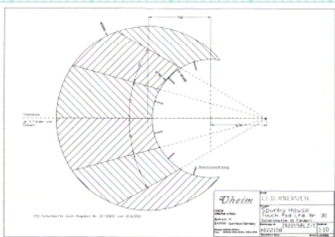
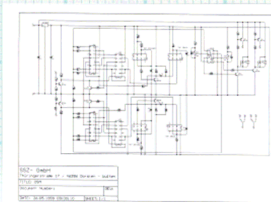
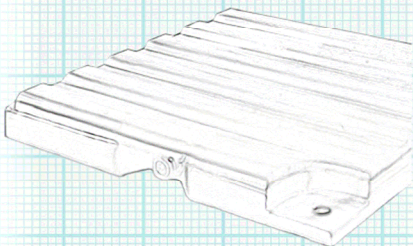
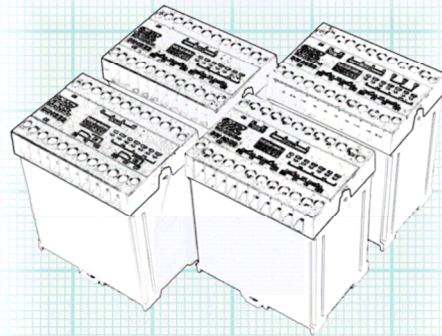
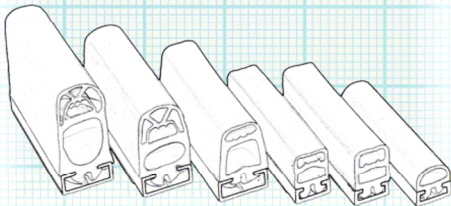
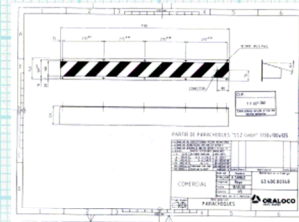
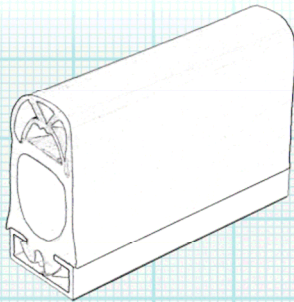
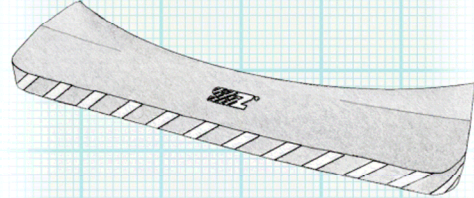
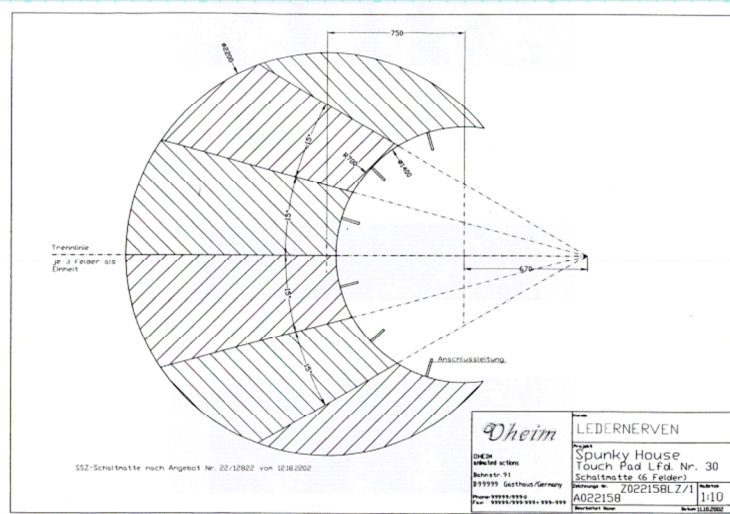
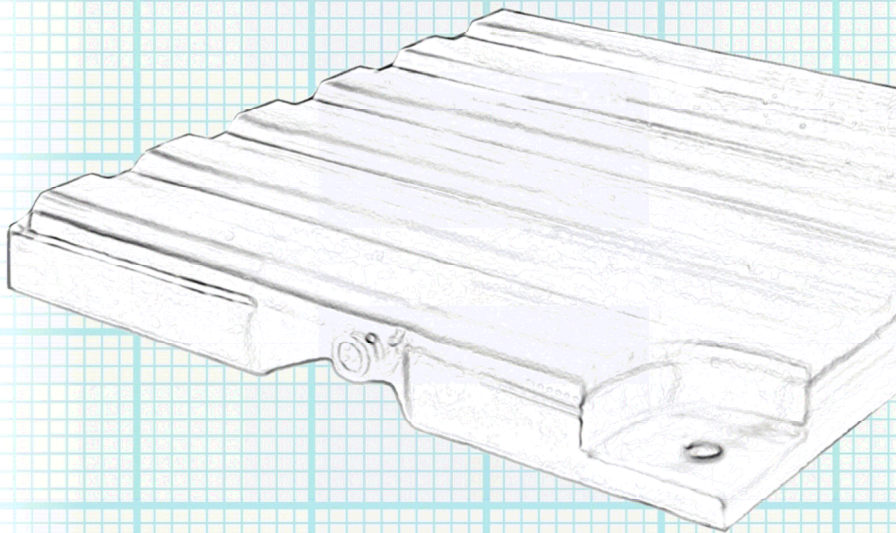


Quality



Made in Germany

Safety Mats



Safety Mats

Safety Mats are pressure sensitive devices for protection of danger points and large danger areas.

The dangerous area is covered with safety mats.

Therefore it is not possible to enter this area without exciting a break-signal.

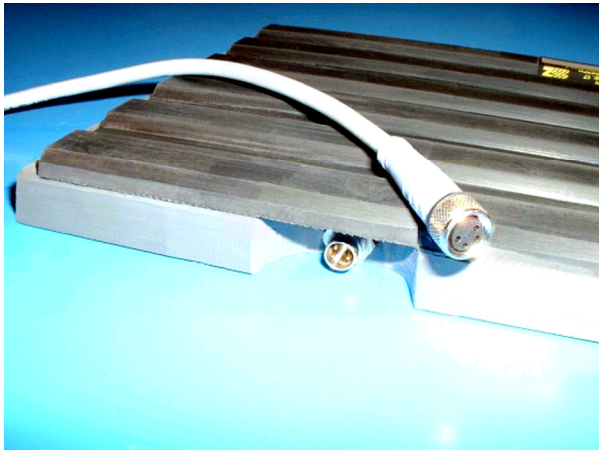
SSZ-safety mats are manufactured on customer requirements up to a size of 3.000 x 1.500 mm in one piece.

Within this maximum dimensions the shape is selectable.

Round or polygonal safety mats can be manufactured.

Cut-outs or slanted safety mats can be implemented.

For danger areas above 3.000 x 1.500 mm several safety mats can be connected in series.



The aluminium-edging is used as a stumble protection at the same time is used for the mounting of the safety mat.

If no aluminium-edging is required it is possible to fit the safety mats with fastening holes positioned on customer demands.

SSZ safety mats are made for an industrial ambience and therefore highly reliable.

This reliability is realised through usage of the SSZ transducer as well as NBR-rubber surface.

SSZ-safety mats are passable with air-tyred vehicles up to a load of 5.000 kg.

If these features are not needed; SSZ offers the safety mat type LC.

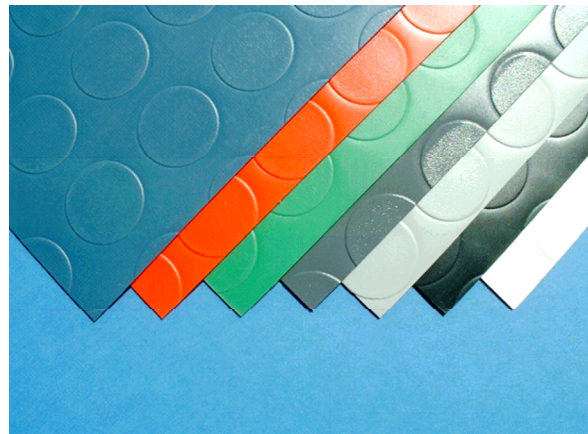
This safety mats are equipped with the SSZ sensor element but instead of NBR-rubber the LC mats are covered with PVC. This type is not waterproof and can be not passed by any vehicle.

Different colours are available for the PVC surface.

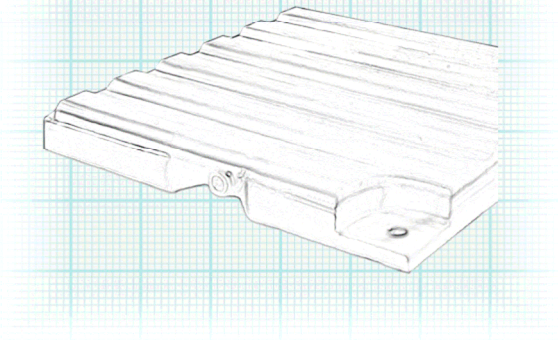
The SSZ safety mat **type BAT** is designed for heavy duty applications in chemical (problematic) environments.

This safety mat is made of welded steel frames which are covered with aluminium tear drop sheets.

As control element safety positioning switches are used.



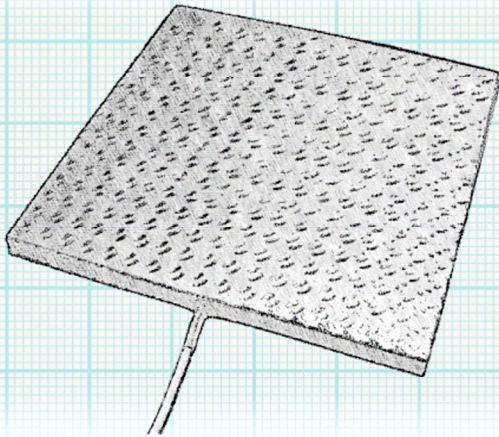
Safety Mats



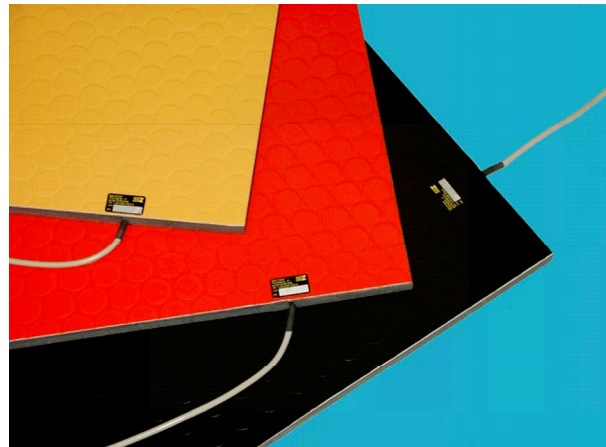
Height	21 mm, 14 mm excluding NBR-surface
Dimensions	On customer requirement, but max. 3.000 x 1.500 mm in one piece
Material	Base : PVC Surface: NBR-rubber (on demand different)
Responsive distance	~4 mm
Responsive force	~120 N (test body Ø80mm)
Max. load	3.000 N/cm ² max. 50.000 N/dm ²
IP protection	IP 65
Ambient temperature	0° ... +60° C
Weight	~24 Kg/m ²
Shape	Angles, cut-outs, round on customer requirement
Mounting	Aluminium-edging or fastening holes
Electrical wiring	4-pin - M8 build-in connector at any required side of mat or fixed 4-wire cable in any length.
Wire dimension	4 x 0.38 mm ²
Specialities	High endurance safety-mat, passable with pneumatic tyred vehicles up to a weight of 5.000 kg.



Safety Mat Type: LC

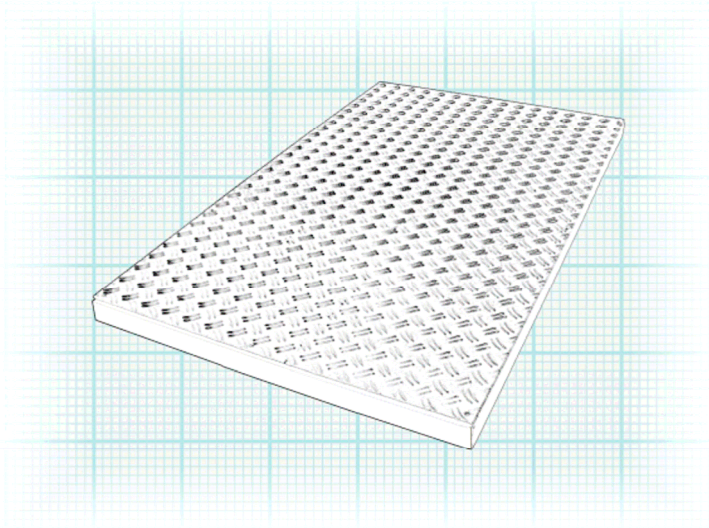


Height	14 mm
Dimensions	On customer requirement, but max. 3.000 x 1.500 mm in one piece
Material	Base : PVC Surface: soft-PVC (On demand different)
Responsive distance	~4 mm
Responsive force	~120 N (test-body 80mm Ø)
Max. load	1.000 N/cm ² max. 3.500 N/dm ²
IP protection	IP 54
Ambient temperature	0° ... +60° C
Weight	~14 Kg/m ²
Shape	Angles, cut-outs, round on customer requirement
Mounting	Aluminium-edging or fastening holes
Electrical wiring	fixed 4-wire cable in any length
Wire dimension	4 x 0.38 mm ²
Specialities	Light duty safety-mat, not passable by vehicles

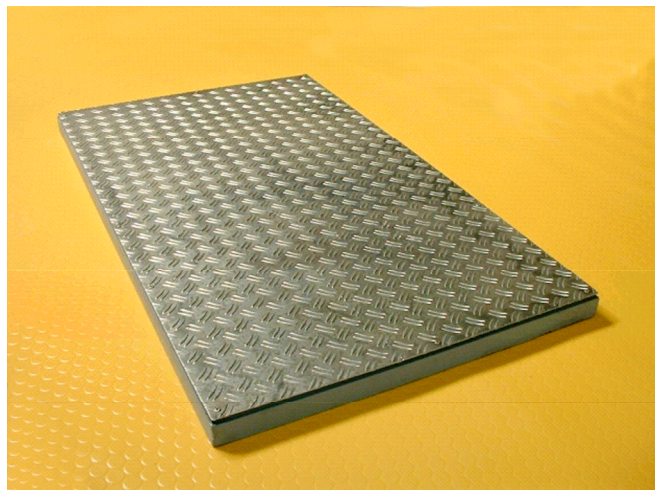


Safety Mat

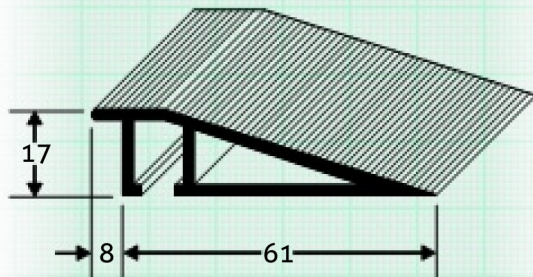
Type: BAT



Height	56 mm
Dimensions	On customer requirement, but max. 3.000 x 1.500 mm in one piece
Material	Base : steel -frame Surface: Aluminium-sheet
Responsive distance	~4 mm
Responsive force	~140 N (test body Ø 80mm) 2.000 N/cm ²
Max. load	max. 3.000 N/dm ²
IP protection	IP 65
Ambient temperature	0° ... +60° C
Weight	~33 Kg/m ²
Shape	Rectangular
Mounting	Fastening holes
Electrical wiring	Fixed 4-wire cable in any length
Wire dimension	4 x 0.38 mm ²

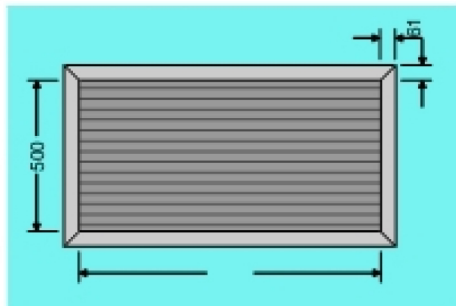


Safety Mat accessories Edging / corner connector



Application	Non switching stumble protection and fastening for safety-mats (except type BAT)
Material	Anodised aluminium EV-1 in silver (standard) or gold (on request)
Length	max. 6.000 mm in one piece
Height	17 mm
Max. load	Passable up to 5.000 kg
Weight	0.8 Kg/m
Mounting	Fastening holes and corner connectors

To calculate the overall dimensions of a safety-mat including edging, for each side with edging must be added 61 mm.



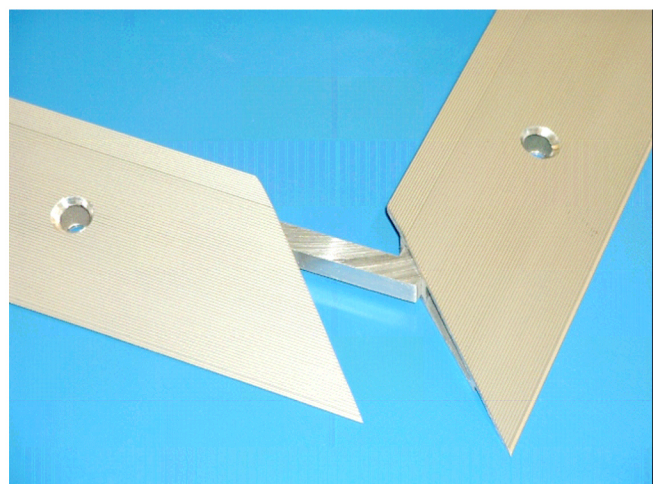
Example:

Safety-mat 1.000 mm x 500 mm with all-around edging.

For the lengths
1.000 mm mat + 61 mm edging left + 61 mm edging right = 1.122 mm

For the width:
500 mm mat + 61 mm edging top + 61 mm edging bottom = 622 mm

The resulting overall dimensions: 1.122 mm X 622 mm



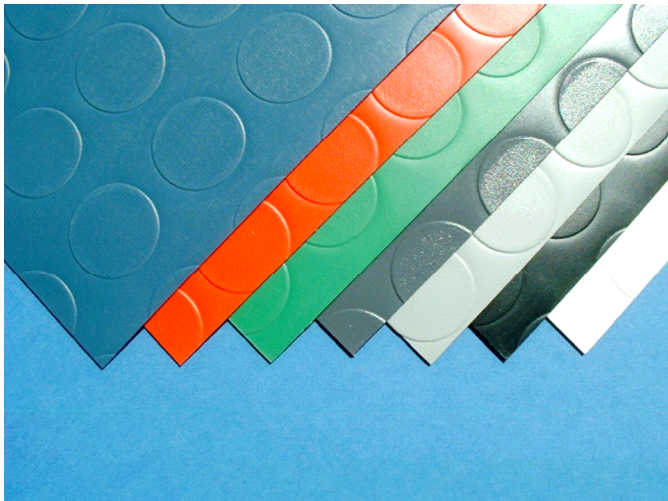
Safety Mat accessories

Cable-connectors/ surfaces

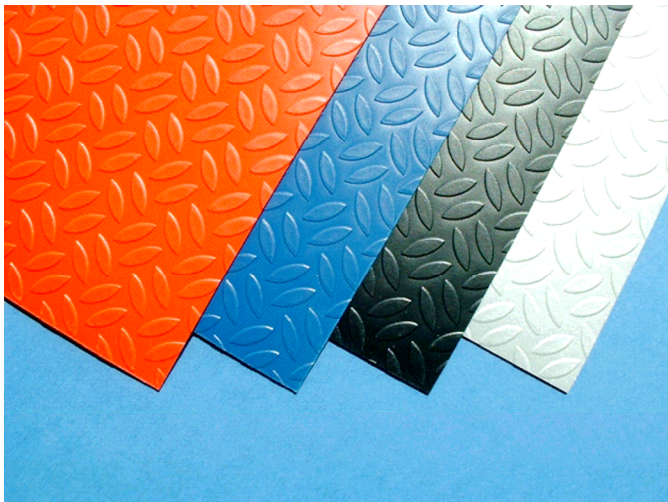
Cable-connector

Female connector thread M8 , 4-pin,
4 x 0.38 mm² wire-profile,
90° angled or straight, length:

2 m
5 m
10 m
15 m
20 m
30 m



PVC-nap pattern surface



PVC-teardrop surface

Surface

NBR-rubber (no illustration)

Size: 6 mm

Material: NBR-rubber

Colour: Black

PVC- nap pattern or teardrop-surface
in various colours

Size: 1.5 mm

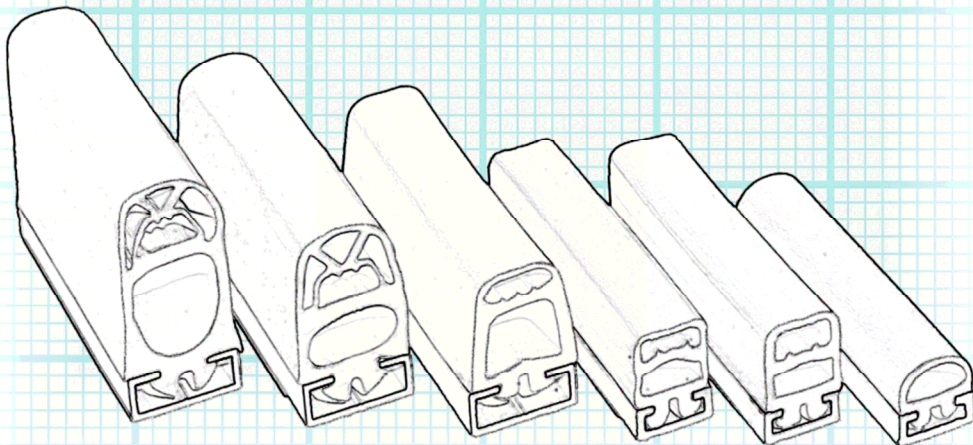
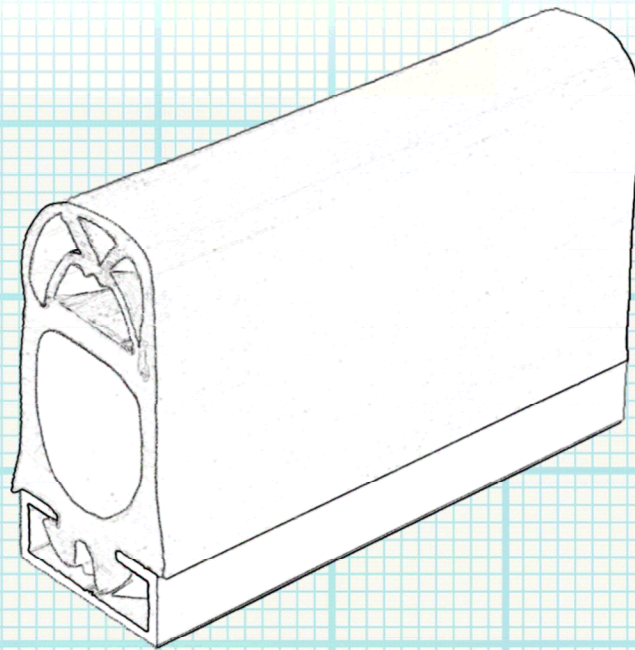
Material: Soft-PVC

Colour

nap pattern: different colours on
request

teardrop: different colours on request

Safety Edges



Safety Edges

Safety edges serve as protective devices on crushing and shearing points, which are formed, for instance, by automatically driven doors and gates.

When an automatically driven door moves closer, it creates dangerous space between the mobile piece and either an obstacle existing on the trajectory or the final position (fig. 1)

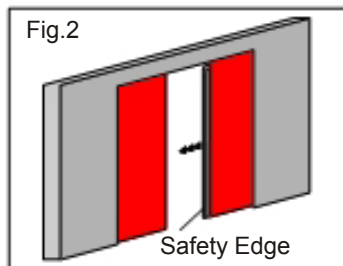
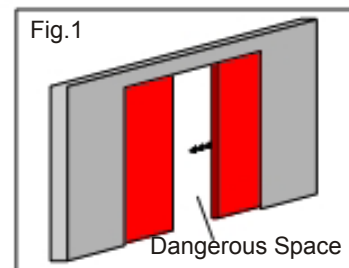
It is possible to safeguard that dangerous zone using a dead man's switch. However, while applying the dead man's switch it is no longer possible to use the door in an automatic mode of operation due to the fact that an operator will have to control movements by keeping on pressing a button. For this case the right solution is to use a safety-edge.

Application of a safety edge represents a more elegant Solution. The safety edge is installed on the mobile part of the door and connected to its control unit. Should the door move towards an obstacle, the switching signal will release and the emergency stop shall start.

In this way you can guarantee a safe automatic mode of operation.

While choosing a profile type, first of all you should determine the material.

By applying the safety edges outdoors it is more preferable to choose EPDM profiles, because it is UV and ozone resistant.



You shall choose the NBR quality, when you attach special weight to the oil resistance.

Having chosen the material, you shall determine the profile type. Here, you should consider the required over-travel (= the path covered by the hazardous piece after the release of the emergency stop)

In the end, you shall determine the cable outlet, two-sided in case of series connection of several safety edges or, if there is only one safety edge, one-sided.

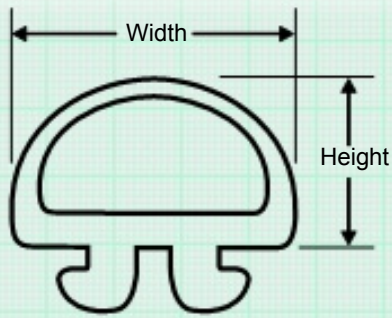
For special shapes, e.g. angle or bent safety edges, we kindly ask you to send us a drawing.

The below table shows the variety of materials. The over-travel can be taken from the individual datasheets.

Resistance Table

	EPDM	NBR
Exhaust fumes	very good	conditional
Sewage	very good	sufficient
Acetone	very good	low
Steam resistance	very good	good
Fuel	low	good
Solvents	low	good
Mineral oils	low	very good
Ozone	very good	satisfactory
Acids	good	satisfactory
Petroleum benzene	low	very good
Weather resistance	very good	good

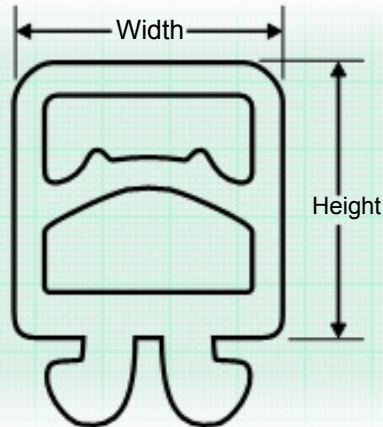
Profile type 05 NBR



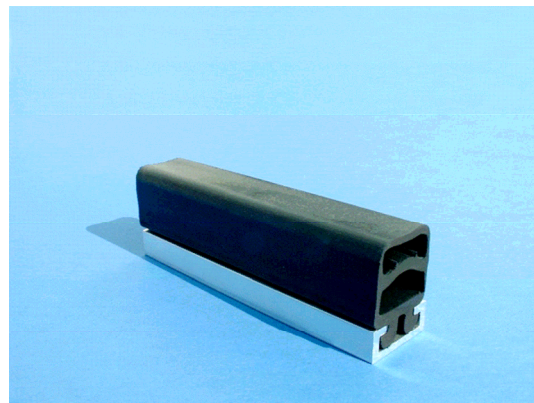
Height	15 mm
Width	25 mm
Material	NBR Rubber
Shore	65 ± 5
Response distance	
Test body Ø 10 mm	7 mm
Test body Ø 30 mm	7 mm
Deformation distance	
Test body Ø 10 mm / 150N	9 mm
Test body Ø 30 mm / 150N	8 mm
Over travel	
Test body Ø 10 mm	2 mm
Test body Ø 30 mm	1 mm
Responsive force	
Test body Ø 10 mm	32 N
Test body Ø 30 mm	36 N
Switching angle	± 45°
IP protection	IP 65
Operating temperature	-20° ... +60° C
Electrical connection	Both ends 2 x 0.38 mm ² or one end 4 x 0.38 mm ² Length on demand, standard 2.000 mm

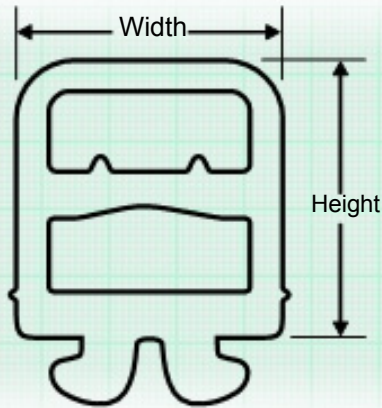


Profile type 06 EPDM



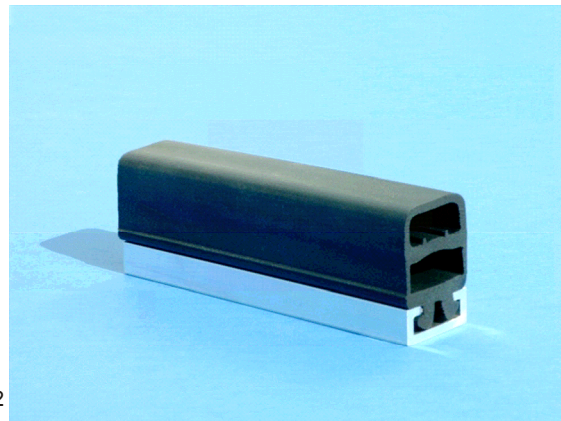
Height	25 mm
Width	25 mm
Material	EPDM rubber
Shore	60 ± 5
Response distance	
Test body Ø 10 mm	3 mm
Test body Ø 30 mm	2.5 mm
Deformation distance	
Test body Ø 10 mm / 150 N	18 mm
Test body Ø 30 mm / 150 N	12 mm
Over travel	
Test body Ø 10 mm	15 mm
Test body Ø 30 mm	9.5 mm
Response force	
Test body Ø 10 mm	9 N
Test body Ø 30 mm	12 N
Switching angle	± 45°
IP protection	IP 65
Operating temperature	-20° ... +60° C
Electrical connection	Both ends 2 x 0.38 mm ² One end 4 x 0.38 mm ² Length on demand, standard 2.000 mm

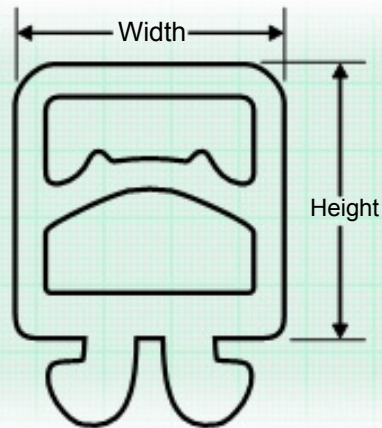




Profile type 06 NBR

Height	28 mm
Width	25 mm
Material	NBR rubber
Shore	65 ± 5
Responsive distance	
Test body Ø 10 mm	4.5 mm
Test body Ø 30 mm	4.5 mm
Deformation distance	
Test body Ø 10 mm / 150 N	19.5 mm
Test body Ø 30 mm / 150 N	14 mm
Over travel	
Test body Ø 10 mm	15 mm
Test body Ø 30 mm	9.5 mm
Response force	
Test body Ø 10 mm	47 N
Test body Ø 30 mm	58 N
Switching angle	± 45°
IP protection	IP 65
Operating temperature	-20° ... +60° C
Electrical connection	Both ends 2 x 0.38 mm ² or one end 4 x 0.38 mm ² Length on demand, standard 2.000 mm

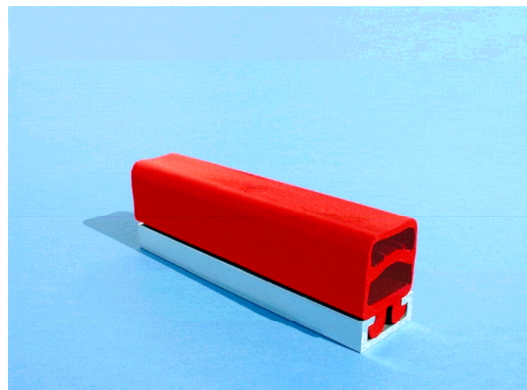


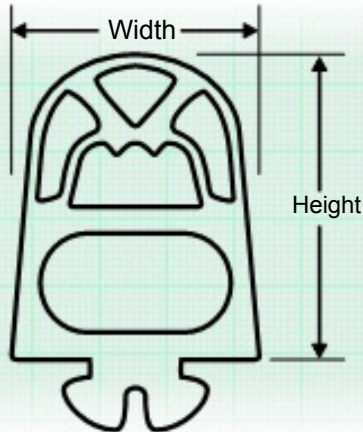


Profile type 06 PVC

Red Colour

Height	25 mm
Width	25 mm
Material	PVC red
Shore	60 ± 5
Responsive distance	
Test body Ø 10 mm	5.5 mm
Test body Ø 30 mm	6 mm
Deformation distance	
Test body Ø 10 mm / 150 N	18.5 mm
Test body Ø 30 mm / 150 N	20 mm
Over travel	
Test body Ø 10 mm	13 mm
Test body Ø 30 mm	14 mm
Responsive force	
Test body Ø 10 mm	18 N
Test body Ø 30 mm	19 N
Switching angle	± 45°
IP protection	IP 65
operating temperature	0° ... +50° C
Electrical connection	Both ends 2 x 0.38 mm ² or one end 4 x 0.38 mm ² Length on demand, standard 2.000 mm

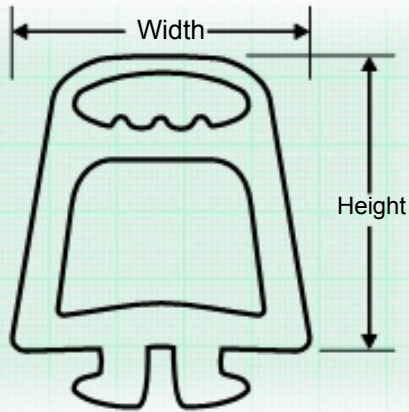




Profile type 08 EPDM

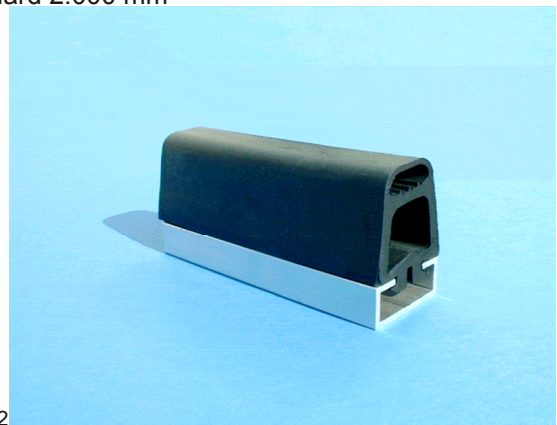
Height	46 mm
Width	35 mm
Material	EPDM rubber
Shore	60 ± 5
Responsive distance	
Test body Ø 10 mm	11 mm
Test body Ø 30 mm	10 mm
Deformation distance	
Test body Ø 10 mm / 150 N	31 mm
Test body Ø 30 mm / 150 N	21.5 mm
Over travel	
Test body Ø 10 mm	20 mm
Test body Ø 30 mm	11.5 mm
Responsive force	
Test body Ø 10 mm	36 N
Test body Ø 30 mm	37 N
Switching angle	± 45°
IP protection	IP 65
Operating temperature	-20° ... +60° C
Electrical connection	Both ends 2 x 0.38 mm ² or one end 4 x 0.38 mm ² Length on demand, standard 2.000 mm

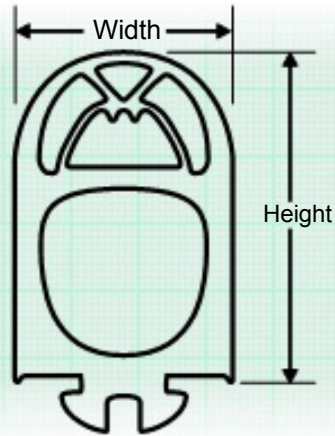




Profile type 08 NBR

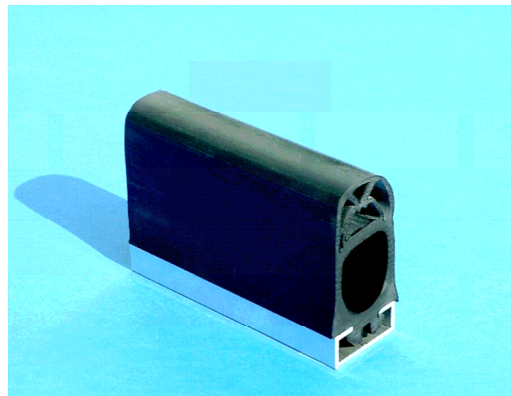
Height	36 mm
Width	35 mm
Material	NBR rubber
Shore	65 ± 5
Responsive distance	
Test body Ø 10 mm	3 mm
Test body Ø 30 mm	2.5 mm
Deformation distance	
Test body Ø 10 mm / 150 N	8.5 mm
Test body Ø 30 mm / 150 N	7.5 mm
Over travel	
Test body Ø 10 mm	5.5 mm
Test body Ø 30 mm	5 mm
Responsive force	
Test body Ø 10 mm	12 N
Test body Ø 30 mm	10 N
Switching angle	± 45°
IP protection	IP 65
operating temperature	-20° ... +60° C
Electrical connection	Both ends 2 x 0.38 mm ² or one end 4 x 0.38 mm ² Length on demand, standard 2.000 mm

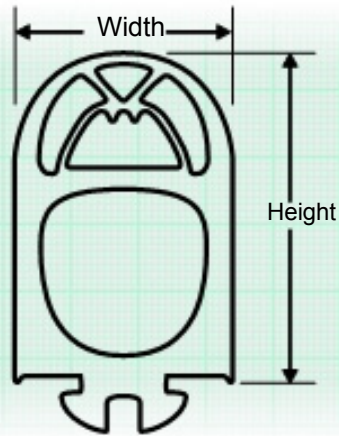




Profile type 10 EPDM

Height	60 mm
Width	35 mm
Material	EPDM rubber
Shore	60 ± 5
Responsive distance	
Test body Ø 10 mm	10 mm
Test body Ø 30 mm	9.5 mm
Deformation distance	
Test body Ø 10 mm / 150 N	39 mm
Test body Ø 30 mm / 150 N	38 mm
Over travel	
Test body Ø 10 mm	29 mm
Test body Ø 30 mm	28.5 mm
Responsive force	
Test body Ø 10 mm	18 N
Test body Ø 30 mm	20 N
Switching angle	± 45°
IP protection	IP 65
Operating temperature	-20° ... +60° C
Electrical connection	Both ends 2 x 0.38 mm ² or one end 4 x 0.38 mm ² Length on demand, standard 2.000 mm

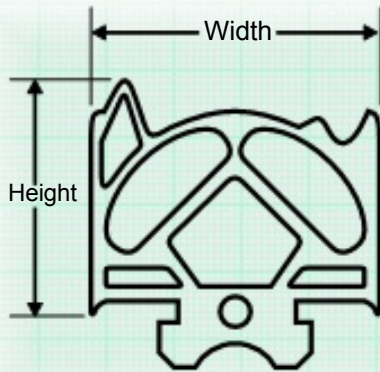




Profile type 10 NBR

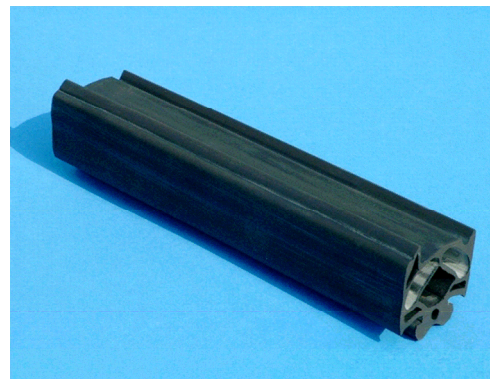
Height	60 mm
Width	35 mm
Material	NBR rubber
Shore	60 ± 5
Responsive distance	
Test body Ø 10 mm	13.5 mm
Test body Ø 30 mm	12 mm
Deformation distance	
Test body Ø 10 mm / 150 N	36 mm
Test body Ø 30 mm / 150 N	29 mm
Over travel	
Test body Ø 10 mm	22.5 mm
Test body Ø 30 mm	17 mm
Response force	
Test body Ø 10 mm	28 N
Test body Ø 30 mm	21 N
Switching angle	± 45°
IP protection	IP 65
Operating temperature	-20° ... +60° C
Electrical connection	Both ends 2 x 0.38 mm ² one end 4 x 0.38 mm ² Length on demand, standard 2.000 mm



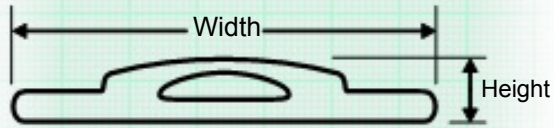


Profile type 11 EPDM

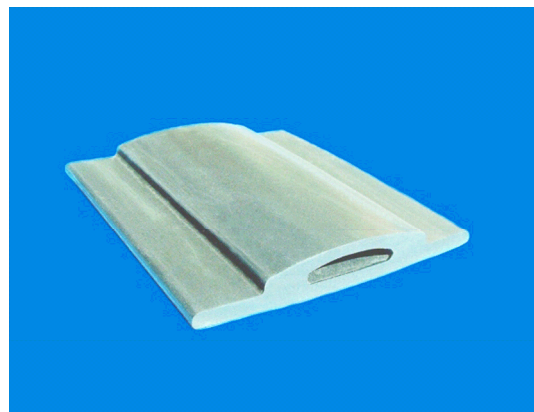
Height	31 mm
Width	38 mm
Material	EPDM rubber
Shore	65 ± 5
Responsive distance	
Test body Ø 10 mm	13.5 mm
Test body Ø 30 mm	12 mm
Deformation distance	
Test body Ø 10 mm / 150 N	36 mm
Test body Ø 30 mm / 150 N	29 mm
Over travel	
Test body Ø 10 mm	22.5 mm
Test body Ø 30 mm	17 mm
Responsive force	
Test body Ø 10 mm	28 N
Test body Ø 30 mm	21 N
Switching angle	± 65°
IP protection	IP 65
Operating temperature	-20° ... +60° C
Electrical connection	Both ends 2 x 0.38 mm ² or one end 4 x 0.38 mm ² Length on demand, standard 2.000 mm



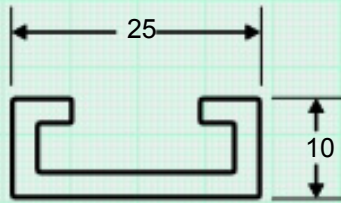
Special switching element type: **BKS**



Height	15 mm
Width	96 mm
Material	Neoprene
Shore	65 ± 5
Responsive distance	
Test body Ø 10 mm	4 mm
Test body Ø 30 mm	4 mm
Deformation distance	
Test body Ø 10 mm / 150 N	4.5 mm
Test body Ø 30 mm / 150 N	3 mm
Over travel	
Test body Ø 10 mm	0.5 mm
Test body Ø 30 mm	1 mm
Responsive force	
Test body Ø 10 mm	42 N
Switching angle	± 25°
IP protection	IP 65
Operating temperature	-20° ... +60° C
Electrical connection	One end 4 x 0.38 mm ² Length on demand, standard 2.000 mm



Aluminium support profiles



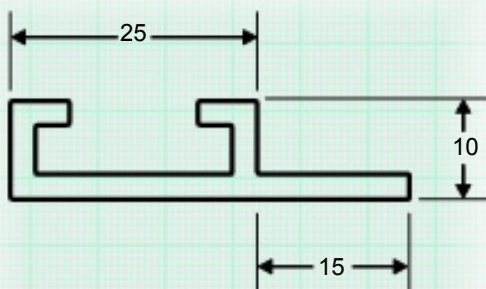
Type 2510 for profiles 05 and 06

Height : 10 mm

Width : 25 mm

Size : 2.5 mm

Length : 6.000 mm max.



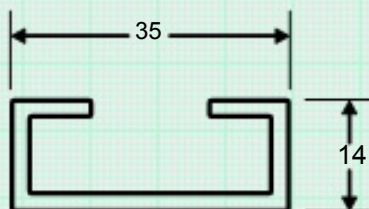
Type 4010 for profiles 05 and 06

Height : 10 mm

Width : 40 mm

Size : 2.5 mm

Length : 6.000 mm max.



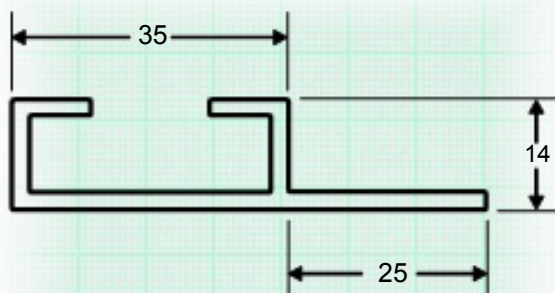
Type 3514 for profiles 08 , 10 and 11

Height : 14 mm

Width : 35 mm

Size : 2 mm

Length : 6.000 mm max.



Type 6014 for profiles 08, 10 and 11

Height : 14 mm

Width : 60 mm

Size : 2 mm

Length : 6.000 mm max.



Safety bumpers

Safety bumpers are shock absorbers applied, for instance in automatic guided systems, like AGV –vehicles, that release switching signal in case of activation.

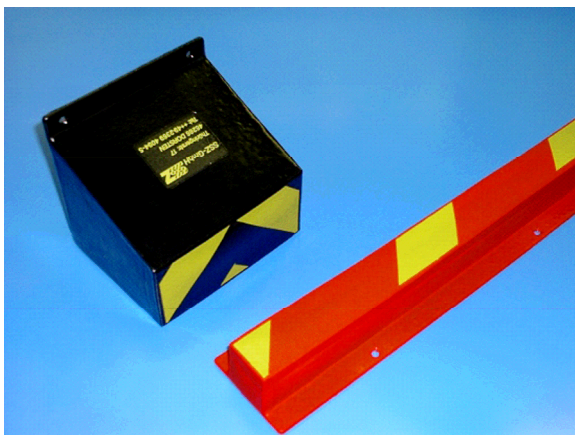
Bumpers are used in places with long over-travels which can not be stopped by safety edges.

Over-travels are paths covered by the hazardous piece after the release of the emergency stop.

When it comes to the SSZ safety bumper, there are no standard measurements. Each bumper is produced according to the customer's request!

Due to the fact that the body of a bumper is made of foam material, it is easy to produce special shapes with angles and cut-outs.

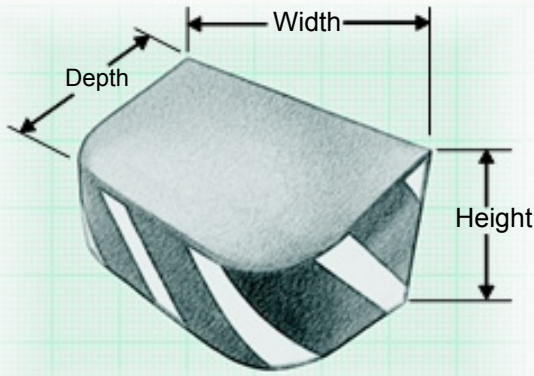
The surface of a bumper is covered alternatively, by sprayed polyurethane, artificial leather or special fabric resistant to the high temperatures .



It is possible to put your company logo or pictographs such as “No step” on the cover. In order to introduce a logo we need to receive a clear paint shield on a scale of 1:1. To fasten a bumper you can apply stud bolts, t holes or threaded holes, alternatively, having in mind that the fixing bracket shall stick out over the outline of the bumper in the upper or/and bottom part.

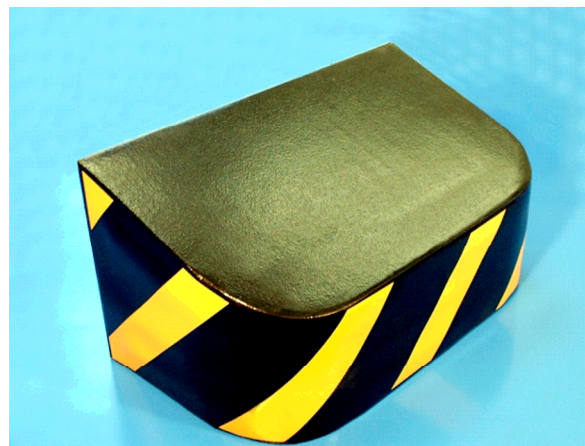
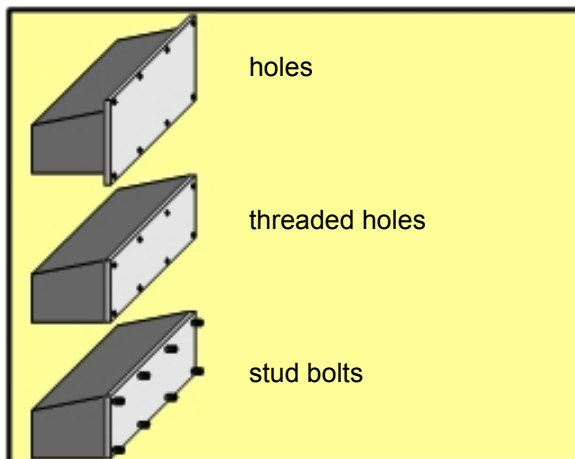
If you haven't made up your mind about the measurements of a bumper you need, please call us and we will work out a solution, together with our technician team.

We will prepare the offer based upon data worked out in that telephone conversation.

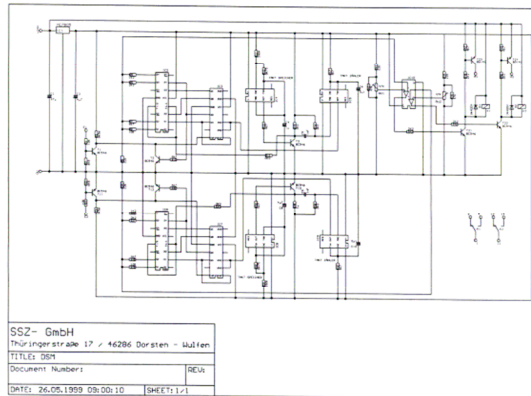
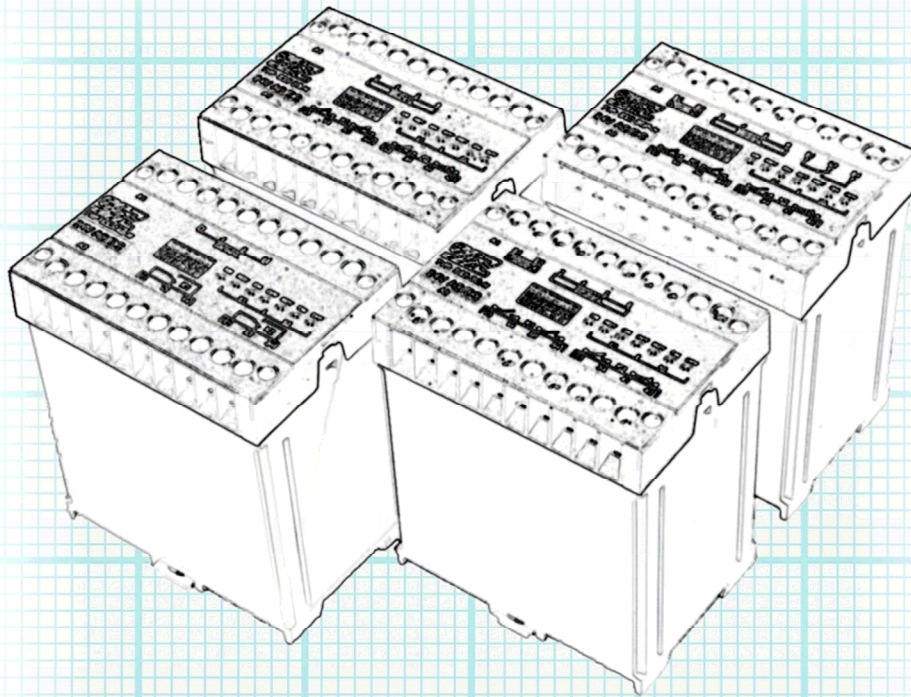


Safety Bumpers

Height	1500 mm max.
Width	3000 mm max.
Depth	1000 mm max. but height depended (Relation about 2:1 / Depth: Height)
Shape	Any shape
Material	Polyurethane foam
Surface	<ol style="list-style-type: none"> 1. Polyurethane black coated - various colours, yellow warning stripes, company logos and icons on demand 2. Silver coloured, flame retardant, fibre reinforced cover (120 sec. at +550° C) 3. artificial leather cover
Sensor element	SSZ-sensor element about 15 mm behind bumper-surface
Responsive distance	max : 20 mm
Responsive force	about 80 N (test body Ø 80 mm)
Deformation distance	Depth depended (about 2/3 of depth)
Mounting	2 to 5 mm sized aluminium- bracket including stud bolts, threaded holes or fixing holes
Electrical connection	on customer requirement Standard: 2x 2.000 mm PVC-cable 2x 0.38

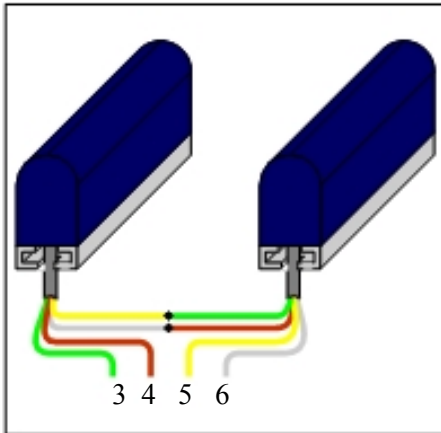


Control Units



SSZ- GmbH	
Thüringerstraße 17 / 46286 Dorsten - Mülten	
TITEL: DSE	
Document Number:	DEU
DATE: 24.05.1999 09:00:10	SHEET: 1/1

Control Units



Series connection of signal transmitters

The SSZ control units are designed for operation with SSZ-safety mats, edges and bumpers.

Signal transmitters are connected to a control unit through cable with four or two wires.

While using several signal transmitters, they have to be connected in series according to the instruction enclosed in each delivery. Under no circumstances parallel connection is permitted.

The SSZ control units (exception: type SSZ-CD) monitors all the time the safety components (mat, edge or bumper) in case of any activation, wire break and short circuit or crossed-wire in the cabling of the signal transmitter.

As long as the signal transmitter remains inactivated and the connectors are OK, the relay contacts are closed.

Should any error occur in the system (e.g. crossed-wire) or the signal transmitters start to operate, at least one relay will be opening in this way the output contacts.

Due to the fact that the switching element in the signal transmitters contains high electrical resistance, the output signals have to be processed.

That processing takes place in the control units where, at the same time, the input signals are generated for the connected components.

Those signals help to control a relay combination in the control unit.

The switching contacts of the relay combination can be applied as the potential free outputs.

It is only the control unit which determines the safety category of the safety system.

The SSZ control units are available in the categories 2 and 3 according to EN 954-1.

For the use without the safety function, you shall apply the signal amplifier type SSZ-CD.

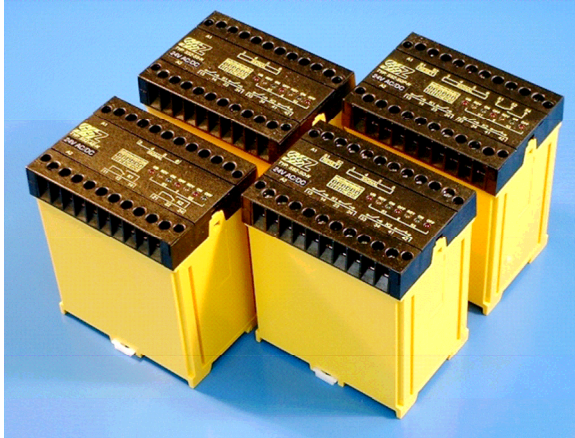
The types SSZ-SQ and SSZ-SQP lock automatically, which means that, in case of the signal transmitter activation, the output contacts are open till the manual reset.

The types SSZ-AE and SSZ-SS are devices with self acknowledgment. In case of the signal transmitter activation, the output contacts are open and they close again automatically as soon as the signal transmitter is inactivated and the system is O.K.

The types SSZ-LC, SSZ-CVS and SSZ-SMC are customized as self lockable and with the option of self acknowledgment. The choice can be done by the customer himself.

All control units are equipped with an electro-luminescent diode serving as the status indicator.

	SSZ-AE/-SS/-SQ/-SQP	SSZ-AMC/-SMC	SSZ-LC/-CVS
Red	(UB) operating voltage	(PWR) operating voltage	Operating voltage
Green	(ON) output inactivated (contacts closed)	(ON) output inactivated	Output inactivated
Yellow	(RDY) signal transmitter OK	(RDY) signal transmitter OK	
Red	(OFF) output blocked (contacts open)	(OFF) output blocked	
Yellow		(INI) switch-on delay	



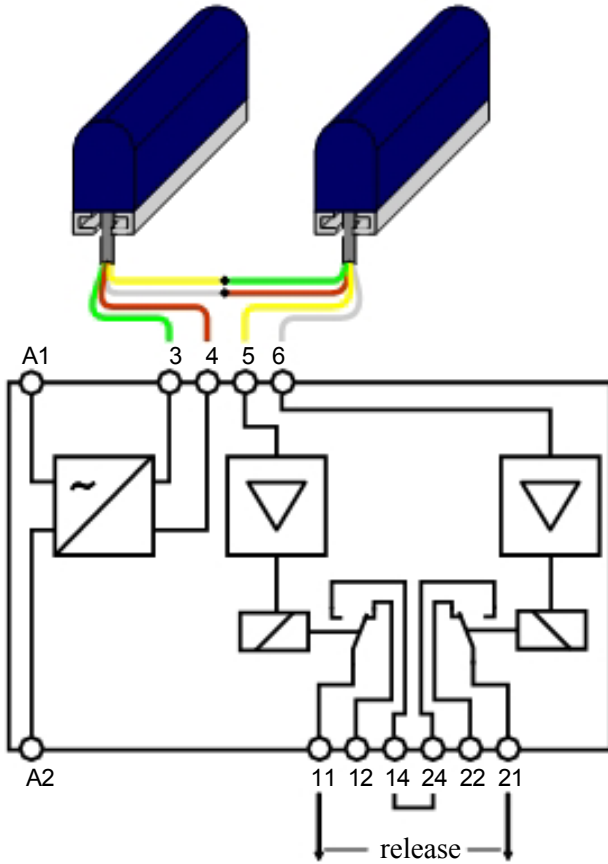
Control Units

Types:

SSZ-AE-N
SSZ-SS-N
SSZ-SQ-N
SSZ-SQP-N

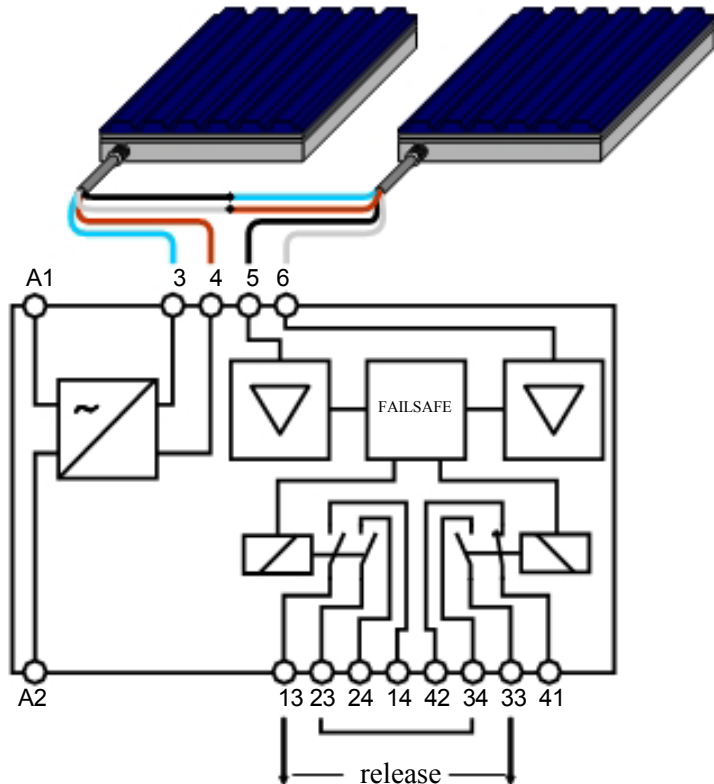
Height	118.2 mm
Width	100 mm
Depth	73.2 mm
Mounting	Mounting rail acc. DIN EN 50022-35
Safety level	SSZ-AE-N : level 2 acc. EN954-1 SSZ-SS-N, -SQ-N, -SQP-N : level 3 acc. EN954-1
IP protection	IP40
Storage temperature	-10° ...+70° C
Operating temperature	0 ...+55° C
Operating voltage	24V AC/DC , 115V AC , 230V AC
Power rating	~3.5VA
Outputs (floating)	SSZ-AE-N : 2x change over (resulting 1 x release) SSZ-SS-N : 3x n.o. (resulting 1x safe release) 1x n.c. SSZ-SQ-N : 3x n.o. (resulting 1x safe release) 1x n.c. SSZ-SQP-N: 3x n.o. (resulting 1x safe release) 1x n.c. 1x changeover (status message)
Reset	AE and SS automatic, SQ und SQP manually operated
Contact capacity	1.000VA / 200W max.
Contact voltage	250V
Contact current	4A
Permanent current	2A
Response time	< 20ms
Weight	24V : 450 g 115V / 230V: 600g
Endurance	
mechanical	SSZ-AE-N : 3x 10 ⁷ cycles SSZ-SS , -SQ , -SQP: 1x 10 ⁷ cycles
electrical	SSZ-AE-N : 2x 10 ⁶ cycles SSZ-SS , -SQ , -SQP: 3x 10 ⁶ cycles

Block diagrams control Units
Types: **SSZ-AE-N** and **SSZ-SS-N**



SSZ-AE-N

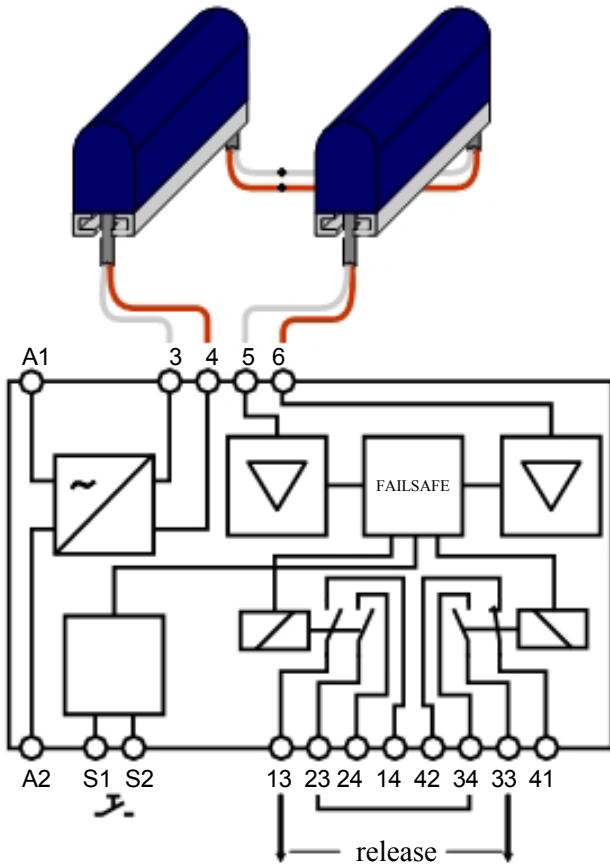
Control unit with automatic reset, safety category 2.
The release is safe, when the contacts 11/14 and 21/24 are connected in series.
When the signal transmitter is inactivated, the contacts 11/14 and 21/24 are closed. They open in case of activation or breakdown of the operating voltage



SSZ-SS-N

Control unit with automatic reset, safety category 3.
The release is safe when the contacts 13/14 or 23/24 and 33/34 are connected in series.

Block diagrams control units
Types: SSZ-SQ-N and SSZ-SQP-N



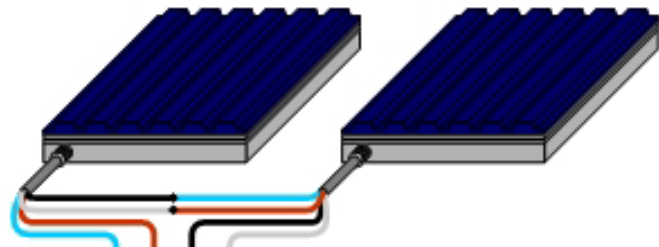
SSZ-SQ-N

Control unit with manual reset, safety category 3.

A reset button without any potential is connected to the control unit through the clamps S1 and S2.

In case of the activation of this button, the reset of the output relay is being prepared. The reset takes place only when the button contact has opened again.

The disconnection occurs safely only when the contacts 13/14 or 23/24 are connected in series with the contacts 33/34.



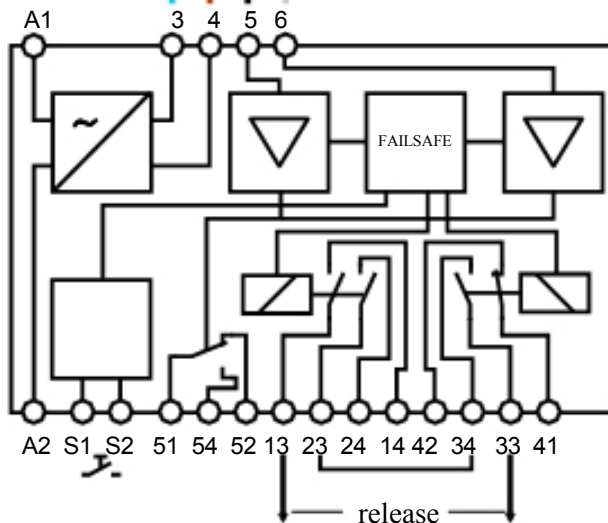
SSZ-SQP-N

Control unit with manual reset, safety category 3.

The type SSZ-SQP is connected exactly in the same way as the type SSZ-SQ.

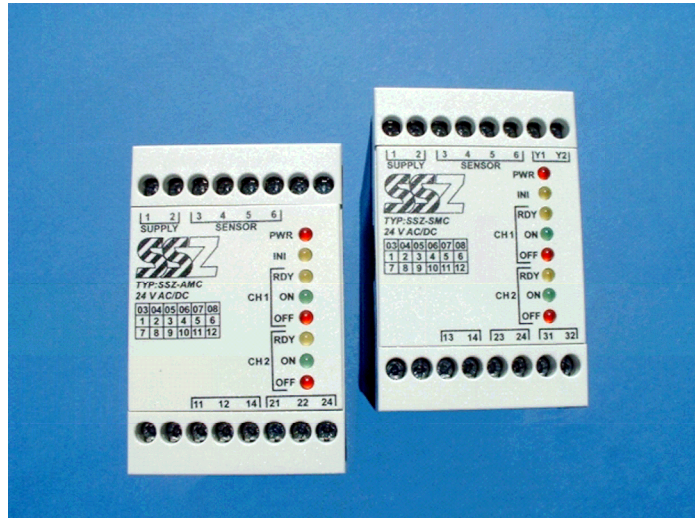
It differs from the type SSZ-SQ by potential free changeover contact that reports the status of the connected signal transmitter, regardless of the output relay.

When the signal transmitter is activated, the contact 51/52 is closed, when the signal transmitter is inactivated, the contact 51/54 is closed.



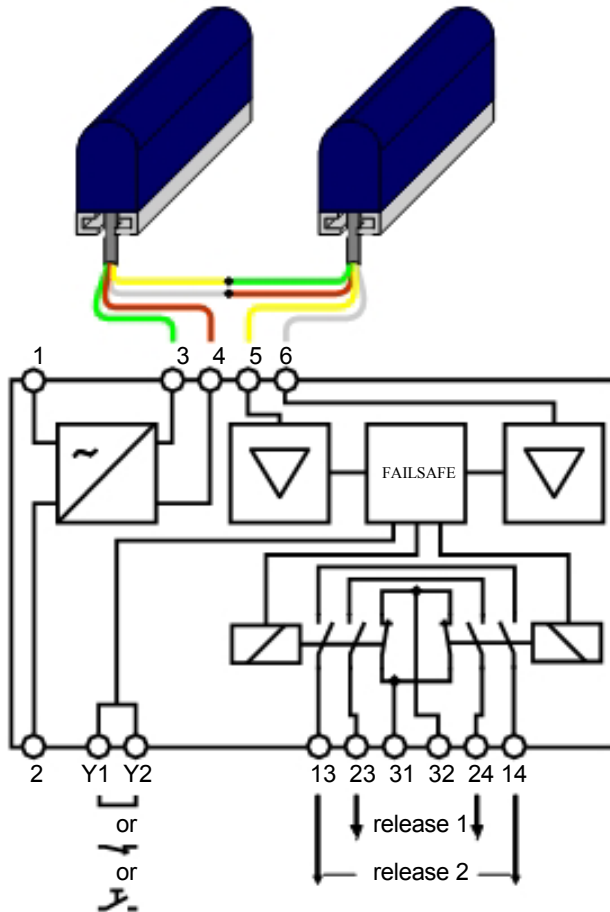
Control Units

Types: SSZ-SMC



Height	120 mm
Width	45 mm
Depth	74 mm
Mounting	Mounting rail acc. DIN EN 50022-35
Safety level	Level 3 acc. EN954-1
IP protection	IP40
Ambient temperature	-10° ...+70° C
Operating temperature	0 ...+55° C
Operating voltage	24V AC/DC
Power rating	~2.8VA
Outputs (floating)	SSZ-SMC : 2x N.O. (resulting 2x safe release) 1x N.C.
Reset	SSZ-SMC automatic or manually operated
Breaking capacity	1.000VA / 200W max.
Breaking voltage	250V
Breaking current	4A
Carry current	2A
Response time	< 20ms
Weight	SMC: 260g
Endurance mechanical	SSZ-SMC: 1x 10 ⁷ cycles
electrical	SSZ-SMC: 3x 10 ⁶ cycles

Block diagrams of control units Types: SSZ-SMC



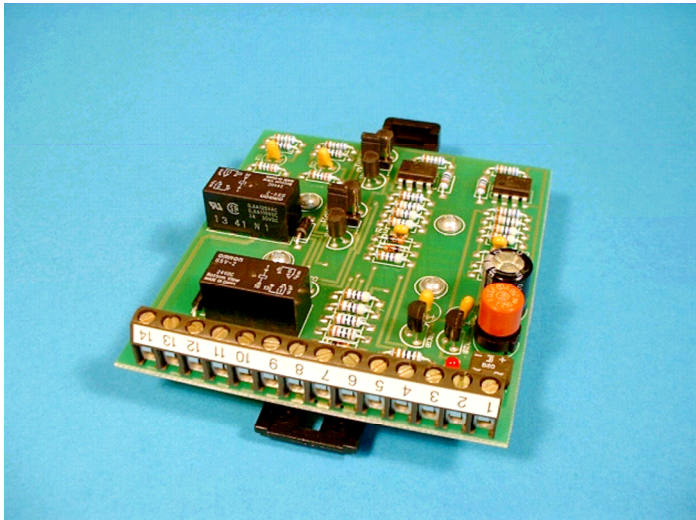
SSZ-SMC

Control unit with automatic or manual reset, safety category 3.

You can decide how the reset of the control unit works through the clamps Y1 and Y2. While applying a bridge, the unit works with automatic reset.

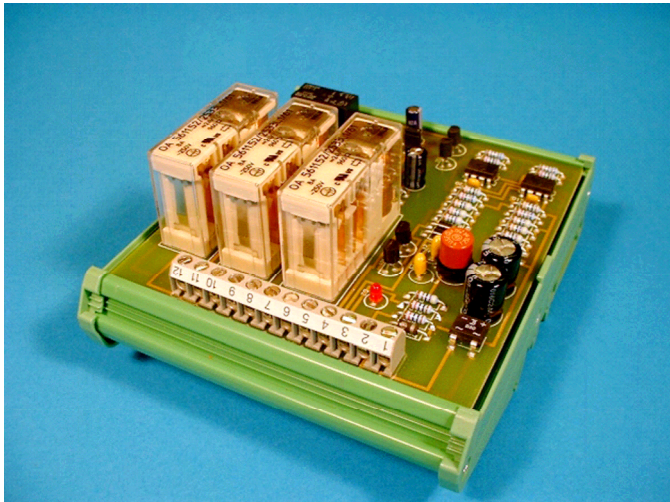
When a button or the check back contact are connected to the external relay, the reset takes place while the contact closes. The type SSZ-SMC has as the output two safe potential make contacts together with one safe break contact.

Comment: the clamps which are not labelled shall not be used for wiring!



Control Units SSZ-LC

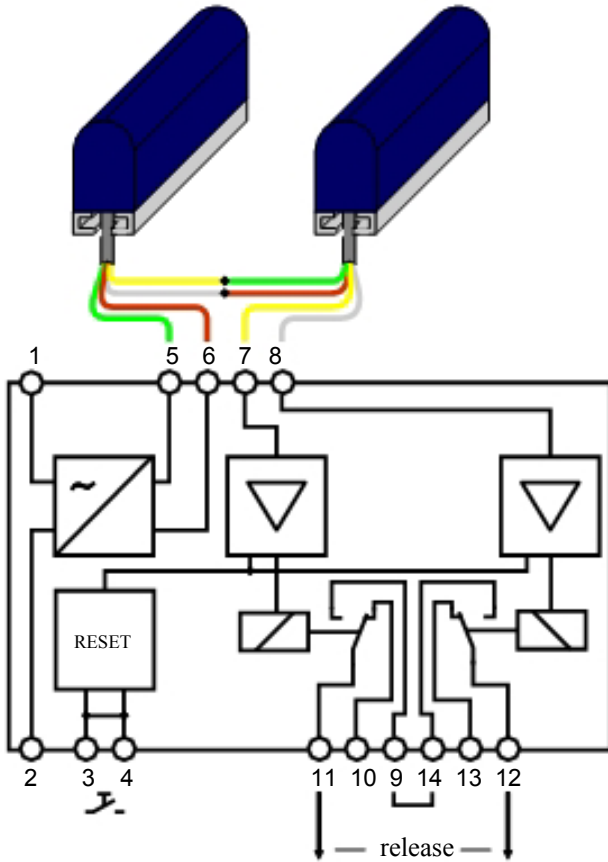
Height	30 mm
Width	79 mm
Depth	89 mm
Mounting	Mounting rail acc. DIN EN 50022-35
Safety level	Level 2 acc. EN954-1
IP protection	IP00
Ambient temperature	-10° ...+70° C
Operating temperature	0 ...+55° C
Operating voltage	24V AC/DC
Power rating	~1.2VA
Outputs (floating)	2 x changeover (resulting 1x safe release)
Reset	Selectable - automatic or manual reset
Breaking capacity	62.5VA / 60W max.
Breaking voltage	125V AC/ DC
Breaking current	2A
Carry current	2A DC/ 0.5A AC
Response time	< 20ms
Weight	75g
Endurance mechanical	5 x 10 ⁶ cycles
electrical	30x 10 ⁴ cycles



Control Units Type: SSZ-CVS

Height	64 mm
Width	106 mm
Depth	126 mm
Mounting	Mounting rail acc. DIN EN 50022-35
Safety level	Level 3 acc. EN954-1
IP protection	IP00
Ambient temperature	-10° ...+70° C
Operating temperature	0 ...+55° C
Operating voltage	24V AC/DC
Power rating	~1.7VA
Outputs (floating)	1x N.O. (resulting 1x safe release) 1x N.C.
Reset	Selectable automatic or manual reset
Breaking capacity	1.000VA / 200W max.
Breaking voltage	250V AC/ DC
Breaking current	4A
Carry current	2A
Response time	< 20ms
Weight	235g
Endurance	
mechanical	5x 10 ⁷ cycles
electrical	3x 10 ⁶ cycles

Block diagrams of control units Types: SSZ-LC and SSZ-CVS



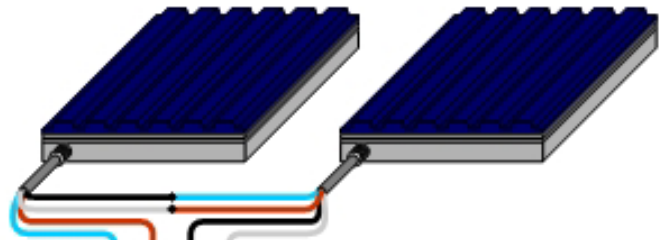
SSZ-LC

Control unit with automatic or manual reset, safety category 2.

The output contact is safe when the contacts 9/11 and 12/14 are connected in series.

In order to switch to the automatic or manual working mode of the reset, you can apply two jumpers located on the printed circuit board.

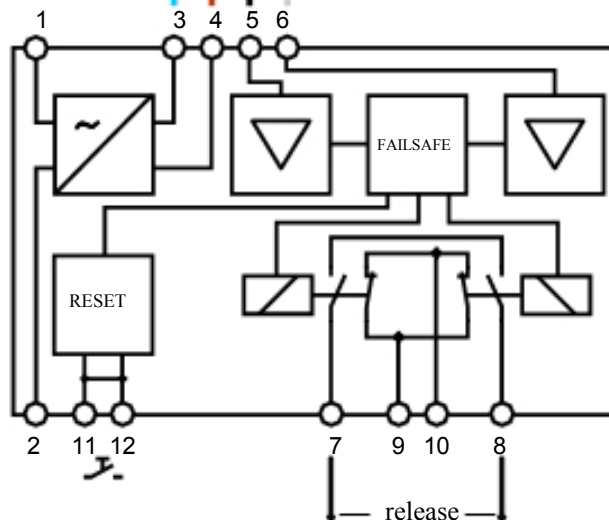
When the signal transmitter remains inactivated, the contacts 9/11 and 12/14 are closed. In case of activation or breakdown of the operating voltage, those contacts open.



SSZ-CVS

Control unit with adjustable automatic or manual reset, safety category 3.

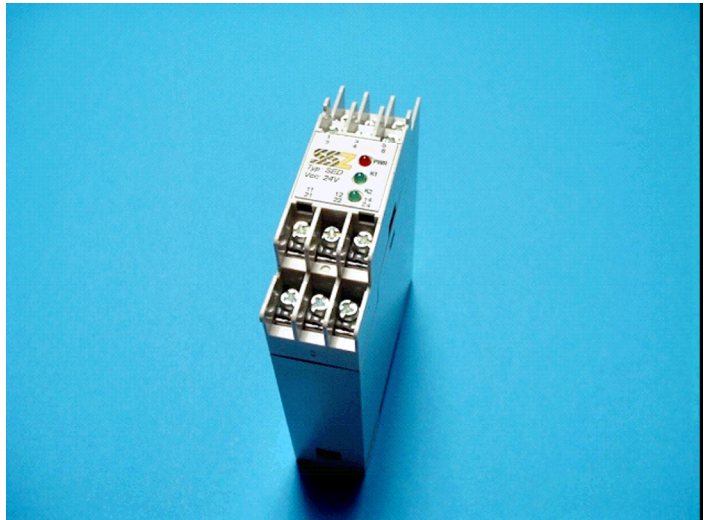
You can reconvert the reset operating mode to automatic or manual with a jumper located on the printed circuit board.



Control Unit

Typ: SSZ-SED

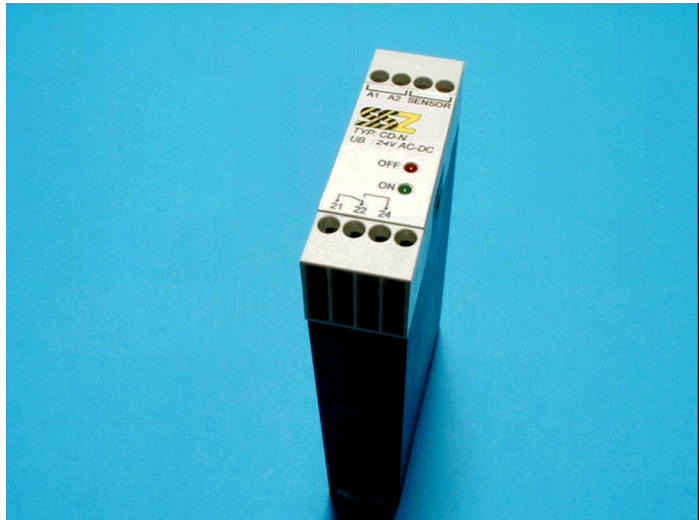
For non-safety application only



Height	97 mm
Width	22.5 mm
Depth	75 mm
Mounting	Mounting rail acc. DIN EN 50022-35
IP protection	IP30
Ambient temperature	-10° ...+70° C
Operating temperature	0 ...+55° C
Operating voltage	24V AC/DC
Power rating	~1.2VA
Outputs (floating)	2 x changeover
Reset	Automatic
Breaking capacity	62.5VA / 60W max.
Breaking voltage	125V AC/ DC
Breaking current	2A
Carry current	2A DC/ 0.5A AC
Response time	< 20ms
Weight	110g
Endurance	
mechanical	5 x 10 ⁶ cycles
electrical	30x 10 ⁴ cycles

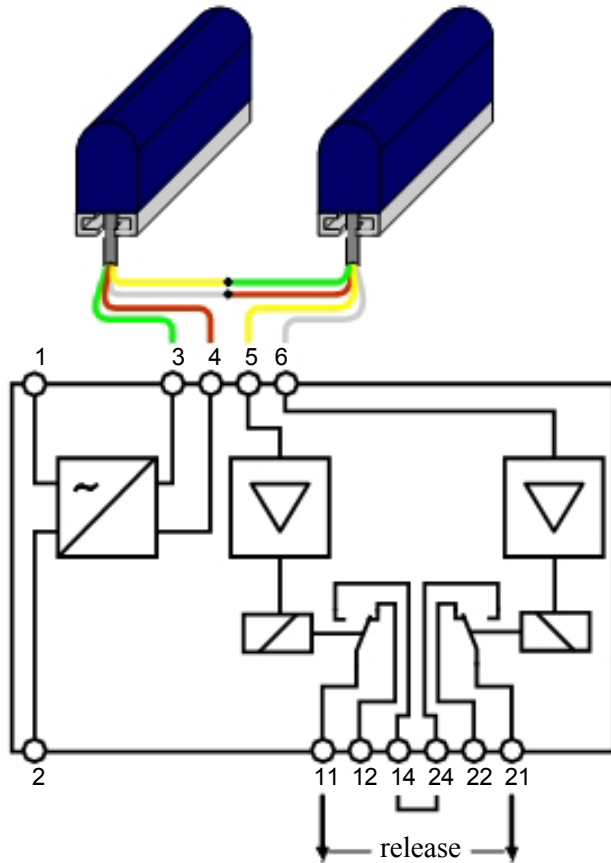
Control Unit

Type: SSZ-CD
Signalamplifier
no safety operation



Height	121 mm
Width	22.5 mm
Depth	73.5 mm
Mounting	Mounting rail acc. DIN EN 50022-35
IP protection	IP40
Ambient temperature	-10° ...+70° C
Operating temperature	0 ...+55° C
Operating voltage	115V/ 230V AC - 24V AC/DC
Power rating	~0.8VA
Outputs (floating)	1x change over
Reset	Automatic
Breaking capacity	62.5VA / 60W max.
Breaking voltage	125V AC/ DC
Breaking current	2A
Carry current	2A DC/ 0.5A AC
Response time	< 20ms
Weight	105g
Endurance	
mechanical	30x 10 ⁴ cycles
electrical	15x 10 ⁶ cycles

Block diagrams of control units Types: SSZ-SED, SSZ-CD



SSZ-SED

Two channel control unit (redundant, not tested, not certified) with automatic reset. The disconnection is redundant when the contact 11/14 and 21/24 are connected in series.

When the signal transmitter is inactivated, the contacts 11/14 and 21/24 are closed. In case of activation or breakdown of the operating voltage, those contact open

SSZ-CD

Signal amplifier without safety function. When the signal transmitter is activated, the contact 11/14 is closed. The green electro luminescent diode signals the activation.

