



The ABB Jokab Safety portfolio Smart Safe Reaction



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The ABB Jokab Safety portfolio

The B&R – Jokab Basic compatibility statement

Potential free contacts

B&R supports almost all of ABB Jokab products with potential free contacts. For this use cases, the B&R SafeIO module provides an unique pulse signals which ensures best cable diagnostic



OSSD

B&R supports almost all of ABB Jokab products with OSSD Interface. For this use cases, the B&R SafeIO provides filter to avoid influencing the application by the OSSD low phase.



Jokab OSSD products supports connecting devices in series without jeopardizing the safety performance level

DYNlink

Up from mapp Safety 5.11, B&R will support all ABB Jokab DYNlink products. This technology needs only one SafeIN channel per Sensors and supports daisy chaining of sensors. Combined with the existing cable and wiring box solutions (TINA 4A, TINA 8A) this reduces costs and installation efforts (provided via FW upgrade → to be used with any exiting X20 SafeIN product)

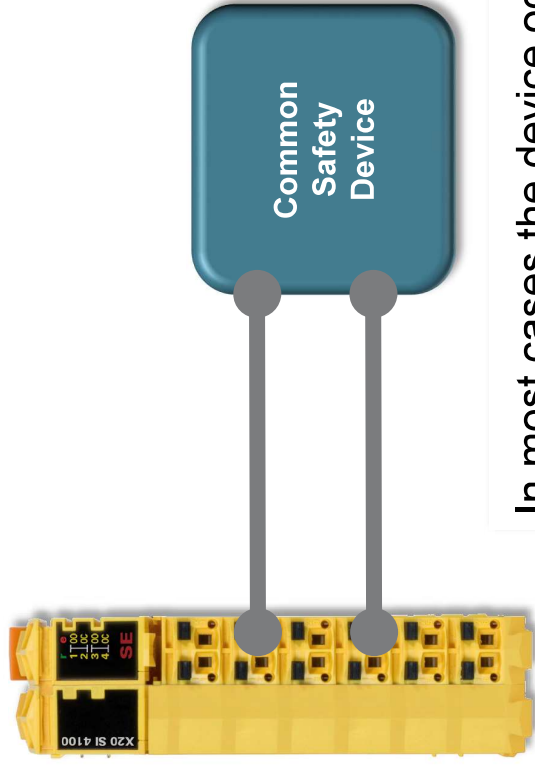
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ABB sensor connectivity – benefits & use cases

Status quo - connectivity to any 3rd party device



In most cases the device occupies TWO SafeIN channel independent of the performance level



ABB sensor connectivity – benefits & use cases

Connecting ABB OSSD Devices

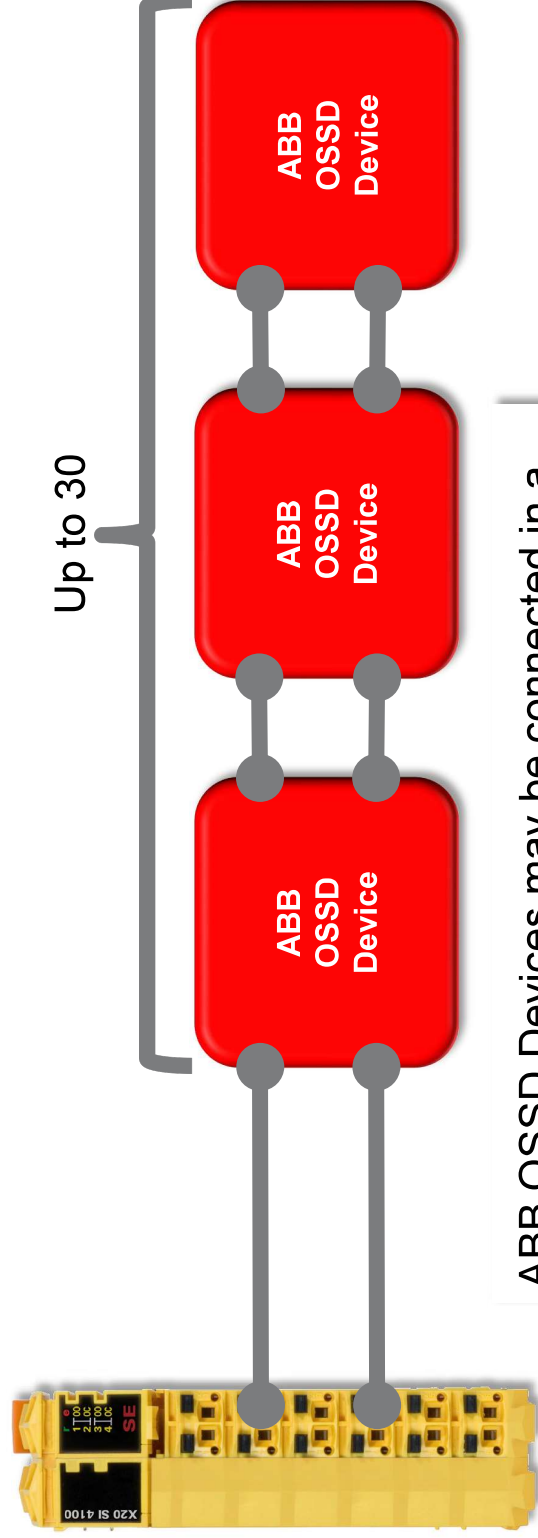


ABB OSSD Devices may be connected in a daisy chain without jeopardizing the safety characteristic – finally the daisy chain results in dual channel but representing one single safety function



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ABB sensor connectivity – benefits & use cases

Connecting ABB DYNlink Devices



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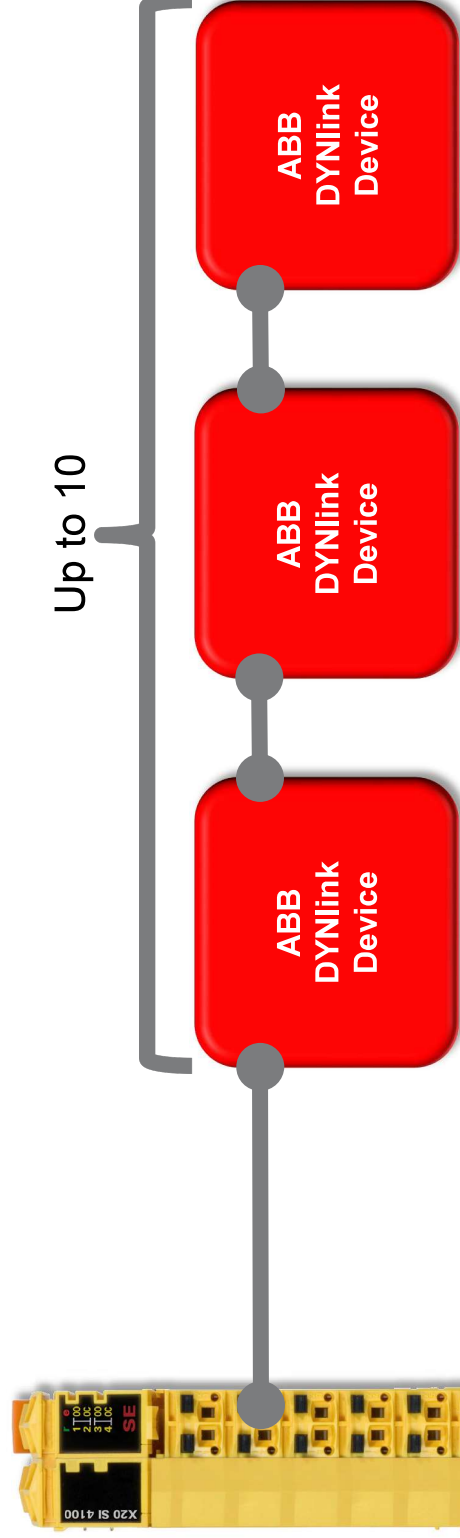
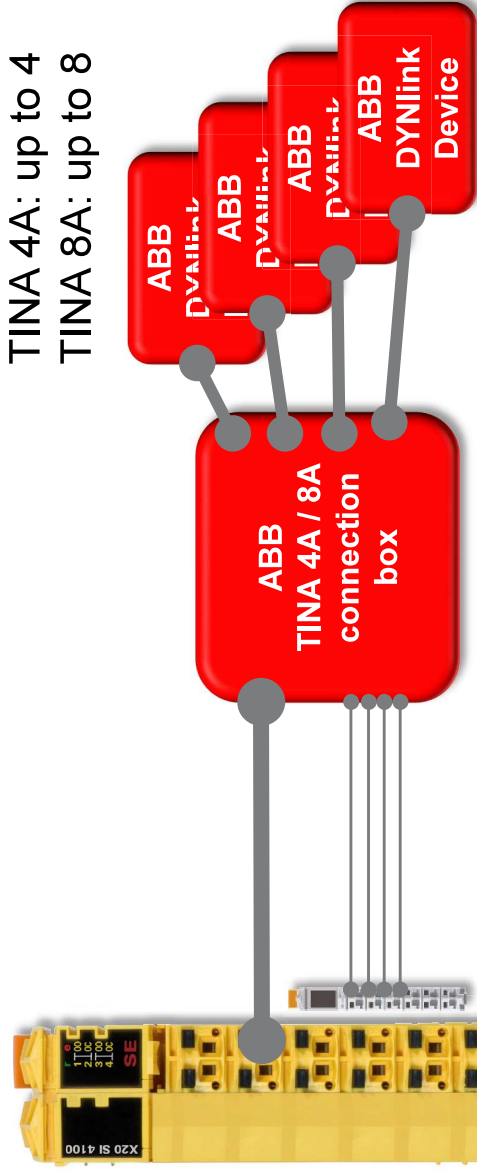


ABB DYNlink supports daisy chaining like OSSD devices, however – only one single SafeIN is occupied – finally the daisy chain results in one single safety function

ABB sensor connectivity – benefits & use cases

Connecting ABB DYNlink Devices via TINA 4A / TINA 8A



TINA 4A: up to 4

TINA 8A: up to 8



TINA 4A / 8A is an out of the box solution for up to 8 DYNlink sensors with cables and connectors, additionally it provides one individual information output per DYNlink devices for diagnostic

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The ABB Jokab Safety portfolio

Overview

- Non-contact safety sensors
- Lock devices
- Emergency stop devices
- Safety control devices
- Pressure sensitive devices
- Optical safety devices
- Accessories



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Non-contact safety sensors:

EDEN → Highest safety level for harsh environments

- Non-contact safety sensor used as interlocking device for doors, safe position monitoring and many more
- Consists of Adam and Eva, Adam senses the presence of Eva without mechanical contact and without any wear
- Unique or general coding, easy to reach PL e
- Easy to use
 - Compact size
 - 360° mounting possibility, large mounting tolerances
 - Fast connection with M12 connectors, minimize cabling
 - Integrated reset function,
 - Withstands harsh environments: IP67/IP69K, -40 to +70°C



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Non-contact safety sensors

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SENSE → Simple non-contact switch for harsh environments

- Non-contact safety sensor used as interlocking device for e.g. doors, hatches and safe position monitoring
- Consists of two complementary parts that can sense each others presence without mechanical contact and without any wear
- Stainless steel housing, used in environments that demands stainless steel material
- Easy to use
 - Compact size
 - Large tolerance to avoid misalignment,
 - Withstands harsh environments, IP69K, -25 to +105°C
 - Fixed cable with different cable lengths



Mechanical safety sensors

MKey → Simple and robust key switches

- Intended for detecting the position of moving guards. They are designed to fit the leading edge of sliding, hinged or lift off machine guards.
- Several versions to meet different needs
 - Plastic, plastic with stainless steel or totally stainless steel
 - Spring-lock or electro-magnetic lock
 - With or without escape release
- Easy to use
 - Rotary heads which provides ease of mounting
 - Offers different actuator entry positions
 - Stainless steel models for extra durability
 - IP69K



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Lock devices



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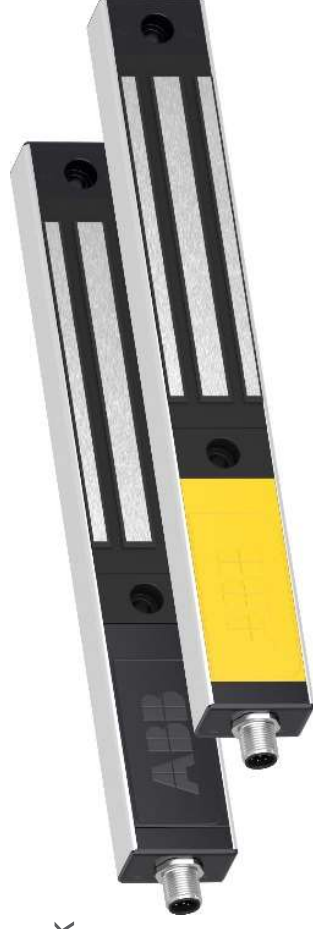
MAGNE → Robust magnetic process lock

● Electromagnetic lock intended for electrical locking of doors and hatches

- Locking function is always a non-safe function
- MAGNE 3 is a lock device only and requests separated safety interlocking device
- MAGNE 4 integrates an EDEN safety sensor

● Easy to use

- Larger mounting tolerances than mechanical lock
- Less wear than mechanical lock
- Holding force up to 1500 N
- Up to PL e/SIL3 with only one device
- M12 connectors speed up installation
- Possible to connect in series with EDEN.
- All the advantages of the integrated EDEN safety sensor with MAGNE 4.



Lock devices



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GKey → Mechanical safety lock for demanding environments

- Robust safety lock with a die cast housing for hinged and sliding doors
- Power is needed to unlock it
 - GKey is a safety lock
 - Interlocking function reaches PL e/SIL 3 with high level coding.
- Easy to use
 - Fitted with an rear escape release button
 - Manual unlocking (auxiliary release)
 - Four positions to integrate 22 mm pilot devices →
 - Reduces the number of external boxes and cabling for emergency stops, push buttons and selectors →
 - Simplifies installation and reduces demanded space
 - The simple construction with a sliding handle directly linked to the key and bolt minimizes the number of moving parts and the risk of mechanical problems



Emergency stop devices



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SMILE → Compact emergency stops and push-button boxes

- **Small size**
- **Easy to install**
 - M12 connection or cable
 - Centralized mounting holes
→ easy to mount it on aluminum extrusions
 - Compact housing
 - LED indication
→ easy troubleshooting
 - Serial connection
→ up to PL e



Emergency stop devices



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EStrong → Emergency stop for harsh environments

- Emergency stop designed to provide a robust unit in exposed and severe environments
 - stainless steel enclosure that withstands high pressure and high temperature wash-down
 - ideally suited for industries that have special demands, such as food processing or chemical industry.
 - High sealing / IP69K
- LED status indication available



Emergency stop devices



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LineStrong → Pull wire emergency stop switches

● Pull wire emergency stop switches designed to be mounted on machines and sections of conveyors which cannot be protected by guards

- In contrast to traditional mushroom head type emergency stops, LineStrong can initiate the emergency command from any point along the installed wire length
- Provides robust emergency stop protection for exposed conveyors and machines.

● Easy to use

- Up to 200m wire with one switch
- Reliable mechanical connection, robust construction
- Stainless steel models
- Switching in 2 directions
- Models with integrated e-stop button



Emergency stop devices



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INCA → Emergency stop for enclosure installation

- Illuminated emergency stop for panel mounting
- Designed for installation in 22.5 mm holes
- Red or black button
- Easy to use
 - removable terminal block
→ easy connection
 - compact dimensions
→ INCA takes very little space in the cabinet
 - LED indication
→ easy troubleshooting



Safety control devices



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SafeBall → Innovative and ergonomic machine control

- consists of a spherical ball containing two embedded pushbutton switches
 - One switch on each side of the ball
 - Both buttons must be activated
- **Easy to use**
 - Simple and ergonomic to use
 - Several grip possibilities
 - Low but distinct activation force
 - Flexible mounting
 - Either for one-hand or two-hand applications
 - Several cable lengths
 - Up to PL e/Cat 4
 - Appropriate for the design of two hand device type IIIC



Safety control devices

JSHD4 → Ergonomic and adaptable three-position device

- **Three-position devices (or hold-to-run devices)**
 - can be used for troubleshooting, programming and test running in situations where no other protection is available or feasible
- **Three-position**
 - Released → Stop position
 - Middle position → Running position
 - Harder pressed → Stop position
- **Easy to use**
 - Ergonomic, adaptable, anti-tampering option for more safety
 - Modular device
 - Up to 2 extra buttons, model with emergency stop button
 - M12 and other types of connection
 - Up to PL e/Cat 4



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Safety control devices



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JSTD25 → Ergonomic and adaptable two-hand station

- The JSTD25 is an innovative alternative to traditional two-hand devices
 - Two-hand device are used when it is necessary to ensure that the operator is outside and must be prevented from reaching into the hazardous area
- Easy to use
 - Prepared two-hand unit
 - Utilizing the good ergonomics of the SafeBall.
 - Shorter safety distance thanks to the SafeBall
 - Easy installation with M12-contact
 - Possibility of emergency stop button



Pressure sensitive device



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ASB → Customized safety bumper

- Bumper consist of a soft foam core that provides a long braking and stopping distance (overtravel).
 - Perfect solution for machines with a longer stopping distance and/or time.
- Easy to use
 - Different sections for different breaking distances
 - Delivered with mounting profile
 - Customized length between 0,2 and 3 m
 - 2 cables, 5 m each
 - 4 different heights to support different stop distances
 - Surface in black/yellow artificial leather
 - Use SENTRY USR10 to interface to B&R SafeIO.



Pressure sensitive device

ASK → Safety mat with rubber edges

- Used to detect the presence of a person
- Shipped with a molded ramp rail
 - If two or more mats are to be joined together, the ramp rails are simply cut off
 - Available in different sizes, custom made, faster delivery with standard sizes
 - Black polyurethane
- Easy to use
 - Surface of slip free rubber
 - Very durable
 - No need for aluminum rails around
 - 2 cables, 5 m each
 - SENTRY USR10 or TINA 6A (DYNlink) are the intended interfaces to B&R SafeIO.



Pressure sensitive device



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TT safety edges

- **Pressure sensitive contact edge used on leading edges of doors and moving machine parts to prevent crushing injuries**
 - Available in two sizes (30 and 45 mm high) and custom lengths
 - Made in TPE rubber that has a good resistance to ozone, weather and especially against chemicals.
- **Easy to use**
 - Supplied with an aluminum profile for simplified mounting.
 - Customized length, preassembled, no gluing required
 - Serial connection of several edges with PL e possible
 - SENTRY USR10 or TINA 6A (DYNlink) are the intended interfaces to B&R SafeIO.



Optical safety devices

ORION: Optical safety devices

- **Reduces complexity, cost and downtime**
 - Orion1 Base light curtain: Finger and hand detection
Up to 6m (finger), 19 m (hand)
 - Orion1 Extended light curtain: Finger and hand detection
Advanced functions
Up to 7 m (finger), 20 m (hand)
 - Orion2 Base light grid: Body detection
Up to 50 m – slim
 - Orion2 Extended light grid: Body detection
Muting function
Up to 50 m – slim
 - Orion3 Base light grid: Body detection
Up to 8 m – robust, mirror unit
 - Orion3 Extended light grid: Body detection
Muting function
Up to 8 m – robust, mirror unit



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Accessories

- Fencing systems
- Cables and connectors





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