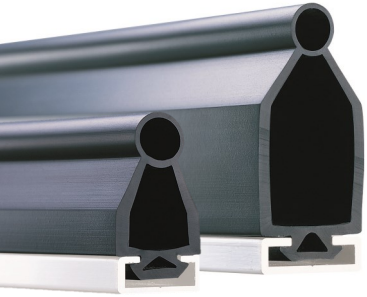


SCHMERSAL Tech Briefs: Series SE Safety Edges



Overview

The series SE Safety Edge consists of a rugged high tear resistant rubber profile, an aluminum mounting rail, a plug-in optoelectronic transmitter receiver pair, and a compatible safety controller. The design features a high reflective internal rubber surface and a self-adjusting gain optical pair whose performance is consistent over the specified operating range.

Units can be quickly and easily assembled (without special skills or use of adhesives) for lengths of 400 mm to 10 m. The self-adjusting optical pair assure the same sensitivity and performance independent of chosen length.

The mechanical design assures encapsulation of the transmitter and receiver ensuring reliable operation unaffected by environmental soiling.

In operation the transmitted IR beam is detected, by the receiver resulting in enabling of the safety controllers safety output(s). Deformation of the rubber profile interrupts/weakens the signal between the transmitter and receiver.

This is sensed by the safety controller disabling the outputs allowing the hazardous movement to be stopped.

Depending upon the choice of safety controller the system meets the requirements of ISO 13849 (PLc, PLd or PLe) as well as ISO 13856-2 for the general principles for the design and testing of pressure-sensitive edges.



Product Extension

In addition to the SE-SET safety edge, Schmersal is also able to offer the STW-SL safety edge for custom angles including 90° and safety bumpers for large applications such as the SSG-SBL or ASB, available with custom lengths and heights.



Applications

Ideal wherever crushing or shearing points are to be safeguarded:

- Guard doors
- Elevating platforms
- Rising stages
- Moving stock shelving
- Operating process tables
- Loading ramps
- Hoists or tipping equipment
- CNC doors

Available Literature



GK-1 Full Product Catalog
Section 3

Ordering Details

Rubber Profile

SE-P①②-③

- | | |
|-------------------|--------------------|
| ① Profile Coating | |
| <i>blank</i> | Uncoated |
| C | Coated |
| ② Profile Height | |
| 40 | 40mm (EPDM rubber) |
| 40NBR | 40mm (NBR rubber) |
| 70 | 70mm (EPDM rubber) |
| ③ Profile Length | |
| 1250 | 1,250mm |
| 2500 | 2,500mm |
| 5000 | 5,000mm |
| 10000 | 10,000mm |

Aluminum Rail (1250mm)

SE-AL①②-1250

- | | |
|--------------------------|----------------|
| ① Rubber Profile Opening | |
| 1 | For SE-40 |
| 2 | For SE-70 |
| ② Mounting Flange | |
| 0 | Without flange |
| 2 | With flange |

Emitter / Receiver Set

SE-SET①

- | | |
|-----------------------------------|---------------|
| ① Emitter / Receiver Cable Length | |
| <i>blank</i> | 6.5m / 3.0m |
| 3M/10.5M | 10.5m / 3.0m |
| 10.5M/20M | 10.5m / 20.0m |

SE Safety Controller

SE-①-C

- | | |
|-------------------------|------------------------|
| ① Monitoring Capability | |
| 100 | 1 SE-SET to PLC |
| 304 | Up to 4 SE-SETs to PLd |
| 400 | 1 SE-SET to PLe |

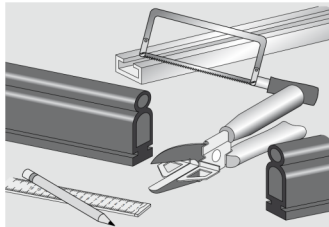
Accessories

End Caps

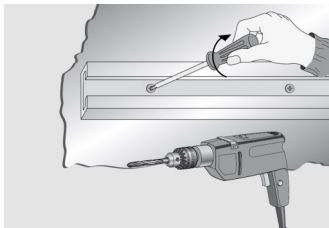
- | | |
|----------------|---------------|
| SE-T40 | (For SE-P40) |
| SE-TC40 | (For SE-PC40) |
| SE-T70 | (For SE-P70) |
| SE-TC70 | (For SE-PC70) |

- | | |
|--------------|-----------------|
| SE-J2 | Junction Box |
| SE-WA | Wring Tool |
| SE-SC | Rubber Scissors |
| SE-CC | Spiral Cable |

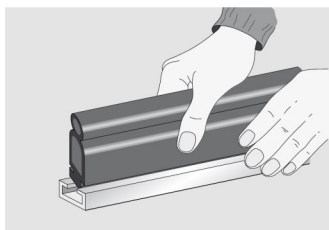
Installation



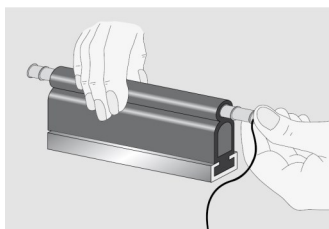
Cut the mounting rail and rubber profile to desired length.



Secure the mounting rail



Slide the rubber profile into the mounting rail.



Plug the SE-SET transmitter and receiver into the round channel at each end. Wire to a safety controller. Finish with end caps.

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