FORTRESS

Compact Robust Interlock with RFID Coding

Atom

Atom is a compact and ultra-robust RFID high-coded solenoid interlock that we have added to our product portfolio.

Suitable for use in applications up to PLe (Cat.4), **Atom** provides a discreet, easy-to-install solution with monitored inputs and OSSD outputs.

Connection Options:
M12 quick disconnects (QD) are supported in single 5 pin, single 8 pin and double 5 pin configurations with the latter for daisy-chain applications.
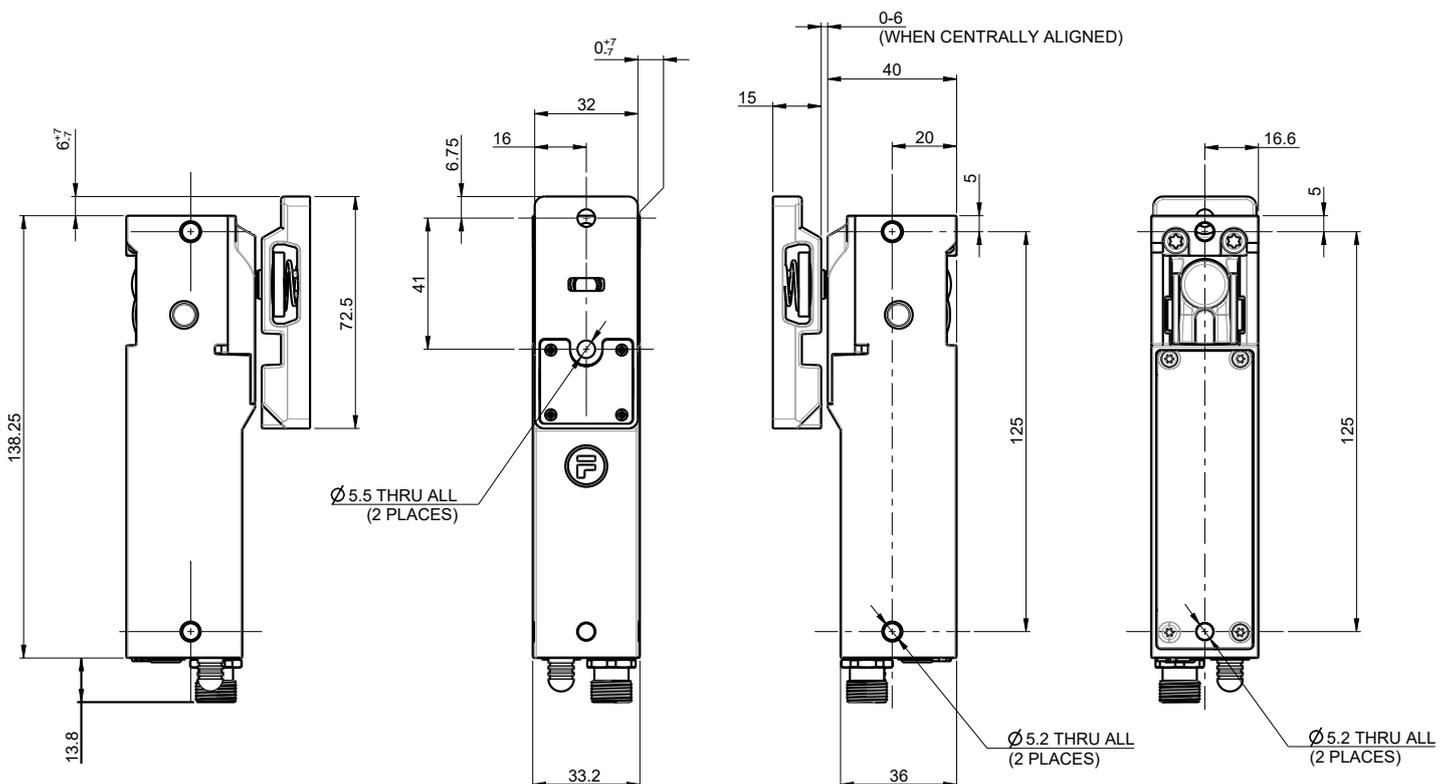
Manual auxiliary release can be performed with the override driver bit provided (Power-to-Unlock only).

Mounting Screws and Cable Requirements:
- **4 x M5 security-type mounting screws** for securing Atom switch and actuator. (Please refer to Atom operating instructions for specific detailed requirements).
- **4 x M5 nut / T-nut / threaded hole** for securing Atom switch and actuator.
- **Adhesive threadlocker** to secure mounting screws.
- **Auxiliary release driver bit** (provided) to operate auxiliary release function.
- **Standard M12 cable(s)** to connect and operate Atom switch. (Exact cable depends on connector option).
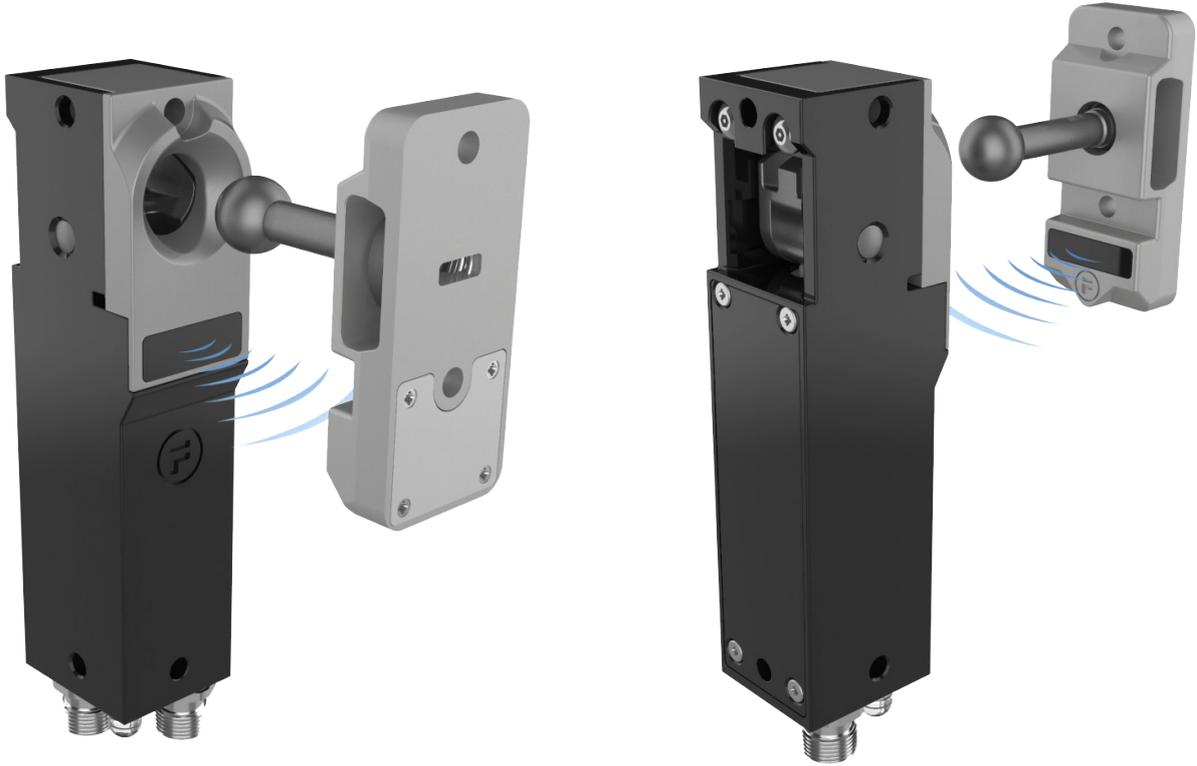
Dimensional Drawing for Atom with Actuator Unit

Atom - High Coded RFID

Atom has a high-coded RFID technology that provides millions of different coding combinations and is classed as "high" coding by ISO 14119.
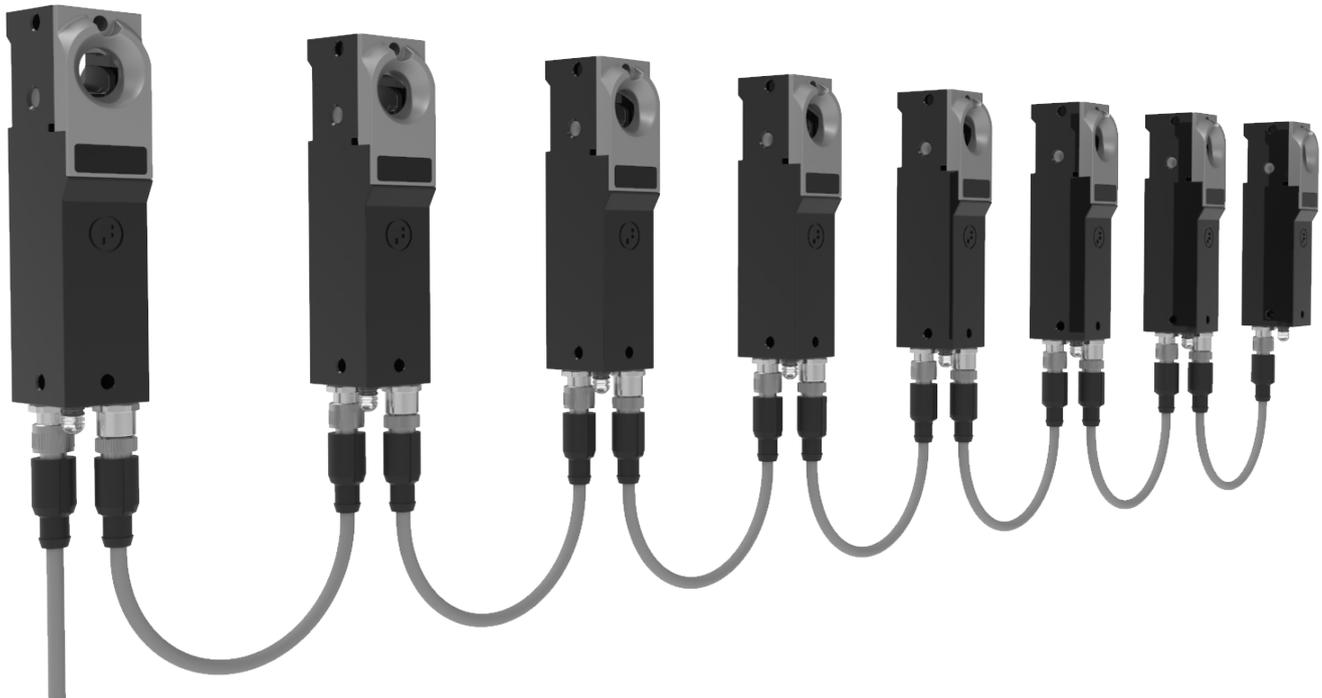
The uniquely coded actuator helps to create a tamper-proof system that prevents unauthorised access.
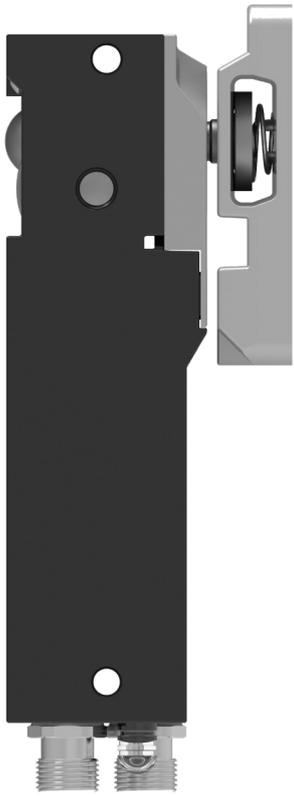

Atom - OSSD Outputs

Atom supports OSSD output (**O**utput **S**ignal **S**witching **D**evice) with daisy-chain connection that enables ease of wiring installation and prevents fault masking powered from the same supply.

Each **Atom** unit in series draws current and causes a voltage drop on the power line. For a detailed calculation please see the voltage drop tool on the Fortress website.
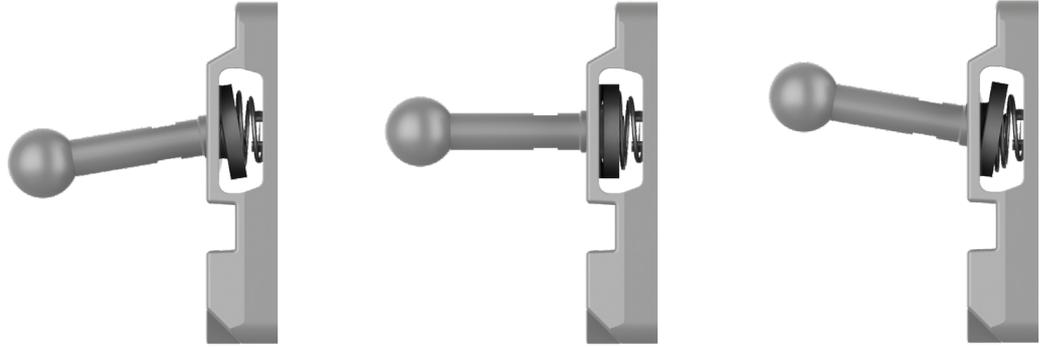
The **Atom** actuator can pivot and self-centre to operate under a high degree of misalignment.

High maximum retention force of up to 8kN.

Pivoting mechanism is particularly well suited to small radius hinged doors and hatches.

Atom in Action: CNC Machine

If a person requires entry to the machine they must press the 'request to stop' button.
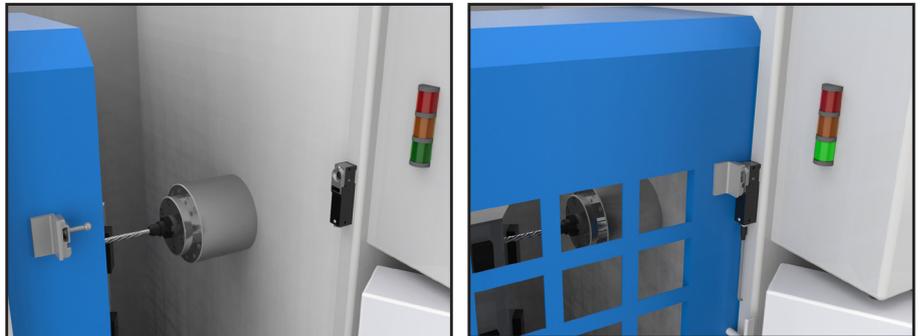
The **Atom** will prevent guard doors from opening whilst the machine is still operating during rundown time.

Once the machine has stopped, the **Atom**'s solenoid is energised which breaks the dual safety circuit to prevent unexpected restart.

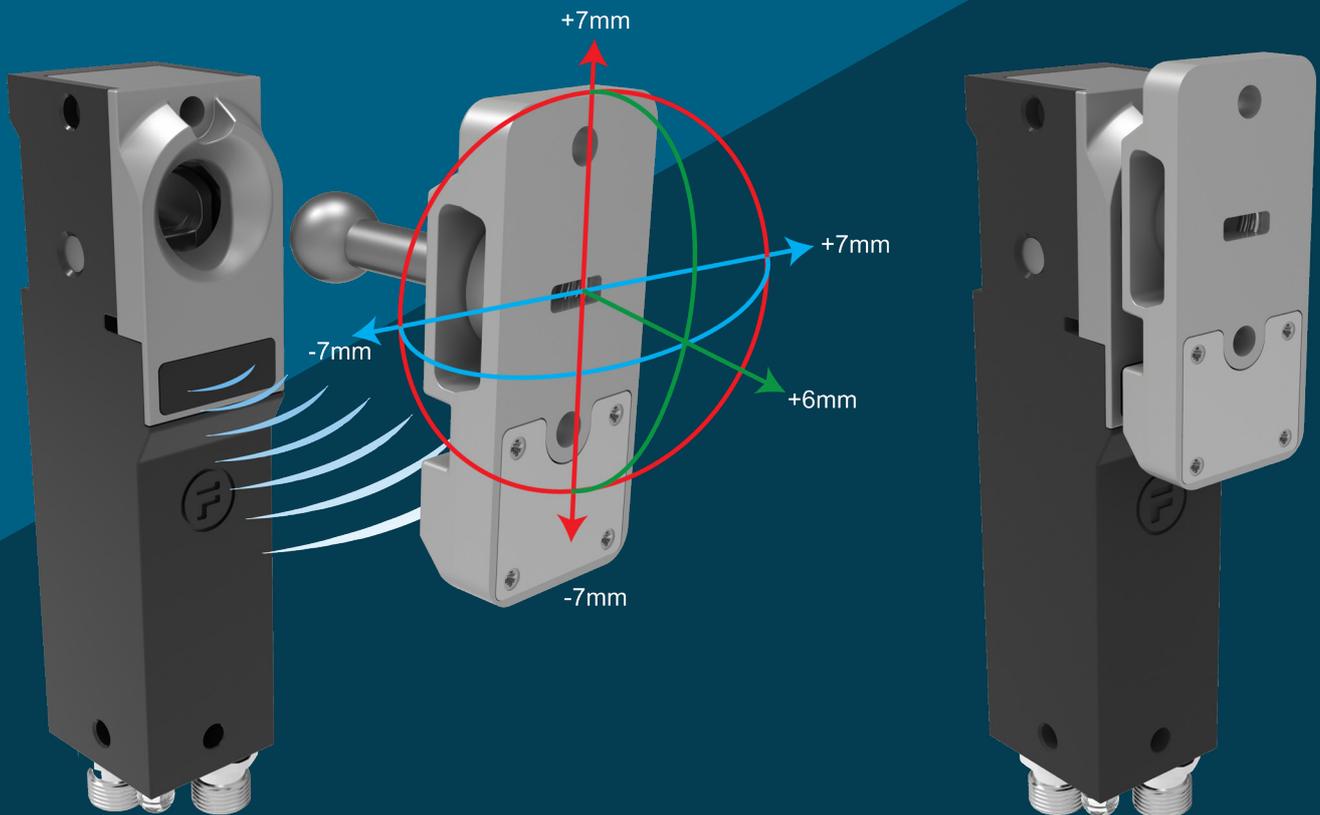Opening the guard door disconnects the RFID connection which prevents inadvertent restart.

High-coded RFID technology prevents any attempts to manually defeat the unit.

When intervention is complete, closing the machine door will re-establish the safety circuits and providing the solenoid is de-energised, the **Atom** unit will then relock and allow for machine restart.

+7mm

+7mm

-7mm

+6mm

-7mm

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What are the features of Atom?

Solenoid controlled interlock

High-coded RFID

Robust actuator design with high locking and retention force (8kN)

Ultra compact mounting footprint, easy to mount with 4 x M5 screws

Safeguarding application up to PLe and SIL3 rating

Provides OSSD outputs with daisy-chain connection, connects up to 8 Atoms in series

High mechanical misalignment and open head to prevent dust, dirt and corrosion from impacting performance

Sealed to IP65 and IP67

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> " We have the peace of mind that our workers are safe and protected by fortress equipment. "

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> " Fortress is best at providing customised solutions at a rapid turnaround - reacting immensely to a challenge to put the customer's needs first. "

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> " Fortress' best quality is providing each customer the most robust and safe solution - all while being completely customizable and retaining a high level of quality. "

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> " We value suppliers that can help navigate the standards and provide guidance that is directly linked to our applications. "

Fortress Global Offices

⊗ **www.fortress-safety.com**

Fortress Interlocks Ltd
📞 +44 (0)1902 349000
✉ sales@fortress-safety.com

Fortress Interlocks USA
📞 +1 (859) 578 2390
✉ us@fortress-safety.com

Fortress Interlocks China
📞 +86 (021) 6167 9002
✉ china@fortress-safety.com

Fortress Interlocks Europe
📞 +31 (0)10 7536060
✉ europe@fortress-safety.com

Fortress Interlocks Pty Ltd
📞 +61 (0)3 9771 5350
✉ australia@fortress-safety.com

Fortress Interlocks India
📞 +91 7042358818
✉ india@fortress-safety.com

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