

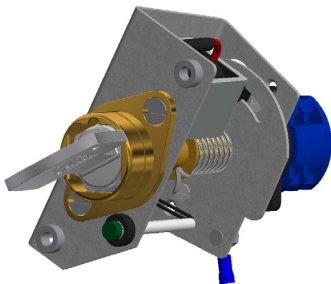
The KSUPS is a solenoid controlled switch. It is designed for, and primarily used in Uninterruptable Power Supply (UPS) bypass systems. The KSUPS ensures that the key may only be removed once the UPS system is in a safe condition. The KSUPS can be manufactured from either brass or stainless steel. The unit is supplied ready for mounting into a panel. It is available with a range of solenoid voltage options; 24, 110 and 240 VAC or VDC.

OPERATION

The Castell KSUPS solenoid control switch is typically used in UPS bypass systems.

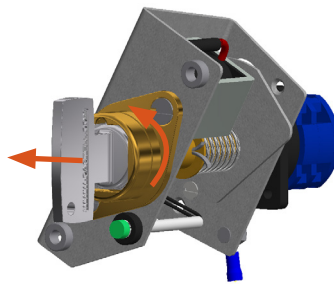
KSUPS Solenoid Controlled Switch

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



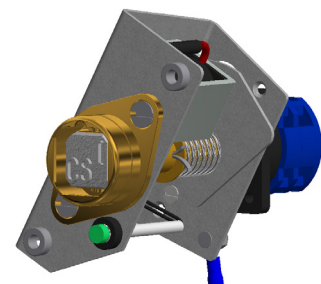
While the power is on, the key is trapped in the KSUPS unit.

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



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.

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



The key may then be removed.

The KSUPS is available with different solenoid voltages as AC or DC: 24, 110 or 240 V.

The KSUPS comes with 4 poles as standard with contact arrangements as either 2NO/2NC or with all 4 contacts closed (key trapped)/ all 4 contacts open (key free). Other switch configurations are available on request.

USAGE

The KSUPS solenoid controlled switch is designed to be part of an electrical safety system.



The KSUPS solenoid controlled switch is not designed for machine guarding.

For machine guarding applications, please refer to Castell KSS20 range.

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

INSTALLATION

The mounted panel units should be fitted 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 M5 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.



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.



The switch should be inspected periodically, as required. Safety checks should include checking the solenoid energises and engages in the locking cams. When de-energised, key should only be removable in the correct safe operating conditions (see page 1).



Check the switch is operating correctly with a continuity checker.



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

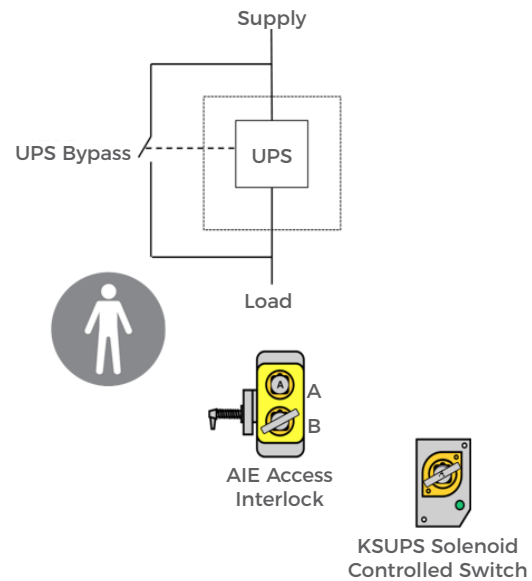
Temperature rating	Ambient temperature of stages: open at 100% Iu/Ith - 55°C during 24 hours with peaks up to 60°C, enclosed at 100% Ithe - 35°C during 24 hours with peaks up to 40°C
	Storage temperature: -40°C to 85°C (in case temperature below -5°C no shock load permissible)
Type of mounting	Panel mount using suitable fasteners (please refer to drawing on page 4 for more details)
Weight	0.6 kg
Material	Brass/Stainless steel
Power isolation	20 A
Voltage	24, 110, 240 VAC or VDC
Switch approvals	UL, CSA, CCC
B10d	1,100,000
Conformation declaration	CE
PL rating	PLd

APPLICATION

While the UPS is running, the key is trapped in the KSUPS interlock. The key can only be turned and released when the UPS is put into bypass. This will energise the solenoid via a remote signal from the UPS system.

Turning the key changes the condition of the switch and releases the key, which can now be transferred to the AIE access interlock. This allows access to the UPS for maintenance.

The UPS will remain in a safe state until the key is returned from the AIE and inserted back into the KSUPS and trapped. This allows the UPS to be returned to service.



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:

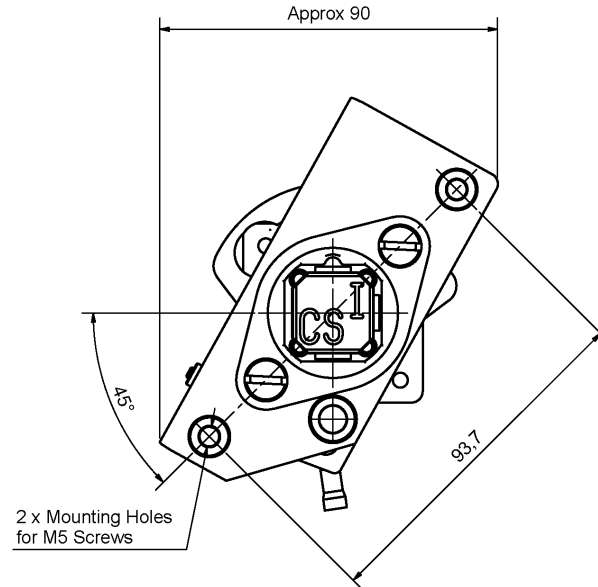
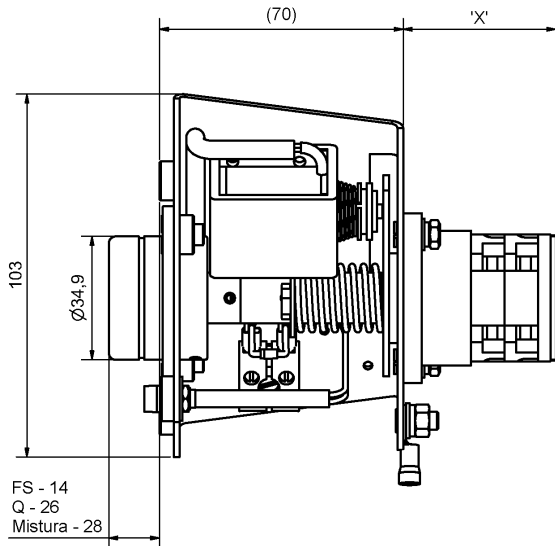
Kirstie Van Oerle
Business Unit Director 

DRAWING

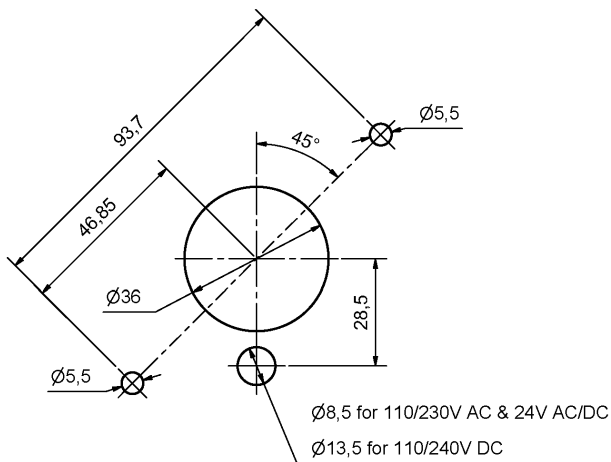
Dimensions: in mm

Note: For safe mounting, use security screws

KSUPS



Panel Mounting Details

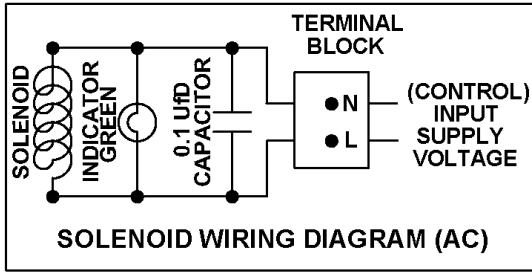


Panel Mounting Cutout Details

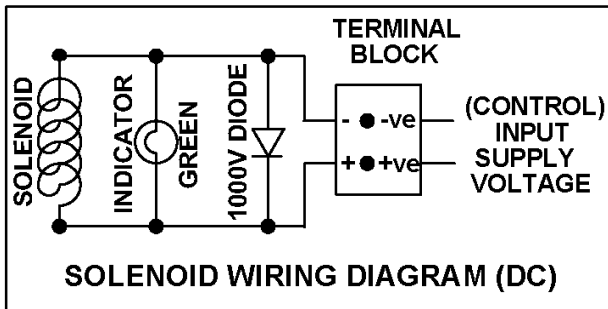
Dimension Reference 'X'	
No of Poles	Length
4 Poles	42.0 mm
6 Poles	51.5 mm
8 Poles	61.0 mm
10 Poles	70.5 mm
12 Poles	80.0 mm
14 Poles	89.5 mm
16 Poles	99.0 mm

WIRING DIAGRAM

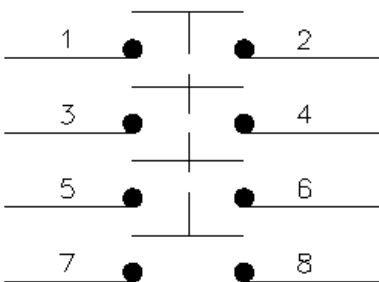
Solenoid Wiring Diagram (AC)



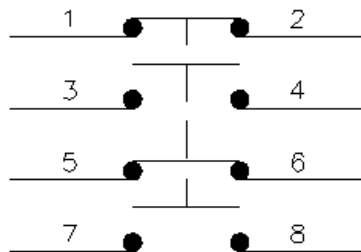
Solenoid Wiring Diagram (DC)



Contacts Wiring Diagram - 4 Pole Switch



Key Free - Switch off





Key Free - 2 NO/2NC

ORDER INFORMATION

	Component type	1	2	3	4	5	6	7	8
Part number	KSUPS								
Example	KSUPS	FS	B	P	CO	4	110	VAC	ABC

1	Lock portion type	FS ⁽¹⁾ / Q ⁽¹⁾
2	Lock portion material	B = Brass / S = Stainless steel
3	Mounting	P = Panel mount, standard
4	Contacts arrangement in normal position (key in)	CO = NO/NC arrangement (contacts closed/open) CC = NC arrangement (all contacts closed, key trapped)
5	Number of contacts	4 = standard contacts
6	Solenoid voltage	24 / 110 / 240
7	AC / DC	VAC / VDC
8	Lock portion symbol	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

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
Shanghai PRC, 200233
China

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