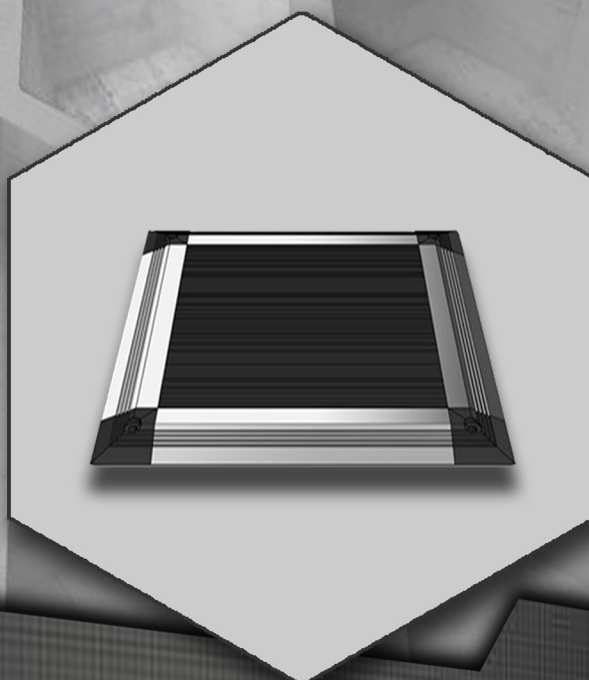
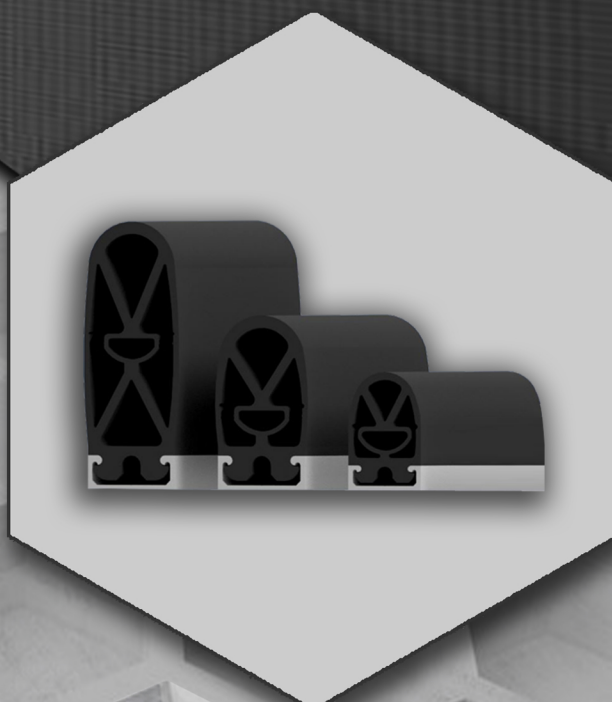
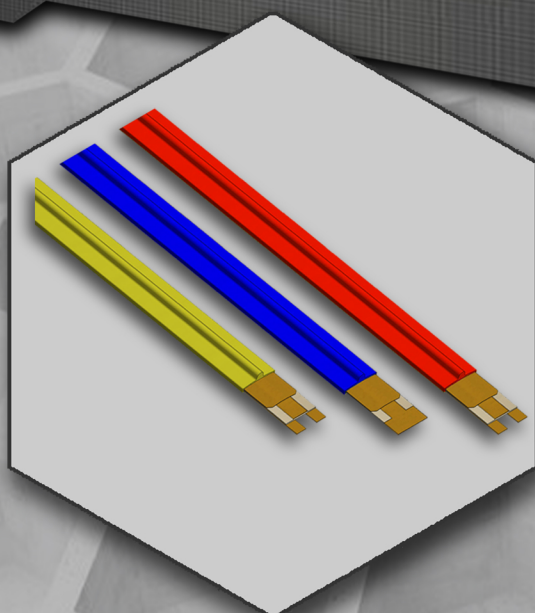


## Product line

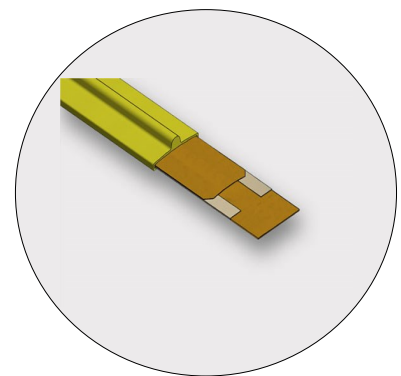
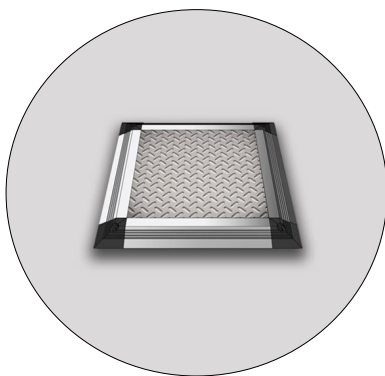
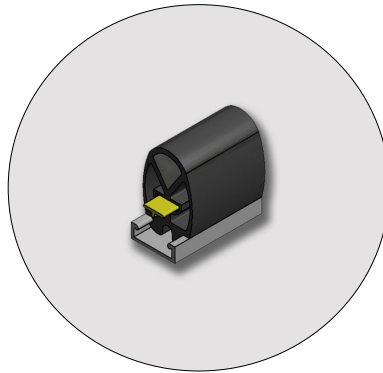
Ed. 003/17-EN

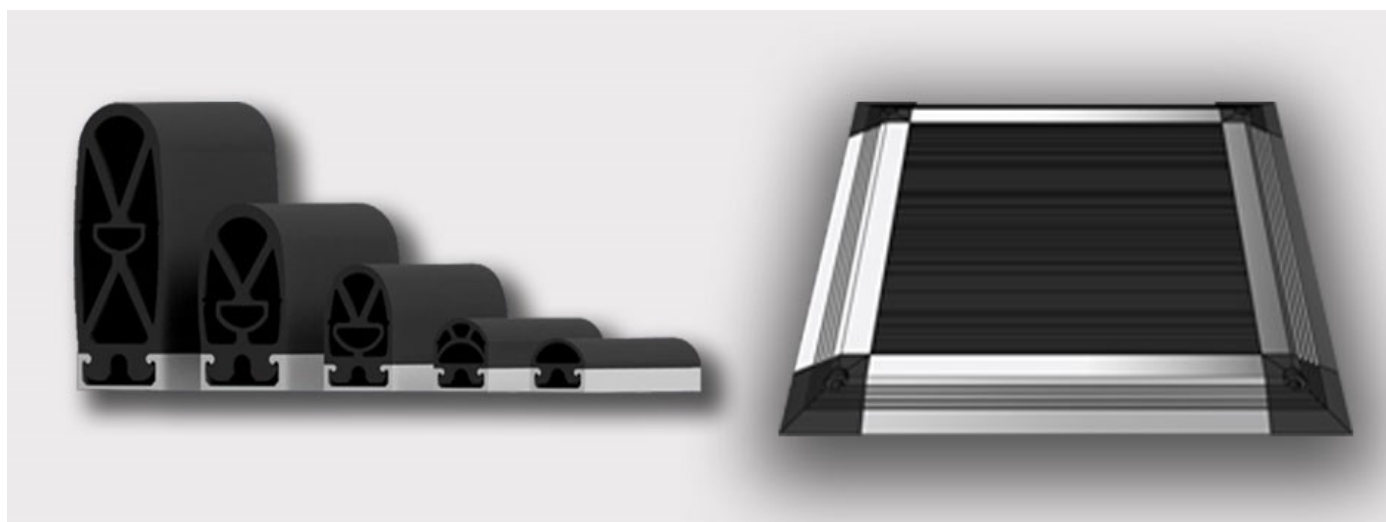


Ribbon switches  
Sensing edges  
Sensing mats  
Control units

# Safety product line

Innovative design, reliability, custom made solutions





Proswitch S.r.l. designs, produces and sells highly technological innovative devices to protect personnel and equipment from being trapped or crushed by moving parts.

Based in Milan, Proswitch develops its own products according to the most updated qualitative standards provided for by the national and international norms regarding safety of machinery.

The entire range of Proswitch products meets the requirements of EN ISO 13849-1 and covers the

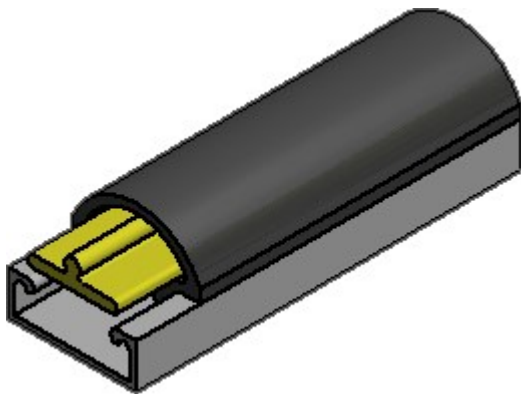
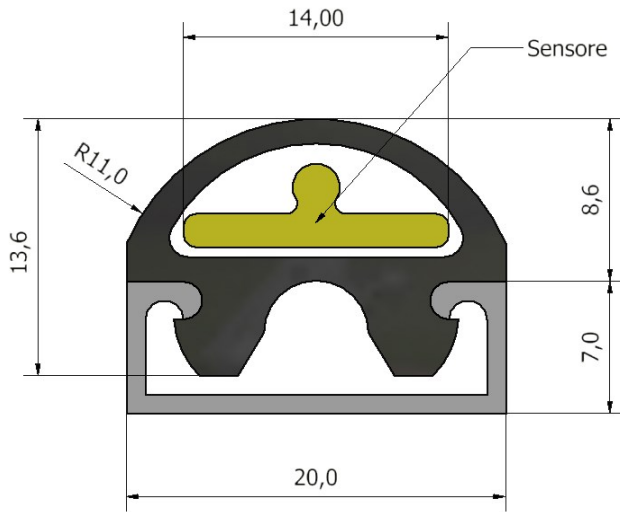
demand both of the national and international markets, reaching high performance and safety levels (PL e).

Proswitch personnel ability, gained after years of experience in the industrial safety sector, lead to a continuous development of high quality products.

This is why Proswitch can satisfy both the traditional safety applications and the customised ones, according to the clients needs.

<b>Safety edge PS - 100</b>	<b>4</b>
<b>Safety edge PS - 200</b>	<b>5</b>
<b>Safety edge PS - 300</b>	<b>6</b>
<b>Safety edge PS - 400</b>	<b>7</b>
<b>Safety edge PS - 500</b>	<b>8</b>
<b>Ribbon Switch S - 30</b>	<b>9</b>
<b>Ribbon Switch S - 33</b>	<b>10</b>
<b>Safety mats TPS / TPR</b>	<b>11</b>
<b>Control Units</b>	<b>12</b>

# Safety edge PS - 100



## General features:

PS-100 type is the smallest profile edge and can be installed in narrow sections, suiting the machine design standard. The inner sensor is sealed inside the edge housing, in order to guarantee a good protection against ingress of solid and liquid agents.

If required, it is available in curved model.

- edge housing material **EPDM** (black coloured)
- edge channel in aluminium (black coloured on request)
- high sensitivity for immediate activation
- two-wire, four-wire and with final resistance

## Technical features:

Switch contact type:	N.O.
Actuation angle:	30°
Inactive zone on each end of the edge:	15 mm
Actuations number:	2x10 <sup>6</sup>
Protection level:	IP56 (IP65 on request)
Max length:	65 m

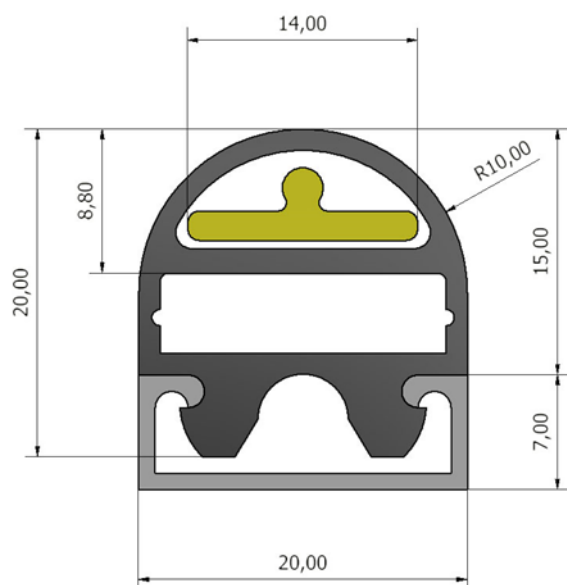
## Applications:

Mechanized sliding doors, scissor lifts, elevators, rehab machines, vehicles for disabled people, automatic shelving systems, conveyor belts, etc.

EN ISO 13856—2

EN ISO 13849—1

# Safety edge PS - 200



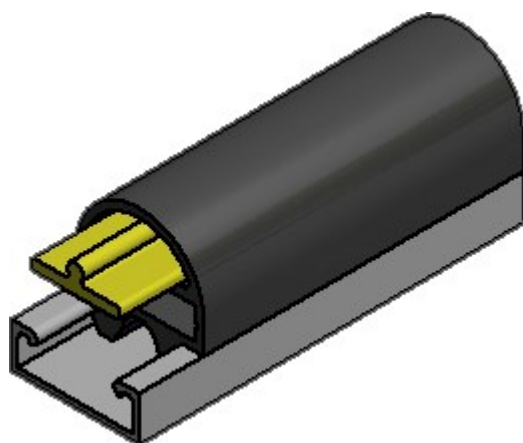
## General features:

PS-200 type is designed for limited space applications, and its over travel allows compression after the inner switch activation. It is resistant to external solid and liquid agents, and it is available in curved model.

- edge housing material **EPDM** (black coloured)
- edge channel in aluminium (black coloured on request)
- high sensitivity for immediate activation
- two-wire, four-wire and with final resistance

## Technical features:

Switch contact type:	N.O.
Actuation angle:	40°
Inactive zone on each end of the edge:	15 mm
Actuations number:	2x10 <sup>6</sup>
Protection level:	IP56 (IP65 on request)
Max length:	65 m



## Applications:

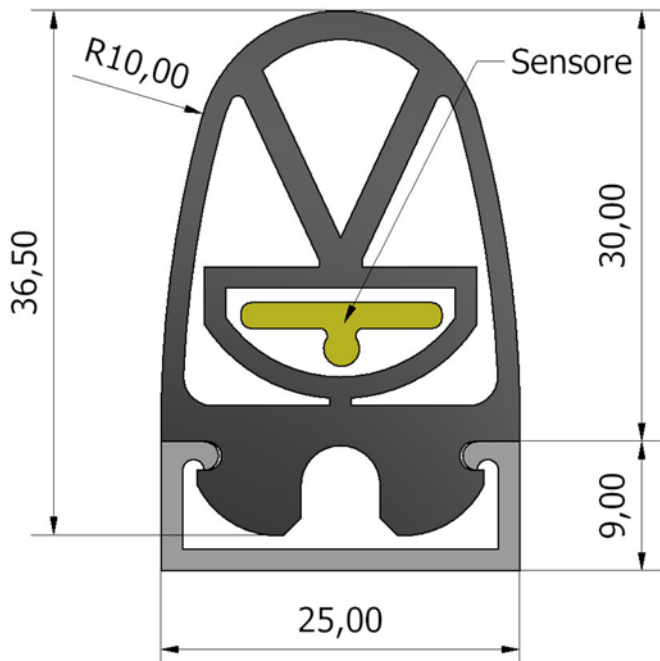
Mechanized sliding doors, scissor lifts, elevators, rehab machines, vehicles for disabled people, automatic shelving systems, conveyor belts, etc.

EN ISO 13856—2

EN ISO 13849—1



# Safety edge PS - 300



## General features:

PS-300 type is a medium profile safety edge that reconciles size and functionality.

The dimensions prevent a casual activation, and the safety edge is actuated only when subject to a huge force. Its unique design allows an excellent side activation.

- edge housing material **EPDM** (black coloured)
- edge channel in aluminium (black coloured on request)
- high sensitivity for immediate activation
- two-wire, four-wire and with final resistance

## Technical features:

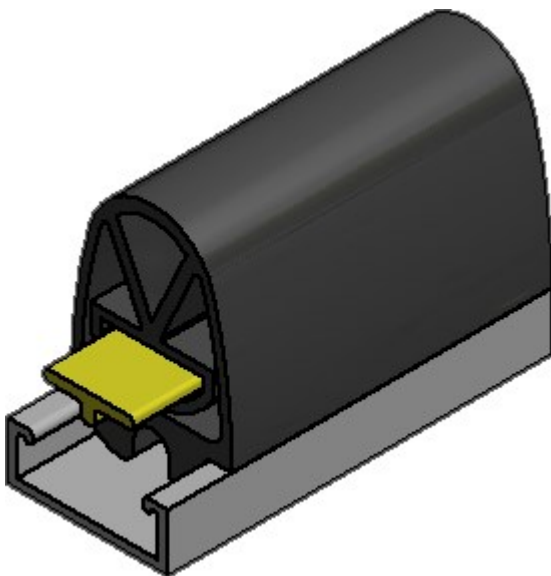
Switch contact type:	N.O.
Actuation angle:	80°
Inactive zone on each end of the edge:	15 mm
Actuations number:	2x10 <sup>6</sup>
Protection level:	IP56 (IP65 on request)
Max length:	65 m

## Applications:

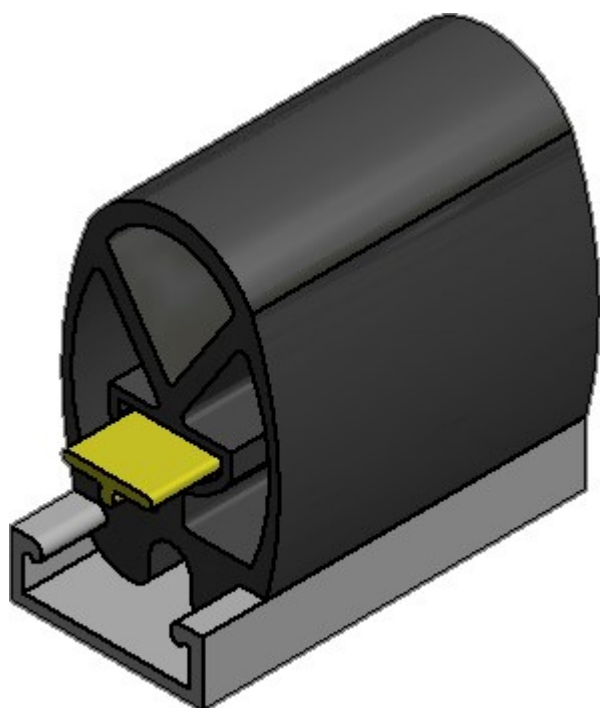
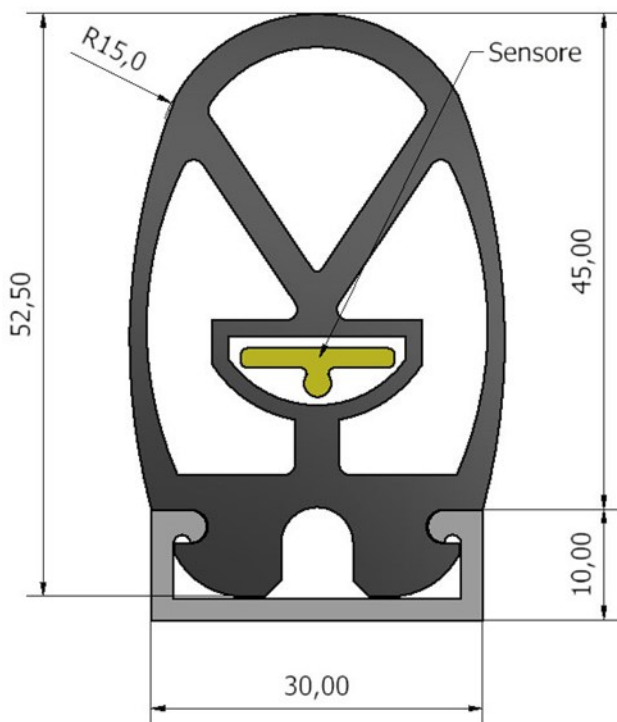
PS-300 Type safety edge are installed on dangerous moving parts of automated machines, in order to protect personnel from injury or equipment from damage .

EN ISO 13856—2

EN ISO 13849—1



# Safety edge PS - 400



## General features:

PS-400 type is designed to resist in extreme work conditions, high temperatures, liquids and steam presence, strong solicitations.

On request, it is available in curved model.

- edge housing material **EPDM** (black coloured)
- edge channel in aluminium (black coloured on request)
- high sensitivity for immediate activation
- two-wire, four-wire and with final resistance

## Technical features:

Switch contact type:	N.O.
Actuation angle:	90°
Inactive zone on each end of the edge:	15 mm
Actuations number:	2x10 <sup>6</sup>
Protection level:	IP56 (IP65 on request)
Max length:	65 m

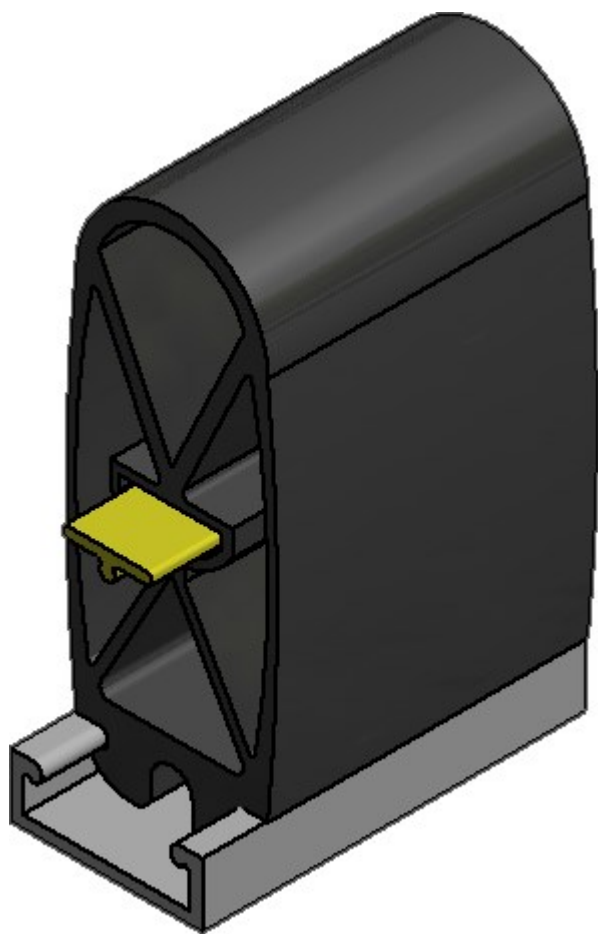
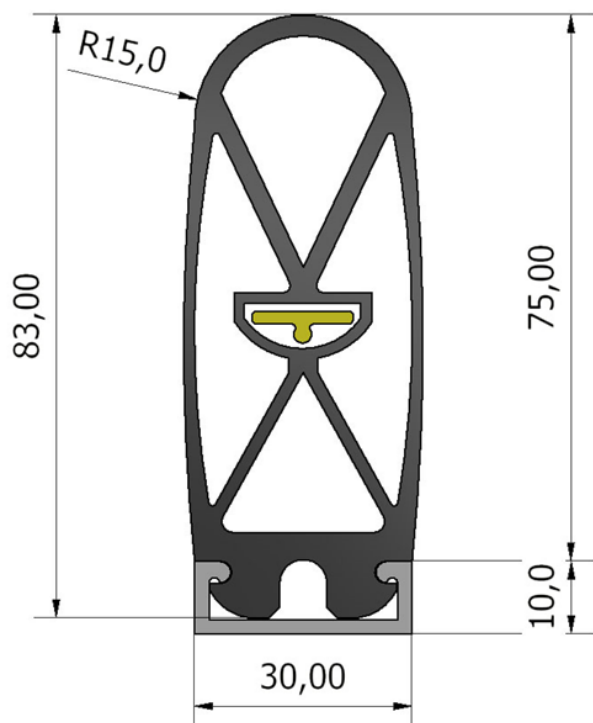
## Applications:

PS-400 type safety edges are easy to install, also in case of long portions' protection.

EN ISO 13856—2

EN ISO 13849—1

# Safety edge PS - 500



## General features:

PS-500 type is the biggest profile of the Proswitch safety edge range. Its high sensitivity and its overtravel provides maximum cushioning after activation, which ensures protections to personnel from being trapped or crushed in automatic moving parts.

- edge housing material **EPDM** (black coloured)
- edge channel in aluminium (black coloured on request)
- high sensitivity for immediate activation
- two-wire, four-wire and with final resistance

## Technical features:

Switch contact type:	N.O.
Actuation angle:	30°
Inactive zone on each end of the edge:	15 mm
Actuations number:	2x10 <sup>6</sup>
Protection level:	IP56 (IP65 on request)
Max length:	65 m

## Applications:

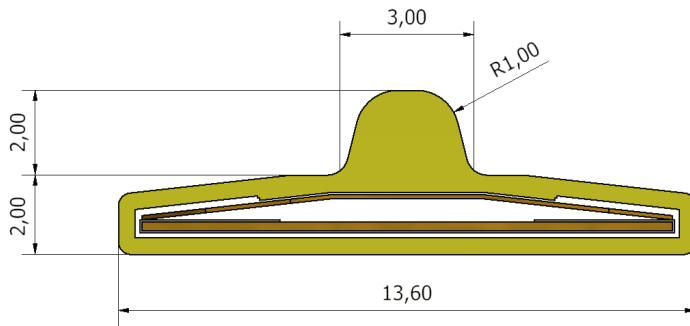
PS-500 type safety edges are used to protect long portions of automated machines, and it is generally installed on parts that move fast or that have a slow deceleration, after the machine stop.

EN ISO 13856—2

EN ISO 13849—1



# Ribbon switch S-30



## General features:

S-30 type ribbon switch is housed inside each Proswitch safety edge. Its length may vary and can be used and provided autonomously packed with its wires or supplied in meters.

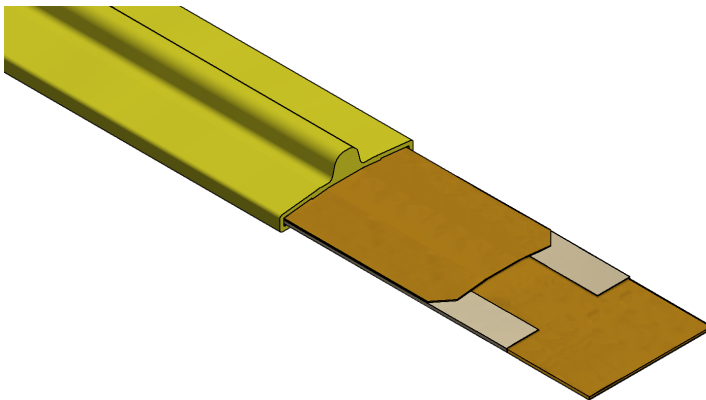
- external cover material **PVC**
- aluminium channel
- external cover colour RAL 1018 (other colours on request)
- switch contact material phosphorous bronze (stainless steel in some cases)
- terminal type **TS-30**

## Technical features:

Switch contact type:	N.O.
Actuation angle:	120°
External cover hardness::	80 shore
Actuations number:	<3x10 <sup>6</sup>
Protection level:	IP56 (IP65 on request)
Max length:	250 m

## Applications:

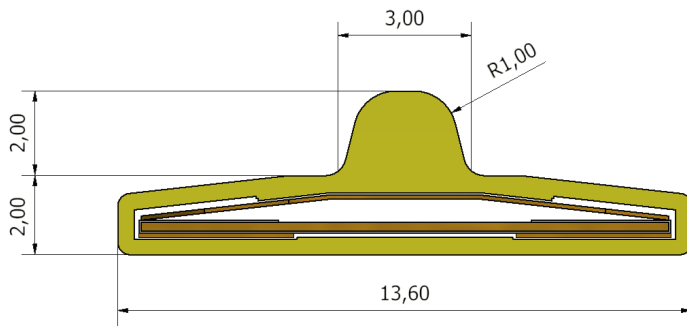
Proswitch ribbon switches can be used as a safety device or for controlling purposes.



EN ISO 13856—2

EN ISO 13849—1

# Ribbon switch S-33



## General features:

S-33 type ribbon switch can be housed inside each Proswitch safety edge. It has the same features of the S-30 type but its conductors are inside the external cover, in order to avoid the presence of external return cable.

- external cover material **PVC**
- aluminium channel
- external cover colour RAL 1018 (other colours on request)
- switch contact material phosphorous bronze (stainless steel in some cases)
- terminal type **TS-30**

## Technical features:

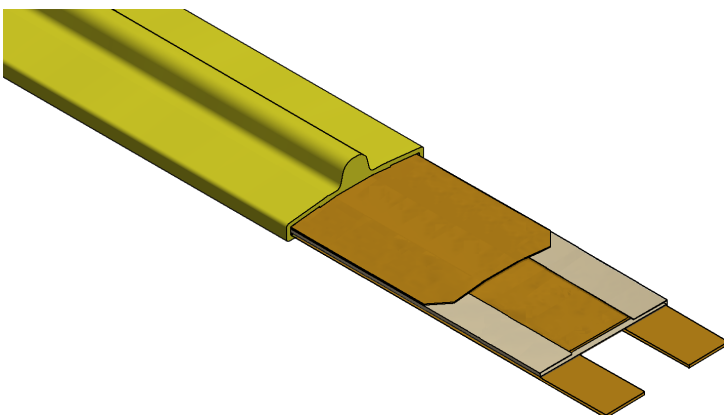
Switch contact type:	N.O.
Actuation angle:	120°
External cover hardness::	80 shore
Actuations number:	<3x10 <sup>6</sup>
Protection level:	IP56 (IP65 on request)
Max length:	250 m

## Applications:

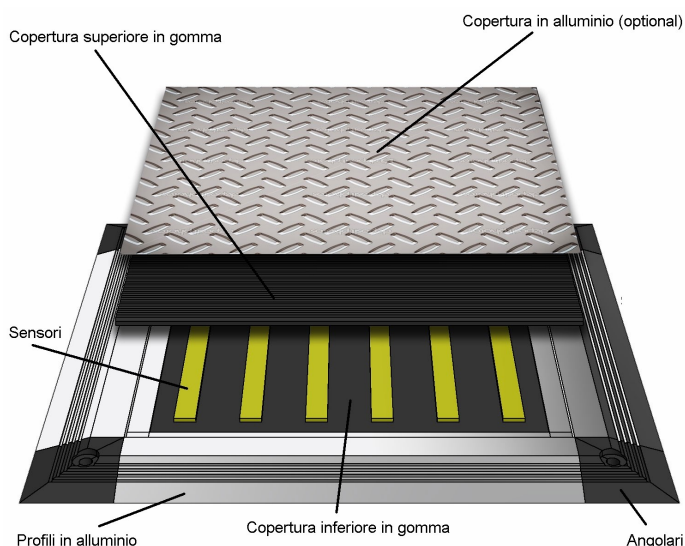
Proswitch ribbon switches can be used as a safety device or for controlling purposes.

EN ISO 13856—2

EN ISO 13849—1



# Safety mats TPS / TPR



## General features:

Proswitch safety mats are pressure sensitive safety devices that must be installed close to dangerous automated machines.

- upper cover: **PVC** (branded 4 mm thick)
- lower cover: **PVC** (smooth 4 mm thick)
- additional aluminium cover on request (**TPR** type)
- protection level: IP56
- two-wire, four-wire and with final resistance

## Technical features:

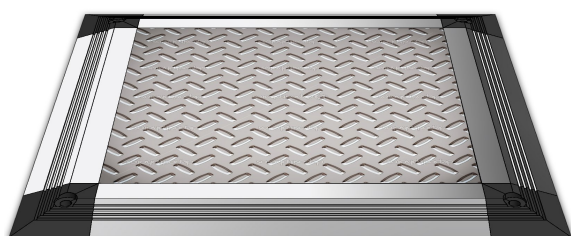
Thickness:	10 mm
Switch contact type:	N.O.
Inactive zone on the perimeter:	20 mm
Mechanical sensor life:	2 x 10 <sup>6</sup> operations
Protection level:	IP56
Frame material:	aluminium

## Applications:

**TPS** type safety mats can be installed on surfaces close to automated machines and robots. **TPR** type safety mats, with the aluminium cover, can be installed on hard working places or sites.

EN ISO 13856—1

EN ISO 13849—1



# Control units



## General features:

Proswitch control units are designed to be compatible both with Proswitch pressure sensitive edges, mats and ribbon switches and with those already present in the market. SP-2S and SP-4S series have safety function, while the SP-NS series are compatible with non safety devices with N.O. contacts.

**SP-2S** type control units are compatible with pressure sensitive safety edges, mats, ribbon switches and bumpers with final resistance of 8,2 KOhm ( $\pm 4K\Omega$ ).

**SP-4S** type control units are compatible with pressure sensitive safety edges, mats, ribbon switches and bumpers that use a four wire technology.

**SP-NS** type control units are compatible with non safety devices with N.O. contacts.

## Technical features:

Feeding:	24 V ac/dc
Reset:	automatic / manual
Mechanical life:	6x10 <sup>6</sup> operations
Protection level:	IP56 (IP65 on request)
Max safety edge length:	65 m
Max safety mats surface:	5 m <sup>2</sup>
Chassis protection level:	IP56 (IP65 on request)
Mounting:	rail mounting DIN 35 mm

EN ISO 13856—2

EN ISO 13849—1

Lined area for notes, consisting of multiple horizontal lines.







