

KSE20-FSS-2S-F-E-C/O4

The KSE is a multi-key controlled electrical switch suitable for the isolation or switching of 20, 32, 63 or 150 amp (maximum) current. This type of isolator should be used for short term, off load isolation and operated by suitably qualified personnel. The unit is supplied for mounting into an existing panel or for surface mounting within its own IP65 rated lockable steel enclosure. It is available in FS or Q type lock portions. The KSE is manufactured from either brass or stainless steel making it ideal for use in standard or harsh corrosive environments.

## Operation

Castell dual key access interlocks are used in various applications to control full body access to hazardous areas.

### KSE multi key powersafe electrical switch, exchange key condition

① Power is on, isolation key is free and personnel keys are trapped



② Insert and turn isolation key to switch power off and release personnel keys



③ Power is off, isolation key is trapped and personnel keys are free



1. While the isolation key is free, the power is on. The personnel keys are trapped.
2. By inserting and turning the isolation key in the KSE unit, the contact condition changes switching the power off. The personnel keys can now be released and taken by the personnel to unlock the door in the machine area.
3. The isolation key stays trapped ensuring power is off as long as the personnel keys are free.

### KSE multi key powersafe electrical switch, double key condition

① Power is on, all keys are trapped



② Turn and release all keys to switch power off



③ Power is off, all keys are free



1. While the power is on, all keys are trapped.
2. By turning the keys, the contact condition changes switching the power off. The keys can now be released and taken by the personnel to unlock the doors in the machine area.
3. The power is off until all keys are replaced in the powersafe electrical switch.

### Usage

The KSE powersafe electrical 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, AIE or Salus.



The KSE powersafe electrical switch is not designed for security purposes.

No hazardous substances were used in the manufacture of this product. The product can be disposed of in standard waste.

### Installation

Back of panel units should be mounted to a flat surface. Panel and surface mount 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. Ensure that the unit is bonded for earth continuity (please refer to drawing on page 4 for installation details).



**IMPORTANT:**

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



The KSE 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.

### 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.

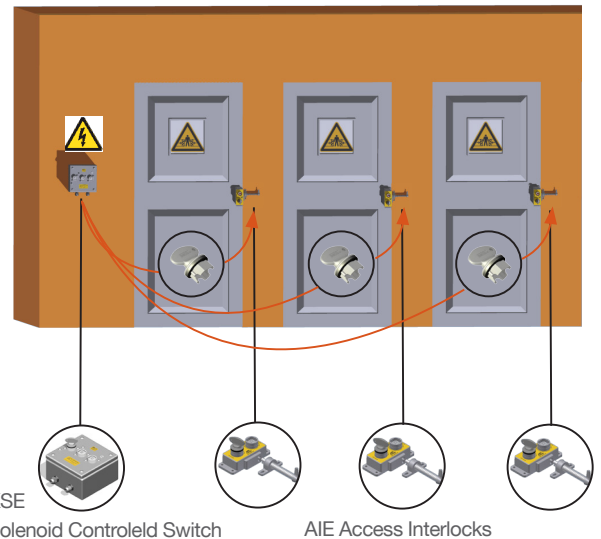
### Technical Data

<b>Temperature rating</b>	-25°C ice free to 55°C
<b>Type of mounting</b>	1/4" or M6
<b>Weight</b>	KS20: Front of board mount = 0,8 kg / back of 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>Power isolation</b>	20A, 32A, and 63A options available
<b>Motor Isolation (AC Values)</b>	KS20: AC-23A 7.5kW or AC-3 5.5kW
	KS32: AC-23A 15kW or AC-3 11kW
	KS63: AC-23A 30kW or AC-3 18.5kW
<b>Switch approvals</b>	CE or CCC
<b>MTTF Certification</b>	Available on request

### Application

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

A typical system will isolate machinery and control access to hazardous areas. Inserting the power isolation key in the KSE unit changes the condition of the electrical supply to the machine to a safe condition and enables the release of the personnel keys. These keys are then used to unlock the AIE double key access interlocks. The guards can only be opened when the electrical supply has been switched into a safe condition and only once all the keys have been returned to the KSE interlock can the machine be restarted.



### 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.

Empowered signatory:

Mr T.C. Whelan  
Managing Director

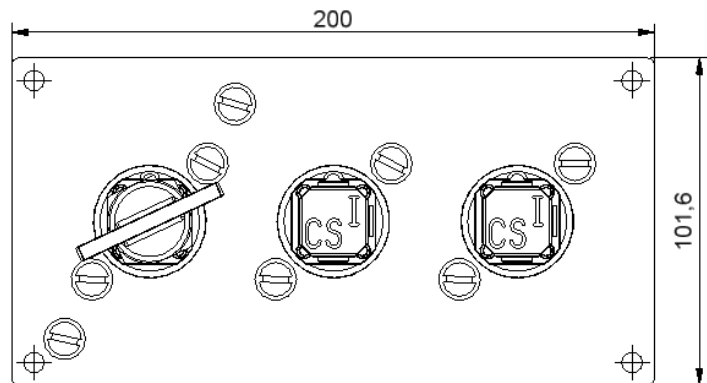
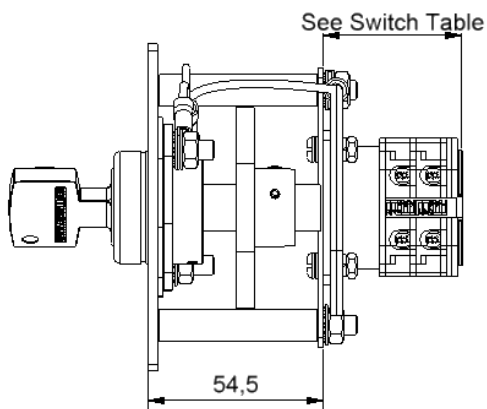


### Drawing

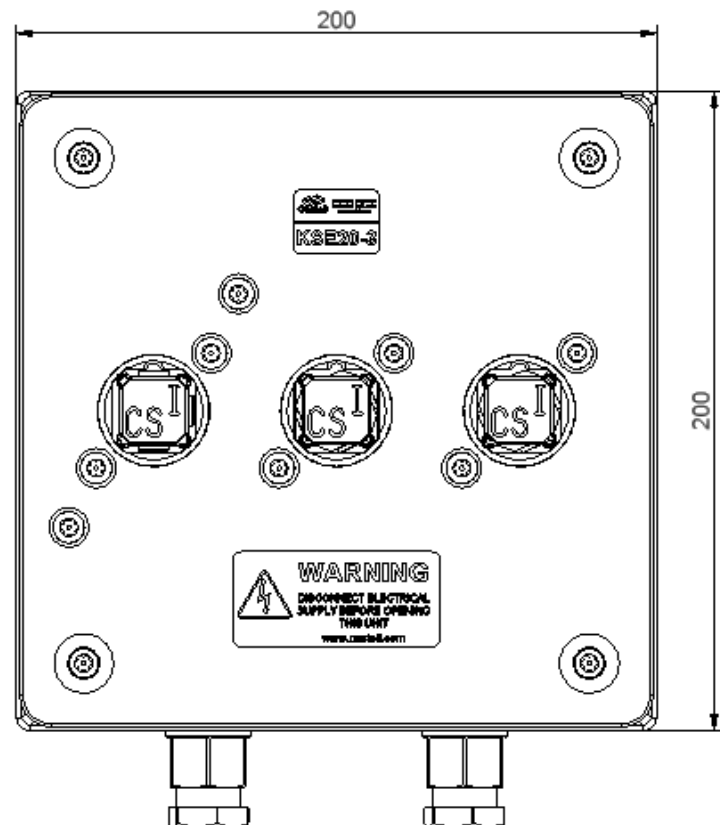
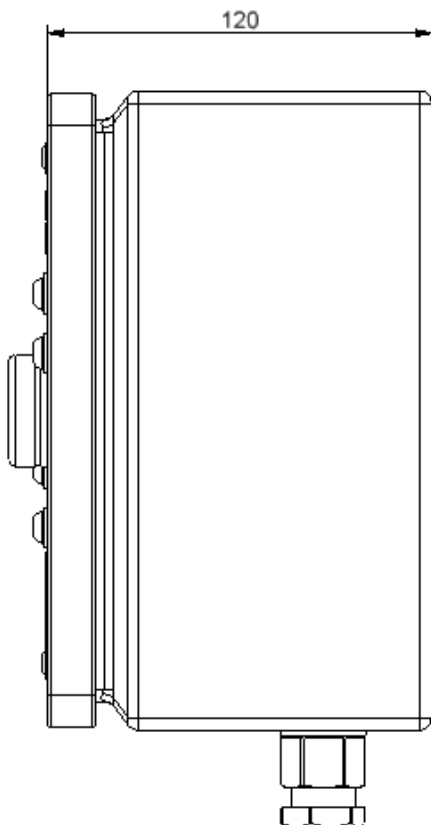
Dimensions:  
in mm

*Note: For safe mounting, use security screws*

KSE, panel mount (3 lock portions)



KSE, surface mount (3 lock portions)



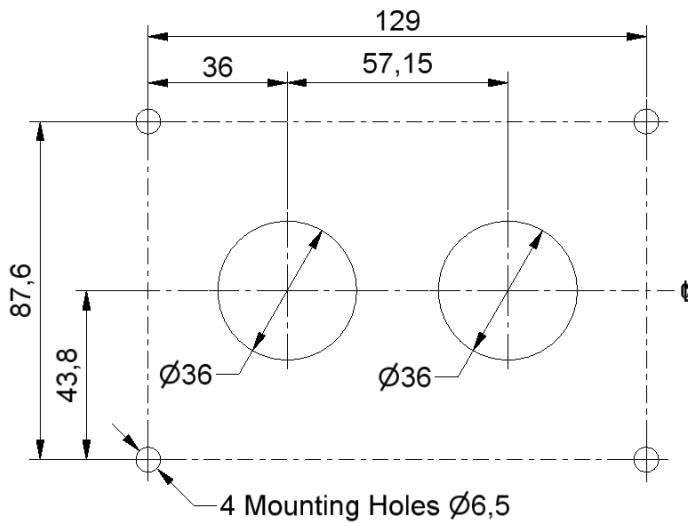
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### Drawing

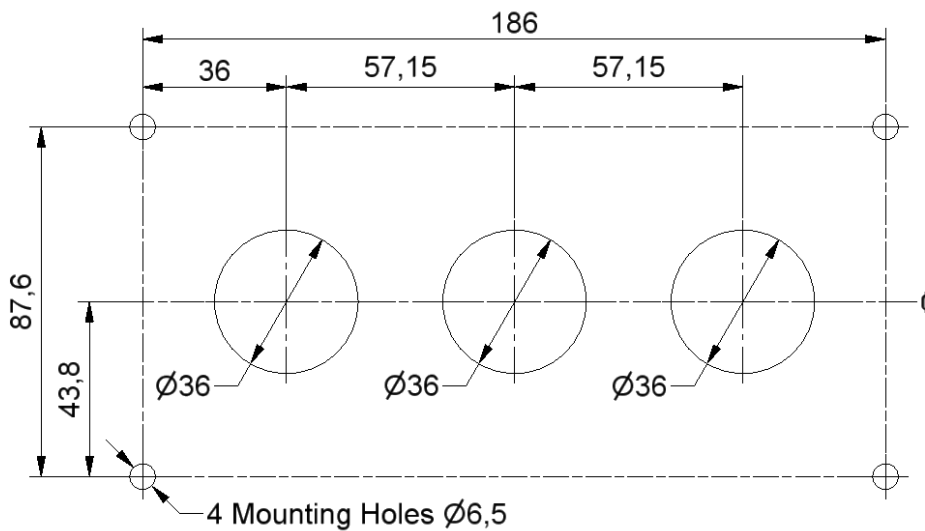
Dimensions:  
in mm

*Note: For safe mounting, use security screws*

KSE, 2 lock portions

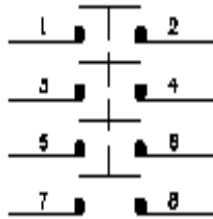


KSE, 3 lock portions

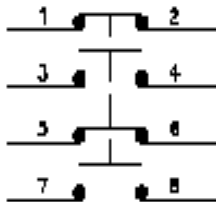


### Wiring Diagram

Key Free, Switch off



Key Free, 2 NO/2NC



### Order Information

	Product Type	1	2	3	4	5	6	7	8
Part Number	KSE								
Example	KSE	20	FS	B	1S	P	D	C/O	4

9	A1	Isolation Key Symbol (exchange key condition)	OR	10	B1	Personnel Key Symbol (exchange key condition)
					Secondary Key Symbol (double key condition)	

1	Isolation	20 amps (standard)
2	Lock portion type	FS <sup>(1)</sup> / Q <sup>(1)</sup>
3	Material	B = Brass / S = Stainless steel
4	Secondary lock portion(s) Secondary lock portions are provided for personnel keys, primary lock portion for the isolation key	1S / 2S / 3S / 4S / 5S or 6S = 1 / 2 / 3 / 4 / 5 or 6 secondary lock portions respectively
5	Mounting	P = Panel mount (back of board) / F = Front of board mount, with enclosure
5	Key condition	E = Exchange key condition / D = Double key condition (simultaneous removal of all keys)
7	Contacts arrangement in normal position	C/O = no/nc arrangement (contacts closed/opened)/ CC = nc arrangement (all contacts closed)
8	Number of contacts	4 / 6 (standard)
11	Lock portion symbol: Isolation key (for exchange key condition) Primary key (for double key condition)	FS <sup>(1)</sup> up to 3 characters / Q <sup>(1)</sup> up to 6 characters
12	Lock portion symbol: Personnel key (for exchange key condition) Secondary key (for double key condition)	FS <sup>(1)</sup> up to 3 characters / Q <sup>(1)</sup> up to 6 characters

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



### Special construction available upon enquiry

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