KSS
Solenoid Controlled Switch



The KSS is a heavy-duty solenoid controlled key driven electrical switch interlock ideal for the controlled isolation or switching of low current. This product is used where a process can send a signal to release a key, e.g. a robot has to finish a cycle prior to isolation. Upon removal of the key, the KSS switch contacts change to isolate the process. This type of isolator should be used for short term, off load isolation. The unit is ready for mounting into an existing panel or for surface mounting within its own IP65 rated enclosure. The KSS is manufactured from either brass or stainless steel.

OPERATION

The Castell KSS Solenoid Controlled Switch is typically used for machine isolation in applications where a machine has to finish a cycle prior to isolation.

KSS Solenoid Controlled Switch

1

Key is trapped while power is on, solenoid is de-energised.



While the power is on and a machine is running, the key is trapped in the Solenoid Controlled Switch.

2

An external signal is received and LED is illuminated. Push the button to energise the solenoid and remove the key.



To release the key, an external signal must be received to energise the solenoid. With the solenoid energised, the LED will illuminate to confirm that the key can be removed ensuring the power is off.

3

Solenoid is energised, switch is locked out and key is free.



The key can now be removed and taken to open the door lock and gain access to the machine area.

The KSS is available with different solenoid voltages as AC: 24, 110 or 240 V or DC: 12, 24, 110, 240 V. Additionally, 30V, 48V, 125V, 220V available upon request (see order information on page 7 for more details).

The KSS comes with 4 or 6 contacts as standard with contacts arrangements as 2NO/2NC, 4NC or 3NO/3NC or 6NC.

The KSS is available as a back of panel mount (BOB) and as a surface mount version with an enclosure (FOB).

While every effort has been made to ensure the accuracy of the information provided, no liability can be taken for any errors or omission.
Sentric Safety Group reserves the right to alter specifications and introduce improvements without prior notice.

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USAGE

The KSS solenoid controlled switch is designed to be part of a safety system and is used to isolate the power releasing.

The KSS solenoid controlled switch is not designed for security purposes.

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

INSTALLATION

Back of panel units should be mounted to a flat surface using suitable fasteners (please refer to drawing on page 4-5 for more details). The lock face should be sealed to the panel for ingress protection.

Cables should be connected to the switch in accordance with the applicable wiring diagrams. Ensure that the unit is bonded for earth continuity (see drawing on page 6 for more installation details).

IMPORTANT: The interlock should be mounted using anti-tamper fasteners to prevent unauthorised removal.

The KSS range of solenoid controlled 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.

The manufacturer should be consulted when used 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 check should include ensuring the keys can only be removed in the correct safety operating conditions and that the switches change state (see page 1).

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TECHNICAL DATA

	KSS Solenoid Controlled Switch
Temperature rating	-25˚C to +55˚C
Type of mounting	Surface mount (FOB) & Panel mount (BOB)
Mounting fasteners	M8 for FOB & M6 for BOB
Weight	2 kg
Material	Brass or Stainless steel lock, with IP65 Mild / Stainless steel enclosure or stainless steel mounting plate
Control isolation	20A / 32A (available upon request)
Switch approvals	CCC, UL, CSA
MTTF Certification	Available on request
B10d	1,000,000
Shock & vibration	EN 60068
Switch standards	IEC 60947
Switch protection	IP 65, for enclosed unit only
Switch rating	690 V, 20 amps

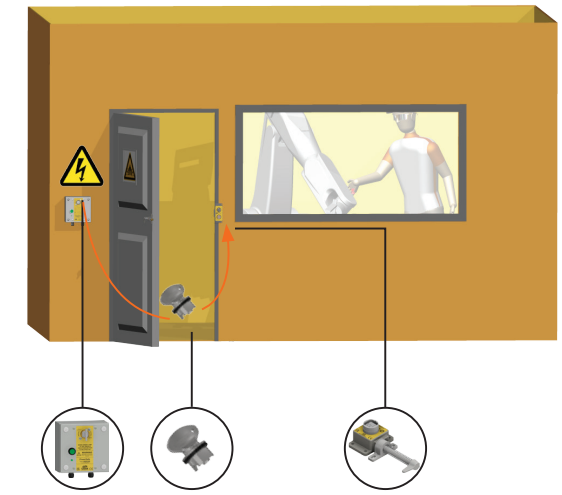
APPLICATION

A KSS Solenoid Controlled Switch safety component is typically used as part of an integrated safety system.

A typical application of KSS solenoid controlled switch is machine guarding. It is usually used in combination with an access interlock such as the AI Access Interlock for part body access or an access interlock with an exchange key for full body access control such as AIE.

The KSS breaks the machine safety circuit ensuring a machine is shut down. Once the machine has completed the cycle, an external signal is received by the solenoid, which is indicated by an illuminated LED. Activating the green button on the KSS will energise the solenoid and enable the key to be turned and removed ensuring the power cannot be switched back on. The key can then be taken to the AIE access interlock to enable access to the machine.

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



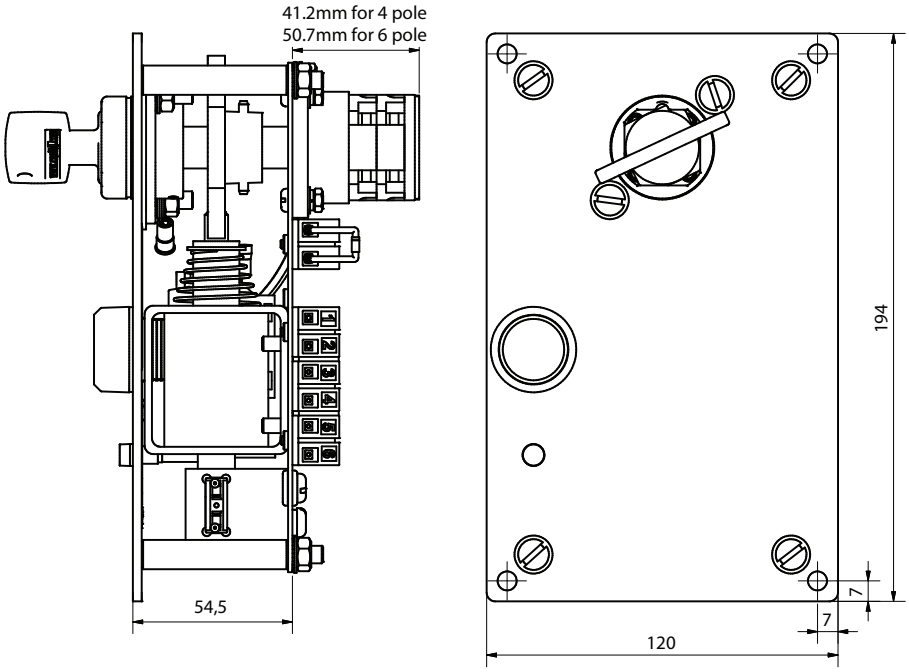
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DRAWING

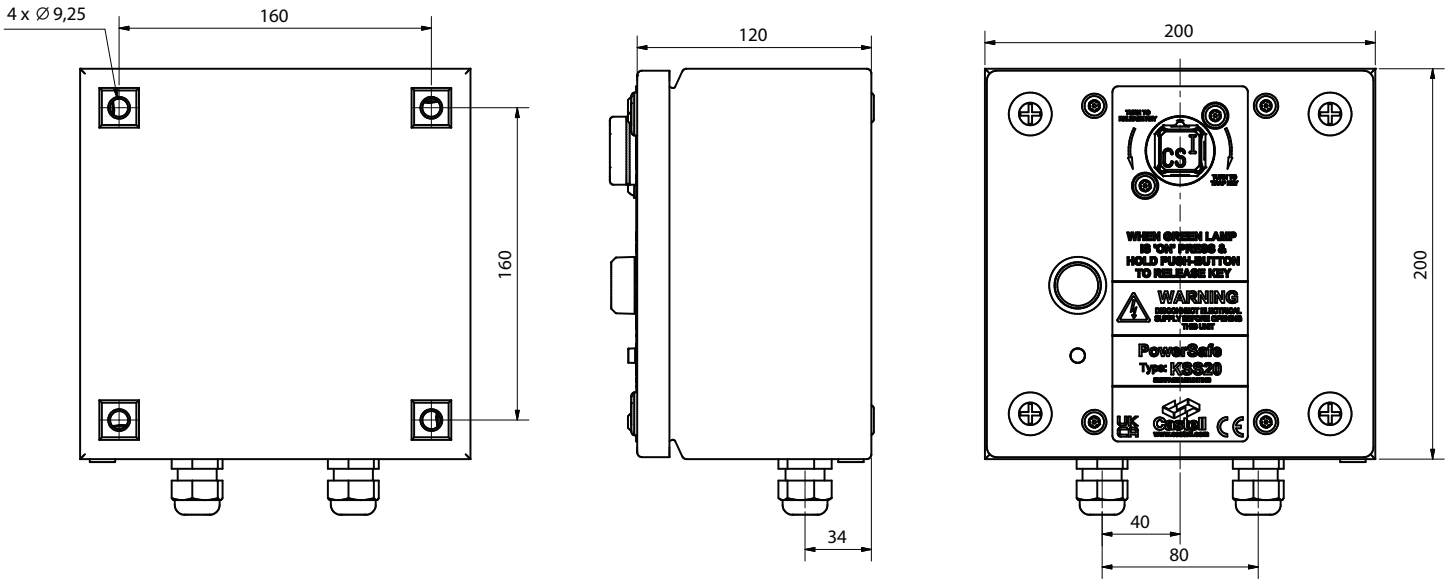
Dimensions: in mm

Note: For safe mounting, use security screws

KSS, panel mount (BOB: back of board)



KSS, surface mounting (FOB: front of board)



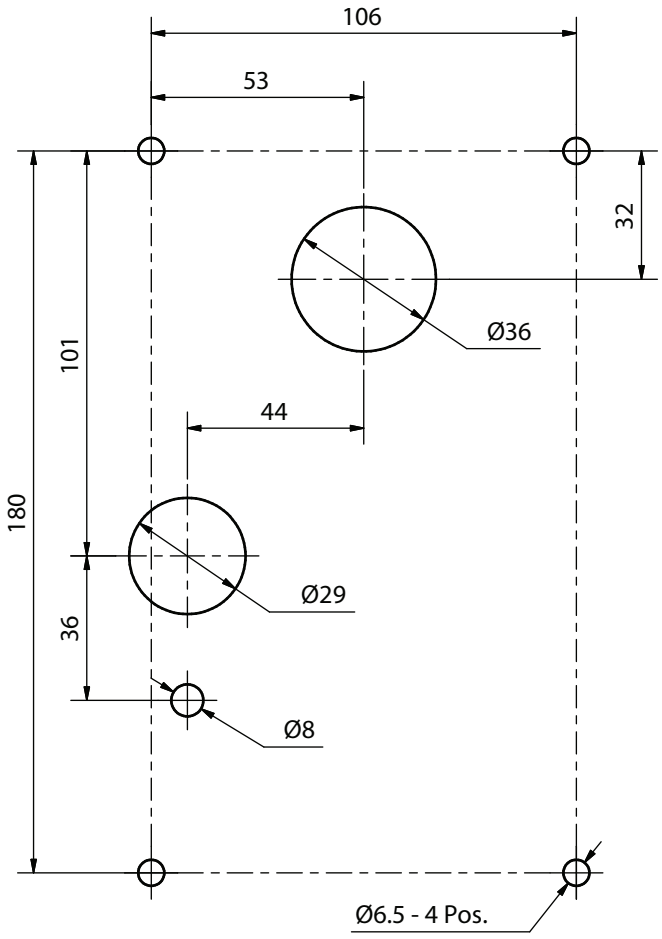
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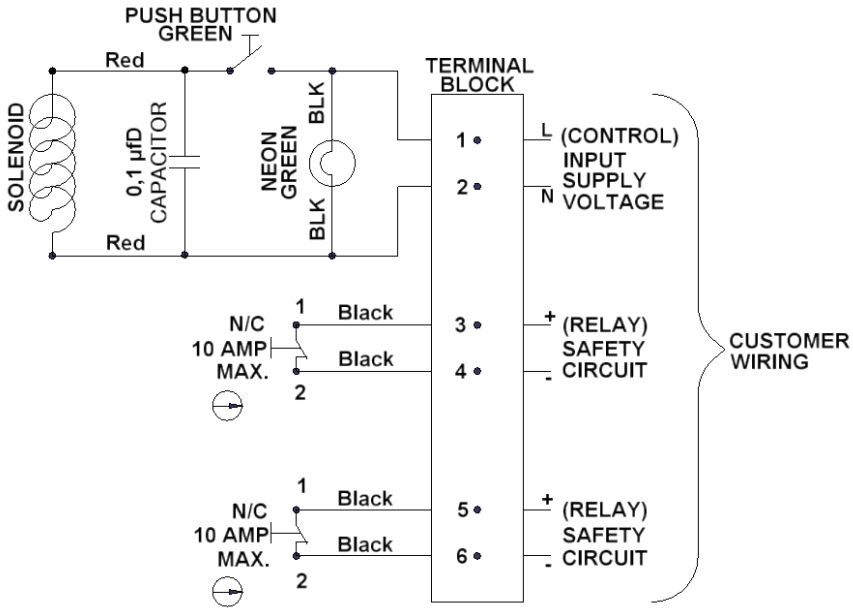
KSS, panel cut-out details



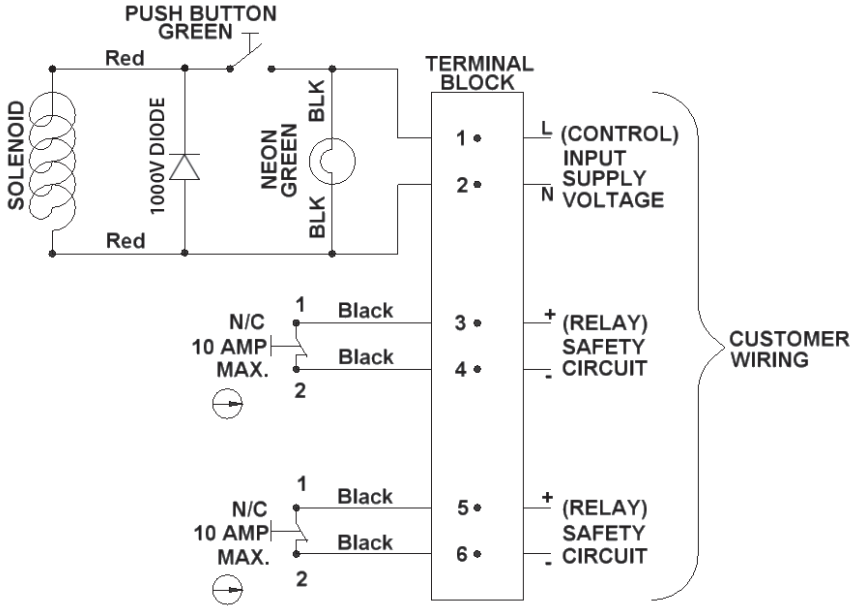
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WIRING DIAGRAM

KSS, AC



KSS, DC



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ORDER INFORMATION

	Component type	1	2	3	4	5	6	7	8	9
Part number	S (KSS)									
Example	S	20	FS	B	F	CO	4	110	A	TBA

1	Isolation	20A, standard / 32A, available upon request
2	Lock portion type	FS (1) / Q (1)
3	Material	B = Brass / S = Stainless steel
4	Mounting	P = Panel mount (BOB- back of board) / F = Front of board, (FOB- mild steel enclosure) / SF = Stainless steel enclosure (not available with brass locks)
5	Contacts arrangement in normal position	CO = NO/NC arrangement (contacts closed/open) / CC = NC arrangement (all contacts closed)
6	Number of contacts	4 / 6, standard
7	Solenoid voltage	110 / 24 / 240, standard 12 / 30 / 48 / 125 / 220 (available upon request)
8	Current	VAC = A / VDC = D
9	Lock portion symbol(s)	FS (1) up to 3 characters / Q (1) up to 6 characters

(1)

FS - Lock type	Q - Lock type
Up to 3 characters	Up to 6 characters
	

Special construction available upon enquiry

ACCESSORIES

	Product	Part number
	Flip Cap	FLIP-S

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