

# Sensing Edges



## FEATURES & BENEFITS

- Rugged construction and excellent moisture and chemical resistance ensure long life, even in harsh environments.
- Modular design allows easy assembly, installation and replacement in the field.
- Sensing edges will activate from force applied to either top, sides or both.
- Sensing edges are available in a selection of sensitivities, sizes, colors and configurations to fit virtually any application.
- Manufactured to exact lengths.
- CE approved sensing switches.



**T**apeswitch sensing edges protect both personnel and equipment from injury and damage. They can be quickly and easily installed on both new and existing applications. These edges are suitable for use in both vertical and horizontal orientations.

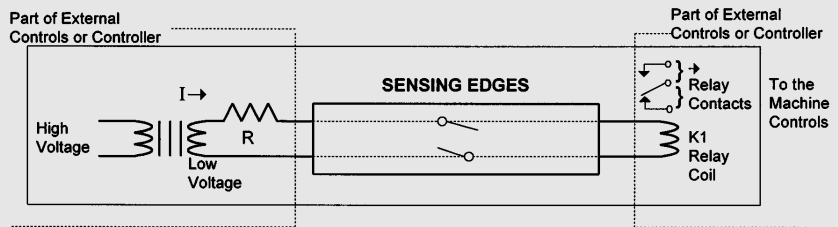
## Rugged Construction

Each sensing edge is composed of a continuous length of completely sealed, field-proven ribbon switch. Encased in a tough, extruded Astarax polymer housing, it is both water and chemical resistant, ensuring long life under the most severe environmental conditions.

## Dri-Run Moisture Resistant Cables

Moisture intrusion is the most common cause of electrical failure in conventional safety edges. Tapeswitch safety edges are equipped with our custom extruded vinyl cable. The Dri-Run cables have no fibrous cloth fillers, which tend to wick moisture along the cable. The "all-solid" design provides longer edge life in most environments.

## FAIL-SAFE Supervised Circuit Concept



## Installation and Mounting

Tapeswitch's modular designed sensing edges consist of three components; an outer cushioned housing, a Controflex® ribbon switch and a mounting channel.

To install, the housing is fitted into an aluminum or PVC mounting channel. Both slide-in and snap-in channel is available. The mounting channel can be cut to length in the field with simple hand-tools. A matching length of the sealed switch is then inserted into the housing to complete the design. Sealing the housing is not necessary for moisture resistance.

## Fail-Safe Wiring

The Tapeswitch Fail-Safe Monitoring Circuit (pictured above) is standard for all sensing edges. This circuit detects power failures, opened or shorted

leads, internal faults, or normal actuation of the edge. The sensing switch contained within all Tapeswitch edges fulfills Class 2.2 (category 3 prEN954-1) when used with a suitable, control reliable controller, (such as the PSSU Series). Over travel is provided by the complete assembly (the outer housing) and the Tapeswitch alone does not provide over travel. See page 56 for detailed explanation of Fail-Safe Concept in the Interface Controllers Section.

## Controllers

Tapeswitch offers a complete line of controllers that provide an interface between our low-voltage sensors and high-voltage, high energy machine control and automation processes. For more information, see the Interface Controllers Section, page 46.

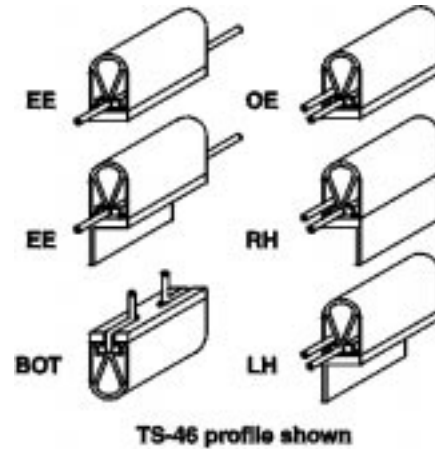
# Sensing Edges

## Lead Configurations

Sensing edges are supplied with two-wire leads (fail-safe) as standard. Lead exit configuration options include:

- EE** One lead from **E**ach **E**nd.
- OE** Both leads from **O**ne **E**nd.
- RH** Both leads from **R**ight **H**and end;  
angle channel only.
- LH** Both leads from **L**eft **H**and end;  
angle channel only.
- BOT** Bottom facilitated by U slot recessed in  
bottom of channel.

Please consult the Style Chart for standard lead exits if not specified.



## How To Order

- Product :** TS-3, TS-6, TS-8, TS-16, TS-18, TS-26P, TS-26S, TS-26T, TS-46, TS-47, TS-48, TS-57, TS-108, TS-109.
- Style:** Edge Only (E), Edge & Channel (C), No channel required (T).
- Edge Length:** Lengths specific to your application.
- Channel Type:** Aluminum Flat Channel (AF), Aluminum Angle Channel (AA), PVC Flat Channel (PF).
- Housing Color:** Black, Red, Orange, Yellow (depending on style).
- Lead Style:** Fail-Safe (F/S) standard, Single Lead (S/L) optional. F/S provided if not specified.  
**Standard** 22/2 AWG 18" long (TS-3, TS-6, TS-8, TS-16, TS-18).
- Lead Wire:** AWG #20 Dri-Run, 72" long, 3/16" diameter  
(TS-26P, TS-26S, TS-26T, TS-46, TS-47, TS-48, TS-57, TS-108, TS-109).
- Lead Exit:** Each End (EE), One End (OE), Bottom U Slot (BOT), Slot (U), Right Hand (RH), Left Hand (LH), last two options apply only to angle (slide in) mounting channel.
- Accessories:** End Caps: special order for TS-6, TS-16, TS-26, TS-46

**Example** **TS-46, 12 ft. long, AF, R, F/S, EE, SLW.**  
Product Type: **TS-46, 12 ft.** edge length, **Aluminum Flat** channel, **Red** color, **Fail-Safe** leads, exiting **Each End**, **Standard Lead Wire**.

# Sensing Edges

## Style Chart

Product	Available Lengths	Channel Type	Housing Colors	Lead Styles	Standard Lead Wire	Standard Lead Exit	End Cap*
<b>TS-3</b>	3 in.–10 ft.	AF–Aluminum Flat	B–Black R–Red Y–Yellow	F/S–Fail-Safe S/L–Single Lead	22/2 AWG 18" long	EE–Each End	No
<b>TS-6</b>	3 in.–16 ft.	AF–Aluminum Flat PF–PVC Flat AA–Aluminum Angle	B–Black O–Orange R–Red	F/S–Fail-Safe S/L–Single Lead	22/2 AWG 18" long	OE–One End	Yes
<b>TS-16</b>	3 in.–16 ft.	AF–Aluminum Flat PF–PVC Flat AA–Aluminum Angle	B–Black O–Orange R–Red Y–Yellow	F/S–Fail-Safe S/L–Single Lead	22/2 AWG 18" long	OE–One End	Yes
<b>TS-8</b> <b>TS-18</b>	3 in.–16 ft.	AF–Aluminum Flat	B–Black	F/S–Fail-Safe S/L–Single Lead	22/2 AWG 18" long	EE–Each End	Yes
<b>TS-26P</b> <b>TS-26S</b>	3 in.–16 ft.	AF–Aluminum Flat AA–Aluminum Angle PF–PVC Flat	B–Black Y–Yellow R–Red	F/S–Fail-Safe S/L–Single Lead	AWG #20 Dri-Run, 72" long 3/16" diameter	OE–One End	Yes***
<b>TS-26T</b>	3 in.–16 ft.	None Required	B–Black	F/S–Fail-Safe S/L–Single Lead	AWG #20 Dri-Run, 72" long 3/16" diameter	OE–One End	No
<b>TS-46</b>	3 in.–16 ft.	AF–Aluminum Flat AA–Aluminum Angle**	B–Black Y–Yellow R–Red	F/S–Fail-Safe S/L–Single Lead	AWG #20 Dri-Run, 72" long 3/16" diameter	LH–Left Hand	Yes
<b>TS-48</b>	3 in.–16 ft.	AF–Aluminum Flat AA–Aluminum Angle PF–PVC Flat	B–Black Y–Yellow R–Red	F/S–Fail-Safe S/L–Single Lead	AWG #20 Dri-Run, 72" long 3/16" diameter	OE–One End	Yes
<b>TS-47</b> <b>TS-57</b>	3 in.–16 ft.	AF–Aluminum Flat AA–Aluminum Angle PF–PVC Flat	B–Black R–Red	F/S–Fail-Safe S/L–Single Lead	AWG #20 Dri-Run, 72" long 3/16" diameter	OE–One End	No
<b>TS-108</b> <b>TS-109</b>	3 in.–10 ft.	None Required	B–Black	F/S–Fail-Safe S/L–Single Lead	AWG #20 Dri-Run, 72" long 3/16" diameter	OE–One End	No

\*End caps are not standard and must be ordered separately.

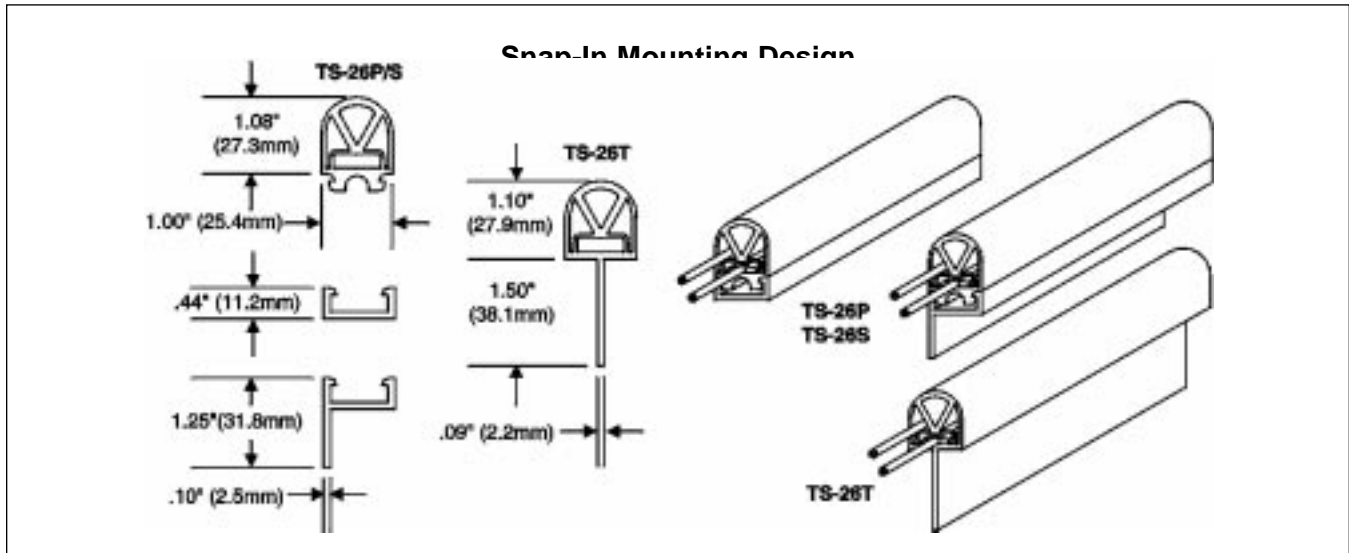
\*\* It is necessary to specify right hand/left hand when ordering angle channel only.

\*\*\* For Black PVC housing only

# TS-26 Sensing Edge

- FEATURES & BENEFITS:**
- Medium Profile • Immediate Activation • Minimal Compliance
  - Provides Over Travel Cushioning • Excellent Side Activation
  - Provides Excellent Protection of Switching Mechanism

- APPLICATIONS:**
- Commercial & Residential Doors • Machinery Edges • Gates • Stage Lifts
  - Bumpers on AGV's • Elevator Doors, etc.



## Specifications

<b>Part Designation</b>	<b>TS-26P</b> (flat or angle channel mounting). <b>TS-26S</b> (flat or angle channel mounting). <b>TS-26T</b> (clamp mounting) special order.
<b>Exterior Housing</b>	<b>TS-26P</b> PVC, <b>TS-26S</b> Santoprene, <b>TS-26T</b> , Santoprene.
<b>Colors</b>	<b>TS-26P</b> , <b>TS-26T</b> - black. <b>TS-26S</b> - black, yellow, red.
<b>Available Lengths</b>	3 in. to 16 ft. (.08m to 4.9m). Non-standard and longer lengths available.
<b>Actuation Force</b>	4.5 lbs. nominal
<b>Overtravel</b>	.350" (9mm) nominal cushioned travel after switch activation.
<b>Lead Wire</b>	Two FAIL-SAFE, AWG #20 Dri-Run leads, each 72" (1830mm) long, black color, 3/16" (5mm) diameter. One end standard.
<b>Mounting Channel Options</b>	Aluminum Flat Channel (AF), Aluminum Angle Channel (AA), Snap-in, PVC Flat Channel (PF), all snap-in channel.
<b>Design Life</b>	Over 3 x 10 <sup>6</sup> actuations at any one point anywhere along the active portion of the edge.
<b>Recommended Voltage and Current</b>	To ensure personnel safety, wire for operation at 28 VDC or VAC, 1.0 amp maximum.
<b>Operating Temperature</b>	-30 °F to 170 °F (-34 °C to 77 °C).
<b>Chemical Resistance</b>	Excellent to common acids and bases, salt water, motor oils, anti-freezes, gasoline, hydraulic fluids, and coolant oils, unless submerged or in continuous contact.
<b>Moisture Resistance</b>	IP67 Protection Classification. Totally protected against dust and against the effects of immersion between 15cm and 1m.
<b>Options</b>	End caps, black PVC housing only.