FORTRESS



Compact Robust Interlock with RFID Coding

Atom

THE QUEEN'S AWARDS FOR ENTERPRISE: INTERNATIONAL TRADE 2018

What is 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.

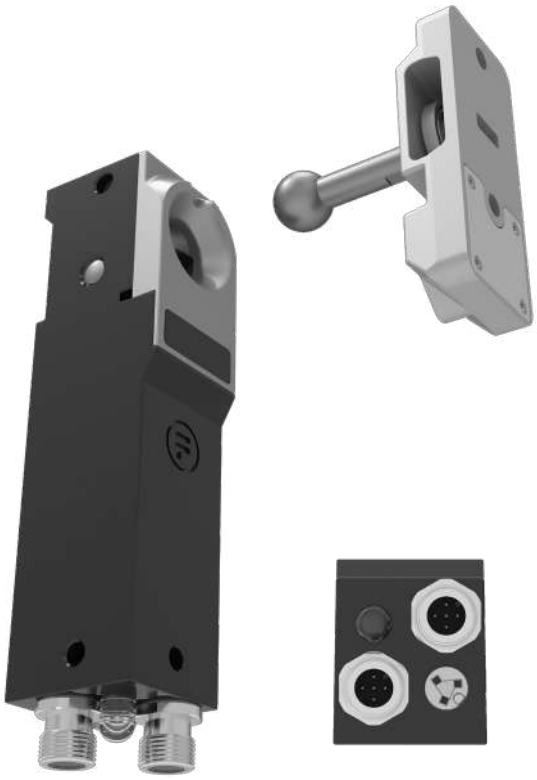
Connection Options:

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.

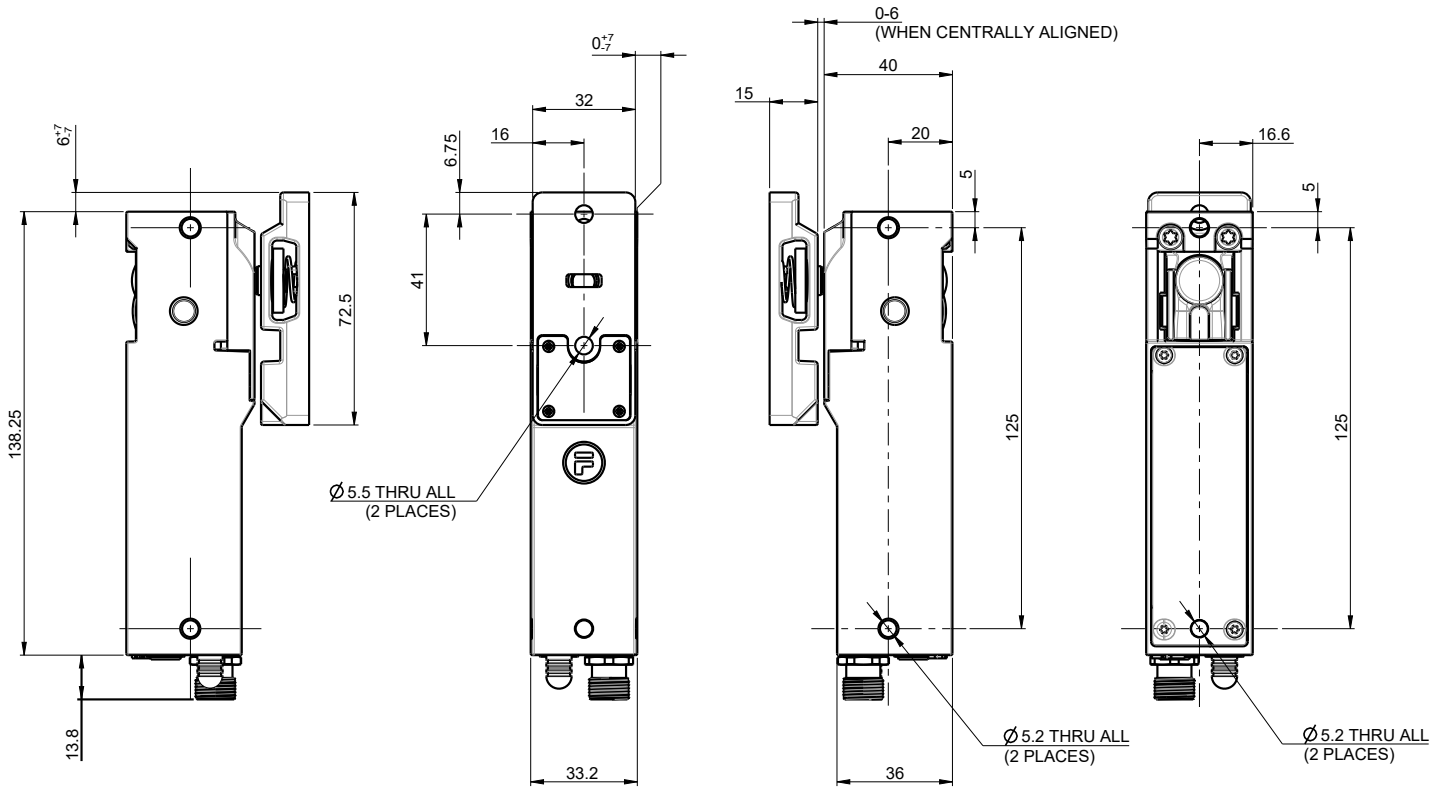
Manual auxiliary release can be performed with the override driver bit provided (Power-to-Unlock only).

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).



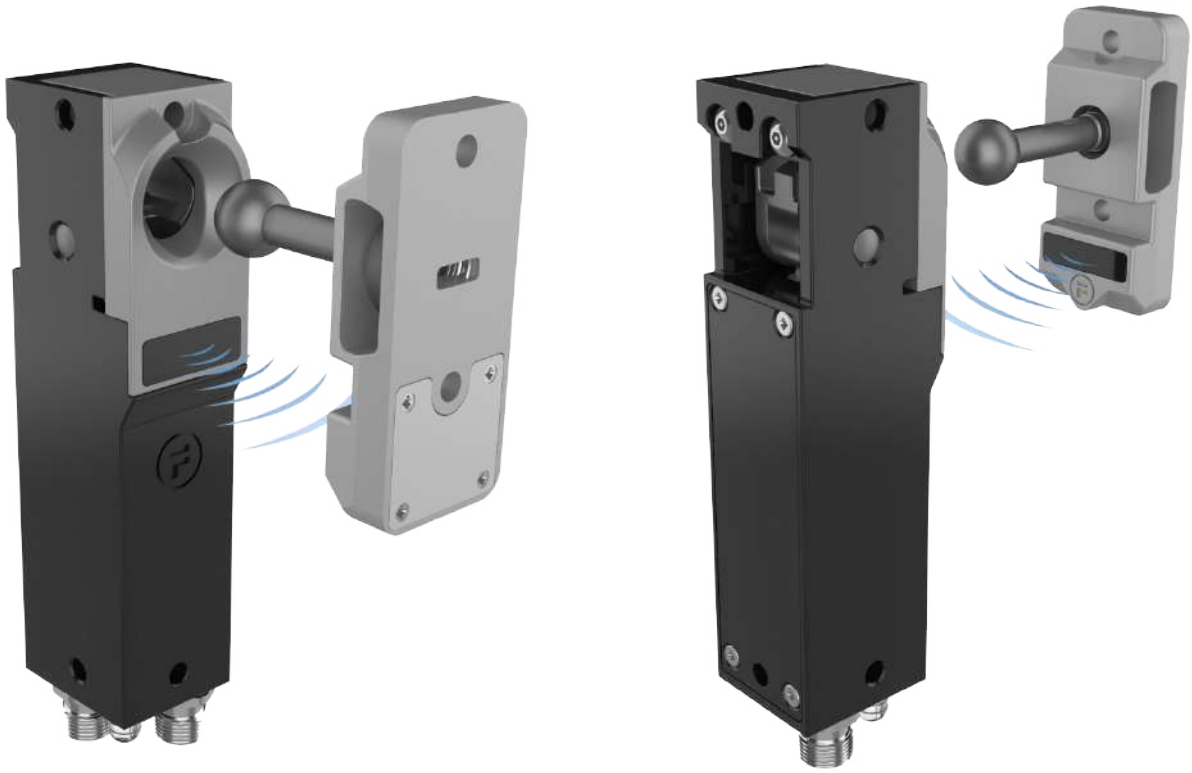
Dimensional Drawing for Atom with Actuator Unit



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.

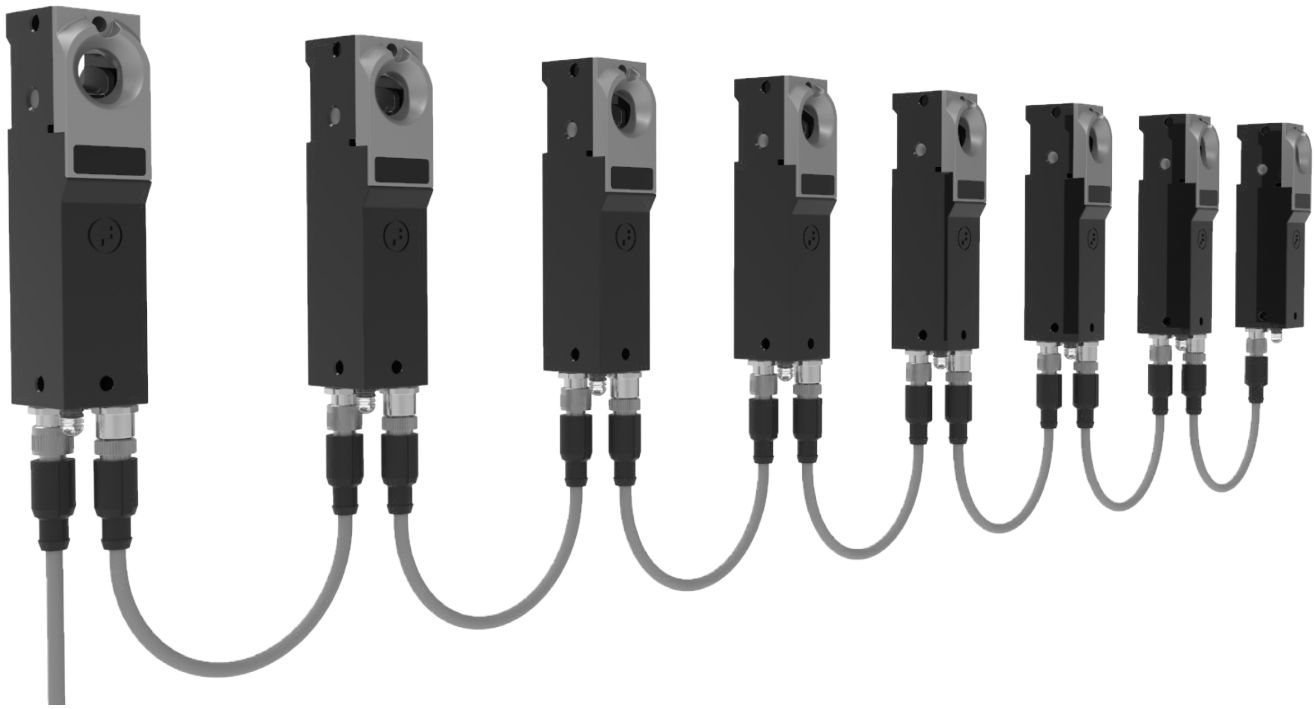
The uniquely coded actuator helps to create a tamper-proof system that prevents unauthorised access.



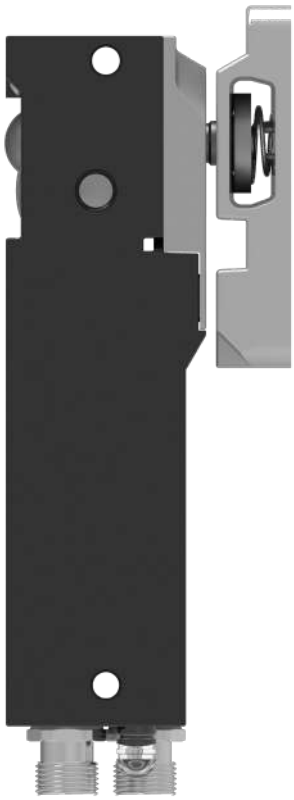
Atom - OSSD Outputs

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.



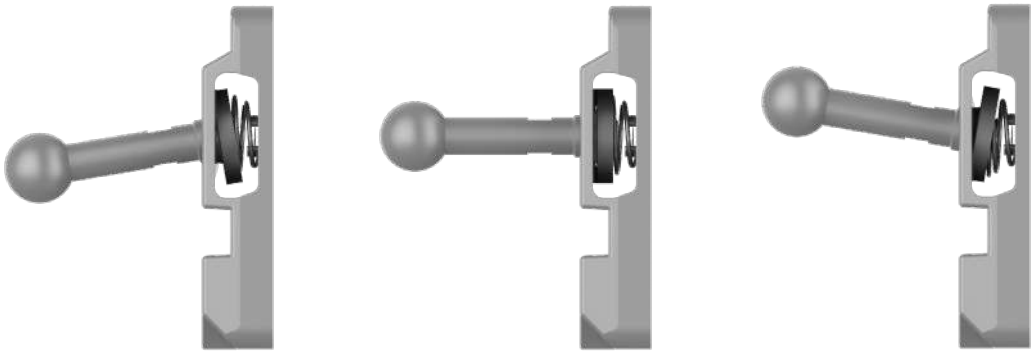
Atom - High Mechanical Misalignment



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.

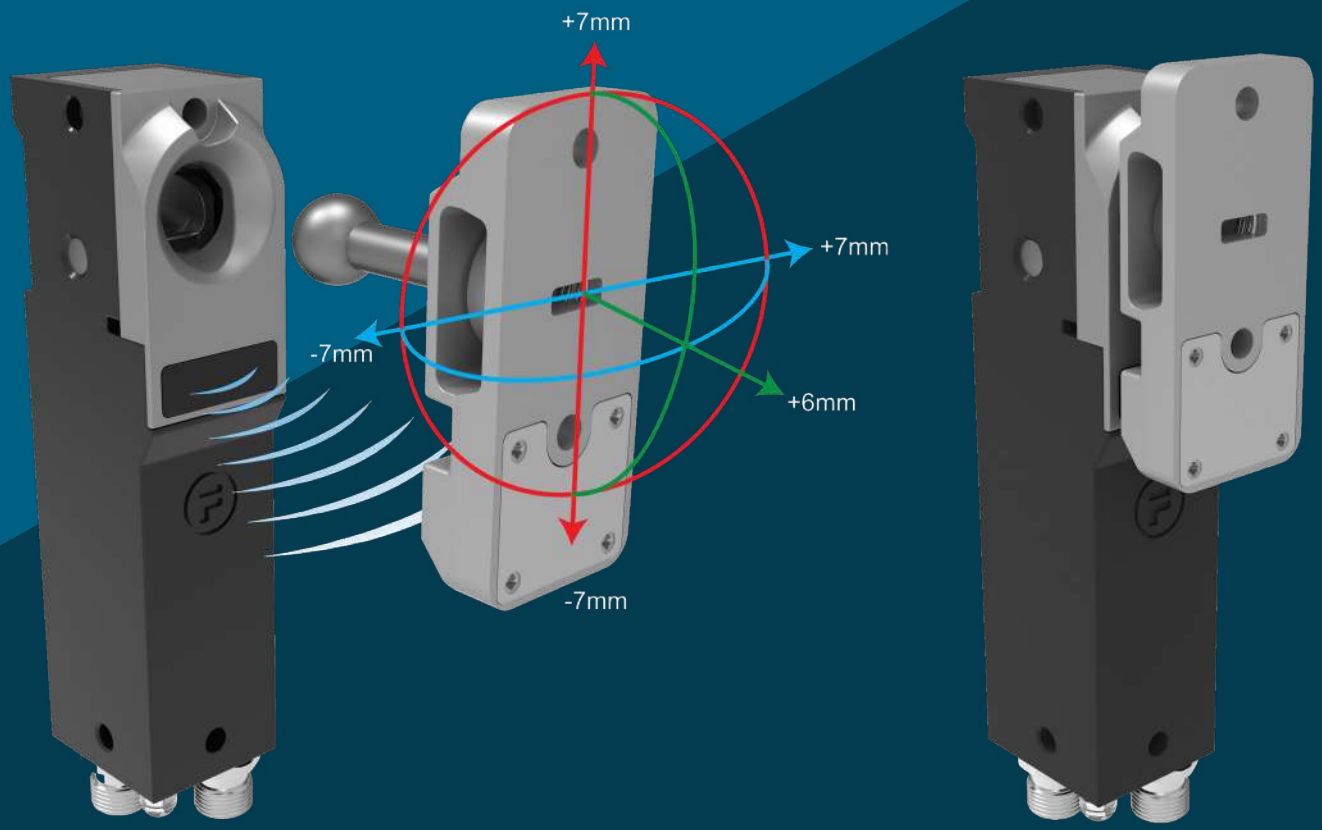
Opening the guard door disconnects the RFID connection which prevents inadvertent restart.

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.



FORTRESS



Compact Robust Interlock with RFID Coding

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

FORTRESS

FORTRESS

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

FORTRESS

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

FORTRESS

"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."

FORTRESS

"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

A Halma company

September 2021 v1.5