# SAS Snap Action Safety Pull Switch

### Slack/Broken Cable Design

The Thermo Scientific Ramsey Snap Action Switch (S.A.S.) was specifically designed to function as Slack/Broken Cable type Pull Cord but without the false trips associated with the effects of weather conditions such as temperature variations affecting the cables, ice, snow, wind and vibration.

#### **Features**

- Satisfies OSHA, MSHA & CSA Push-Pull operating requirements
- Snap Action Design
- Opposing cable design eliminates false trips due to temperature variations
- Positive-opening NC contacts
- Self cleaning microswitch contacts
- -40°C to +80°operating temperature
- Superior drawbar spring design is easy to install
- Rugged, Corrosion-resistant, die cast aluminum enclosure
- Optional Addressable Module
- Optional Activation Flag
- Optional 4 microswitch model

#### **Superior Design**

The Thermo Ramsey model SAS Snap Action Safety pull cord is a two-sided cable pull emergency stop switch. In addition it is designed to ensure that should the cable become slack or is accidentally cut, the switch will activate so as to be repaired to normal functionality.



#### How it works

Pre-tensioned springs are installed at the extremity each side of the pull cord cable run. Cable tension is kept equal on both sides.

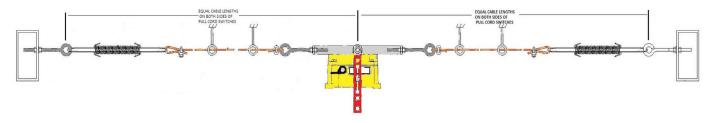
In normal operation, should an emergency present itself, the cable is pulled in any direction and the pull cord switch's arm rotates clockwise or counter-clockwise thus activating the micro switches in order to alarm. If the cable breaks or becomes slack, the opposing pre-tensioned spring pulls the arm in that direction. The contact behavior for a cable that has broken is the same as pulling the cable.

Cable lengths are kept equal on opposite sides of the Pull Cord switch. This is particularly suitable to installations prone to wide temperature changes minimizing nuisance trips or stops associated with coefficient of expansion characteristics of actuation cables.

The snap action design uses a two step function. The switch arm must be pulled to a locked position. As a second step, an internal linkage then permits the spring loaded cam to fully rotate ensuring that both micro switches are activated together. This ensures that partial arm rotation due to temperature changes; snow, ice or wind effects on the cable cannot activate one micro switch and not the other.



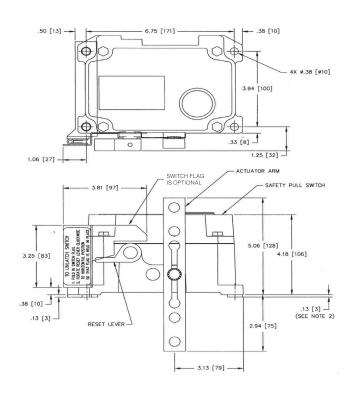
## **thermo**scientific



Specifications	SAS NEMA Type-4X	SAS Nickel Plated NEMA Type-4X
Outputs	2 or 4 SPDT contacts rated for 6A @ 250 VAC	2 or 4 SPDT contacts rated for 6A @ 250 VAC
Pull cord lock angle	15°	15°
Operating temperature	-40°C to 85°C (-40°F to 185°F)	-40°C to 85°C (-40°F to 185°F)
Adjustable actuator angle increment	22.5°	22.5°
Enclosure	Yellow poly enamel painted aluminum	Nickel plated aluminum
Rating	Standard cCSAus non-haz area rating; optional	Standard cCSAus non-haz area rating; optional
	cCSAus for Class II, Div 1 & 2, Groups E,F,G	cCSAus for Class II, Div 1 & 2, Groups E,F,G
Pull force rating	10 kg (22 lb)	10 kg (22 lb)
Conduit openings (2) female	Standard 3/4-14 NPT threads; optional M20x1.5	Standard 3/4-14 NPT threads; optional
	metric threads	M20x1.5 metric threads
Watertight design rating	Meets IP65	Meets IP65
Installation spacing	45.7m (150 ft) spacing between pull cord switches	45.7m (150 ft) spacing between pull cord
		switches
Microswitch	Positive break, self-cleaning contacts	Positive break, self-cleaning contacts
Installation and maintenance manual	REC 4475	REC 4475
Accessories	Slack/Broken Cable Kit, Flag, Light	Slack/Broken Cable Kit, Flag, Light

#### Enclosure dimensions







Find out more at thermofisher.com/bulkweighing