

## Solo Ribbon Switches



### Features

- Simple, reliable technology
- Wide range available
- Length up to 1000m
- Choice of colours
- Choice of cables & connection options
- Variety of mounting options
- TÜV approved
- Long life (in excess of 3 million operations)
- AS-Interface compatible
- Volt-free, normally closed contacts

Ribbon switches are press-at-any-point, momentary, normally-open contacts. The major difference between the Solo ribbon switch and any other ribbon switch is that it has a Category 3 fail-safe monitoring function built into it. A pair of redundant contacts are closed when the ribbon switch is not activated and open when it is pressed. This configuration is ideal for use with AS-Interface systems, which connect sensors and actuators to remote control systems through only a 2-wire cable. The ribbon switches can be connected directly to the same kind of standard AS-Interface Safe I/O connection modules that are used to connect E-stop switches over the AS-Interface. This is much more convenient than the alternative of having an additional control unit close to the switch so that it can provide the volt-free, normally closed connections to the AS-Interface Safe I/O module.

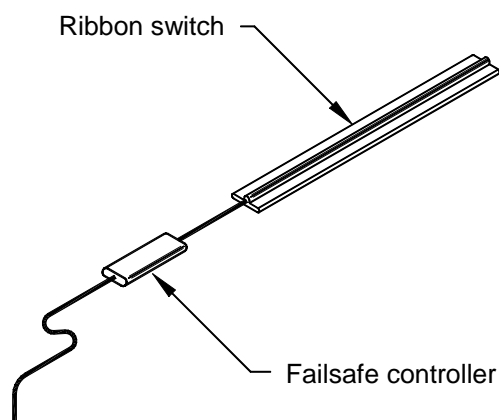
Ribbon switches are the essence of simplicity and reliability. These products deliver the highest levels of performance in thousands of applications ranging from general-purpose usage to severe environments.

Our ribbon switches offer a broad range of pressure sensitivities and a wide range of sheathing materials, switch lengths, end-termination seals, exterior colours, lead-wire combinations and mounting options, as well as substantial resistance to moisture and chemicals.

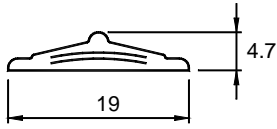
### Typical applications

- Special needs  
*motorised furniture—baths/chairs/worktops*
- Transportation  
*driver alerts*
- Local authorities  
*alarm systems*
- Factory automation  
*product detection*
- Sports timing  
*cycle racing, swimming events*

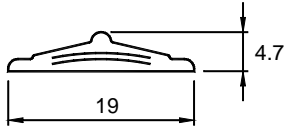
### Construction



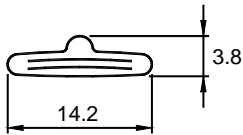
Ribbon switches can be supplied factory sealed in any length to suit the application.



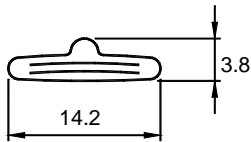
**131A** is designed typically for foot, hand or mechanical activation and can be bent around smoothly curved corners. It can be supplied with sleeve end (lower profile) or alternatively with a block end which allows for fixing with screws.



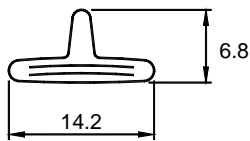
**101B** is designed typically for finger operation and can be bent around tightly curved corners. It has been used extensively in vehicle crash testing applications. The 101B can be supplied with a sleeve end (lower profile) or alternatively can be supplied with block end, which allows for fixing with screws.



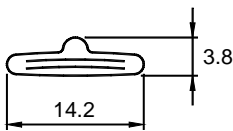
**121BP** is a very sensitive switch which can be operated directly but more commonly is integrated for indirect operation e.g. as an interlock inside a seat.



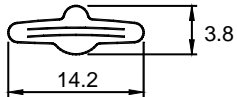
**107BP** is a variation on the BP switch and has an evoprene jacket. The properties of evoprene offer a good alternative where the toxicity of PVC is inappropriate.



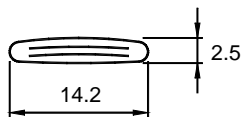
**141BPH** is a very sensitive switch with a high bead for increased operating angle. Where the application allows it can be used as a leading edge safety switch.



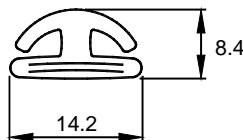
**180** is a snap action switch which operates when bent or pressed. It is typically used as a paddle or limit switch and can be mounted in a special bracket to be used as a flex-switch.



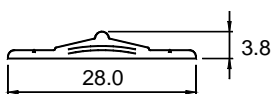
**191-S** is a switch with stainless steel conductors which means that it is suited to applications where the switch is submerged in water. It is regularly used in sports timing pads in swimming events and has even been used at the Olympic Games.



**151BBW** is a low profile, beadless switch which is highly sensitive. It has been widely used in window security applications.



**TS3** is a low profile, contoured switch which can be bent smoothly around curved corners. It is commonly used as a hand or foot activated machine stop/ start device.



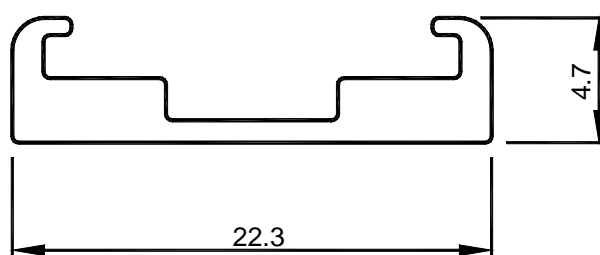
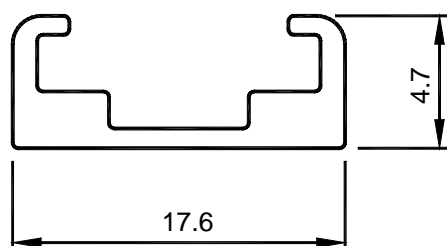
**101BS** is a variation on the B switch and is unique, this switch has an extra wide jacket offering the option to staple the switch into place. This switch has been specially designed for the motorised chair industry.

## Technical Specification

	Colour	Min. bending radius	Actuating force (20mm $\phi$ test piece)	Sheath material	Switch termination	Ingress protection	Operating temperature	Weight	Recommended max. voltage	Max. switching current @ 30V d.c.
131A	Grey	15mm	<60N (6.0kg)	PVC	Sleeve/Block	IP65	-20°C to +50°C	75g/m	30V d.c.	1A
101B	Yellow/Black	3mm	<26N (2.6kg)	PVC	Sleeve/Block	IP65	-20°C to +50°C	75g/m	30V d.c.	1A
121BP	Green	4mm	<6N (0.6kg)	PVC	Welded end	IP65	-20°C to +50°C	65g/m	30V d.c.	1A
141BPH	White/Red	10mm	<16N (1.6kg)	PVC	Welded end	IP65	-20°C to +50°C	65g/m	30V d.c.	1A
180	Red	<12° bends	<12° bends	PVC	Welded end	IP65	-20°C to +50°C	65g/m	30V d.c.	1A
191-S	Beige	Do not bend	<11N (1.1kg)	PVC	Welded end	IP65	-20°C to +50°C	50g/m	30V d.c.	1A
151BBW	White	3mm	N/A	PVC	Welded end	IP65	-20°C to +50°C	70g/m	30V d.c.	1A
TS3	Black/ Yellow/ Red	30mm	<48N (4.8kg)	PVC	Welded end	IP65	-20°C to +50°C	120g/m	30V d.c.	1A
101BS	Black	4mm	<26N (2.6kg)	PVC	Welded end	IP65	-20°C to +50°C	110g/m	30V d.c.	1A
107BP	Black	10mm	<12N (1.2kg)	Evoprene	Welded end	IP65	-20°C to +50°C	50g/m	30V d.c.	1A

## Mounting Channel

Two main types of mounting channel are available; the 104 and 106 models. 104 aluminium mounting channel is designed for use with the BP and BPH style ribbon switches. 106 aluminium mounting channel is suitable for use with the A and B model ribbon switches. Additionally, the 106 type channel is available as 106P (plastic) which allows for mounting on curved surfaces.



**Order Code**

XXXXSolo / XXXX / XX / XXXX / XXXX / XX

**Switch type** e.g.101B

**Switch length (mm)**

**Lead type**

(FS- fail-safe, SL- single lead standard)

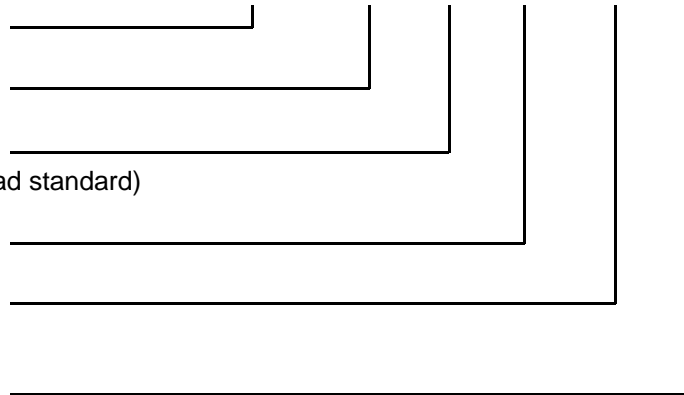
**Lead 1 length (mm)**

**Lead 2 length (mm)**

(If applicable)

**Colour**

(W-white, R-red,  
BK-black, Y-yellow,  
GN-green, BN-beige,  
GY-grey)



**This is only a sample order code. If you have any special requirements, please contact our sales team.**