High-Coded Safety Door Switch
D41 Series

OMRON

Protect against defeating interlocks, ensuring safety in production

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STI SAFETY, TECHNOLOGY & INNOVATION

Prevent industrial accidents caused by tampering

Safety components perform their safety functions only when properly used. Are safety components in your production facility used correctly? Some industrial accidents were caused by tampering with interlocking devices used for safety guards, in spite of the fact that they could have been prevented. As these accidents often become problems in many countries, there is an effort to standardize prevention of tampering. Many countries adopt ISO 14119 that defines the measures required to minimize defeat of interlocking devices and is becoming the global standard.

Minimize tampering risk by preventing defeat of interlocking devices

One of the typical ways to defeat interlocking devices is to simulate closing of the movable guard by tampering using a spare actuator with the guard opened. Since this carries the risk of causing accidents at a production site, it is recommended to follow ISO 14119 to prevent defeat.

Defeatable

The machine is running even if the movable guard is opened.

Possible accident risk

Improper operation without following the procedure can lead to accidents.This may result in compensation for the injured personnel, disruption of production plan, or economic loss due to production shutdown.

More serious risk of business continuity

If an industrial accident occurs, the governmental authorities may order the company to suspend operation, or to change the use of the machinery.

Defeat prevention

The machine is stopped while the movable guard is opened.

Reduction in accident risk

Operators follow correct procedures, which reduces accidents. This will make production environments safe and reliable and reduce management risks.

Compliance with laws and regulations

Compliance with ISO 14119, to which local safety standards in each country conform, becomes an evidence of safety validation that can be provided to safety control authorities if required.

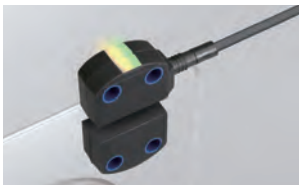
Reduce defeating risk by using high-coded safety door switches

Use of Omron's D41 High-Coded Safety Door Switch reduces the risk of defeating. This safety door switch is one where a switch is paired with a unique actuator by teaching, which excludes the possibility of tampering using a spare actuator.

D41 Series facilitates designing defeat prevention measures according to ISO 14119

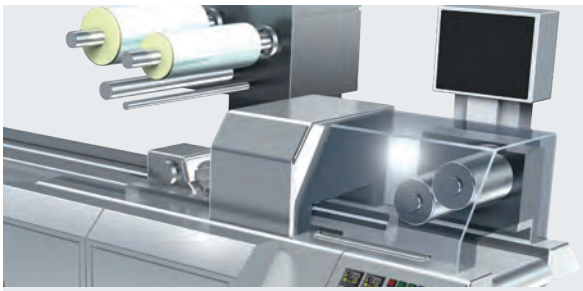
Non-Contact D41D

- The compact design fits into tight spaces inside machines and does not hinder entry through openings.D41D matches with machine design while providing excellent usability.
- Short teaching times reduce design and commissioning time for a system using many safety door switches.



Actuators fit in narrow spaces inside machines.

Small machine with small opening



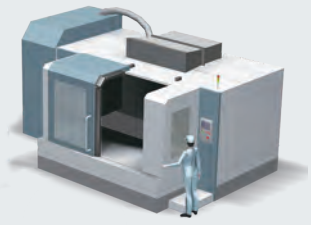
Flow packer

Guard Lock (for Gate) D41G

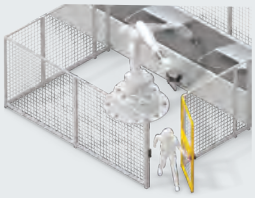
- The safety door switch with an integrated door handle can be used as the handle of a safety guard, reducing the time required to design a guard.
- The actuator with a door handle is available with the lock-out option to prevent operators from being trapped inside and ensure safer operation.

Actuators for right hinged doors and actuators for left hinged doors are available.

Large facilities where operators enter



Machine tool



Guard for robot cell

Guard Lock D41L

- The unique design that prevents water and foreign substances from collecting, plus the ECOLAB-certified detergent resistance allow hygienic use and quick cleaning.
- High tolerance to door misalignment

Identical mounting for left and right hinged doors

Food machinery

Food processing machine

Filling machine

High-Coded Safety Door Switch Datasheets

Non-Contact D41D

Cat No.F112

Guard Lock D41L

Cat No.F113

Guard Lock (for Gate) D41G

Cat No.F114

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