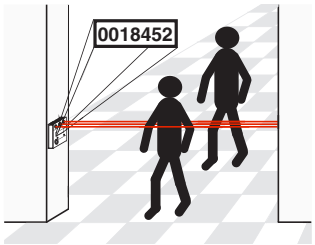
Hole detectors



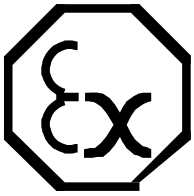
Turbidity sensors

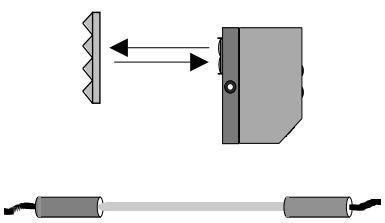


Analogue loop sensors



Counting light barriers





Light barriers for general purposes

Your application