

# Safe door monitoring with lock for high risk

## Sentry, MKey10RF and contactors

**An interlock combined with safety lock.**

- Robust design
- Easy to install
- Easy to reach highest safety level



### Application

For high risk applications (where the risk assessment shows a risk for life or limb) it is usually not sufficient to only monitor a door - it also needs to be safely locked.

MKey RFID simplifies safety by combining the two different safety functions – interlock and safety lock – into the same product. It can be used on doors and hatches to protect people from machines with long stopping times, by keeping the movable guard locked and interlocked (monitored).

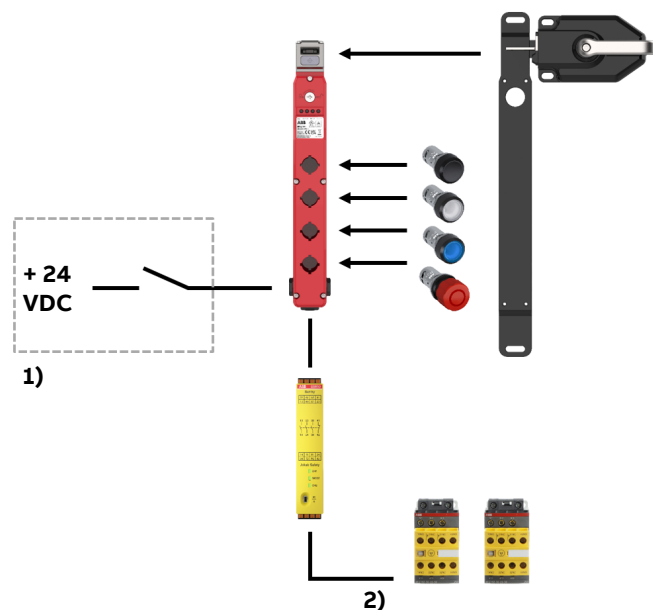
A long stopping time may be caused by, e.g., movable parts taking time coming to a complete halt, or heat being vented in an oven. When the kinetic or heat energy is spent and gone, access can be granted.

MKey RFID has an integrated non-contact RFID sensor for interlocking and safe supervision of the door. It also enables mounting of four pilot devices, to be used for, e.g., reset, e-stop and request for access. Note that it is possible to solve the time-before-entry for an access request by using a safety timer relay like Sentry TSR.

### Functional safety level

The safe interlock and safety lock (mechanical and RFID) makes it easy to reach PL e/SIL 3 for the interlocking function according to EN ISO 13849 and IEC 62061. For the locking function to reach PL e/SIL 3 a fault exclusion for the mechanical breakage of the key must be made, which is easiest to achieve using the bolt or handle accessories. MKey RFID meets the coding requirements according to EN ISO 14119 regarding manipulation protection.

The illustration below shows the principle for the interlock and safety lock/unlock functions. Please note that the reset function needs to be implemented in the safety relay, and a request for access needs to be sent to the control system for processing.



- 1) Safe unlocking condition can be realized in different ways, e.g. cool down time or stand-still monitoring function etc.
- 2) Including EDM (External Device Monitoring)



**Sentry SSR10P**

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**Sentry safety relay**  
 Choose between standard screw terminals or push-in terminals

Description	Type	Order code
Single function safety relay with screw terminals	Sentry SSR10	2TLA010050R0000
Single function safety relay with push-in terminals	Sentry SSR10P	2TLA010050R0001

Note that alternative safety relays are available for other functions, such as the safe timer relay Sentry TSR (see [Sentry product sheet](#)).



**MKey10RF**

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**MKey safety lock**

Description	Type	Order code
MKey10RF. Die-cast safety switch with RFID, M20 conduit and place for 4 pilot devices.	MKey10RF Die-cast M20	2TLA050012R0612

Note that alternative models are available both for the switch and the key (see [MKey RFID product sheet](#)).



**CP1-11L-10**



**CE3P-10R-02**

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**Reset button**

Description	Type	Order code
Compact momentary pushbutton, 1 NO contact, illuminated blue.	CP1-11L-10	1SFA619100R1114
Compact momentary pushbutton, 1 NO contact, black.	CP1-10B-10	1SFA619100R1016
Compact momentary pushbutton, 1 NO contact, illuminated white.	CP1-11C-10	1SFA619100R1118
Compact emergency stop, 2 NC contacts, pull release.	CE3P-10R-02	1SFA619501R1051

Note that a wide range of alternative pilot devices are available for various functions (see Compact range in [Pilot Devices catalog](#)).



**MKey10 RFID R handle**

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**MKey accessories**

Description	Type	Order code
Rotary handle for MKey10RF. Including RFID actuator. Right hand.	MKey10 RFID R handle	2TLA050040R0605

Additional optional accessories are available (see [MKey RFID product sheet](#)).



**AFS09**

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**Safety contactors**

The AFS contactors are dedicated for safety applications. See [AFS product sheet](#) for range and selection.

## Links

Product sheets	<a href="#">Sentry flyer</a> <a href="#">MKey RFID</a> <a href="#">AF contactors for safety applications</a>
Web pages	<a href="#">Sentry SSR10</a> <a href="#">MKey10RF</a> <a href="#">MKey10 RFID R handle</a> <a href="#">CP1-11L-10</a> <a href="#">CP1-10B-10</a> <a href="#">CP1-11C-10</a> <a href="#">CE3P-10R-02</a> <a href="#">Contactors for safety applications - Motor protection and control</a>
Connection diagrams	<a href="#">Sentry connection diagrams with most safety devices</a>
Manuals	<a href="#">Sentry SSR10</a> <a href="#">MKey RFID</a>