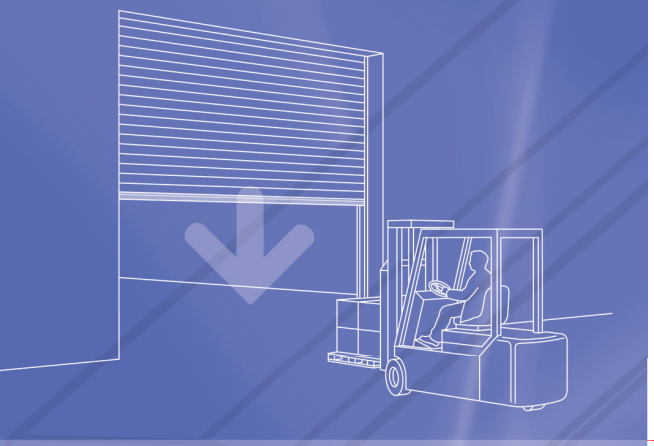
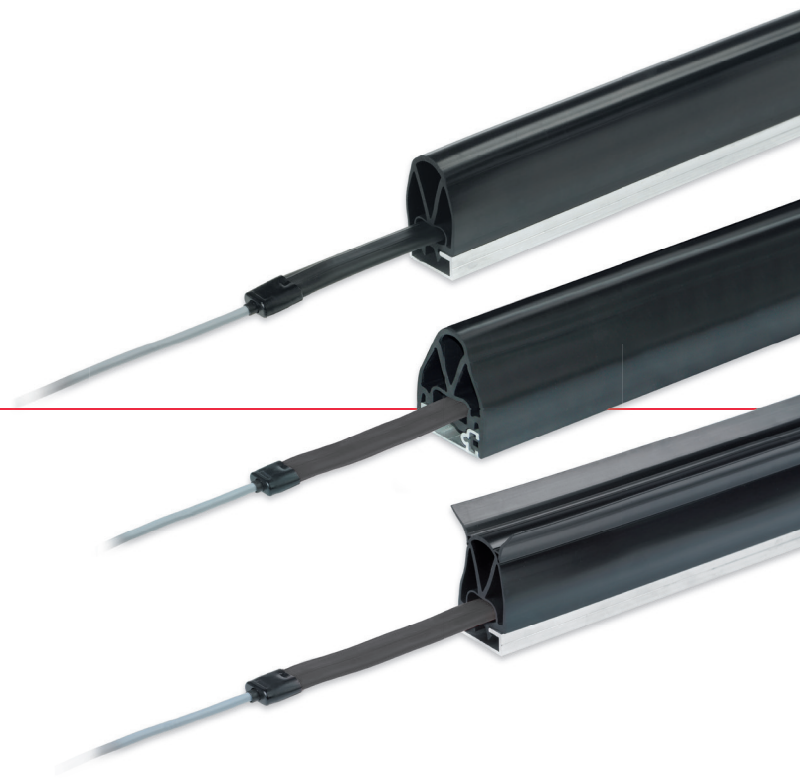
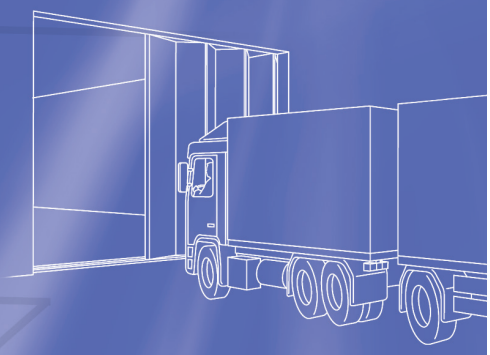
BBC BIRCHER

Smart Access







ClickLine
CoverLine
StandardLine

Electrical safety edges and rubber profiles with 0.8" contact strips for automatic gates, doors, public transport and industrial applications

Reliable, proven, suitable for self-assembly

- **Suitable profile for every application**
- **Best electrical properties**
- **High mechanical load capacity**
- **Quick mounting with special profile shapes**
- **Conformity acc. to EN 12978, EN ISO 13856-2**

Electrical safety edges

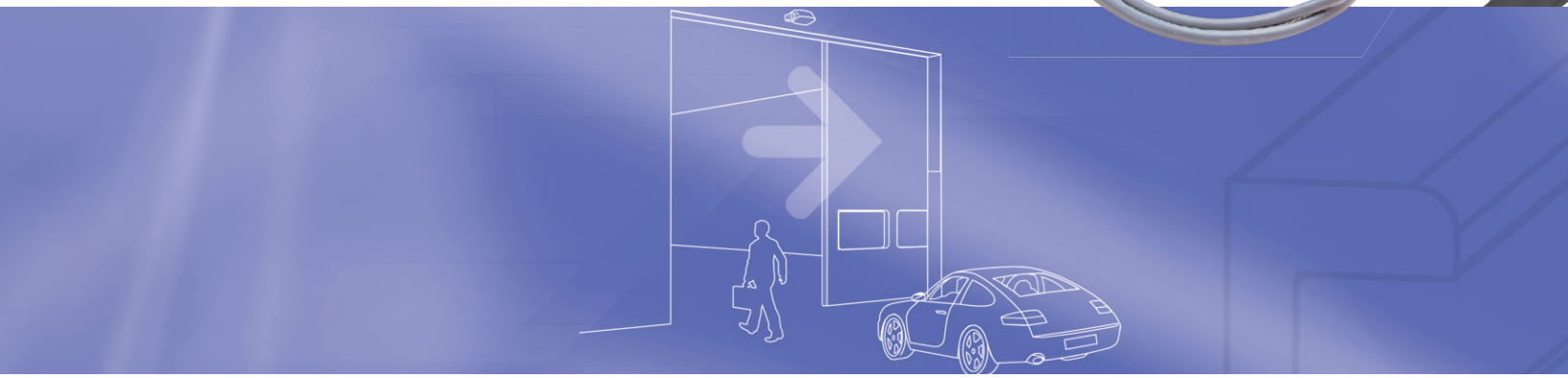
For automatic gates, doors, public transport and industrial applications

Reliable, tried-and-tested as the best

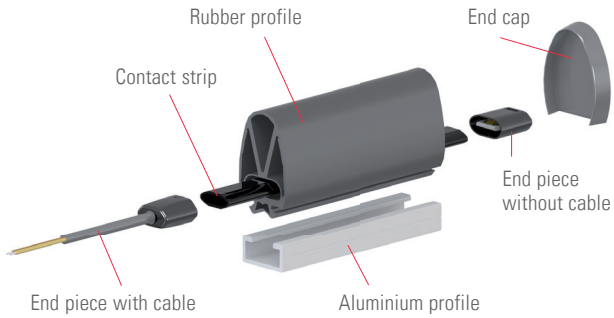
Electrical safety edges are used for protecting crushing and shearing points on automatic gates, doors, shutters and grills. Profiles of different sizes in combination with various switching devices safely and reliably protect people and objects according to the applicable standards.

Quick and easy to install

Our safety edges are based on the tried-and-tested principle of the contact strip drawn into the rubber profile. They are available both prefabricated at the factory and as system parts for self-assembly by the customer. The ingenious structure with separate contact strips can be relied upon for high reliability even in unusual applications and facilitates retrofitting on site.



Safety edges – system overview



End pieces

Maximum flexibility

End pieces are available with or without terminating resistor (standard 8.2 kOhm) and with various cable lengths.

Safety edge assembly

Pre-assembled – individual and convenient

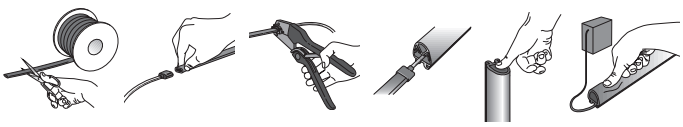
For optimum functionality, a distinction can be made between horizontal and vertical application:

① Rubber profile sealed **on both ends** with end caps
→ primarily for horizontal safety edge application

② Rubber profile **closed at top** with end cap,
open at bottom with profile holder
→ for vertical safety edge application only

Self-assembly – quick and easy

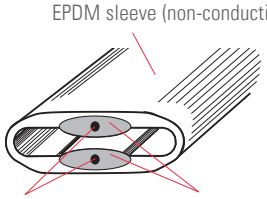
Safety edges can be self-assembled without problems and within the quickest possible time



Detailed installation and operating instructions are included with the product

Contact strip ENT-R – perfect sensor

This robust contact strip is especially suited for applications in moist conditions or with a large mechanical load

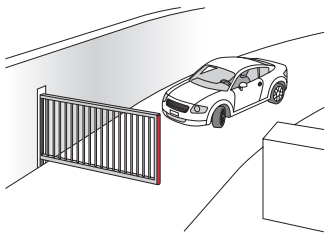


Reliable in every application

Situation
Sliding gate

Solution
- Safety edge (ClickLine or CoverLine) in combination with the radio transmission system ExpertSystem XRF

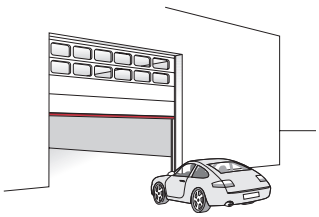
Advantages
- Optimum protection because of mobile and stationary safety edges acc. to cat. 2 or cat. 3
- Tip: ProLoop2, reliable monitoring and evaluation of induction loops as opening sensor



Situation
Sectional gate

Solution
- Safety edge (ClickLine, CoverLine or StandardLine) in combination with the radio transmission system ExpertSystem XRF

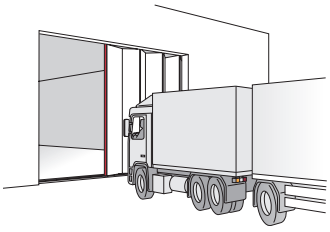
Advantages
- Optimum protection because of mobile safety edges acc. to cat. 2 or cat. 3
- Tip: Hercules 2s gate radar as opening sensor. It distinguishes between vehicles and people



Situation
Folding door

Solution
- Safety edge (ClickLine, CoverLine or StandardLine) in combination with the radio transmission system ExpertSystem XRF

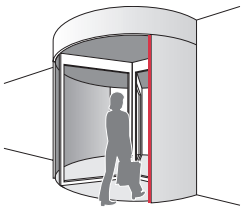
Advantages
- Optimum protection because of mobile safety edges acc. to cat. 2 or cat. 3
- Tip: Depending on the gate height, Hercules 2s or Merkur 2 as reliable opening sensor



Situation
Revolving door

Solution
- Safety edge (ClickLine, CoverLine or StandardLine) in combination with a switching device

Tip
- Merkur 2 as reliable opening sensor

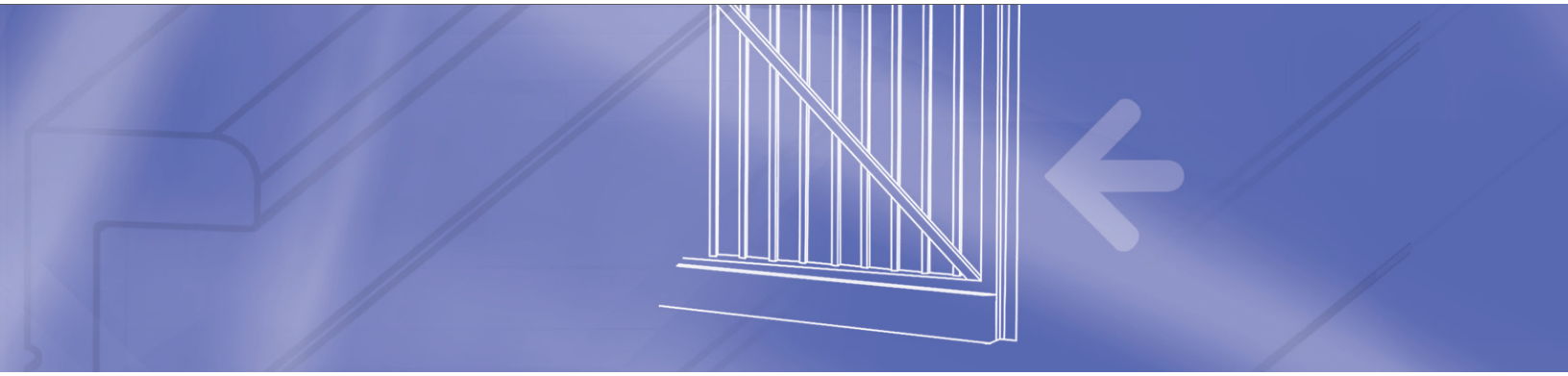


ClickLine

Rubber profiles with click-fit foot

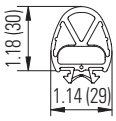
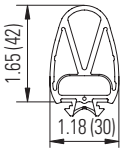
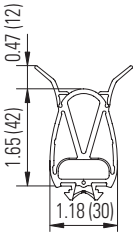
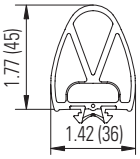
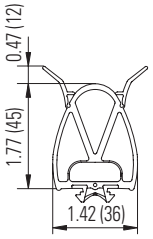
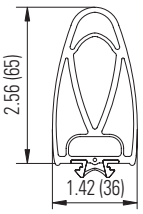
Click-fit!

The easiest possible installation is a feature of ClickLine: Click and go. No need for time-consuming pushing in from the side. This means even damaged safety edges can be renewed quickly and effortlessly. The optimally designed profile shape also guarantees the greatest possible switching reliability.



ClickLine profile types

General technical data on rubber profiles and prefabricated safety edges can be found on the back page.

Dimensions (Dimensions in inches [mm], tolerances acc. to DIN ISO 3302-1, tl. E2)						
Rubber profile	EPE025/029A0V	EPE030/042A0V	EPE030/042J2V	EPE036/045A0V	EPE036/045J2V	EPE036/065A0V
Article no.	210736	210751	210752	210760	210761	210764
Packing unit	164 ft (50 m)	164 ft (50 m)	164 ft (50 m)	82 ft (25 m)	82 ft (25 m)	82 ft (25 m)
Aluminium rail max. length 19.6 ft (6 m)	AP-5	AP-5	AP-5	AP-8	AP-8	AP-8
Safety edges (prefabricated)	ELE025/029A0Vx	ELE030/042A0Vx	ELE030/042J2Vx	ELE036/045A0Vx	ELE036/045J2Vx	ELE036/065A0Vx
Activation distance	0.28" (7 mm)	0.24" (6 mm)	0.39" (10 mm)	0.43" (11 mm)	0.59" (15 mm)	0.39" (10 mm)
Switch point force	15.7 lbf (70 N)	13.5 lbf (60 N)	22.5 lbf (100 N)	24.7 lbf (110 N)	20.2 lbf (90 N)	31.5 lbf (140 N)
Overtravel*						
250 N	0.31" (8 mm)	0.70" (18 mm)	0.20" (5 mm)	0.55" (14 mm)	0.67" (17 mm)	0.91" (23 mm)
400 N	0.39" (10 mm)	0.79" (20 mm)	0.55" (14 mm)	0.67" (17 mm)	0.79" (20 mm)	1.14" (29 mm)

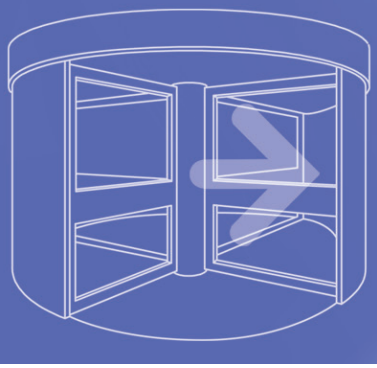
*acc. to EN ISO 13856-2, temp. 73°F (23°C), test object dia. 3.15" (80 mm), measuring point C3

CoverLine

Rubber profiles for high visual requirements

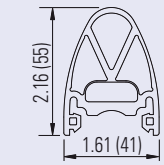
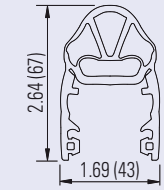
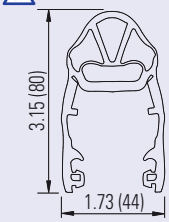
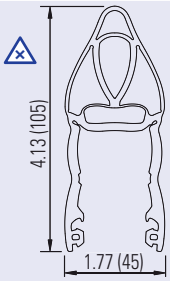
The synthesis of practicality and appearance

The aluminium profile is covered by the lateral attachment principle. This results in a uniform appearance that blends very well even into even demanding designs. The installation is quick and easy: simply click in, no need for pulling in sideways. CoverLine is especially suitable for vertical installation (sliding gate at site entrances) and for long overtravel distances. Specially developed profiles guarantee the highest switching reliability.



CoverLine profile types

General technical data on rubber profiles and prefabricated safety edges can be found on the back page.

Dimensions (Dimensions in inches [mm], tolerances acc. to DIN ISO 3302-1, tl. E2)	 2.16 (55) 1.61 (41)	 2.64 (67) 1.69 (43)	 3.15 (80) 1.73 (44)	 4.13 (105) 1.77 (45)
Rubber profile	EPE040/055A0J	EPE040/067A0J	EPE040/081A0J	EPE040/105A0J
Article no.	210766	354468	262476	219341
Packing unit	98 ft (30 m)	65 ft (20 m)	65 ft (20 m)	82 ft (25 m)
Aluminium rail max. length 19.6 ft (6 m)	AP-G1	AP-G1	AP-G1	AP-G1
Safety edges (prefabricated)	ELE040/055A0Jx	ELE040/067A0Jx	ELE040/081A0Jx	ELE040/105A0Jx
Activation distance	0.39" (10 mm)	0.20" (5 mm)	0.31" (8 mm)	0.20" (5 mm)
Switch point force	22.5 lbf (100 N)	13.5 lbf (60 N)	18.7 lbf (83 N)	15.7 lbf (70 N)
Overtravel* **250 N** **400 N**	0.43" (11 mm) 0.59" (15 mm)	1.18" (30 mm) 1.26" (32 mm)	1.50" (38 mm) 1.61" (41 mm)	1.46" (37 mm) 2.09" (53 mm)

Discontinued products:

The marked products are in the process of being discontinued and will only be available for a short time. Please contact our sales department for more information and successor products.

The perfect and powerful alternative to the discontinued CoverLine:

ExpertSystem XL

– highly sensitive
– economical
– attractive

StandardLine

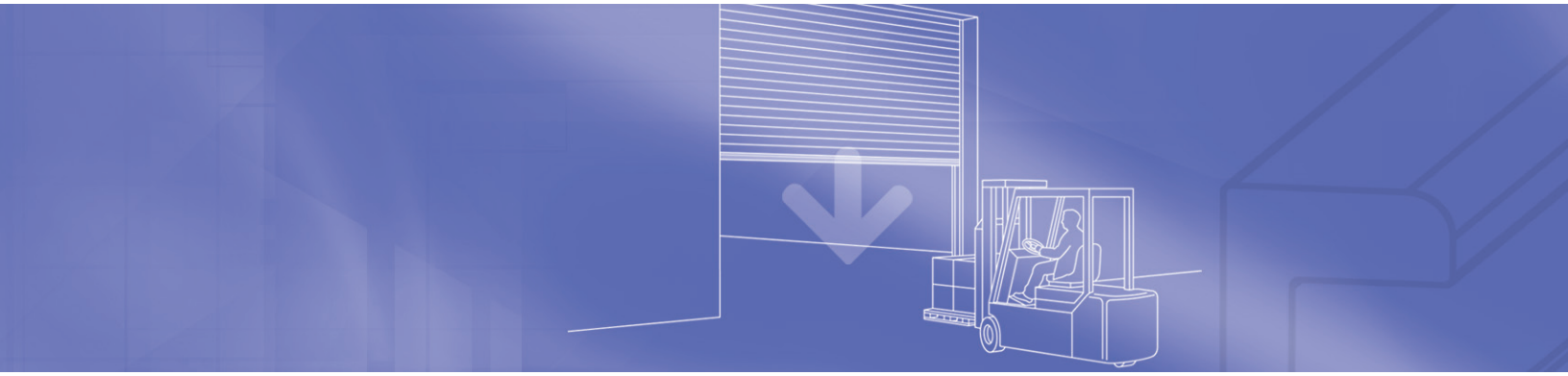
Rubber profiles with standard mounting foot

The tried-and-tested, reliable profile family

StandardLine offers the widest range of contours for all kinds of applications. We will be happy to present additional versions on request.

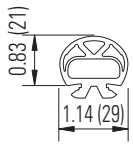
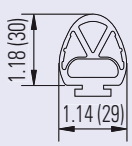
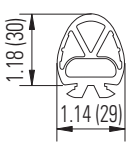
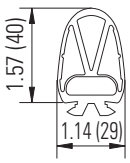
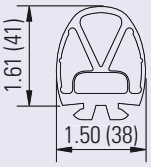
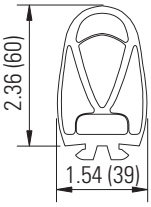
EPDM, the robust material

All safety edges from Bircher are made from EPDM. It is totally resistant to various materials and substances such as waste water, acetone, manganese sulphate, methyl alcohol, methyl phthalate as well as adequate resistance to acetaldehyde, methyl ethyl ketone, methyl chloride, cold lactic acid and other substances.



StandardLine profile types

General technical data on rubber profiles and prefabricated safety edges can be found on the back page.

Dimensions (Dimensions in inches [mm], tolerances acc. to DIN ISO 3302-1, tl. E2)		⚠ 			⚠ 	
Rubber profile	EPE025/020A0K	EPE025/029A0L	EPE025/029A0K	EPE025/040A0K	EPE036/040A0D	EPE036/060A0D
Article no.	210732	210735	210733	210746	210753	210762
Packing unit	164 ft (50 m)	164 ft (50 m)	164 ft (50 m)	164 ft (50 m)	164 ft (50 m)	82 ft (25 m)
Aluminium rail max. length 19.6 ft (6 m)	AP-5	AP-7	AP-5	AP-5	AP-4	AP-4
Safety edges (prefabricated)	ELE025/020A0Kx	ELE025/029A0Lx	ELE025/029A0Kx	ELE025/040A0Kx	ELE036/040A0Dx	ELE036/060A0Dx
Activation distance	0.12" (3 mm)	0.28" (7 mm)	0.28" (7 mm)	0.16" (4 mm)	0.35" (9 mm)	0.20" (5 mm)
Switch point force	15.7 lbf (70 N)	18.0 lbf (80 N)	18.0 lbf (80 N)	15.7 lbf (70 N)	20.2 lbf (90 N)	20.2 lbf (90 N)
Overtravel*						
250 N	0.08" (2 mm)	0.24" (6 mm)	0.24" (6 mm)	0.35" (9 mm)	0.31" (8 mm)	0.51" (13 mm)
400 N	0.16" (4 mm)	0.39" (10 mm)	0.39" (10 mm)	0.47" (12 mm)	0.63" (16 mm)	1.18" (30 mm)

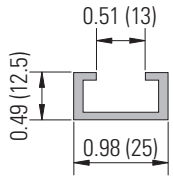
*acc. to EN ISO 13856-2, temp. 73°F (23°C), test object dia. 3.15" (80 mm), measuring point C3

⚠ Discontinued product

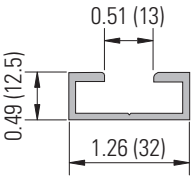
Aluminium rails / switching devices

The matching aluminium rail

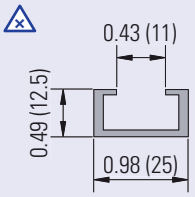
Aluminium rails from Bircher can be quickly and easily installed. Simply screw on, push in or click on the profile, and that's it.



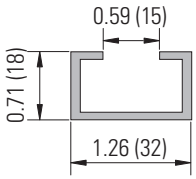
AP-5
Article no. 209583
(max. length 19.6 ft [6 m])



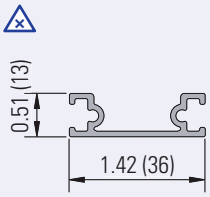
AP-8
Article no. 209593
(max. length 19.6 ft [6 m])



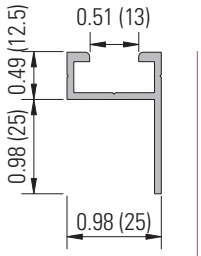
AP-7
Article no. 209591
(max. length 19.6 ft [6 m])



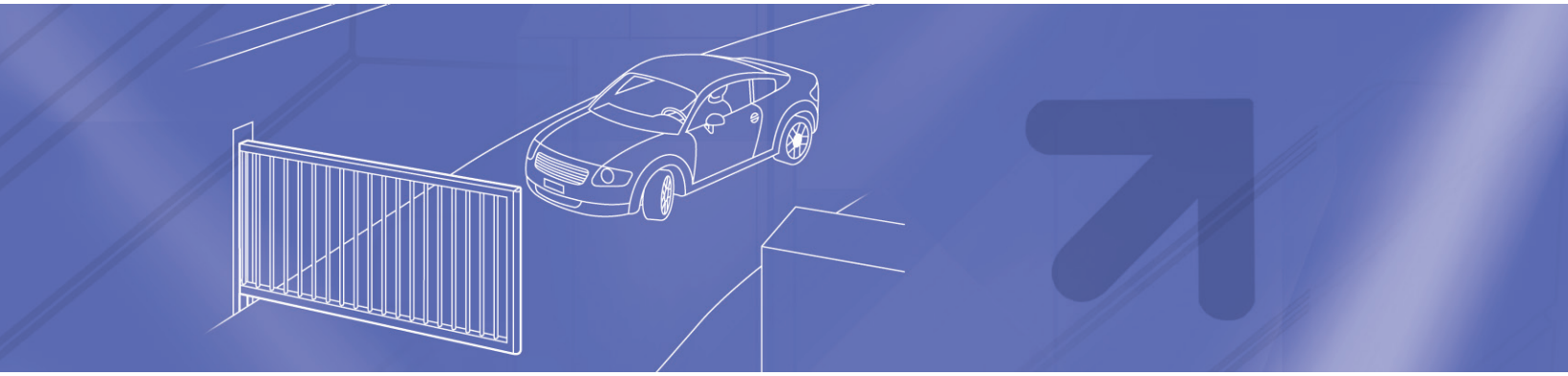
AP-4
Article no. 209580
(max. length 19.6 ft [6 m])



AP-G1
Article no. 209596
(max. length 19.6 ft [6 m])



AP-5-F1
Article no. 311759
(max. length 19.6 ft [6 m])



Calculation model

For selecting the suitable safety edge.

It is important to establish the stopping and overtravel distances in order to guarantee the greatest possible safety

Calculation of the stopping distance of hazardous parts (s_1):
$s_1 = ½ \times v \times T$

Calculation of the minimum overtravel of the safety edge s:
$s = s_1 \times C$

Key
v = Speed of the hazardous movement [mm/s]
T = Run-on time of the entire system (machine + safety edge) [s]
C = Safety factor, at least 1,2 (a greater safety factor should be selected if there are other factors such as a brake system which might be damaged; → EN ISO 13856-2)

The right switching device for every application

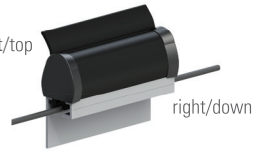
Some examples.

Details and technical data, including on additional switching devices and transmission systems, can be found in the corresponding booklets or by request from us.

Article no.	Description	
410975	**ExpertSystem XRF-1** Wireless signal transmission system cat. 2/3. Radio transmission system for automatic sectional, folding and sliding gates. Evaluation of mobile/stationary safety edges with terminating resistor 8.2 kOhm, supply voltage 12–36 V ACDC, dimensions 50 × 121 × 23 mm, set 1-channel: 1 receiver XRF-R1, 1 transmitter XRF-T2	
364283	**EsMatix 3** Cat. 3 safety switching device. For 2 sensors 8.2 kOhm, 2 redundant outputs, PLe, cat. 3 acc. to EN ISO 13849-1, mounting on DIN rail, supply voltage 24 V ACDC, dimensions 22.5 × 92 × 85 mm	

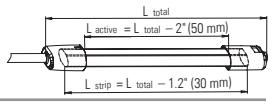
Discontinued product

Order details



Order details for prefabricated safety edges

ELE030/042A0V	/	2	/	1	/	45	/	6.5	/	8K
Type		**Contact strip**		**Profile endings**		**Length**		**Cable**		**Cable**
See tables		2 = ENT-R		1 = 8k2 resistor, with aluminium		Length of edge [inch]		Length [ft] / **resistor** (8K) **left/ top**		Length [ft] / **resistor** (8K) **right/ down**
ClickLine pg. 4				2 = 2 cables, with aluminium						
CoverLine pg. 5				4 = 8k2 resistor, without aluminium						
StandardLine pg. 6				5 = 2 cables, without aluminium						
				A1 = 8k2 resistor, with alu., bottom open, cable at the top						
				A4 = 8k2 resistor, without alu., bottom open, cable at the top						
				B1 = 8k2 resistor, with alu., bottom open, cable below						
				B4 = 8k2 resistor, without alu., bottom open, cable below						
				C2 = 2 cables, with alu., bottom open						
				C5 = 2 cables, without alu., bottom open						



Order details for prefabricated contact strips

ENT-R	/	4	/	45	/	6.5	/	8K
Type		**End piece 2**		**Length**		**Cable**		**Cable**
ENT-R		4 = 8k2 resistor, cable		"L total" length of strip [inch]		Length [ft] / **resistor** (8K) **left**		Length [ft] / **resistor** (8K) **right**
		5 = 2 cables						

Order details for components for self-assembly

Contact strip

Type: roll	**164 ft (50 m)**	**328 ft (100 m)**
ENT-R	ENT-R/50 **210718**	ENT-R/100 **210715**

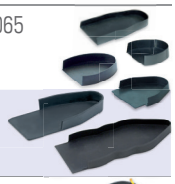
End pieces (packaging unit 10 pcs.)

Type	**8k2**	**without**
Resist.	ENEH-8 **210642**	ENEH-0 **210626**

Type	**1.6 ft (0.5 m)**	**6.5 ft (2 m)**	**13.1 ft (4 m)**	**23 ft (7 m)**	**32.8 ft (10 m)**
Cable	ENEH-K05 **210649**	ENEH-K2 **210661**	ENEH-K4 **210670**	ENEH-K7 **210673**	ENEH-K10 **210654**

End caps (packaging unit 50 pcs.)

209008	**EN-C60**	End cap for rubber profile EPE036/040/045/060/065
250333	**EN-C29**	End cap for rubber profile EPE025/029
256012	**EN-C42**	End cap for rubber profile EPE030/042
256017	**EN-C55** ⚠	End cap for rubber profile EPE040/055
358715	**EN-C81** ⚠	End cap for rubber profile EPE040/067/081
368031	**EN-C105** ⚠	End cap for rubber profile EPE040/105

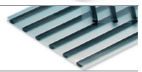


210616	**ENA-10**	Terminating band for rubber profile, 32.8 ft (10 m) roll (1 pc.), for cutting by customer
219349	**EN-KAS**	End piece for arcing chamber

Accessories / tools

209249	**EN-DS**	Sealing plug for arcing chamber, 50 pcs.
209248	**EN-DL**	Sealing plug with hole for cable, 50 pcs.

210964	**ES-BD**	Sealing compound for profile seal, 1 bag with strips (sufficient for about 50 edges)

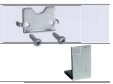


211010	**ES-KLEBER**	Contact adhesive for sealing plugs, 0.7 oz (20 g) tube (sufficient for about 50 edges)

211739	**ES-PRESS**	Pliers with jaws, bag of 1 (for pressing the end pieces onto the contact strips)

212876	**PROFIL-SCHERE**	Profile cutters, bag of 1 (for cutting a rubber profile)

254924	**EN-PHC** ⚠	Profile holder for CoverLine, 10 pcs.
262494	**EN-PHK**	Profile holder for ClickLine and StandardLine, 10 pcs.



210617	**EN-A20**	Delimiter piece, height 0.7" (18 mm), 10 pcs.
210618	**EN-A30**	Delimiter piece, height 1.1" (28 mm), 10 pcs.
210619	**EN-A40**	Delimiter piece, height 1.5" (38 mm), 10 pcs.

⚠ Discontinued product

Technical data

ENT-R contact strips	
Dimensions (max.)	0.3 × 0.75" (7.5 × 19 mm)
Operating temperature	–13°F to +140°F (–25°C to +60°C)
Storage temperature	–40°F to +176°F (–40°C to +80°C)
Material	EPDM
Contact material	Conductive EPDM
Current (min. / max.)	1 mA / 100 mA
Max. voltage	30 V ACDC
Resistance per unit length	< 0.6 Ohm/ft (2 Ohm/m)
Contact resistance	Typ. < 200 Ohm, max. < 500 Ohm
Switching frequency	> 100'000 (with test object ø 3.15" [80 mm])

Prefabricated safety edges	
Temperature range	–4°F to +131°F (–20°C to +55°C)
Max. length	19.6 ft (6 m) (longer lengths on request)
Insulating strength	1500 V AC
Max. load capacity	110 lbf (500 N)
Dead zone	0.8" (20 mm) (ELE040/105A0J2: 0" [0 mm])
Switching frequency	> 10'000 (with test object ø 3.15" [80 mm])
Connection cable	Double-jacketed cable, PVC, UV- and weatherproof, ø 0.19" (4.7 mm), strain relief wire 2 x AWG22 (0.34 mm^2), min. bending radius 0.4" (10 mm), non-detachable
Protection class	NEMA 4 (IP65)
Standards conformity	EN 12978, EN ISO 13856-2

Note
Technical details and recommendations concerning our products are based on experience and are an aid for the orientation of the user. Details stated in our brochures and data sheets do not guarantee special properties of the products. This does not apply to special product properties confirmed in writing or individually on a case-by-case basis. Subject to technical alterations.

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