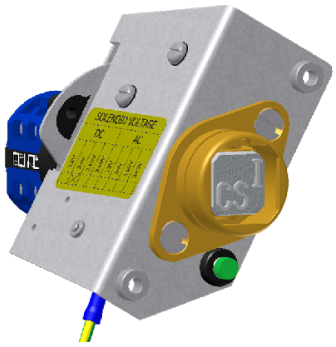
# KSUPS

## Solenoid Controlled Switch

User Manual - Original Language Version



KSUPS-FSB-P-CO4-110VAC

The KSUPS is a solenoid controlled key driven electrical switch for the controlled isolation or switching of low current in conjunction with the control circuit. It is used in applications such as UPS changeover system or where a machine has to finish a cycle prior to isolation. A good example of this is fast, safe access to robot cells where the robot needs to return to a safe or home position before entry can be gained. The KSUPS is manufactured from either brass or stainless steel making it ideal for use in standard or harsh corrosive environments. The unit is supplied ready for mounting into an existing panel.

## Operation

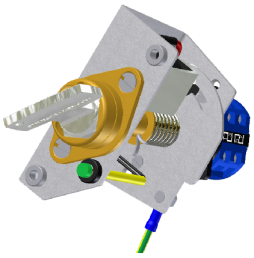
The Castell KSUPS solenoid control switch is typically used in either an uninterruptable power supply control system or for machine isolation in applications where a machine has to finish a cycle prior to isolation.

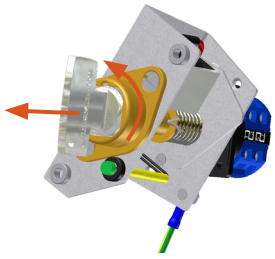
### KSUPS Solenoid Controlled Switch

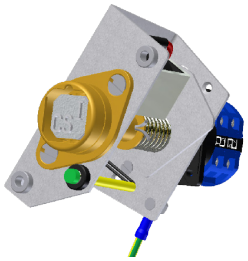
① **Key is trapped while power is on, solenoid is de-energised.**

② **Solenoid is energised by external signal. As the LED illuminates, key can be turned and released.**

③ **Solenoid is energized, switch is locked out and key is free.**







1. **While the power is on and a machine is running, the key is trapped in the Solenoid Controlled Switch.**
2. **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. **The key can now be removed and taken to open the door lock and gain acces to the machine area.**

The KSUPS is available with different solenoid voltages as AC or DC: 24, 110 or 240 V (see order information on page 6 for more details).

The KSUPS comes with 4 contacts as standard with contacts arrangements as 2NO/2NC, 4NC, but auxiliary set of contacts are available on request.

## Usage

The KSUPS 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, AIE or Salus.

The KSUPS solenoid controlled 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

The back of panel units should be mounted to a flat surface, holes should be drilled in the panel to accept the lock mounting (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 (see drawing on page 4 for more installation details).

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

The KSUPS 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 beeing detected please contact your nearest Castell Support Department for further actions.
Please see Contact section for contact details.

## Technical Data

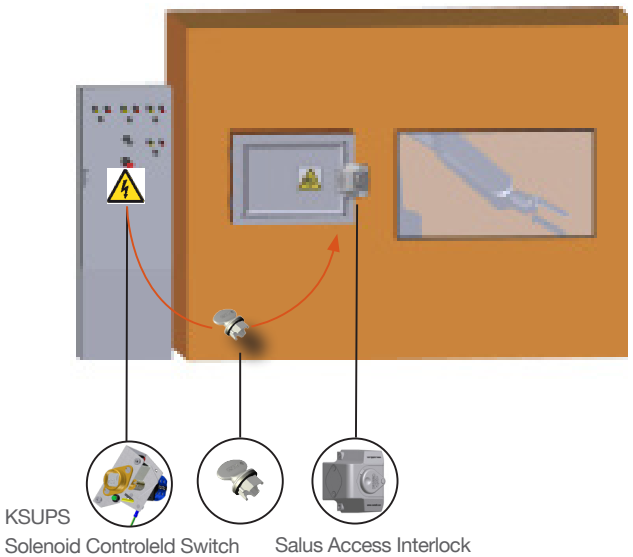
| | |
|---|---|
| **Temperature rating** | -25°C ice free to +55°C. |
| **Type of mounting** | Panel mount using suitable fasteners (please refer to drawing on page 4 for more details) |
| **Weight** | 0,6 kg |
| **Material** | Brass/Stainless steel |
| **Power isolation** | 20A |
| **Voltage** | 24 VDC and 240 VAC, 110 VAC |
| **Switch approvals** | BS,UL,CSA & VDE |
| **MTTF Certification** | Available on request |

## Application

A typical application of KSUPS Solenoid Controleld 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.

The KSUPS 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. The LED will illuminate and the key can be turned and removed, ensuring the power is locked out. The key can then be taken to the Salus Automatic 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 KSUPS solenoid controlled 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.

Empowered signatory:

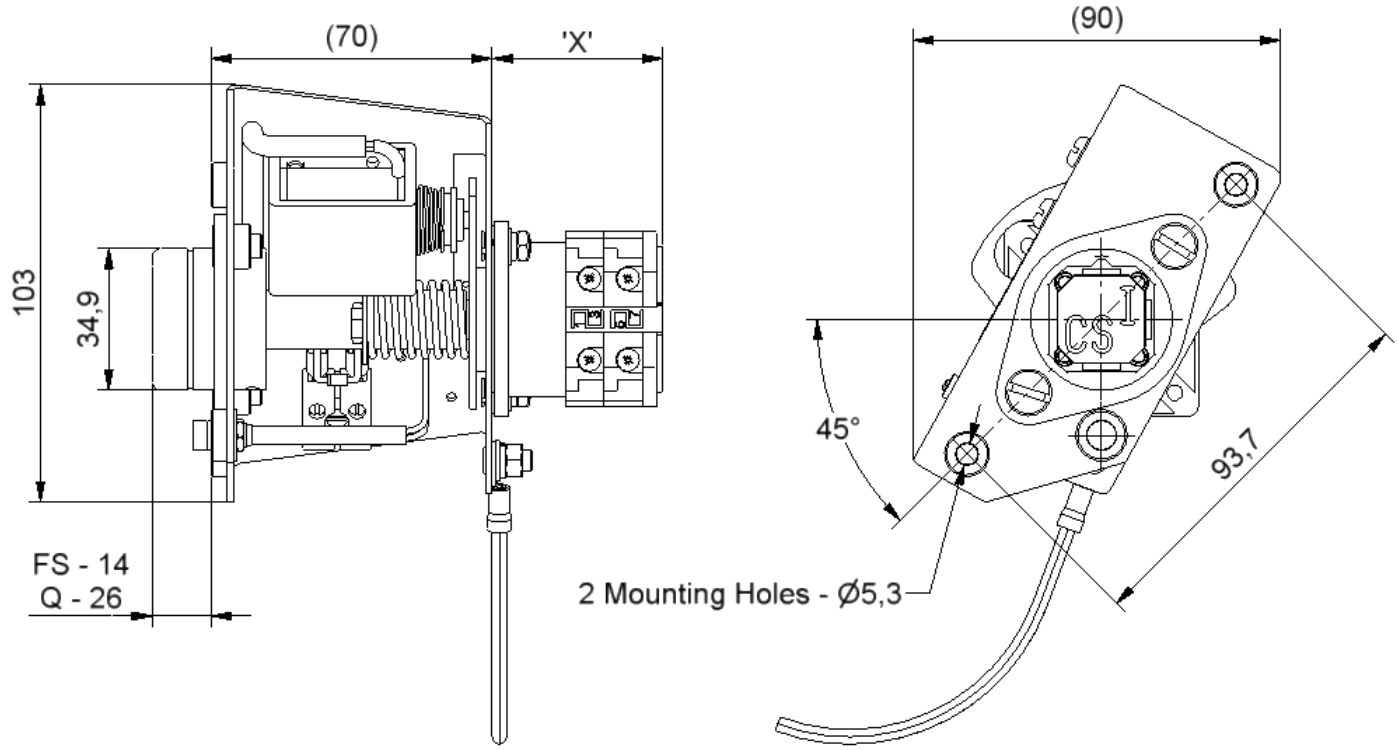
Mr T.C. Whelan
Managing Director

## Drawing

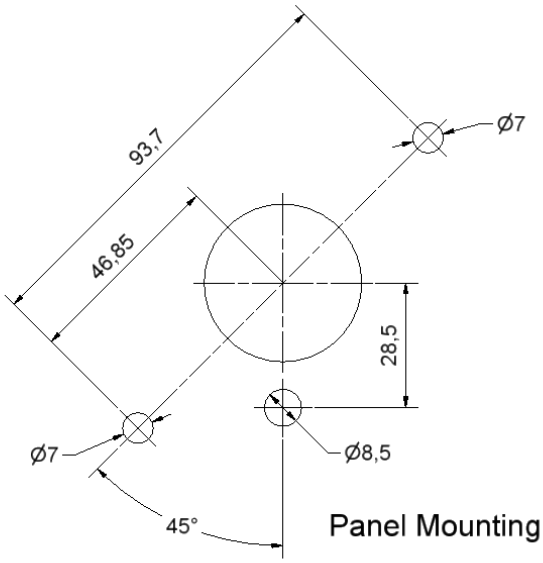
Dimensions:
**in mm**

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

KSUPS




Panel Mounting Details




Panel Mounting Details

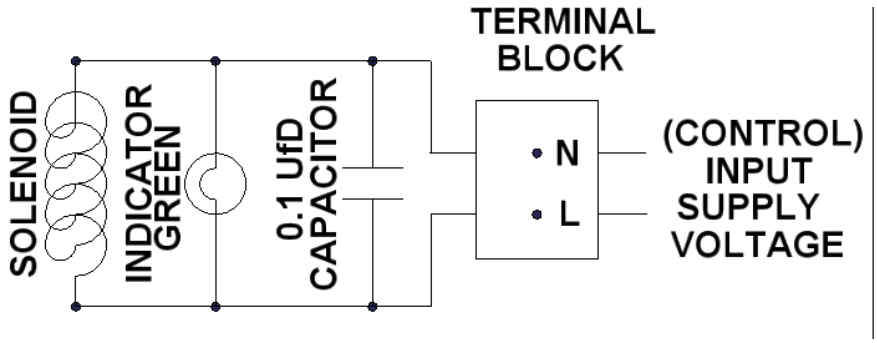
| Dimension Reference 'X' | |
|---|---|
| No of Poles | Length |
| 4 Poles | 42,0 mm |
| 6 Poles | 51,5 mm |
| 8 Poles | 61,0 mm |
| 10 Poles | 70,5 mm |
| 12 Poles | 80,0 mm |

## Wiring Diagram

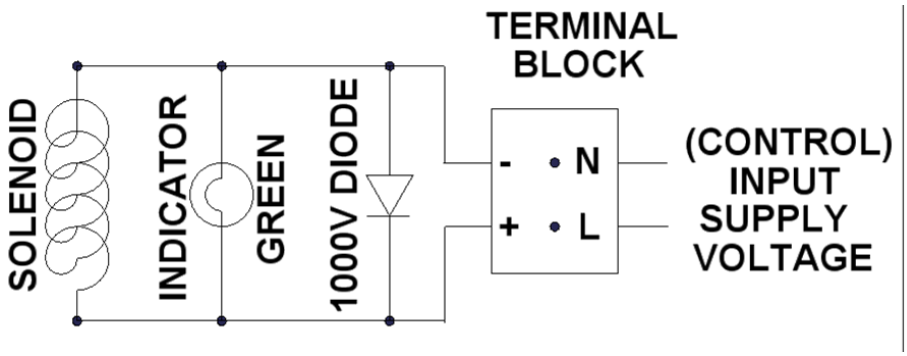
Dimensions:
**in mm**

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

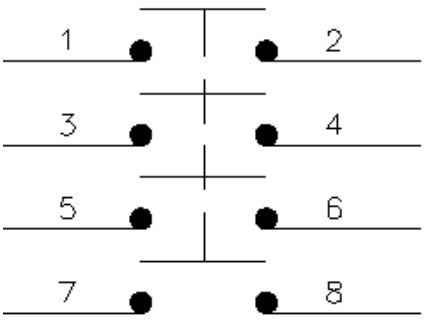
Solenoid Wiring Diagram (AC)



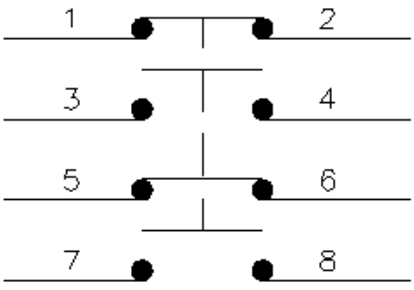

Solenoid Wiring Diagram (DC)




Contacts Wiring Diagram




Key Free - Switch off




Key Free - 2 NO/2NC

## Order Information

| | Product Type | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| Part Number | KSUPS | | | | | | | |
| Example | KSUPS | FS | B | P | CO | 4 | 110 | VAC |

| 8 |
|---|
| ABC |

| | | |
|---|---|---|
| 1 | Lock portion type | FS (1) / Q (1) |
| 2 | Material | B = Brass / S = Stainless steel |
| 3 | Mounting | P = Panel mount (back of board) |
| 4 | Contacts arrangement in normal position | CO = no/nc arrangement (contacts closed/opened)<br>CC = nc arrangement (all contacts closed) |
| 5 | Number of contacts | 4 = standard contacts number |
| 6 | Control voltage | 24, 110 or 240 = standard voltages |
| 7 | Current | VAC or VDC |
| 8 | 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 |

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