# KS Powersafe Electrical Switch

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.
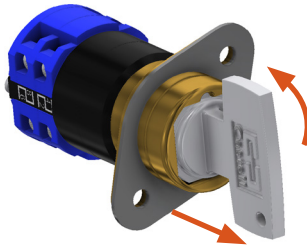
KS20 powersafe electrical switch, back on panel mount
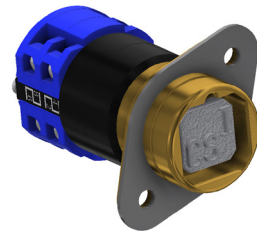
1 Key is trapped, while power is on.
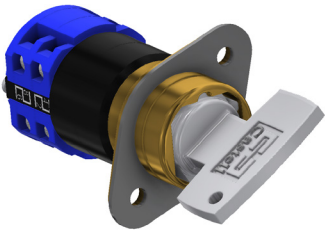
While the power is on and a machine is running, the key is trapped in the KS key switch.

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.

KS Powersafe Electrical Switch

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).

KS Powersafe Electrical Switch

TECHNICAL DATA

|	
Temperature rating	-25 °C ice free to 55 °C
Type of mounting	Surface or panel mount using suitable fasteners (please refer to drawing on page 4 for more details)
Weight	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
Material	Brass/Stainless steel
Enclosure	Polycarbonate IP65
Control isolation	20A, 32A, and 63A options available
Switch approvals	CCC, UL, CSA
B10d	2,500,000
PL rating	PLe
Shock & vibration	EN 60068
Switch standards	IEC 60947
Switch protection	IP65, for enclosed unit only
Switch rating	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.

KS20 Key Switch

AI Access Interlock
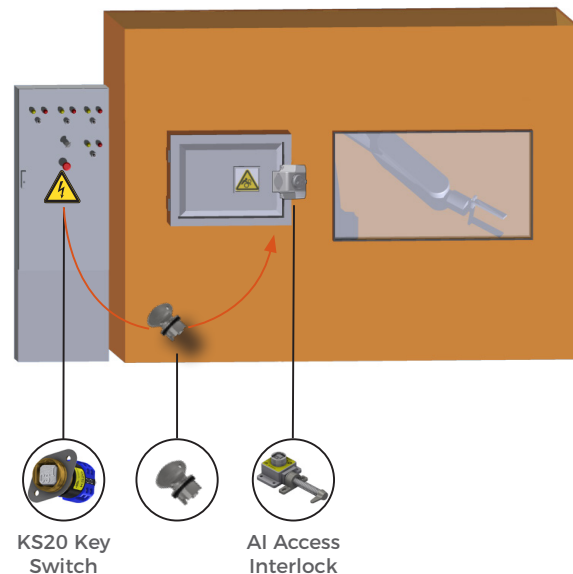
EC-DECLARATION

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
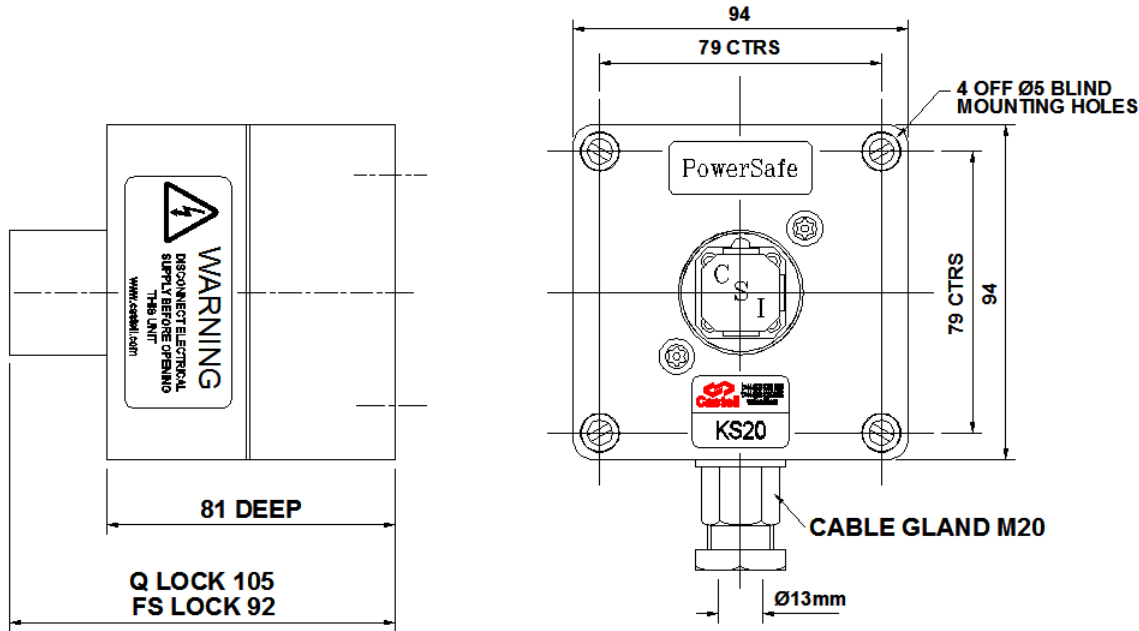
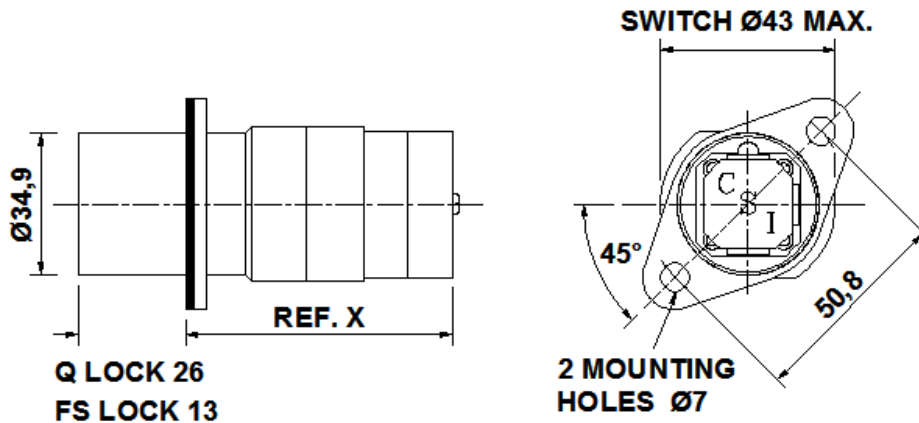Empowered signatory:

Kirstie Van Oerle
Business Unit Director

U-KS-001-E Issue 3
www.castell.com

KS Powersafe Electrical Switch

DRAWING

Note: For safe mounting, use security screws

KS20, FOB (Front of board, enclosure)

94
79 CTRS
4 OFF Ø5 BLIND MOUNTING HOLES
PowerSafe
79 CTRS
94
KS20
CABLE GLAND M20
Ø13mm

81 DEEP
Q LOCK 105
FS LOCK 92

KS20, BOB (Back of board)

Ø34,9
REF. X
Q LOCK 26
FS LOCK 13

SWITCH Ø43 MAX.
45°
50,8
2 MOUNTING HOLES Ø7

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

KS Powersafe Electrical Switch
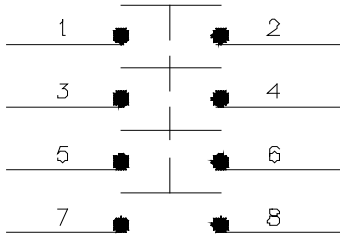
Key Free, Switch off

KEY FREE — SWITCH OFF

Key Free, 2 NO/2NC

KEY FREE — 2 N/O & 2 N/C

KS Powersafe Electrical Switch
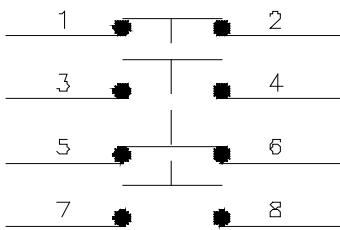
ORDER INFORMATION

	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 [1] / Q [1]
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 [1] up to 3 characters / Q [1] up to 6 characters

(1)	FS - Lock type Up to 3 characters	Q - Lock type Up to 6 characters

Special construction available upon enquiry

ACCESSORIES

	Product	Part number
	Flip Cap	FLIP-S

CONTACT INFORMATION

Castell Safety
The Castell Building
217 Kingsbury Road
London, NW9 9PQ
UK
t: +44 (0)20 8200 1200
f: +44 (0)20 8205 0055
e: sales@castell.com

Castell Safety
Tower 185
60185 Frankfurt am Main
Germany

t: +49 (0)69 50 50 47 310
f: +49 (0)69 50 50 47 450
e: vertrieb@castell.com

Kirk Key Interlock
9048 Meridian Circle NW
North Canton, OH 47720
USA

t: +1 800 438 2442
f: +1 330 497 4400
e: sales@kirkkey.com

SPS China
2F, Building 63
No 421 Hongcao Road, Xuhui District
Shangai PRC, 200233
China

t: +86 (0)21 6040 7398
f: +86 (0)21 5453 0630
e: chinasales@castell.com

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