KSSE

Multi Key Solenoid Controlled Switch



The KSSE is a solenoid controlled, multi-key electrical switch for the controlled isolation of low current. This product is used where the controlled isolation of a machine needs to take place, i.e. where a robot has to finish a cycle prior to isolation and where multiple entry points to the protected area are required. The solenoid is continuously rated, and its position is electrically monitored. This type of isolator should be used for short term, off load isolation. The unit is supplied capable of being mounted into an existing panel or for surface mounting within its own IP65 rated lockable steel enclosure. The KSSE is manufactured from either brass or stainless steel.

OPERATION

KSSE multi key solenoid controlled switch, double key condition

1

All keys are trapped while power is on, solenoid is de-energised.



While all keys are trapped, the switch for the main power supply is closed enabling the power supply.

2

Wait for an external signal (sent to the unit upon machine cycle is completed). Once signal is received, an LED illuminates. Push the button to energize the solenoid and release the keys. This changes the switch contacts condition.



Once the machine has finished the cycle, a signal is sent to the KSSE to energise the solenoid. This illuminates the LED. The keys can now be released by pushing the button. This changes the switch contacts condition, interrupting the power supply. The released keys should be taken by the personnel to unlock the doors in the machine area.

3

While all keys are free, the power supply is interrupted.



The power is off until all keys are replaced in the KSSE unit and turned, switching the contact condition to open.

Exchange key condition available upon application

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 KSSE multi key solenoid controlled switch is designed to be part of a safety system and is used to isolate the power releasing a key which is then used to gain access to a hazardous area via an access interlock such as the AI or AIE.

The KSSE multi key 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 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 on page 5. Ensure that the unit is bonded for earth continuity (see drawing on page 4 for more installation details).

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

The KSSE range of multi key 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 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 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

	KSSE Multi Key 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	4 kg (2 lock portions unit)
Material	Brass or Stainless steel lock, with IP65 Mild / Stainless steel enclosure or Stainless steel mounting plate
Control isolation	20A
Switch approvals	CC, 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 (standard for KSSE20)

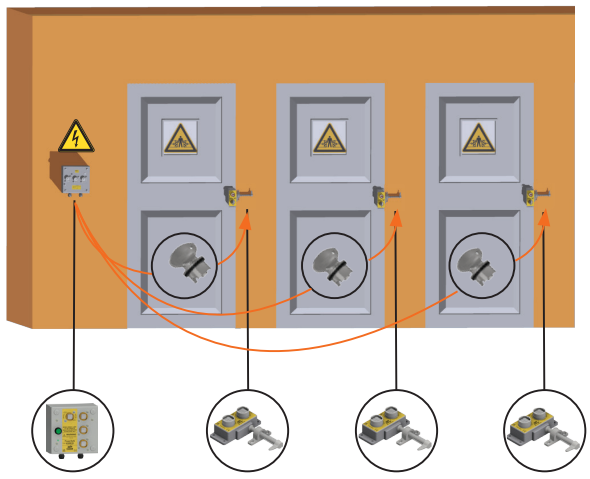
APPLICATION

A typical application of KSSE multi key solenoid controlled switch with double key condition 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 AIE access interlock with an exchange key for full body access control.

The operator requests access from the machine control panel. Once the machine has completed its cycle and stops an external signal is received by the solenoid, which is indicated by an illuminated LED. Activating the green push button on the KSSE will energise the solenoid and allow the first trapped key to be turned and released.

Turning the key changes contacts on a switch to prevent the machine from starting. The additional keys can now be turned and removed sequentially. The keys can then be taken to the AIE double key access interlocks to enable access to the machine.

The machine cannot be restarted until all doors are closed, and all keys returned to the KSSE multi key solenoid controlled switch.



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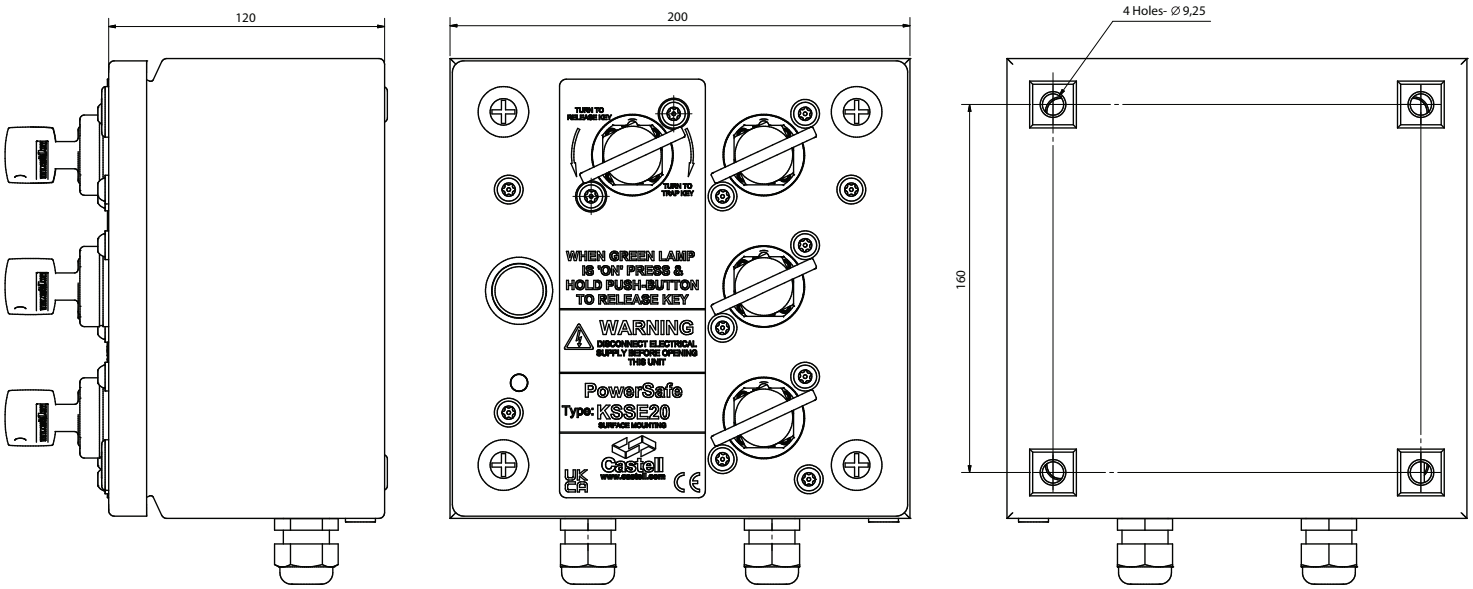
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DRAWING

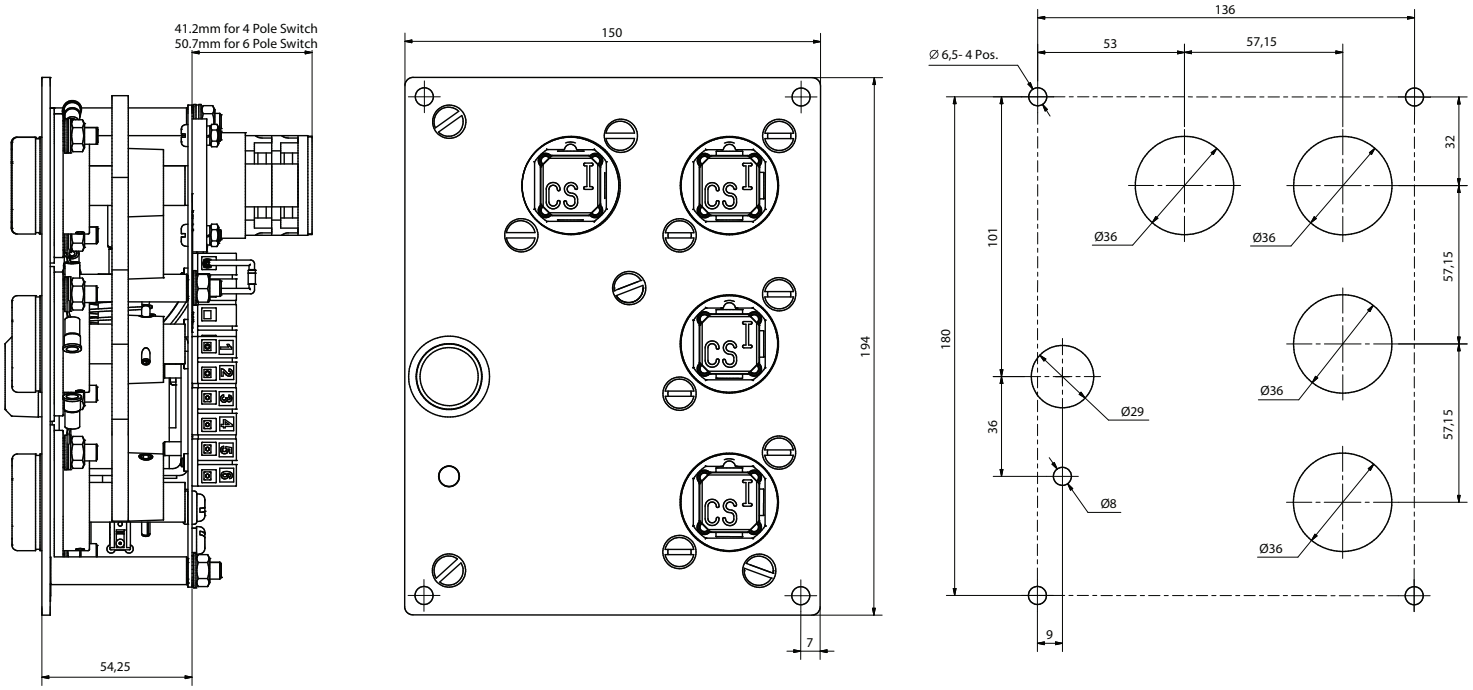
Dimensions: in mm

Note: For safe mounting, use security screws

KSSE (Front of board, FOB)



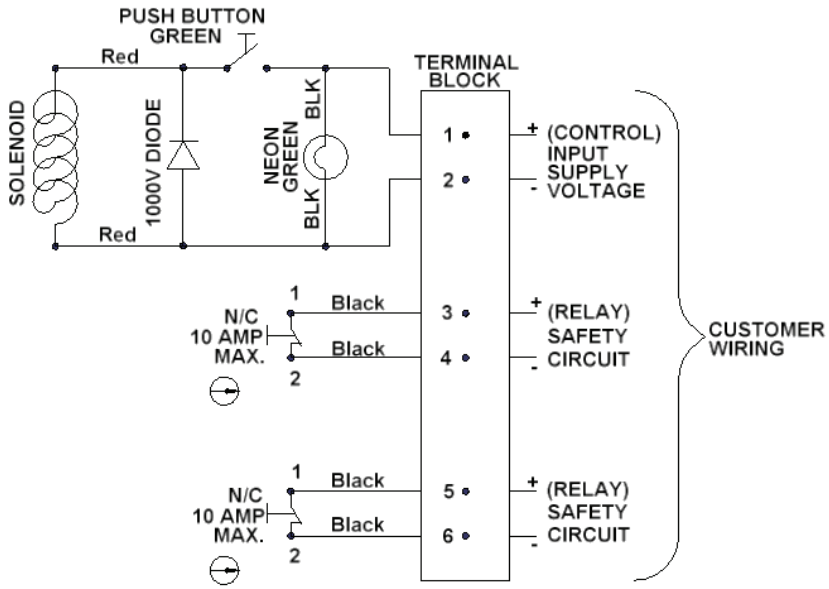
KSSE (Back of board, BOB)



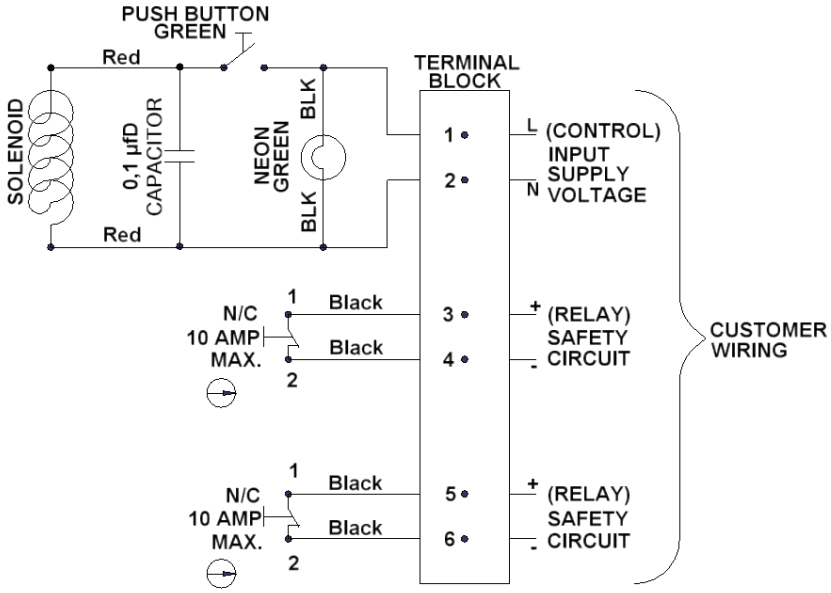
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WIRING DIAGRAM

KSSE, Wiring Diagram DC



KSSE, Wiring Diagram AC



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ORDER INFORMATION

	Component type	1		2	3	4	5	6	7	8		9	10	11	12
Part number	E (KSSE)		-								-				
Example	E	20	-	FS	B	1	D	F	CO	4	-	110	A	A1	B1

1	**Isolation**	20A, standard / 32A, available upon request
2	**Lock portion type**	FS (1) / Q (1)
3	**Material**	B = Brass / S = Stainless steel
4	**Secondary lock portion(s)**	1 / 2 / 3 (more secondary lock portions available upon request)
5	**Key condition**	D = Double key condition (sequential removal of all keys) E = Exchange key condition (available upon request)
6	**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)
7	**Contacts arrangement in normal position**	CO = NO/NC arrangement (contacts closed/open) / CC = NC arrangement (all contacts closed) (not availble for exchnage key condition)
8	**Number of contacts**	4 / 6
9	**Solenoid voltage**	110 / 24 / 240, standard 12 / 30 / 48 / 125 / 220 (available upon request)
10	**Current**	VAC = A / VDC = D
11	**Lock portion symbol** Primary key (located next to switch)	FS (1) up to 3 characters / Q (1) up to 6 characters
12	**Lock portion symbol(s)** Secondary key(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

Castell Safety International
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