

AIE-HD-FSS-E-1

The AIE-HD is a Heavy Duty (HD) dual key access interlock that is suitable for use on hinged and sliding doors. The interlock has an open cavity design and is manufactured in stainless steel making it ideal for very harsh, corrosive, high vibrate environments where the lock is subject to heavy use. The AIE-HD is available in two options: exchange key and double key.

### Operation

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

#### AIE-HD dual key access interlock, exchange key condition (bolt trapped - personnel key trapped/isolation key free)

- ① Side bolt is trapped and the personnel key is trapped, isolation key is free.
- ② Insert and turn isolation key, then turn and release the personnel key. The side bolt can now be released.
- ③ isolation key is trapped, the side bolt and personnel key are free.

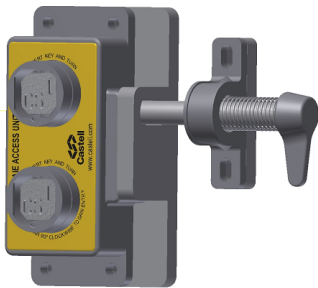


1. While the isolation key is free and the personnel key trapped in the AIE-HD, the bolt of the AIE-HD is trapped in the mechanism. The door is closed.
2. By inserting and turning the isolation key in the access interlock, you can release the personnel key. This traps the isolation key, which enables the release of the side bolt. The personnel key should be taken by the Personnel to the hazardous area.
3. The isolation key stays trapped while the bolt is released and the door is open.

### Operation

#### AIE-HD dual key access interlock, double key condition (bolt trapped - both keys are free)

① Bolt is trapped, while both keys are free



② Insert and turn the keys, then turn and release bolt



③ keys are trapped, bolt is unlocked



1. While both keys are free, the bolt of the AIE-HD is trapped in the mechanism. The door is locked.
2. By inserting and turning the keys in the access interlock, you can release the bolt and open the door.
3. Both keys stay trapped while the bolt is released and the door is opened.

### Usage

The AIE-HD access interlock should be used to allow safe access to potential hazardous and dangerous areas. The AIE-HD access interlock should be used on full body access doors where the use of personnel safety keys is essential (to prevent accidental lock in).



The AIE-HD access interlock is not designed for security purposes, such as a safe or external access to a building.

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

### Installation

The housing of the AIE-HD access interlock should normally be mounted on the static frame of the guard and the bolt to the sliding or hinged door using suitable fasteners. Fixed bolt bracket is highly tolerant to misaligned guards and should be fitted with suitable fasteners. Please refer to the drawing on page 4 for mounting details for the housing and bolt. The AIE-HD interlocks are available in Hand 1 and Hand 2 version suitable for left or right hinged doors, respectively. Anti vibration pads should be used on machines that generate a high level of vibration.



**IMPORTANT:**

The AIE-HD access interlock should be mounted on the guard using anti-tamper fasteners to prevent unauthorised removal.



The AIE-HD access interlock 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>	Minimum: -40°C [-40°F] ice free for Q & FS type
	Maximum: 107°C [224,6°F] for Q type/140°C [284°F] for FS type or 288°C [550°F] upon request
<b>Type of mounting</b>	Surface mount using suitable fasteners (please refer to drawing on page 4 for more details)
<b>Weight</b>	Stainless steel: 2,2 kg
<b>Material</b>	Stainless Steel
<b>MTTF Certification</b>	Available on request

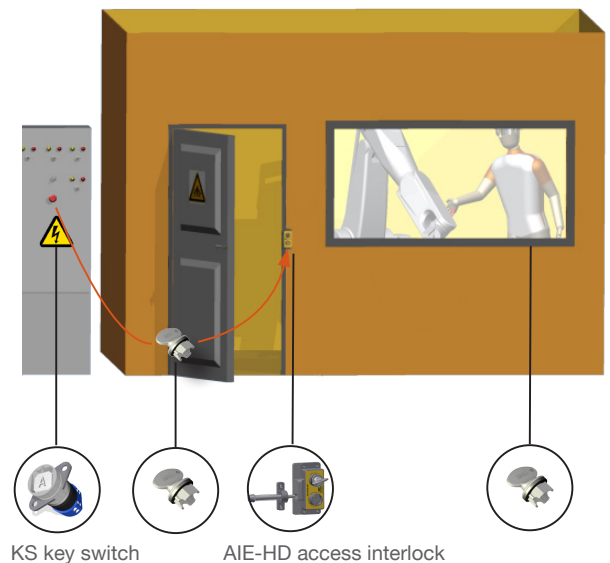
### Application

A typical application of the AIE-HD dual key Access Interlock is machine guarding with full body access.

The AIE-HD is used as part of a safety system, which ensures a machine is shut down, before access to the hazardous area is allowed.

The system involves a KS key switch for the electrical supply. The removal of the isolation key from the key switch isolates the electrical supply to the machine. This key is taken to the AIE-HD and inserted into the lock. This allows the release of the personnel key and then the sidebolt, which traps the isolation key. The personnel key is then taken into the area by the operative to safeguard themselves against accidental lock in and start up.

The machine cannot be restarted until the personnel key is returned, the bolt is replaced in the AIE-HD and the isolation key is removed and taken to the KS key 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

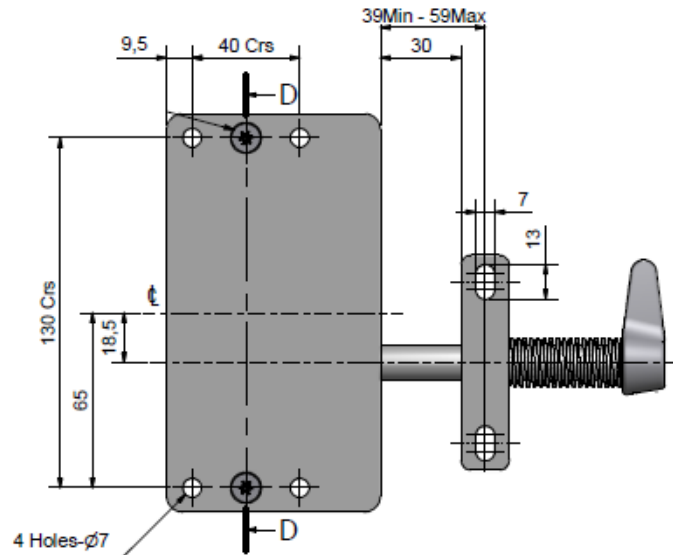


### Drawing

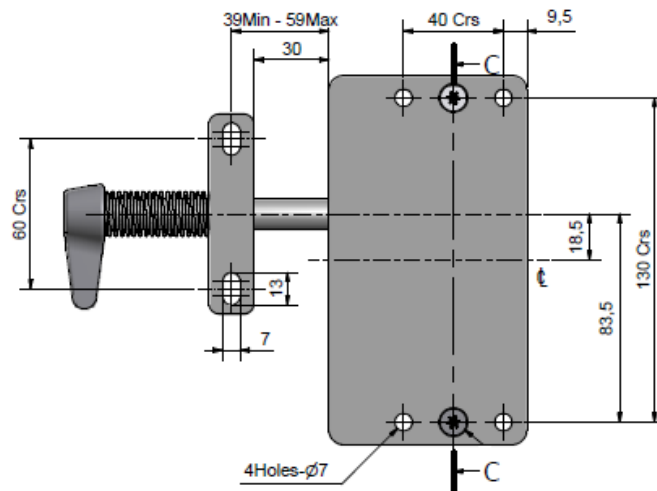
Dimensions:  
in mm

*Note: For safe mounting, use security screws*

AIE-HD, Hand 1



AIE-HD, Hand 2



### Order Information

Part Number **Product Type** - **1** - **2** - **3** - **4**

Example **AIE-HD** - FS - S - E - 1

5  **Isolation Key Symbol** (exchange key condition)  
OR  
 **Primary Key Symbol** (double key condition)

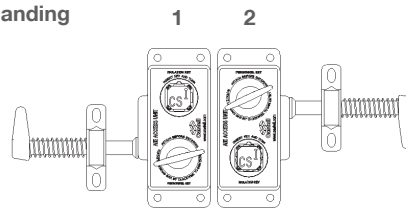
6  **Personnel Key Symbol** (exchange key condition)  
OR  
 **Secondary Key Symbol** (double key condition)

<b>1</b>	<b>Lock portion type</b>	FS <sup>(1)</sup> / Q <sup>(1)</sup>
<b>2</b>	<b>Material</b>	S = Stainless steel
<b>3</b>	<b>Key Condition</b>	E = Exchange key Condition D = Double key Condition
<b>4</b>	<b>Handing</b>	1 = left hinged door <sup>(2)</sup> 2 = right hinged door <sup>(2)</sup>
<b>5</b>	<b>Lock portion symbol:</b> Isolation key symbol (for exchange key condition) Primary key symbol (for double key condition, lock next to the bolt)	FS <sup>(1)</sup> up to 3 characters / Q <sup>(1)</sup> up to 6 characters
<b>6</b>	<b>Lock portion symbol:</b> Personnel key symbol (for exchange key condition) Secondary key symbol (for double key condition)	FS <sup>(1)</sup> up to 3 characters / Q <sup>(1)</sup> up to 6 characters

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



(2) **Handing**



(AIE shown for example)

Special construction available upon enquiry

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