

SS - Solenoid Switch

SS with CL



Mounting

Back of Board (BOB) Mounting

Mount the unit only in its correctly assembled condition to flat metal plate of minimum thickness 3.0mm. The plate must be bonded to earth potential. A sound earth connection must be made to the front plate of the product. A shakeproof washer may be required on at least one fixing, to ensure Earth continuity.

1. Locate the unit so that all the locks are within easy reach.
2. Machine the panel as shown in figure 3.
3. Mount the unit to the panel using the 4 M6 screws, nuts and washers, as applicable.
4. All fixing screws must be permanently prevented from removal, either by vibration or by personnel using standard tools.

Front of Board (FOB) Mounting

Mount the unit only in its correctly assembled condition to flat metal plate of minimum thickness 3.0mm.

1. Locate the unit so that all the locks are within easy reach.
2. Mount the unit to the panel using the 4 M4 screws, nuts and washers, as applicable. The fixing holes are accessible with the lid removed and will not be within the sealed area.
3. All fixing screws must be permanently prevented from removal, either by vibration or by personnel using standard tools.
4. For Waterproof units, cable glands must be sealed against ingress of dust and liquids.

Multiple Lock FOB

For multiple lock FOB units, please contact Fortress for dimensional drawings

Electrical Connection

Check that the unit to be installed is of the same electrical type and voltage rating as the machine control circuits. Note that all units are designed to operate at +/-10% of the nominal supply voltage. The use of an incorrect voltage can seriously damage the unit.

The electrical system must incorporate fuse protection for all circuits, using a Quick-Acting (F) fuse (maximum rating 3A, 250V to IEC 127). Make the electrical connections referring to figures 4 and 5.

Terminals A-B and E-F are N/C contacts opened mechanically by the solenoid operating. These are normally used as the solenoid operated safety circuits. Terminals C-D are the solenoid power supply. The D.C. supply can be connected either way around.

Please refer to figure 5 for the Terminal Numbers for the Key Operated Rotary Switch.

The earth wire used to bond the unit to Earth potential must be multi-stranded Yellow and Green PVC sheathed and approved to BS 6231 with conductor cross-sectional area of 2.5mm². The Earth lead must be fitted such that it will be the last to be broken if the wiring loom is pulled from the product.

When all wiring is complete, conduct a Protective Earth Test to BS 60204, clause 20 to all accessible metal parts. Test the unit for correct operation:

Functionality

Key Trapped State

(With all Gate Keys Inserted) When the solenoid is not energised, all the keys are trapped. The solenoid operated safety circuits are closed.

Key Unlocked State

When voltage is applied to the solenoid, the solenoid safety circuits are positively opened.

Key Free State

When the control key is removed, the contacts on the rotary switch change state. This allows the removal of any other keys.

Commissioning

Mechanical Function Test

1. Isolate electrical supplies.
2. Insert all the keys (starting from the bottom lock and working down wards).
3. Check that all the keys are trapped in position.
4. For Manually override the solenoid to allow the removal of the keys, starting from the top working downwards.

Electrical Function Test

5. Check that all the switches are in the states shown in the wiring diagrams - see figures 4 and 5.
6. Insert all keys.
7. Apply voltage to the solenoid.
8. Check that the solenoid safety circuits are open.
9. Remove the control key.
10. Check that the key operated rotary switch changes state.

Service and Inspection

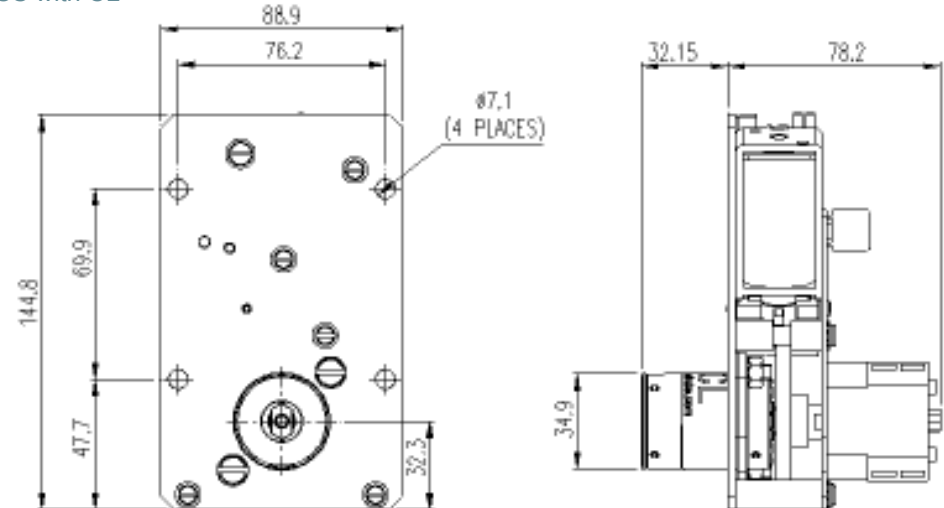
Regular weekly inspection of the following is necessary to ensure trouble-free, lasting operation:

1. Correct switching function.
2. Secure mounting of components.
3. Debris and wear.
4. Loose cable terminals.

There are no user serviceable parts in this unit. If damage or wear is found the whole unit must be replaced. If lubrication is required use a high temperature grease such as Rocol Sapphire Hi-Temp2. Do not use dry lubricant.

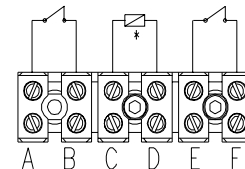
Installation Instruction

SS with CL



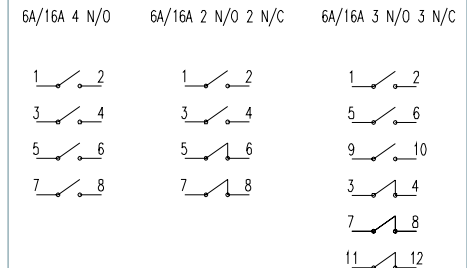
To View Full 2D CAD Drawing [Click Here](#)

SOLENOID AND MONITORING SWITCHES WIRING DETAILS



* A BRIDGE RECTIFIER IS CONNECTED TO THE SOLENOID ON AC UNITS

ROTARY SWITCH WIRING DETAILS



Disposal

This interlock does not contain any certified hazardous materials so should be disposed of as industrial waste.

Liability coverage is voided under the following conditions:

1. If these instructions are not followed.
2. Non-compliance with safety regulations.
3. Installation and electrical connection not performed by authorised personnel.
4. Non-implementation of functional checks.

Environmental Specification

Environment Type	Indoor
Max. Altitude	2000m
Ambient Temperature	-5°C to +40°C
Maximum Relative Humidity	80% @ ≤31°C
	50% @ 40°C
Transient Overvoltages	Installation Uimp 2500V
Pollution Degree (IEC 664)	Degree 2
Ingress Protection	BOB - IP00
	FOB - IP40
Waterproof	FOB - IP66

The manufacturer reserves the right to modify the design at any time and without notice. This guide should be retained for future reference.

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