



The KS is a key driven electrical switch designed for machine control circuits. This type of isolator should be used for short term, off load isolation. The KS lock is manufactured from either brass or stainless steel. The unit is able to be mounted into an existing panel or for surface mounting within its own polycarbonate IP65 rated enclosure.

## OPERATION

The Castell KS powersafe electrical key switch is used for machine isolation in order to protect the hazardous area from access while power is on.

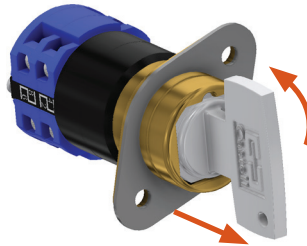
### KS20 powersafe electrical switch, back on panel mount

**1** Key is trapped, while power is on.



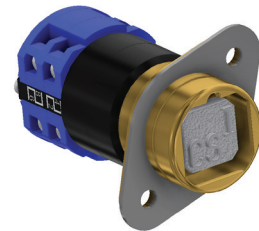
While the power is on and a machine is running, the key is trapped in the KS key switch.

**2** Turn and remove key to switch the power off by changing the contacts arrangement.



By turning and removing the key from the switch, the contacts condition in the KS changes, switching the power off.

**3** Key is free, power is off.



The key can now be taken to unlock the door interlock and gain access to the machine area.

The KS is available for different switching loads as KS20, KS32 or KS63 (20, 32 or 63 amps control isolation respectively). Please refer to order info on page 6 for more details.

The KS comes with 4 contacts as standard with contacts arrangements as 2NO/2NC or 4NC, but additional sets of contacts are available on request.

The KS is available as a back of panel mount version or as a front of panel mount with an enclosure. Please refer to drawing on page 4 for more details.

## USAGE

The KS powersafe electrical key switch is designed to be part of a safety system.



The KS key switch is not designed for security purposes.

No hazardous substances were used in the manufacture of this product.

## INSTALLATION

Front of board units should be mounted to a flat surface using 4 off suitable fixing screws. Offer up back box of enclosure in desired position and use mounting holes as a drilling template.

Back of board units should be mounted to a flat surface using suitable fasteners (please refer to drawing on page 4 for more details). The lock face should be sealed to the panel for ingress protection.

Cables should be connected to the switch (via the cable gland for front of panel) in accordance with the applicable wiring diagrams. Ensure that the unit is bonded for earth continuity (see drawing on page 4 for more installation details).



The KS range of switches must be installed by a competent and qualified person who has read and understood these instructions. Please retain this document in your technical file



You must use M6 anti-tamper stainless steel screws secured using threadlock set to a torque of 5 N/M.



The manufacturer should be consulted when use in a corrosive environment is planned.

## MAINTENANCE

Periodic visual checks should be carried out by the site manager / safety officer.

Do not lubricate lock barrel with oil or grease, use CK Dry Powder Graphite if necessary.



In case of defects being detected please contact your nearest Castell Support Department for further actions. Please see Contact section for contact details.



The interlock must be inspected every 6 months. Safety checks should include ensuring the keys and switch operate in the correct safety operating conditions (see page 1).

## TECHNICAL DATA

<b>Temperature rating</b>	-25 °C ice free to 55 °C
<b>Type of mounting</b>	Surface or panel mount using suitable fasteners (please refer to drawing on page 4 for more details)
<b>Weight</b>	KS20: Front of board mount = 0.8 kg / back on board mount = 0.6 kg
	KS32: Front of board mount = 0.8 kg / back of board mount = 1 kg
	KS63: 1.5 kg
<b>Material</b>	Brass/Stainless steel
<b>Enclosure</b>	Polycarbonate IP65
<b>Control isolation</b>	20A, 32A, and 63A options available
<b>Switch approvals</b>	CCC, UL, CSA
<b>B10d</b>	2,500,000
<b>PL rating</b>	PLe
<b>Shock &amp; vibration</b>	EN 60068
<b>Switch standards</b>	IEC 60947
<b>Switch protection</b>	IP65, for enclosed unit only
<b>Switch rating</b>	690 V, 20 amps (standard for KS20)

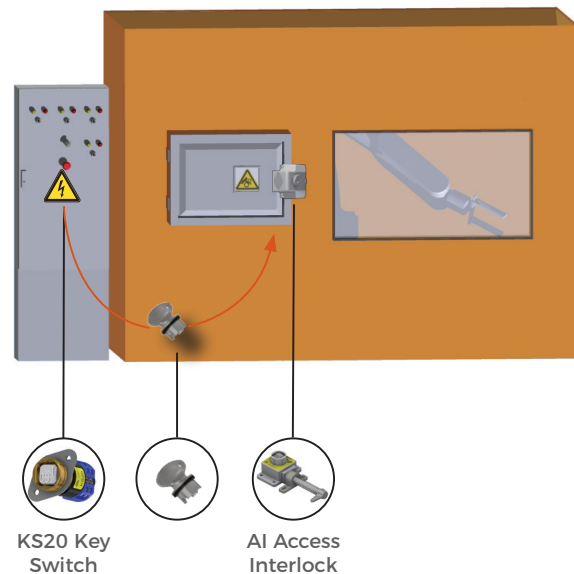
## APPLICATION

The KS powersafe safety component is used as part of an integrated safety system.

A typical application of KS powersafe electrical switch is machine guarding. It is usually used in combination with an access interlock such as the AI for part body access or an access interlock with an exchange key for full body access control such as AIE.

The KS breaks the machine safety circuit, ensuring a machine is shut down when the key is turned and removed. The key can then be taken to the AI access interlock to enable access to the machine.

The machine cannot be restarted until the door is closed, the bolt is trapped in the access interlock and the key is removed and taken to the KS key switch.



## EC-DECLARATION

We, the manufacturers, declare that the components detailed herein and placed on the market comply with all the essential health and safety requirements applying to them.

ISO 13849-1:2015 Safety of Machinery

2006/42/EC Machinery Directive

Empowered signatory:

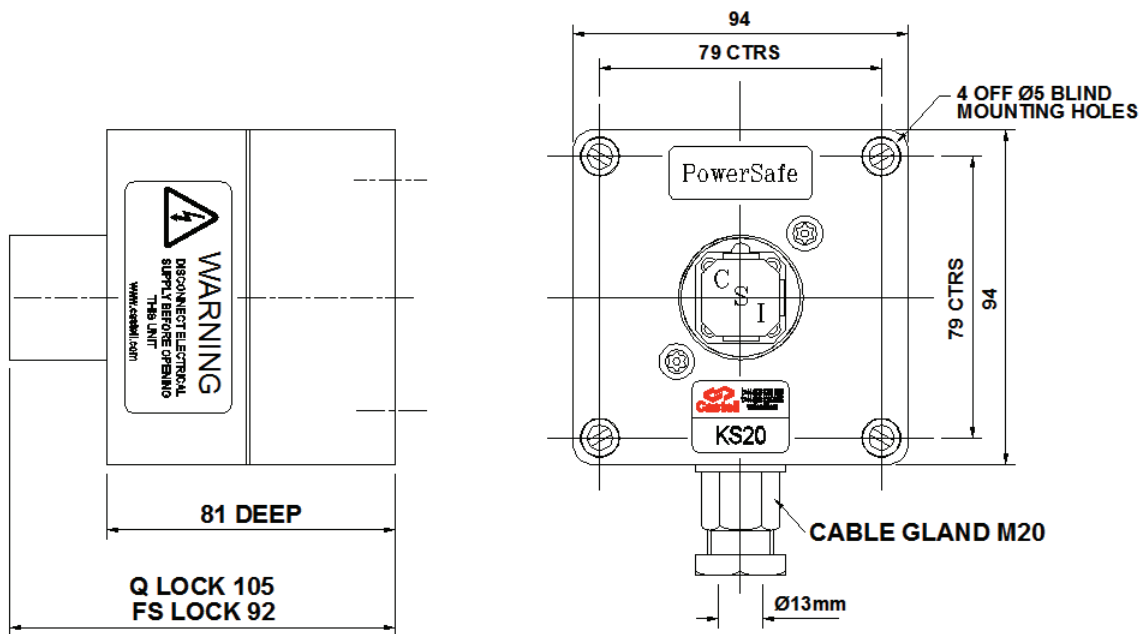
Kirstie Van Oerle  
Business Unit Director 

## DRAWING

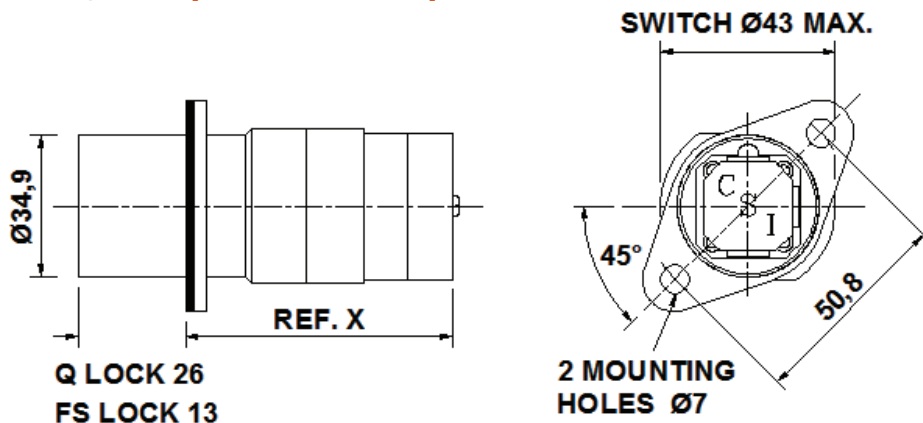
Dimensions: in mm

**Note:** For safe mounting, use security screws

### KS20, FOB (Front of board, enclosure)



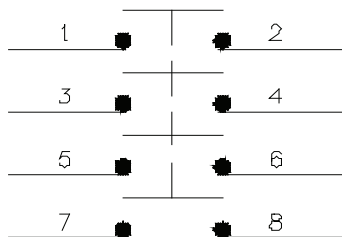
### KS20, BOB (Back of board)



DIMENSION REFERENCE 'X'	
No. OF POLES	LENGTH
4 POLES	66,6mm
6 POLES	76,1mm
8 POLES	85,6mm
10 POLES	95,1mm
12 POLES	104,6mm

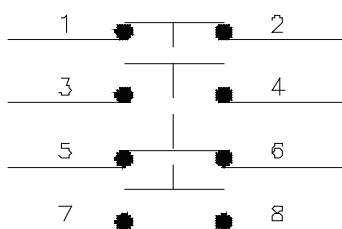
## WIRING DIAGRAM

### Key Free, Switch off



KEY FREE – SWITCH OFF

### Key Free, 2 NO/2NC





KEY FREE – 2 N/O & 2 N/C

## ORDER INFORMATION


	Component type		1	2	3	4	5	6	7
Part number	KS								
Example	KS	20	FS	B	P	C/O	4	ABC	

1	Control isolation	20 amps 32 amps 63 amps
2	Lock portion type	FS <sup>(1)</sup> / Q <sup>(1)</sup>
3	Material	B = Brass / S = Stainless steel
4	Mounting	P = Panel mount (back of board) F = Front of board mount, with enclosure
5	Contacts arrangement in normal position	C/O = NO/NC arrangement (contacts closed/opened) CC = NC arrangement (all contacts closed)
6	Contacts number	4 (standard)
7	Lock portion symbol	FS <sup>(1)</sup> up to 3 characters / Q <sup>(1)</sup> up to 6 characters

(1)	<b>FS - Lock type</b> Up to 3 characters 	<b>Q - Lock type</b> Up to 6 characters 
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Special construction available upon enquiry

## ACCESSORIES

	<b>Product</b>	<b>Part number</b>
	Flip Cap	FLIP-S

## CONTACT INFORMATION

### Castell Safety

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