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MARCH 2019

# ABB Jokab Safety

Easy Reference Overview – US



# Easy Reference Overview

## How to use the Easy Reference



## Using the Easy Reference

- The Easy Reference is meant to be an easy to use presentation for ABB Jokab Safety products that you can take with you and use easily when discussing machine safety applications
- By going to the link below you can update the Easy Reference with the latest version.
- Save the Easy Reference to you device for easy access
- It is designed to fit on the screen of your phone, tablet, or computer and is not available in print form
- Many of the subjects on the pages are linked to web site information, such as manuals, videos ,brochures, and data sheets
- You can open these links and email them easily
- The Easy Reference can be used for presentations, design discussions, reference, and training
- If you have trouble getting the links to work try downloading Adobe Reader at <http://get.adobe.com/reader/>

Click here for the latest version of the Easy Reference

Easy Reference

Link to Adobe Reader

Home Page

# Easy Reference Overview

## Navigating the Easy Reference

### How to navigate the Easy Reference

- Opening page is where your Easy Reference starts Click the ABB Logo to go to the Home page
- Links to product and information can be found on the Home page, These take you to the beginning of the Product pages
- At the end of the Product pages is the Part Number page, Clicking on a underlined part number will open the Product Data Sheet

Opening Page



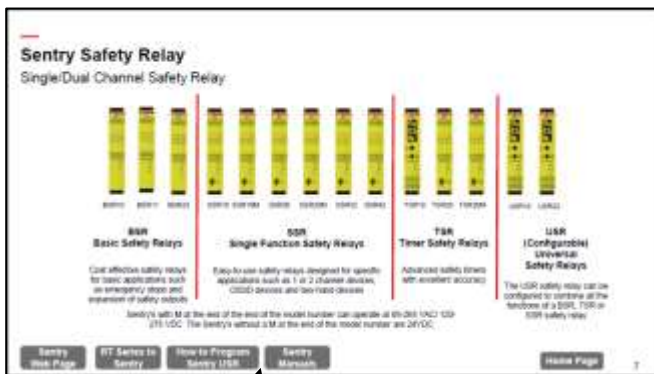
Click here or scroll to Home Page

Home Page



Click here or scroll to Product Page

Product Pages



Click here for additional information  
Scroll to part number page

Returns to Home Page

Part Number Page



Click on underlined part numbers to get data sheet

Data Sheet Window



Opens on a separate window

Home Page



# Easy Reference

Home Page



For additional information go to our web site  
<http://new.abb.com/low-voltage/products/safety-products>

## Technical Support

Email [EPPC.Support@us.abb.com](mailto:EPPC.Support@us.abb.com)

1-888-385-1221 Option 1

ABB Jokab  
Video

ABB Jokab  
Web Site

## Controls

- [Sentry Safety Relay](#)
- [Vital/Tina Safety System](#)
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## DYNLink Components

- [Eden Dynamic Safety Sensor](#)
- [Smile and Inca Tina DYNLink E-Stops and Resets](#)
- [Magne Door Locking Solutions](#)

## Dual Channel Components

- [Eden OSSD Safety Sensor](#)
- [Orion Safety Light Curtain](#)
- [Mkey Mechanical Safety Switch](#)
- [Gkey Safety/Process Lock](#)
- [Sense Non-Contact Magnetic Safety Switch](#)
- [LineStrong – Rope Pull Switch](#)
- [Smile and Inca Dual Channel E-Stops and Resets](#)
- [E-Strong Heavy Duty Estop](#)
- [Safety Mats\\*](#)
- [SafeBall Two Hand Control](#)
- [JSHD4 Three Position Enabling Device\\*](#)
- [Magne OSSD](#)

## Solutions

- [Quick Guard Fencing Solutions](#)
- [Machine Safety Services](#)

## Dual Channel & DYNLink Cables

- [Cables](#)

## Complementary ABB Products

- [Overview](#)
- [AFS Contactor](#)
- [Electronic Compact Starters](#)

## Literature and Video Links

- [Jokab Contact list](#)
- [Video Links](#)
- [Pluto Training](#)
- [Catalogs and Brochures](#)
- [Vertical Market Products & Solutions](#)
- [European Catalogs](#)
  - Articles
  - Connection Diagrams and Certificates
  - Additional Information

Note: Asi components can be found in the Main Catalog that can be found on the global web site.

Note: Some components have US part numbers that differ from the European offering. An \* in the title of the page indicates US only part numbers

# Controls

## Sentry, Vital, and Pluto

### Sentry Safety Relay

- Dual Channel
- Continuous Operation
- Optimized Logistics
- Easy to Install

### Vital Safety Controller

- DYNLink Safety Controller
- Reduces the wiring points
- Advanced diagnostics
- Easily scalable

### Pluto Programmable Safety Controller

- Works with Dual Channel and/or DYNLink
- Cost Effective
- Pluto Manager Software included
- Stand Alone, Networkable, Analog, and As-i versions available
- Works with StatusBus devices

### DYNLink Tina Dual Channel Adapters

- Tina makes dual channel devices dynamic
- Available in different configurations



Sentry Safety Relay



Vital Safety Controller



Pluto Programmable Safety Controller



DYNLink Tina Dual Channel Adapters

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# Sentry Safety Relay

## Single/Dual Channel Safety Relay

### Continuous Operation

- 3-color LEDs allow for more status messages and simplify troubleshooting. Models with display offer preset configurations and extensive fault information
- Advanced timer functions with an accuracy better than 1% minimize unnecessary downtime
- Multi-reset function enables reset of up to 10 Sentry safety relays using just one reset button

### Optimized Logistics

- Single Safety Relay for all common safety applications reduces stock and saves warehouse space
- Multi-voltage models offer more flexibility and less stock
- All models are only 22.5 mm wide, even models with 4 NO outputs

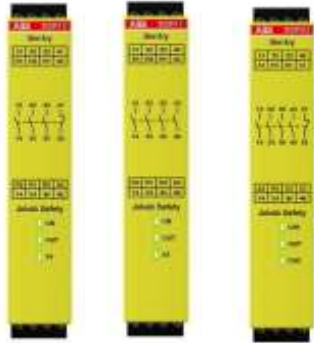
### Easy to Install

- Detachable terminal blocks speeds up connection and replacement
- Manual or automatic reset easily selectable by switch
- Powerful outputs simplify installation by saving the use of an intermediary contactor



# Sentry Safety Relay

## Single/Dual Channel Safety Relay



BSR10 BSR11 BSR23

### **BSR** Basic Safety Relays

Cost effective safety relays for basic applications such as emergency stops and expansion of safety outputs



SSR10 SSR10M SSR20 SSR20M SSR32 SSR42

### **SSR** Single Function Safety Relays

Easy-to-use safety relays designed for specific applications such as 1 or 2 channel devices, OSSD devices and two-hand devices



TSR10 TSR20 TSR20M

### **TSR** Timer Safety Relays

Advanced safety timers with excellent accuracy



USR10 USR22

### **USR** (Configurable) Universal Safety Relays

The USR safety relay can be configured to combine all the functions of a BSR, TSR or SSR safety relay

Sentry's with M at the end of the end of the model number can operate at 85-265 VAC/ 120-275 VDC The Sentry's without a M at the end of the model number are 24VDC

[Sentry Web Page](#)

[RT Series to Sentry](#)

[How to Program Sentry USR](#)

[Sentry Manuals](#)

[Home Page](#)

# Sentry Safety Relay

## Dual Channel Safety Relay



Type	Part Number	Voltage	Timer	Safety Outputs	Manual Reset	Two Hand Device	Contact Mat Bumper	2 channel OSSD	2 channels with anti valent contacts	2 channel equivalent contacts	1 channel contact
BSR10	<a href="#">2TLA010040R0000</a>	24 VDC	No	3NO+1NC	No				a)	X	X
TSR20	<a href="#">2TLA010061R0000</a>	24 VDC	Off Delay 5 & 1.5 s	3NO+1NC	No			X		X	X
TSR20M	<a href="#">2TLA010061R0100</a>	c) AC/DC	Off Delay 5 & 1.5 s	3NO+1NC	No						X
TSR10	<a href="#">2TLA010060R0000</a>	24 VDC	0-999s b)	3NO+1NC	No			X		X	X
BSR11	<a href="#">2TLA010040R0200</a>	24 VDC	No	4NO	No				a)	X	X
BSR23	<a href="#">2TLA010041R0600</a>	24 VDC	No	4NO+1NC	No					X	X
SSR32	<a href="#">2TLA010052R0400</a>	24 VDC	Off Delay 5 s	2NO+2NO Delayed	Yes			X		X	X
SSR42	<a href="#">2TLA010053R0400</a>	24 VDC	Off Delay 1.5 s	2NO+2NO Delayed	Yes			X		X	X
USR22 d)	<a href="#">2TLA010070R0400</a>	24 VDC	0-999s b)	2NO+2NO Delayed	Yes					X	X
SSR10	<a href="#">2TLA010050R0000</a>	24 VDC	No	3NO+1NC	Yes			X		X	X
SSR20	<a href="#">2TLA010051R0000</a>	24 VDC	No	3NO+1NC	Yes	X				X	X
SSR10M	<a href="#">2TLA010050R0100</a>	c) AC/DC	No	3NO+1NC	Yes					X	X
SSR20M	<a href="#">2TLA010051R0100</a>	c) AC/DC	No	3NO+1NC	Yes	X				X	X
USR10	<a href="#">2TLA010070R0000</a>	24 VDC	0-999s b)	3NO+1NC	Yes	X	X	X	X	X	X
USR22 d)	<a href="#">2TLA010070R0400</a>	24 VDC	No	4NO	Yes	X	X	X	X	X	X

a): No monitoring of two-channel fault, ie max Category 3 without fault exclusion

b): Off-delay, On-delay, Time bypass or Time reset Configurable model with display

c): 85-265 VAC/ 120-275 VDC

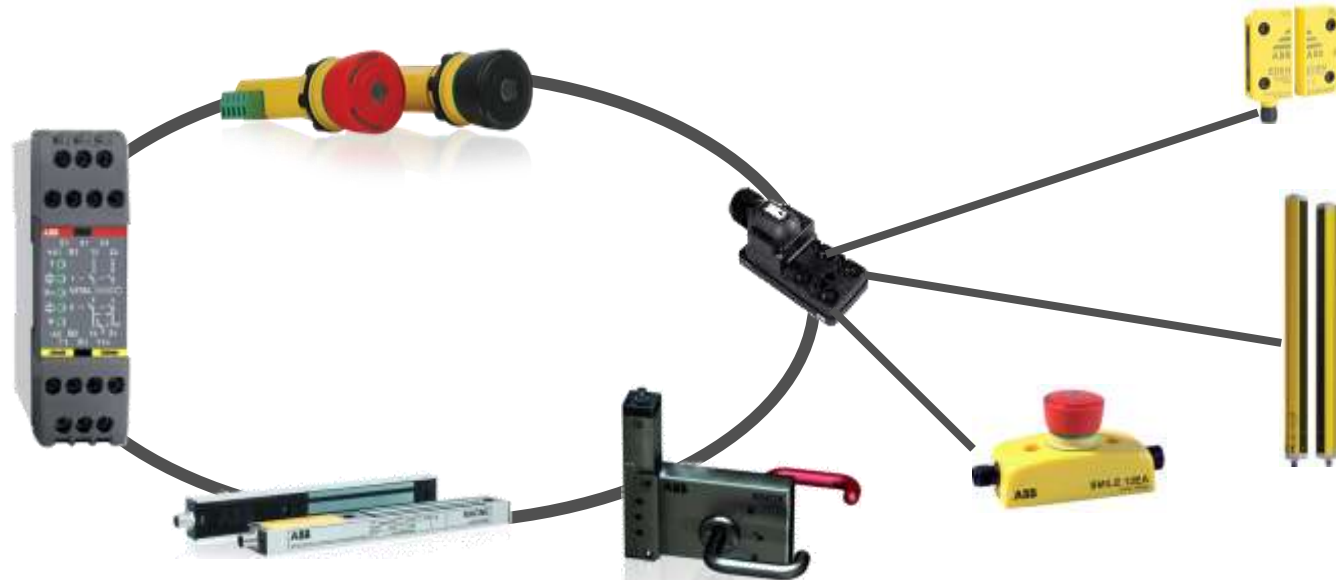
d): USR22 is shown twice because it can be configured in multiple ways



# Vital Safety Controller System

## Vital Safety Controller, Cat 4/ PLe

- Works on DYNLink, the Dynamic Pulse Safety System
- Connect up to 30 Dynamic Pulse devices to one Vital Controller
- Cannot be bypassed at the controller
- Advanced Diagnostics – Flashing Lights guide you to the problem
- Tina adapters convert dual channel devices to Dynamic Pulse



Works with Tina and DYNLink enabled devices  
See Tina section

Part Number	Description	Vital Controller
<a href="#">2TLA020052R1000</a>	Vital 1	Vital DYNLink controller, 24 VDC

Vital  
Web Page

Vital  
Manual

Home Page

# Pluto Programmable Safety Controller

SIL 3/PLe Safety Rated

## Main features

- S Models – Stand Alone Without Safety Bus Connectivity
- A, B, & D Models – Safety Bus Capable, Up to 32 Pluto's on Network
- D Models –with Analog Safety (0-10VDC)(4-20mA)(Networkable)
- AS-i Models are available, See Pluto brochure for accessories
- 12/20/22/42/45/46 - I/O Count
- Advanced Hot Swappable Technology gives Pluto the ability to be replaced and running in minutes, reducing downtime
- Can control muting function using Orion 1 Base
- Gateways for many Protocols
- Ability to follow encoders
- Pluto Manager Software – No Charge, Download on our website
- Telephone Support at No Charge
- Works with both DYNLink Dynamic Pulse and Dual Channel Architectures
- StatusBus Functionality
- TUV approved safety function blocks
- Pluto Manager needs to be registered, send your contact info to technical support to receive a registration code
- See the “Your First Pluto Project” video series in the back of this guide



[Pluto Web Page](#)

[Pluto Programming Manual](#)

[Pluto Hardware Manual](#)

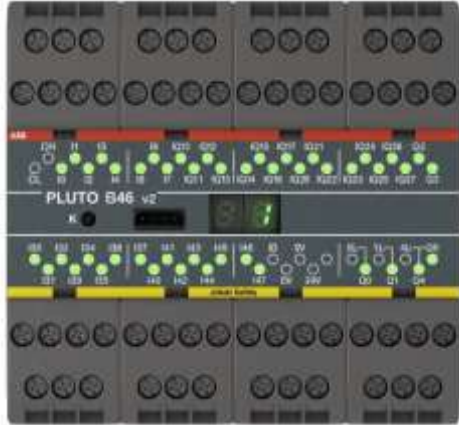
[Pluto Manager Software](#)

[Pluto Manager Registration](#)

[Home Page](#)

# Pluto Programmable Safety Controller

SIL 3/PLe Safety Rated



**B46**



**B20**

Model	S20	S46	A20	B22	D20	D45	B20	B46	AS-i	B-42 AS-i
Number of I/O	20	46	20	22	20	45	20	46	12	42
FailSafe Inputs	8	24	8	14	8	24	8	24	4	20
FailSafe Input or Non-Safe Outputs	8	16	8	8	8	15	8	16	4	16
Analog Input 0-10V/4-20mA					4	8				
Counter Inputs						4				
Analog Inputs (0-27V)	1	3	1	1	1	3	1	3	4	3
FailSafe Relay Outputs	2	4	2	2	2	4	2	4	2	4
FailSafe Transistor Outputs	2	2	2	2	2	2	2	2	2	2
Pluto Bus			x	x	x	x	x	x	x	x
Pluto AS-I Bus									x	x
Current Monitoring			2							
Width mm (all h=84, d=118)	45	90	45	45	45	90	45	90	45	90
Supply Voltage, VDC	24	24	24	24	24	24	24	24	24	24

[Pluto Web Page](#)

[Pluto Programming Manual](#)

[Pluto Hardware Manual](#)

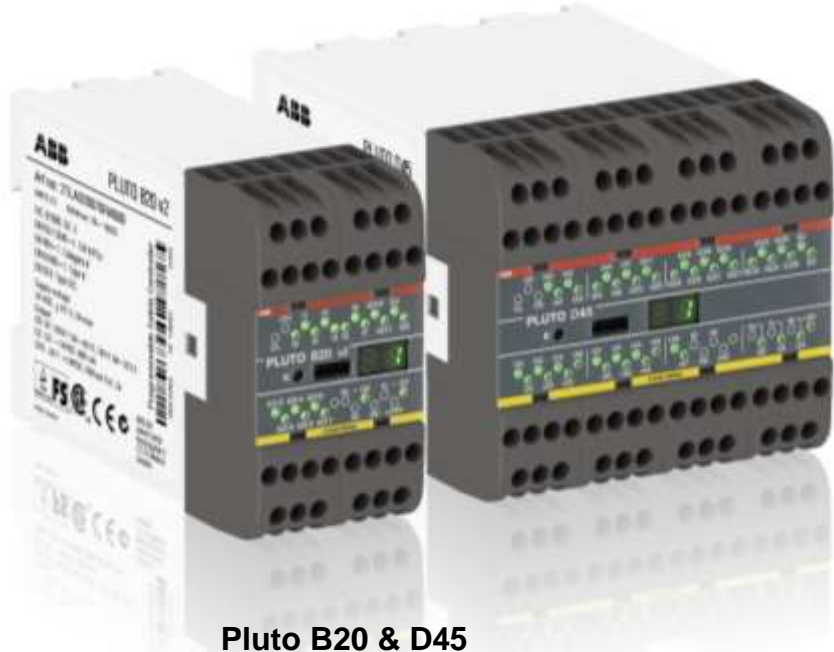
[Pluto Manager Software](#)

[Pluto Manager Registration](#)

[Home Page](#)

# Pluto Programmable Safety Controller

SIL 3/PLe Safety Rated



**Pluto B20 & D45**

Download the latest version of Pluto Manager on our website Pluto Manager and Telephone Support is provided at no charge Pluto Manager needs to be registered, send your contact info to technical support to receive a registration code

### Technical Support

Email [EPPC.Support@us.abb.com](mailto:EPPC.Support@us.abb.com)

1-888-385-1221 Option 1

	Part Number	Description
Stand Alone	<a href="#">2TLA020070R4700</a>	S20, Safety PLC with 8 failsafe inputs plus 8 non-failsafe outputs/failsafe inputs plus 2 individual failsafe relay outputs plus 2 individually failsafe transistor outputs
	<a href="#">2TLA020070R1800</a>	S46, Safety PLC with 24 failsafe inputs plus 16 non-failsafe outputs or failsafe inputs plus 4 individual failsafe relay outputs plus 2 individually failsafe transistor outputs
Network Versions	<a href="#">2TLA020070R4600</a>	B20, Safety PLC with 8 failsafe inputs plus 8 non-failsafe outputs/failsafe inputs plus 2 individual failsafe relay outputs plus 2 individually failsafe transistor outputs For use with Pluto safe bus and/or a Pluto Safety databus
	<a href="#">2TLA020070R4800</a>	B22, Safety PLC with 14 failsafe inputs plus 8 non-failsafe outputs/failsafe inputs For use with Pluto safe bus and/or a Pluto Safety databus
	<a href="#">2TLA020070R1700</a>	B46, Safety PLC with 24 failsafe inputs plus 16 non-failsafe outputs/failsafe inputs plus 4 individual failsafe relay outputs plus 2 individually failsafe transistor outputs
Analog Versions	<a href="#">2TLA020070R6400</a>	D20, Safety PLC with 8 failsafe inputs plus 8 non-failsafe outputs/failsafe inputs plus 2 individual failsafe relay outputs plus 2 individually failsafe transistor outputs For use with Pluto safe bus and/or a Pluto Safety databus 4 0-10V/4-20mA analog inputs
	<a href="#">2TLA020070R6600</a>	D45, Safety PLC with 24 failsafe inputs plus 15 non-failsafe outputs/failsafe inputs plus 4 individual failsafe relay outputs plus 2 individually failsafe transistor outputs For use with Pluto safe bus and/or a Pluto Safety databus 8 0-10V/4-20mA analog inputs, 4 high speed counter inputs
AS-i	<a href="#">2TLA020070R1100</a>	AS-i V2 Safety PLC with 4 failsafe inputs and 4 non-failsafe outputs or failsafe inputs and 2 individual failsafe relay outputs and 2 individual failsafe transistor outputs
	<a href="#">2TLA020070R1400</a>	B42 AS-i, Safety PLC with 20 failsafe inputs and 16 non-failsafe outputs or failsafe inputs and 4 individual failsafe relay outputs and 2 individual failsafe transistor outputs

Pluto  
Web Page

Pluto Programming  
Manual

Pluto Hardware  
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Pluto Manager  
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# Pluto Programmable Safety Controller

SIL 3/PLe Safety Rated



Gateway Family



IDFIX-PROG 10k  
External Memory



USB Programming Cable  
Used with Pluto Manager

	Part Number	Description
Gateways	<a href="#">2TLA020071R8000</a>	GATE-P2, Gateway for 2-way communication between the Pluto bus and Profibus
	<a href="#">2TLA020071R8100</a>	GATE-C2, Gateway for 2-way communication between the Pluto bus and CANopen
	<a href="#">2TLA020071R8200</a>	GATE-D2, Gateway for 2-way communication between the Pluto bus and DeviceNet
	<a href="#">2TLA020071R9000</a>	GATE-EIP, Gateway for 2-way communication between the Pluto bus and Ethernet/IP
	<a href="#">2TLA020071R9100</a>	GATE-EC, Gateway for 2-way communication between the Pluto bus and EtherCat
	<a href="#">2TLA020071R9200</a>	GATE-S3, Gateway for 2-way communication between the Pluto bus and Sercos III
	<a href="#">2TLA020071R9300</a>	GATE-PN, Gateway for 2-way communication between the Pluto bus and ProfiNet
	<a href="#">2TLA020071R9400</a>	GATE-MT, Gateway for 2-way communication between the Pluto bus and Modbus TCP
Accessories	<a href="#">2TLA020070R8500</a>	Pluto O2, Output module with Pluto safety bus Safety output module Totally 6 I/O: 2 Failsafe inputs for monitoring + 2 non-failsafe outputs/failsafe inputs + 2 individually failsafe relay outputs (with 3 contacts each)
	<a href="#">2TLA020070R2000</a>	IDFIX-R, Identifier, read only For assigning Pluto an address on the Pluto bus
	<a href="#">2TLA020070R2100</a>	IDFIX-RW, Identifier, read/write For assigning Pluto an address on the Pluto bus
	<a href="#">2TLA020070R2400</a>	IDFIX-PROG 2k5, External memory, 2.5 kbyte For projects with only one Pluto, store the PLC program, required for Pluto Bus
	<a href="#">2TLA020070R2600</a>	IDFIX-PROG 10k, External memory, 10 kbyte For projects with only one Pluto, store the PLC program, required for Pluto Bus
	<a href="#">2TLA020070R2300</a>	IDFIX-DATA Identifier, read/write and AS-i safety codes
	<a href="#">2TLA020070R2200</a>	R-120, Terminating resistor for Pluto bus
	<a href="#">2TLA020070R6805</a>	CAN-Bus cable, 50M, yellow, 1 x 2 x 0.75 mm, 100/500M see cable section
	<a href="#">2TLA020070R5700</a>	Programming Cable HMI, Cable for connecting HMI-panel to Pluto programming port
	<a href="#">2TLA020070R5800</a>	Programming Cable USB, For connecting PC, USB port to Pluto for programming with Pluto Manager

Pluto  
Web Page

Pluto Programming  
Manual

Pluto Hardware  
Manual

Pluto Manager  
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Registration

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# Smile 41 for Pluto

## Smile 41



Part Number	Description	Smile 41
<a href="#">2TLA030057R0000</a>	Smile 41 WWWP	Push button box according to Smile design with 4 buttons. The box is adapted for connection to Pluto IQ using light button function. Connection via a M12 8-pin male connector. 4 push-buttons and kit of filters
<a href="#">2TLA030057R0100</a>	Smile 41 EWWP	Push button box according to Smile design with 4 buttons, one of which is an emergency stop. The box is adapted for connection to Pluto IQ using light button function. Connection via a M12 8-pin male connector. 1 emergency stop + 3 push-buttons and kit of filters



**Smile 41 with E-Stop should be used with a Pluto\***

**Smile 41 without E-Stop is not a safety device and should be used with a Pluto\***

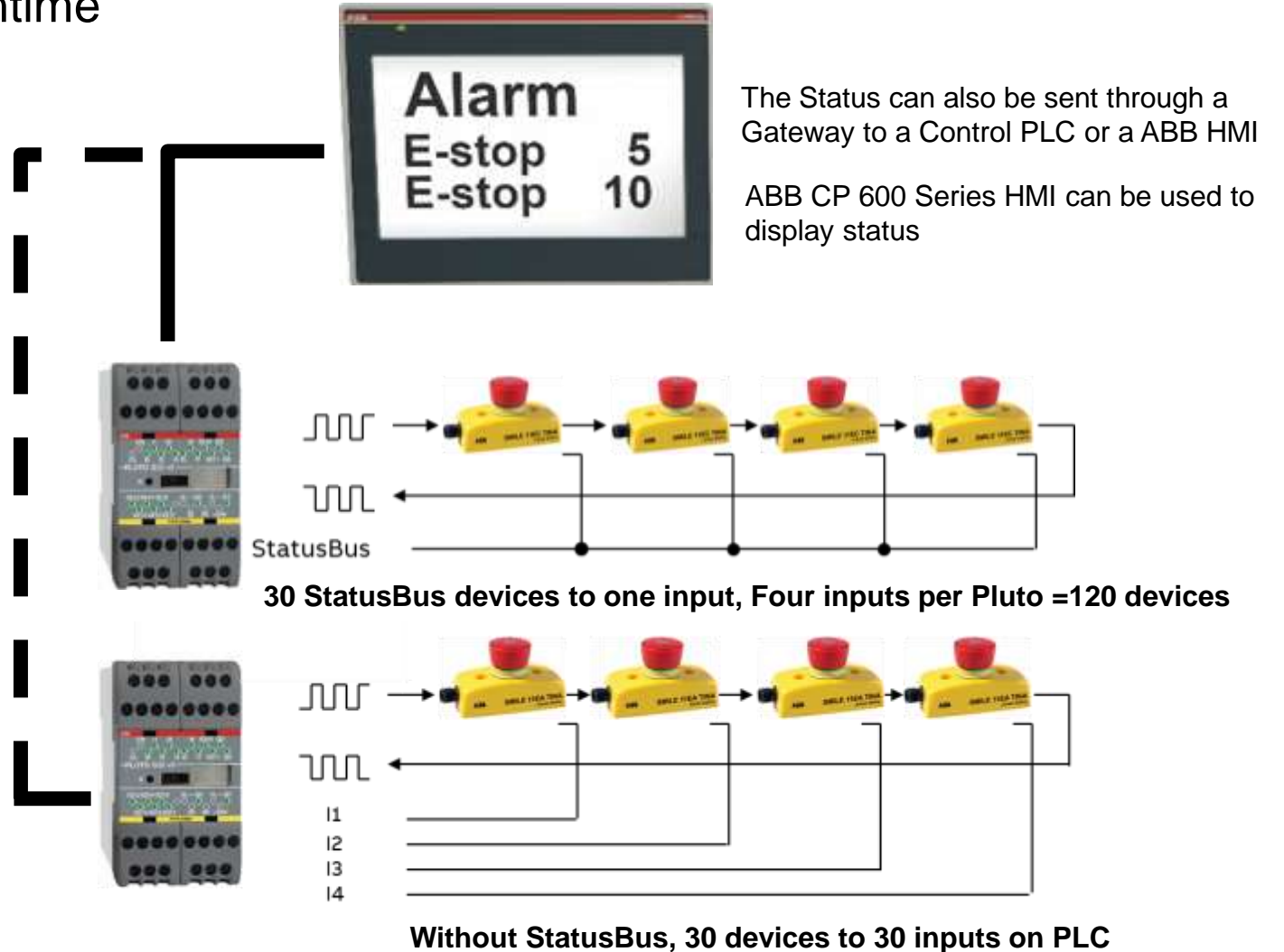
\*Pluto has the ability to accept the button input and control the light on the same input

# Pluto Programmable Safety Controller with StatusBus

## Simplified Status Monitoring Reduces Downtime

### Main features

- Status of up to 30 devices connected to one input on the Pluto Safety PLC
- Up to four inputs on the Pluto can be configured for StatusBus = 120 StatusBus Devices
- Status of Safety System is easily sent to HMI to be displayed, Reducing Downtime
- M12 connectors for ease of installation
- Supported by Smile, Inca, & Eden and other StatusBus devices
- All Pluto models support the StatusBus functionality as long as they have OS 3.6.1 or higher
- Pluto Manager v 2.26 or higher is necessary



# Pluto Programmable Safety Controller with StatusBus

Simplified Status Monitoring Reduces Downtime



Smile StatusBus



INCA StatusBus



FIXA Programming Tool  
Optional Not Required



Eden StatusBus



\*\*Tina 4A Safety Port Block



M12-3S Y-Connector



\*\*Tina 8A Safety Port Block

Part Number	Description	StatusBus Devices
		<b>Smile/Inca Tina StatusBus Estops (Red Button)</b>
<a href="#">2TLA030050R0900</a>	Smile 11EC Tina	Emergency stop in Smile enclosure, 1 m 5-pole cable out from bottom
<a href="#">2TLA030054R1400</a>	Inca 1EC Tina	Emergency stop in Smile enclosure, 1 × M12 5-pin male connector
		<b>Eden Safety Sensor with StatusBus</b>
<a href="#">2TLA020051R5200</a>	Adam StatusBus	M12-5, Serial connection, for StatusBus (Use with Pluto Only)
<a href="#">2TLA020046R0800</a>	Eva General Code	All Generals have the same code
<a href="#">2TLA020046R0900</a>	Eva Unique Code	Unique has 1 of 10,000 codes, EN/ISO 14119 Compliant
<a href="#">2TLA040033R3600</a>	JSMD4H	Eden mounting plate (2 req, 1 per Adam/Eva)
		<b>StatusBus Accessories</b>
<a href="#">2TLA020072R2000</a>	FIXA	Handheld terminal AS-i/StatusBus – Used for addressing StatusBus Devices (Addressing can also be done with Pluto Manager)
<a href="#">2TLA020055R0600</a>	M12-3S	M12 Y-connector for serial connection of dynamic device with StatusBus functionality
<a href="#">2TLA020054R0000</a>	Tina 1A	Tina 1A M12 Dynamic Port Plug, Used to Fill unused ports on Tina 4A/8A
<a href="#">2TLA020054R0300</a>	Tina 4A	Connection block for up to 4 dynamic devices
<a href="#">2TLA020054R0500</a>	Tina 8A	Connection block for up to 8 dynamic devices

CP 600 Series ABB HMI can be used to display status

\*\*Using the Tina 4A/8A make wiring for StatusBus easy. You are able to connect the StatusBus pins easily inside the Tina 4A/8A

StatusBus  
Web Page

FIXA  
Manual

StatusBus  
Brochure

Home Page



# DYNLink adapters for Dual Channel devices

Tina makes dual channel devices dynamic



**Tina 1A**  
for filling unused  
ports on Tina 4A/8A



**Tina 2A**

**Tina 2B**



**Tina 3Aps**

**Tina 3A**

**Tina Adapters for 4 wire safety device**



**\*\*Tina 4A Safety Port Block**



**Tina 6A for Safety Mats**



**Tina 5A**  
for By-Pass  
applications

Part Number	Tina Adapter	Description
<a href="#">2TLA020054R0000</a>	Tina 1A	Tina 1A M12 Dynamic Port Plug
<a href="#">2TLA020054R0100</a>	Tina 2A	Tina Adapter that screws into M20 (No M12)
<a href="#">2TLA020054R1100</a>	Tina 2B	Tina 2B Can be hidden inside device (No M12)
<a href="#">2TLA020054R0200</a>	Tina 3A	4 wire adapter to Dyn Pulse, M12-5Pin
<a href="#">2TLA020054R1400</a>	Tina 3Aps	Tina 3A with 24VDC power circuit, M12-8Pin
<a href="#">2TLA020054R0300</a>	Tina 4A	Tina 4A Safety Port Block, use Tina 1A to fill unused ports
<a href="#">2TLA020054R1900</a>	Tina 5A	Bypass Unit
<a href="#">2TLA020054R0600</a>	Tina 6A	For Safety Mats, Edges, and Bumpers

\*\*Using the Tina 4A/8A make wiring for StatusBus easy also. You are able to connect the StatusBus pins easily inside the Tina 4A/8A

# DYNLink adapters for Dual Channel devices

Tina makes dual channel devices dynamic



Tina 7A for DIN Rail



\*\*Tina 8A Safety Port Block



Tina 10A



Tina 10B



Tina 10C

Tina Adapters for Light Curtains



Tina 11 for 5 Pin Devices



Tina 12 for 8 Pin Devices

Tina 11/12 work like Tina 4A/8A but for only two devices

Part Number	Tina Adapter	Description
<a href="#">2TLA020054R0700</a>	Tina 7A	DIN Rail Mounted Tina
<a href="#">2TLA020054R0500</a>	Tina 8A	Tina 8A Safety Port Block, use Tina 1A to fill unused ports
<a href="#">2TLA020054R1200</a>	Tina 10A	Light Curtain, adapts OSSD to DYNLink (Needs adapter cable for Orion)(Only goes to receiver)
<a href="#">2TLA020054R1300</a>	Tina 10B	Light Curtain, adapts OSSD to DYNLink (Needs adapter cable for Orion)(Goes to receiver and the third port for reset button)
<a href="#">2TLA020054R1600</a>	Tina 10C	Light Curtain, adapts OSSD to DYNLink (Needs adapter cable for Orion)(One port for the receiver and the other for the transmitter)
<a href="#">2TLA020054R1700</a>	Tina 11A	Two port Block M12-5 Pin devices
<a href="#">2TLA020054R1800</a>	Tina 12A	Goes to two M12-8 Pin devices

\*\*Using the Tina 4A/8A make wiring for StatusBus easy also. You are able to connect the StatusBus pins easily inside the Tina 4A/8A

# DYNLink Components

Eden, Smile, Inca, and Magne

## Eden Dynamic Safety Sensor

- IP69K with connector at the Sensor
- Works on RF, very tolerant to misalignment and vibration
- Advanced Diagnostics and StatusBus

## Smile and Inca Tina DYNLink E-Stops and Resets

- Advanced Diagnostics and Status Bus
- Comes with mounting hardware
- M12 connections optimizes installation time
- Surface mount or In Cabinet

## Magne Door Locking Solutions

- DYNLink models
- Strong magnetic holding force of 1500N (337 lbs)
- Can be connected in series with Eden sensors
- For process locking applications
- StatusBus version available



Eden Dynamic



Smile and Inca Tina DYNLink E-Stops and Resets



Magne Door Locking Solutions

# Eden Dynamic

## DYNLink, Dynamic Pulse Non-Contact RF Safety Sensor



**Eva  
Unique or  
General**

**Adam Dynamic  
Info, Reset, or  
StatusBus**

### Main features

- Non mechanical, non-contact, non-magnetic, Control Reliable Category 4 Safety Sensor
- Up to 30 Eden Sensors can be connected to a single Vital controller
- 15mm +/- 2mm alignment forgiveness
- LED indication and transistor output status from each switch
- IP69K for harsh wash down
- -40C to +70C (-40F to +158F) Operating Temperature Range
- Three versions of the Adam Dynamic – Info, Reset, or StatusBus
- Eva is available with either General or Unique coding for EN/ISO 14119 applications.

IMPORTANT – Eva Unique or General can used with either OSSD and DYNLink Adams. Eva Unique or General cannot be used with the Asi Adams which will only work with an Asi Eva. See the main catalog for Asi components.



# Eden Dynamic

## DYNLink, Dynamic Pulse Non-Contact RF Safety Sensor

### Bill of Material – Single Run Connection – Only one Eden

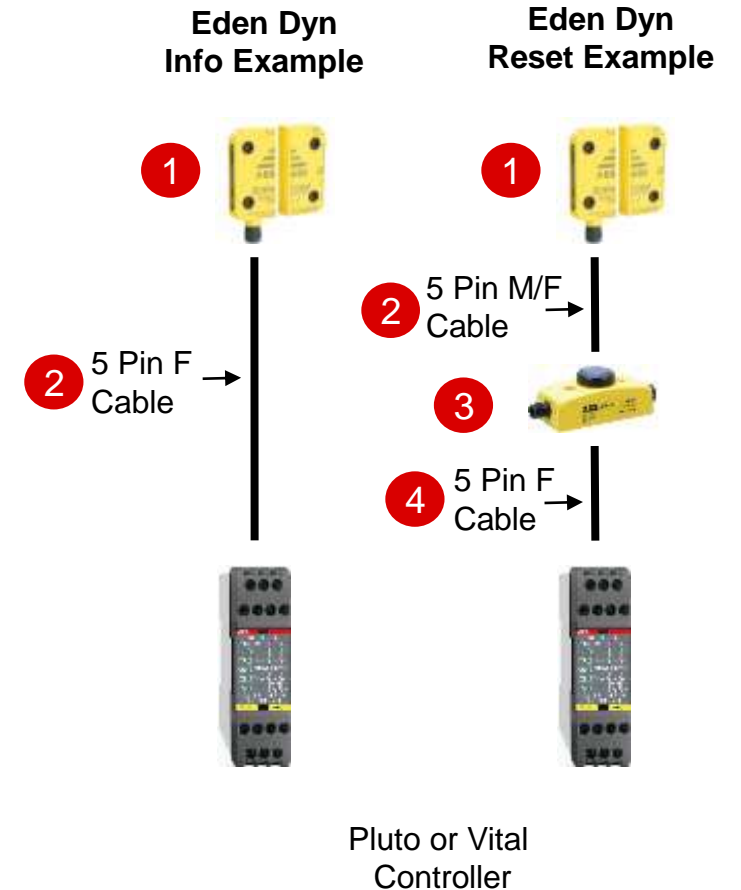
#### Eden Dyn-Info Example

- 1 (1) Adam Dyn-Info & (1) Eva General/Unique
- 2 (1) M12-5 Pin F Cable – Single End

#### Eden Dyn-Reset Example

- 1 (1) Adam Dyn-Reset & (1) Eva General/Unique
- 2 (1) M12-5 Pin M/F Cable – Double
- 3 (1) Reset, Smile 12RF
- 4 (1) M12-5 Pin F Cable – Single End

Quantities are for this example only  
Cable lengths can vary



# Eden Dynamic

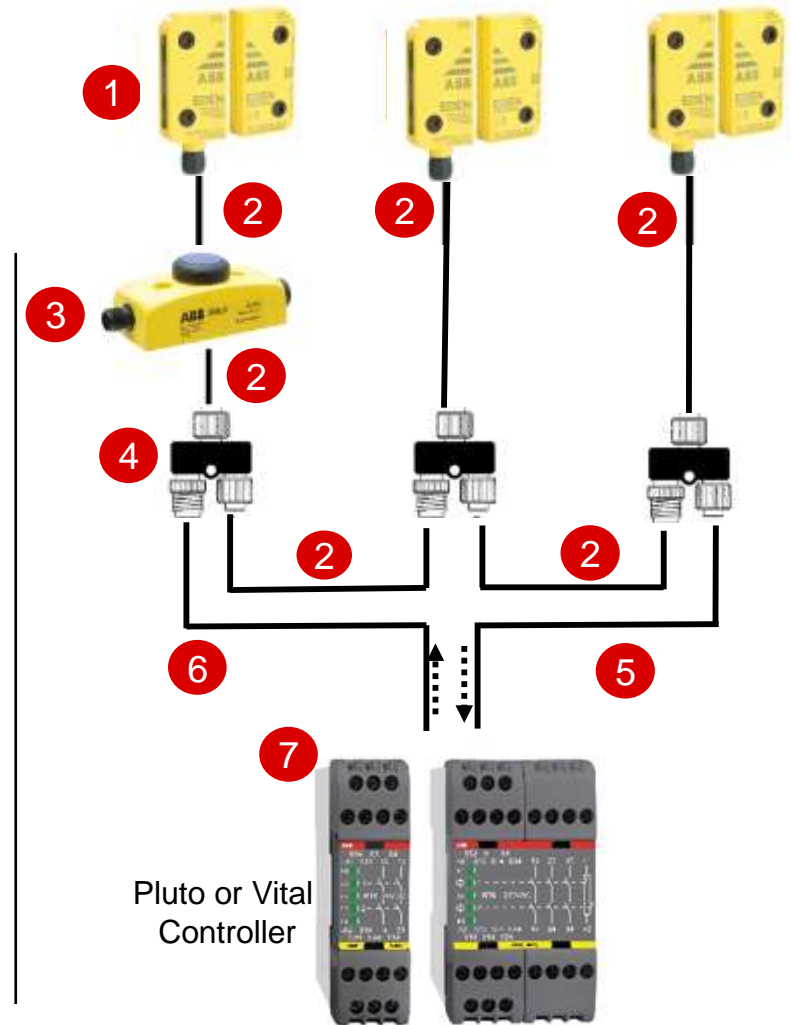
## DYNLink, Dynamic Pulse Non-Contact RF Safety Sensor

### Bill of Material – Series Connection

- 1 (3) Adam-Info/Reset & (3) Eva General/Unique (Up to 30)
- 2 (6) Double Ended Male-Female M12-5 Pin Cable
- 3 (1) Local Reset Button(Optional)( Use Adam-Reset)
- 4 (3) M12-3A Y-Connector 5 Pin Series
- 5 Single Ended Male M12-5 Pin Cable
- 6 Single Ended Female M12-5 Pin Cable
- 7 Vital / Pluto Safety PLC

Quantities are for this example only, Up to 30 Eden's can be connected  
Cable lengths can vary

Note: On a Vital the **5** return cable the #2 Pin (White Wire) must land on the receive (RX) terminal of the Vital/Pluto See Pluto catalog for instructions on wiring a Pluto Safety PLC



# Eden Dynamic

## DYNLink, Dynamic Pulse Non-Contact RF Safety Sensor

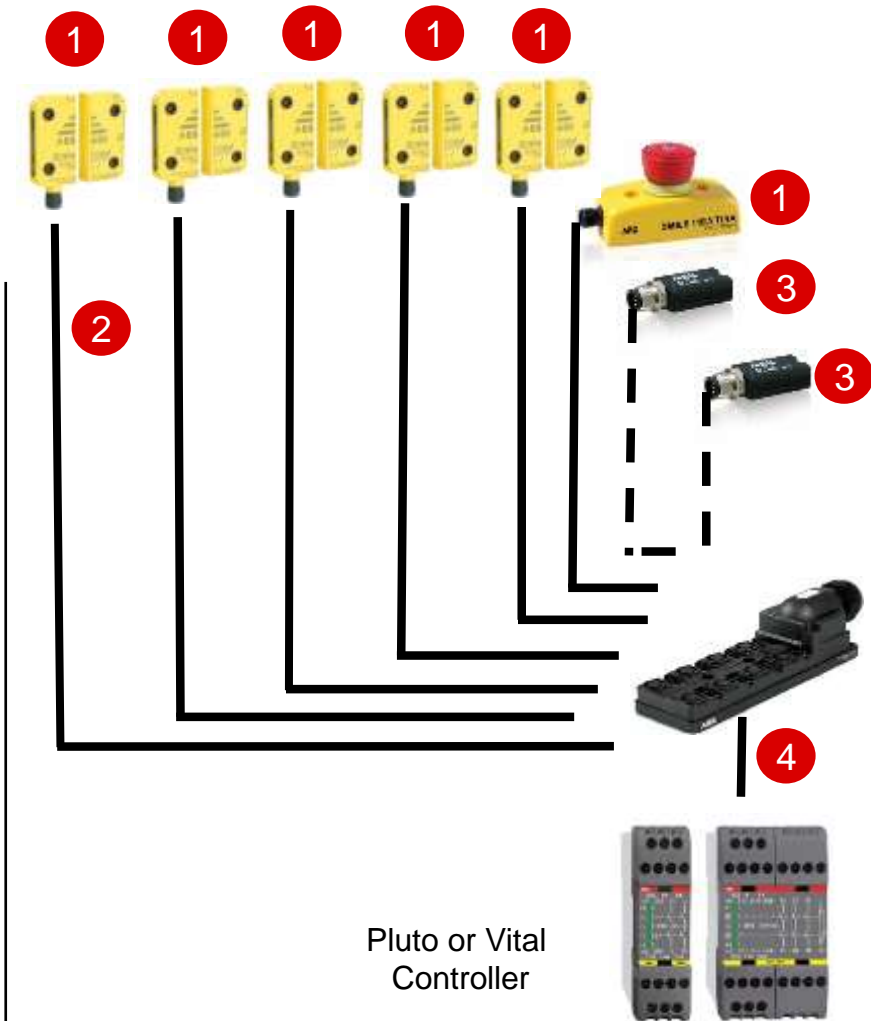
### Bill of Material – Tina 4A/8A Connection (Tina 8A Shown)

- 1 Dynamic Pulse Device (Up to 4 connections for 4A, 8 for 8A)  
Devices on Example (5) Edens, (1) Smile Tina, (2) Tina 1A
- 2 (6) M12-5 Pin M/F Cable ( Tina 1A can be attached directly to Tina 4A/8A)
- 3 (2) Tina 1A Terminator
- 4 (1) Multi-Conductor Cable
  - 5 Conductor if information outputs are not used (4A only)(StatusBus also)
  - 9 Conductor if information outputs are used (4A only)
  - 5 Conductor if information outputs are not used (8A only)
  - 13 Conductor if information outputs are used (8A only)

Note : Unused connections on Tina 4A/8A must be filled with a Tina1A

Quantities are for this example only

Cable lengths can vary



# Eden Dynamic

## DYNLink, Dynamic Pulse Non-Contact RF Safety Sensor



	Part Number	Description
Adam	<a href="#">2TLA020051R5100</a>	Adam Dyn-Info M12-5
	<a href="#">2TLA020051R5300</a>	Adam Dyn-Reset M12-5
	<a href="#">2TLA020051R5200</a>	Adam Dyn-Info M12-5, StatusBus (Use on Pluto Only)
Eva	<a href="#">2TLA020046R0800</a>	Eva General Code, All Generals have the same code
	<a href="#">2TLA020046R0900</a>	Eva Unique Code, Unique has 1 of 10,000 codes, EN/ISO 14119 Compliant
Accessories	<a href="#">2TLA020055R0000</a>	M12-3A, Y-Connector, Series Connection to daisy chain DYNLink Devices
	<a href="#">2TLA020055R0100</a>	M12-3B, Y-Connector, one cable to two devices, both devices must be made to send stop signal back
	<a href="#">2TLA020055R0600</a>	M12-3S, Y-Connector for StatusBus Only, Series, (Use on Pluto Only)
	<a href="#">2TLA040033R3600</a>	JSMD4H Eden mounting plate (2 req, 1 per Adam or Eva)
	<a href="#">2TLA030053R0000</a>	Smile 11RA 5 Pin Reset button for use with Vital
	<a href="#">2TLA030053R0100</a>	Smile 11RB 5 Pin Reset button for use with Pluto
	<a href="#">2TLA020052R1000</a>	Vital, Dynamic Pulse Safety Controller, 24VDC, Capable of 30 Dynamic Pulse devices, Cat 4
	Pluto Safety PLC	Pluto Safety PLC, See Pluto Section
	<a href="#">2TLA020054R0000</a>	Tina 1A Connection Block, Used to fill unused ports on Tina 4A/8ADynamic Pulse devices only
	<a href="#">2TLA020054R0300</a>	Tina 4A Connection Block, 4 Port Connection Block for Dynamic Pulse devices, Also makes it easy to use Status Pin
<a href="#">2TLA020054R0500</a>	Tina 8A Connection Block, 8 Port Connection Block for Dynamic Pulse devices, Also makes it easy to use Status Pin	

# Smile & Inca Tina DYNLink E-Stops

## Emergency Stop, Reset, & Machine Stop Buttons

### Main features

- Smile is quick disconnect for easy wiring to standard safety relay systems and available with integrated Tina for the Vital/Pluto network
- Inca is the 22.5mm panel mount version of the Smile
- Red/Green status LED for diagnostics
- Slim profile for easy mounting to extruded aluminum Quick Guard Fencing
- Black button versions are for “Production Stops” or “Request to Enter”
- Advanced DYNLink Diagnostics



Smile Tina (DYNLink)



INCA Tina (DYNLink)



# Smile & Inca Tina DYNLink E-Stops

Emergency, Reset, & Machine Stop Buttons - DYNLink



Smile Tina Emergency, Reset, & Machine Stop Buttons



Inca Tina Emergency, & Machine Stop Buttons

	Part Number	Description	Smile Tina and INCA Tina
EStops	<a href="#">2TLA030050R0400</a>	Smile 10EA Tina (Red Button)	Emergency stop in Smile enclosure, 1 m 5-pole cable out from bottom
	<a href="#">2TLA030050R0000</a>	Smile 11EA Tina (Red Button)	Emergency stop in Smile enclosure, 1 × M12 5-pin male connector
	<a href="#">2TLA030050R0200</a>	Smile 12 EA Tina (Red Button)	Emergency stop in Smile enclosure, 1 × M12 5-pin male connector and 1 × M12 5-pin female connector
	<a href="#">2TLA030054R0000</a>	Inca 1 Tina (Red Button)	Emergency stop button for panel mounting, 22 5 mm holes, Tina adaption unit included for dynamic circuit, Status LED in button, terminal blocks
	<a href="#">2TLA030054R0400</a>	Yellow Surround for E-Stop	Elevated yellow surround for Inca 22 5 panel mounted (Inca) emergency stop button
	<a href="#">2TLA030054R0900</a>	Yellow Surround for E-Stop	Flat Yellow surround for panel mounted (Inca) emergency stop button, for 22 5 mm hole
Resets	<a href="#">2TLA030053R0000</a>	Smile 11RA (Blue Button)	Reset button in Smile enclosure, Vital Light button connection, 1 button + Blue LED, 1 × M12 5-pin male connector For Vital
	<a href="#">2TLA030053R0100</a>	Smile 11RB (Blue Button)	Reset button in Smile enclosure, Pluto Light button connection, 1 button + Blue LED, 1 × M12 5-pin male connector For Pluto
Mach Stops	<a href="#">2TLA030050R0500</a>	Smile 11 SA Tina (Black Button)	Machine stop (Black button) in Smile enclosure, 1 × M12 5-pin male connector
	<a href="#">2TLA030054R0200</a>	Inca 1S Tina (Black Button)	Machine stop (Black button) for panel mounting, 22 5 mm holes, Tina adaption unit included for dynamic circuit, Status LED in button

# Magne

## Magne 3 & 4 Process Safety Lock



### Main features

- Magne is an electro magnetic device used for securing doors or hatches closed for non-inertia, process sensitive applications. When applied with the Eden Sensors, Category 4 / Ple level of safety can be achieved
- Magne 3X does not have an integrated safety sensor
- Magne 4 has integrated Eden (All Versions)
- Only 350mA current draw compared to 2 amps for a solenoid locking switch
- 1500N holding force compared to 1000N for a solenoid locking switch
- Eva and Anchor plate must be ordered separately
- Anchor plate (32B) can be ordered with an embedded magnet to hold door closed (30N) when power is not applied

[Magne Web Page](#)

[Magne 3-4 Manual](#)

[Magne 1-2 Conversion](#)

[Magne Accy's](#)

[Home Page](#)

# Magne

## Magne 3 & 4 Process Safety Lock



- The Magne 3 does not have an Adam safety sensor built in
- All Magne 4 Series have a built in Adam Safety Sensor
- Magne 4 and 4X requires ordering the Eva (for Magne 4) and Anchor Plate separately
- The metal target (anchor) plate is also ordered separately for all models
- When the Magne 4 is powered up for the first time, the Magne and the Eva will share codes. The Eva General can be replaced with another Eva General since they share the same codes. The Eva Unique satisfies the requirements of EN/ISO 14119

Part Number	Description	Magne 3X, With No Safety Switch, 24VDC
<a href="#">2TLA042022R2700</a>	Magne 3X	Magne 3x, No Safety Sensor, M12-5,
Part Number	Description	Magne 4X/4, Eden Dyn Safety Switch, 24VDC
<a href="#">2TLA042022R3000</a>	Magne 4X DYN-Info	Magne 4X with Eden Dyn, 5 Pin M12 Connector
<a href="#">2TLA042022R3400</a>	Magne 4 DYN-Info	Magne 4 with Eden Dyn-Info, 8 Pin M12 Connector

# Dual Channel Components

Eden OSSD, Orion, Mkey, Sense, LineStrong

## Eden OSSD, Mkey, Magne OSSD, Sense

- Eden OSSD Safety Sensor that can work with a Standard Safety Relay
- Mkey Mechanical Safety Switch in plastic, metal, and SS
- Magne OSSD magnetic door locking solution
- Sense Non Contact Magnetic safety sensors in plastic and SS

## Smile, Estrong, LineStrong

- Smile eStops with M12 connections
- Estrong heavy duty IP69k eStop
- LineStrong rope pull solution for many applications

## Orion Light Curtains

- Orion 1 Base safety light curtain for basic applications
- Orion 1 Extended safety light curtain for advanced applications

## Safeball, JSHD4 Enabling Devices\*

- Safeball is an ergonomic two hand control solution
- JSDH4 Modular Enabling Device for extended control applications

## Safety Mats\*

- Heavy duty safety mat solution
- Available in standard sizes
- Two styles, blunt for use with aluminum trim or with an integrated ramp



Eden OSSD, Mkey, Magne OSSD, Sense



Smile, Estrong, LineStrong



Orion Light Curtains



Safeball, JSHD4 Enabling Devices\*



Safety Mats\*

# Eden OSSD

## Dual Channel Non-Contact RF Safety Sensor

### Main features

- Up to 30 Eden OSSD's can be attached to any standard dual channel Safety Relay or Safety PLC and still maintain Cat 4/PLe safety levels
- High level of misalignment tolerance (15mm +/- 2mm) because of the RF technology
- IP69K wash down rated with the M12 connection at the sensor
- Advanced Diagnostics, if one of the Edens is open, its LED is solid red, the downstream sensors flash Red/Green indicating the problem is before them
- Ideal for retrofit and OEM applications where an existing safety relay or safety PLC needs to be used
- Large operating temperature span, -40C to 70C (-40F to 158F)
- Two versions of the Adam OSSD are available – Info or Reset  
Eva is available with either General or Unique coding for EN/ISO 14119 applications

IMPORTANT – Eva Unique or General can be used with either OSSD and DYNLink Adams. Eva Unique or General cannot be used with the Asi Adams which will only work with an Asi Eva. See the main catalog for Asi components.





# Eden OSSD

## Dual Channel Non-Contact RF Safety Sensor

### Bill of Material – Single Run Connection – Only One Eden

#### Adam OSSD-Info Example

- 1 (1) Adam OSSD-Info (8 Pin) & (1) Eva (General/Unique)
- 2 (1) Female M12-8 Pin Cable – Single End
- 3 (1) Sentry SSR10 Safety Relay

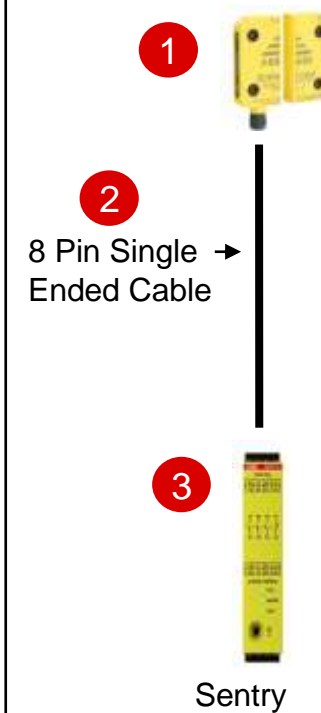
#### Adam OSSD-Reset Example

- 1 (1) Adam OSSD-Reset & (1) Eva General/Unique
- 2 (1) M12-8 Pin Cable – Double End
- 3 (1) Reset, Smile 12RG
- 4 (1) M12-8 Pin Cable – Single End
- 5 (1) Sentry SSR10 Safety Relay

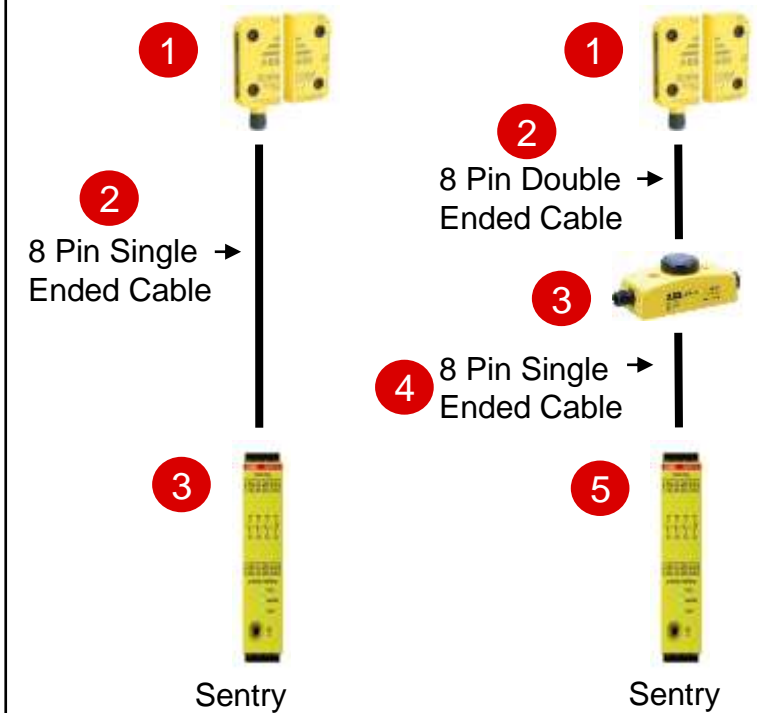
Quantities are for this example only

Cable lengths can vary

#### Adam OSSD- Info Example



#### Adam OSSD - Reset Example



Does not show Terminal Blocks

# Eden OSSD

## Dual Channel Non-Contact RF Safety Sensor

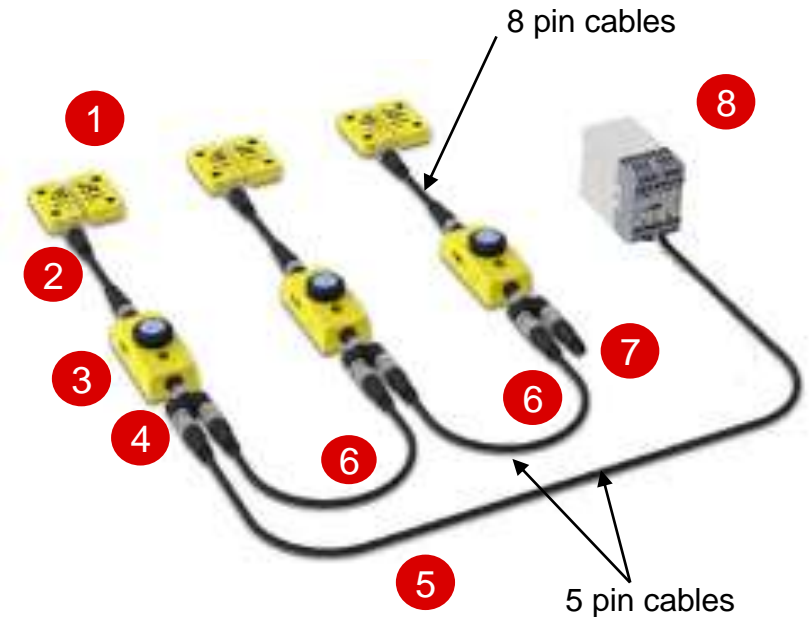
### Bill of Material – Multiple Edens in Series using 5 Pin Cables

- 1 (3) Adam OSSD (8 Pin) – Reset or Info & (3) Eva -General/Unique
- 2 (3) M12-8 Pin M/F Cable
- 3 (3) Reset, Smile 12RG (8 Pin)(Optional)(Can use M/F 8 Pin Cable to M12-3H)
- 4 (3) M12-3H Y-Connector, 8 pin connection from Eden-Reset to 5 pin cables
- 5 (1) Single Ended, Male M12-5 Pin Cable
- 6 (2) M/F M12-5 Pin Cables (one less than the number of Eden sensors)
- 7 (1) JSOP-1 5 pin Terminator (Eliminates the need for a return cable to Sentry/Pluto)
- 8 (1) Dual Channel Safety Relay or Safety PLC (Sentry or Pluto)

If you use a M12-3G Y-Connector the system would use all 2 5 6 8 pin cables and require a 7 JSOP-2 8 pin terminator

Quantities are for this example only, Up to 30 Edens can be connected

Cable lengths can vary



# Eden OSSD

## Dual Channel Non-Contact RF Safety Sensor



	Part Number	Description
Adam	<a href="#">2TLA020051R5700</a>	Adam OSSD-Info M12-8 for single & series applications
	<a href="#">2TLA020051R5900</a>	Adam OSSD-reset M12-8 for single & series applications
Eva	<a href="#">2TLA020046R0800</a>	Eva General Code, All Generals have the same code
	<a href="#">2TLA020046R0900</a>	Eva Unique Code, One of 1,000 codes, complies with EN/ISO 14119
Accessories	<a href="#">2TLA020055R0800</a>	M12-3H Y-Connector 5Pin, (1) 8 Pin to Eden, (2) 5 Pin for series connection
	<a href="#">2TLA020055R0700</a>	M12-3G Y-Connector 8Pin, (1) 8 Pin to Eden, connector (All 8 pin cable solution, optional, Use with JSOP-8 terminator)
	<a href="#">2TLA040033R3600</a>	JSMD4H Eden mounting plate (2 req, 1 per Adam/Eva)
	<a href="#">2TLA020053R7000</a>	JSOP-1 5 Pin Terminator for M12-3H serial connector
	<a href="#">2TLA020053R7100</a>	JSOP-2 8 Pin Terminator for M12-3G serial connector (All 8 pin cable solution, optional, use with M12-3G Y-Connector)
	<a href="#">2TLA030053R2700</a>	Smile 12RG 8 Pin Reset button
	See Pluto or Sentry for part numbers	Eden OSSD is a dual channel device, use with a standard safety relay (Sentry) or Safety PLC (Pluto)

See cable section at end of Easy Reference Guide for 5 and 8 Pin Cables

# Orion Safety Light Curtain

## Orion 1 Base & Extended



### Main features

- Orion Base units are cost effective safety light curtain with automatic/manual reset functions, and built in EDM to eliminate the need for external safety relays
  - EDM – External Device Monitoring
  - Automatic/Manual Reset
- Orion Extended units give you the added functions for the most demanding applications. Features include:
  - EDM – External Device Monitoring
  - Automatic/Manual Reset
  - Muting
    - X, L, & T muting
  - Blanking
    - Fixed and Floating
  - Cascading
    - Up to 3 segments
  - Range select
  - Push Button Programmable
  - No software or DIP switches needed

[Orion Web Page](#)

[Orion 1 Base Manual](#)

[Orion 1 Ext Manual](#)

[Orion Connections](#)

[Orion Video](#)

[Home Page](#)

# Orion Safety Light Curtain

## Orion 1 Base



### Main features

- Orion Base units are the most economical safety light curtain on the market
- Features include Automatic/Manual Reset
- EDM (External Device Monitoring) allows the device to act as its own safety relay
- Orion 1 Base can be used with the Pluto Safety PLC to “Mute” a circuit Pluto allows for more functionality in the safety system
- 6M Range for 14mm resolution
- 19M Range for 30mm resolution
- Transmitter is a 5 pin male connection
- Receiver is a 8 pin male connection

14mm Finger Detection	30mm Hand Detection	Protective Height (mm/Inch)	Orion 1 Base (X is 14 or 30)
<a href="#">2TLA022300R0000</a>	<a href="#">2TLA022302R0000</a>	150/5 9	Orion1-4-X-015-B Transmitter+ Receiver
<a href="#">2TLA022300R0100</a>	<a href="#">2TLA022302R0100</a>	300/11 8	Orion1-4-X-030-B Transmitter+ Receiver
<a href="#">2TLA022300R0200</a>	<a href="#">2TLA022302R0200</a>	450/17 7	Orion1-4-X-045-B Transmitter+ Receiver
<a href="#">2TLA022300R0300</a>	<a href="#">2TLA022302R0300</a>	600/23 6	Orion1-4-X-060-B Transmitter+ Receiver
<a href="#">2TLA022300R0400</a>	<a href="#">2TLA022302R0400</a>	750/29 5	Orion1-4-X-075-B Transmitter+ Receiver
<a href="#">2TLA022300R0500</a>	<a href="#">2TLA022302R0500</a>	900/35 4	Orion1-4-X-090-B Transmitter+ Receiver
<a href="#">2TLA022300R0600</a>	<a href="#">2TLA022302R0600</a>	1050/41 3	Orion1-4-X-105-B Transmitter+ Receiver
<a href="#">2TLA022300R0700</a>	<a href="#">2TLA022302R0700</a>	1200/47 2	Orion1-4-X-120-B Transmitter+ Receiver
<a href="#">2TLA022300R0800</a>	<a href="#">2TLA022302R0800</a>	1350/53 1	Orion1-4-X-135-B Transmitter+ Receiver
<a href="#">2TLA022300R0900</a>	<a href="#">2TLA022302R0900</a>	1500/59 0	Orion1-4-X-150-B Transmitter+ Receiver
<a href="#">2TLA022300R1000</a>	<a href="#">2TLA022302R1000</a>	1650/64 9	Orion1-4-X-165-B Transmitter+ Receiver
<a href="#">2TLA022300R1100</a>	<a href="#">2TLA022302R1100</a>	1800/70 9	Orion1-4-X-180-B Transmitter+ Receiver

[Orion Web Page](#)

[Orion 1 Base Manual](#)

[Orion 1 Ext Manual](#)

[Orion Connections](#)

[Orion Video](#)

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# Orion Safety Light Curtain

## Orion 1 Extended



### Main features

- Orion Extended units give you the added functionality for the most demanding applications
- Automatic/Manual Reset
- Muting applications
- Y cable M12-C02PT62RM connects to receiver and muting sensors
- Standard/Blanking applications
- Use cable M12-C02PT6RB for standard and blanking applications
- Cascading, Use Cascade Cable
- Coding for when close together
- Push Button Programmable
- 7M range for 14mm Resolution
- 20M range for 30mm Resolution

14mm Finger Detection	30mm Hand Detection	Protective Height (mm/Inch)	Orion 1 Extended (X is 14 or 30)
<a href="#">2TLA022301R0100</a>	<a href="#">2TLA022303R0100</a>	300/11 8	Orion1-4-X-030-E Transmitter+ Receiver
<a href="#">2TLA022301R0200</a>	<a href="#">2TLA022303R0200</a>	450/17 7	Orion1-4-X-045-E Transmitter+ Receiver
<a href="#">2TLA022301R0300</a>	<a href="#">2TLA022303R0300</a>	600/23 6	Orion1-4-X-060-E Transmitter+ Receiver
<a href="#">2TLA022301R0400</a>	<a href="#">2TLA022303R0400</a>	750/29 5	Orion1-4-X-075-E Transmitter+ Receiver
<a href="#">2TLA022301R0500</a>	<a href="#">2TLA022303R0500</a>	900/35 4	Orion1-4-X-090-E Transmitter+ Receiver
<a href="#">2TLA022301R0600</a>	<a href="#">2TLA022303R0600</a>	1050/41 3	Orion1-4-X-105-E Transmitter+ Receiver
<a href="#">2TLA022301R0700</a>	<a href="#">2TLA022303R0700</a>	1200/47 2	Orion1-4-X-120-E Transmitter+ Receiver
<a href="#">2TLA022301R0800</a>	<a href="#">2TLA022303R0800</a>	1350/53 1	Orion1-4-X-135-E Transmitter+ Receiver
<a href="#">2TLA022301R0900</a>	<a href="#">2TLA022303R0900</a>	1500/59 0	Orion1-4-X-150-E Transmitter+ Receiver
<a href="#">2TLA022301R1000</a>	<a href="#">2TLA022303R1000</a>	1650/64 9	Orion1-4-X-165-E Transmitter+ Receiver
<a href="#">2TLA022301R1100</a>	<a href="#">2TLA022303R1100</a>	1800/70 9	Orion1-4-X-180-E Transmitter+ Receiver

Orion  
Web Page

Orion 1 Base  
Manual

Orion 1 Ext  
Manual

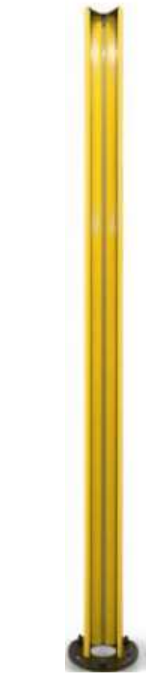
Orion  
Connections

Orion Video

Home Page

# Orion Safety Light Curtain

## Cables and Accessories



Orion Stand



Orion Stand Plate



Orion Laser Pointer



Orion1 Mirror



OMC1 Muting Block



Orion1 Wet

Base	Extended	Description	Part Number	Application
	X	M12-C02PT2T	<a href="#">2TLA022315R0100</a>	Orion 1 E Transmitter Cable Connects to M12-5 Pin Female
	X	M12-C02PT6RB	<a href="#">2TLA022315R0200</a>	Orion 1 E Receiver Std/Blanking Cable Connects to M12-12 Female
	X	M12-C02PT62RM	<a href="#">2TLA022315R0300</a>	Orion 1 E Receiver Muting Y Cable Connects to M12-12 Female and M12-5 Female (to 24VDC Mute Sensors)
	X	OMC1 Muting Block	<a href="#">2TLA022316R2000</a>	OMC1 is a connection box that simplifies the connection of muting sensors to a light guard
	X	PT-C1PT	<a href="#">2TLA022315R1000</a>	Orion 1 E Cascade Cable, 1M
	X	PT-C05PT	<a href="#">2TLA022315R1100</a>	Orion 1 E Cascade Cable, 0.5M
	X	PT-C005PT	<a href="#">2TLA022315R1200</a>	Orion 1 E Cascade Cable, 0.05M
X		JSM-03	<a href="#">2TLA022310R0100</a>	JSM-03 Rotational bracket for Orion 1 Base
X		WET-XXX	See Manual for PN	Orion 1 Base Wet Tubes
X	X	Orion Mirror	See Manual for PN	Orion 1 Mirror+ Orion Stand + JSM Orion 11
X	X	M12-5 Female Cable	See Cable Section For lengths	Base – Transmitter Extended – Connects to Transmitter cable Extended – Connects to Mute Cable
X		M12-8 Female Cable	See Cable Section For lengths	Base - Receiver
	X	M12-12 Female Cable	See Cable Section For lengths	Extended - Connects to Receiver cable (either mute or no mute)
X	X	Orion Laser Pointer	<a href="#">2TLA022310R5000</a>	Used to align Orion Light Curtains Very useful when using mirrors

Orion  
Web Page

Orion 1 Base  
Manual

Orion 1 Ext  
Manual

Orion  
Connections

Orion Video

Home Page

# MKey

## Mechanical Safety Switch

### Main features

- Available in Metal, Stainless Steel, and Plastic housings
- Industry standard foot prints
- Mkey 8 & 9 Are Solenoid Locking
- Ex Proof versions for harsh environments (See Switch Catalog)
- Ideal for OEM & MRO applications
- Can be used with Sentry Safety Relays or Pluto Safety PLC



**MKey 1  
Plastic**



**MKey 2  
Plastic**



**MKey 4  
Plastic**



**MKey 5  
Plastic, Plastic with SS Head, All SS**



**MKey 6**

**Die Cast, Die Cast with SS HEADS, All SS**



**MKey 8 & 8M**

**Die Cast, Die Cast with SS HEADS, All SS**



**MKey 9 & 9M  
Plastic with SS Heads**



**Std Key**



**Flat Key**



**Plastic Flex  
Key**



**SS Flex  
Key**

# MKey

## Mechanical Safety Switch with Standard Key, Order Specialty Key Separately

Part Number	MKey 1, Plastic Body, Mech Safety Switch
2TLA050021R1100	Mkey1, Compact NPT, 2NC/1NO with Angle Key
Part Number	MKey 2, Plastic Body, Mech Safety Switch
2TLA050020R1000	Mkey2, Compact Hinge NPT, 2NC/1NO
Part Number	MKey 4, Plastic Body, Mech Safety Switch
2TLA050001R1100	Mkey4, NPT, 2NC/1NO
2TLA050001R1101	Mkey4+, NPT, 2NC/1NO 40N
2TLA050001R1110	Mkey4, SS Head, NPT, 2NC/1NO
2TLA050001R1111	Mkey4+, SS Head, NPT, 2NC/1NO 40N
Part Number	MKey 5, Mech Safety Switch
2TLA050003R1100	Mkey5, Plastic Body, NPT, 2NC/1NO
2TLA050003R1101	Mkey5+, Plastic Body NPT, 2NC/1NO 40N
2TLA050003R1110	Mkey5, SS Head, NPT, 2NC/1NO
2TLA050003R1111	Mkey5+, SS Head, NPT, 2NC/1NO 40N
2TLA050003R1120	Mkey5Z, SS Body, NPT 2NC/1NO
2TLA050003R1121	Mkey5+Z, SS Body, NPT 2NC/1NO 40N
Part Number	MKey 6, Metal Body, Mech Safety Switch
2TLA050005R1130	Mkey6, NPT, 2NC/1NO
2TLA050005R1131	Mkey6+, NPT, 2NC/1NO 40N
2TLA050005R1140	Mkey6Z, SS Head, NPT 2NC/1NO
2TLA050005R1141	Mkey6+Z, SS Head, NPT 2NC/1NO 40N
2TLA050005R1120	Mkey6Z, SS Body, NPT 2NC/1NO
2TLA050005R1121	Mkey6+Z, SS Body, NPT 2NC/1NO 40N
Part Number	MKey 8, Metal Body, Solenoid Safety Switch
2TLA050011R1132	Mkey8, NPT, 24V Sol, Power to Unlock,
2TLA050011R1142	Mkey8, SS Head, NPT, 24V Sol, Power to Unlock,
2TLA050011R1122	Mkey8Z, SS Body, NPT, 24V Sol, Power to Unlock,

Part Number	MKey 8ER & 8ERZ, Metal Body, Solenoid Safety Switch, 24 VDC
2TLA050015R1132	Mkey8ER, NPT, 24V Sol, Power to Unlock,
2TLA050015R1122	Mkey8ERZ, SS Body, NPT, 24V Sol, Power to Unlock,
Part Number	MKey 8M, Metal Body, Solenoid Safety Switch, 24 VDC
2TLA050013R1132	Mkey8M, Sol NPT, 24V, Power to Lock,
2TLA050013R1142	Mkey8M, SS Head, Sol NPT, 24V, Power to Lock,
Part Number	MKey 9 & 9M, Plastic Body, Solenoid Safety Switch, 24 VDC
2TLA050007R1112	Mkey9, SS Head, Sol NPT, 24V, Power to Unlock,
2TLA050009R1112	Mkey9M, SS Head, Sol NPT, 24V, Power to Lock,
Part Number	Keys
<a href="#">2TLA050040R0201</a>	MKey 4,5 Metal Standard Key (Mkey 4/5 with Plastic Head)
<a href="#">2TLA050040R0202</a>	MKey 4,5,6,8,9 Metal Standard Key (Mkey 4/5 with SS Head)
<a href="#">2TLA050040R0220</a>	MKey 4,5,6,8,9 Metal Flat Key
<a href="#">2TLA050040R0221</a>	MKey 4,5,6 With Plastic Housing, Flex Key
<a href="#">2TLA050040R0203</a>	MKey 4,5,6,8,9 Metal Housing Flex Key
<a href="#">2TLA050040R0204</a>	MKey 6,8,9 SS Housing Flex Key
<a href="#">2TLA050040R0400</a>	MKey 8Z, 8ERZ, Manual Release Key for Solenoid Switches
Part Number	Accessories
2TLA050040R0001	1/2 NPT 316 SS Cable Gland

Commonly ordered safety switches with only standard keys are listed on this page  
 Order specialty key separately, or go to our Safety Switch catalog for other options  
 + Indicates Holding force of 40N (9lbs)

All Shown are 1/2" NPT connections (See catalog for others)

"Z" in the part description indicates it is stainless steel

# GKey

## Modular Safety/Process Lock

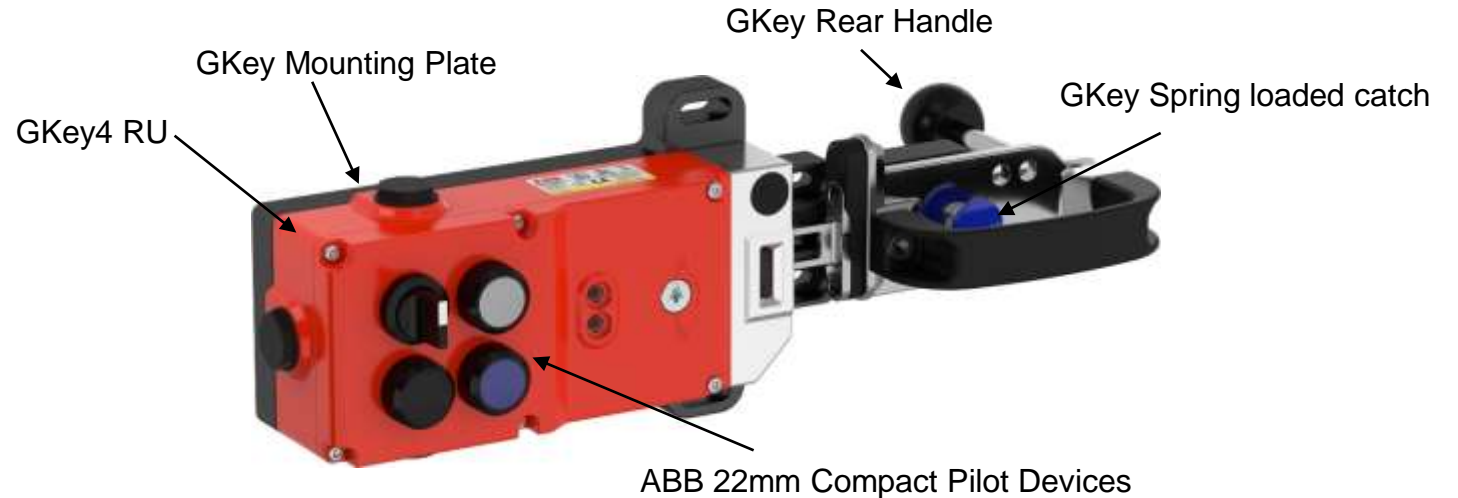
### Main features

#### Modular Design

- Gkey uses the ABB Compact line of 22mm pilot devices allowing you to customize it to your requirements.
- Modular design allows you to order just what you need, Start with the Gkey4 RU and add what you need
- Operates on 24 VDC

#### Locking function

- A locked door cannot be opened by a person.
- Usually used when the door may only be opened at a specific time, e.g. at the end of the welding operation (process protection) or when the dangerous movement has stopped (person protection = safety function).
- GKey can be used when safe locking/unlocking is necessary. Up to PLe/SIL 3



GKey safety lock incorporate an RFID interlock switch and is designed to fit to the leading edge of machine guard doors to provide robust guard locking and double tamper resistant interlock mechanism.

It is designed to provide position interlock detection for moving guards and will keep the guard locked until a voltage is applied to the switch solenoid. GKey safety lock will hold guards closed up to 3000 N.

It can be used in conjunction with delay timers to provide the solenoid energize signal only after a pre-determined time has run down. GKey housing can incorporate positions for mounting of standard ABB Compact 22 mm push buttons, switches or lamps to facilitate machine request functions and diagnostics all in one housing. These pilot devices are ordered separately.

[Gkey Web Page](#)

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# GKey

## Modular Safety/Process Lock



2TLA050304R0002  
GKey4 RU Safety lock  
4 positions, die-cast, escape release,  
manual unlock, 24 VDC



2TLA050310R0032  
FHS GKey4 Front handle,  
sliding incl. mounting plate for GKey4



2TLA050040R0510  
RHS GKey MKey Rear handle, sliding



2TLA050040R0511  
SCS GKey MKey Spring loaded catch



1SFA619501R1051  
Emergency stop button,  
2NC Not Illuminated 24 V AC/DC  
CE3P-10R-02 Qty 1/pkg



1SFA619200R1026  
2 Position Selector Switch,  
Not Illuminated 24 V AC/DC  
CE3P-10R-02 Qty 10/pkg



See above for part number  
Push button Illuminated  
24 VDC Available in red, green,  
blue, white Qty 10/pkg



1SFA616920R8120  
Legend plate holder ,  
Without Insert  
KA1-8120 Qty 100/pkg



1SFA611920R8130  
Blanking plug, Black  
MA1-8130 Qty 10/pkg

Part Number	Gkey, Die Cast Body, RFID Key
<a href="#">2TLA050304R0002</a>	GKey4 RU, No Pilot Devices, 24 VDC
Part Number	GKey, Mounting Plate with Front Handle
<a href="#">2TLA050310R0032</a>	FHS GKey4
Part Number	GKey, Accessories
<a href="#">2TLA050040R0510</a>	RHS Gkey MKey
<a href="#">2TLA050040R0511</a>	SCS Gkey MKey
Part Number	GKey Pilot Devices Commonly Used
<a href="#">1SFA619501R1051</a>	Emergency stop button, Dual Channel. 24VDC 1/pkg
<a href="#">1SFA619200R1026</a>	2 Position Selector switch, 24 VDC 10/pkg
<a href="#">1SFA619100R1112</a>	Push button Illuminated 24 VDC Green 10/pkg
<a href="#">1SFA619100R1113</a>	Push button Illuminated 24 VDC Yellow 10/pkg
<a href="#">1SFA619100R1114</a>	Push button Illuminated 24 VDC Blue 10/pkg
<a href="#">1SFA619100R1118</a>	Push button Illuminated 24 VDC White/Clear 10/pkg
<a href="#">1SFA619101R1016</a>	Push button Not Illuminated 24 VDC Black 10/pkg
<a href="#">1SFA611920R8130</a>	Blanking plug Black 10/pkg
<a href="#">1SFA616920R8120</a>	Legend plate holder (without insert) 100/pkg

To view additional Compact Pilot Devices click on the Pilot Device Catalog button below

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# Sense

## Non-Contact Magnetic Safety Switch

### Main features

- Available in Stainless Steel (Z) and Plastic housings
- Industry standard foot prints
- Over 1200 available
- See catalog for Explosion Proof



Sense 1 & 2



Sense 5 & 6



Sense 7 & 8



Sense 3 & 4



Sense 9 & 10



Sense 11 & 12

See Catalog for dimensions

# Sense

## Non-Contact Magnetic Safety Switch

### Sense Coded Magnetic Safety Switch, 5m cable

Part Number	Sense Coded Magnetic Safety Switch
2TLA050050R5108	Sense 1, 5m cable Rt Cable Exit, 2NC/1NO LED, 24VDC
2TLA050050R5107	Sense 1, 5m cable Lt Cable Exit, 2NC/1NO LED, 24VDC
2TLA050052R5100	Sense 3, 5m cable, 2NC/1NO LED, 24VDC
2TLA050052R5120	Sense 3Z, SS 5m cable, 2NC/1NO LED, 24VDC
2TLA050052R5150	Sense 3Z, HYG SS 5m cable, 2NC/1NO LED, 24VDC
2TLA050054R5100	Sense 5, 5m cable, 2NC/1NO LED, 24VDC
2TLA050054R5120	Sense 5Z, SS 5m cable, 2NC/1NO LED, 24VDC
2TLA050056R5100	Sense 7, 5m cable, 2NC/1NO LED, 24VDC
<a href="#">2TLA050056R5120</a>	Sense 7Z, SS 5m cable, 2NC/1NO LED, 24VDC
2TLA050058R5100	Sense 9, 10m cable, 2NC/1NO LED, 24VDC
2TLA050058R5120	Sense 9Z, SS 5m cable, 2NC/1NO LED, 24VDC
2TLA050058R5150	Sense 9Z HYG, SS 5m cable, 2NC/1NO LED, 24VDC
2TLA050060R5100	Sense 11, 5m cable, 2NC/1NO LED, 24VDC
2TLA050060R5120	Sense 11Z, SS 5m cable, 2NC/1NO LED, 24VDC

Coding offers a degree of tamper resistance over uncoded non contact magnetic safety switches

### Sense Uncoded Magnetic Safety Switch, 5m cable

Part Number	Sense Uncoded Magnetic Safety Switch
2TLA050070R5108	Sense 2, 5m cable Rt 2NC/1NO, 24 VDC
2TLA050070R5107	Sense 2, 5m cable Lt 2NC/1NO, 24 VDC
2TLA050072R5100	Sense 4, 5m cable, 2NC/1NO, 24 VDC
2TLA050072R5120	Sense 4Z, SS 5m cable, 2NC/1NO, 24 VDC
2TLA050072R5150	Sense 4Z, Hyg, SS 5m cable, 2NC/1NO, 24 VDC
2TLA050074R5100	Sense 6, 5m cable, 2NC/1NO, 24 VDC
2TLA050074R5120	Sense 6Z, SS 5m cable, 2NC/1NO, 24 VDC
2TLA050076R5100	Sense 8, 5m cable, 2NC/1NO, 24 VDC
2TLA050076R5120	Sense 8Z, SS 5m cable, 2NC/1NO, 24 VDC
2TLA050078R5100	Sense 10, 5m cable, 2NC/1NO, 24 VDC
2TLA050078R5120	Sense 10Z, SS 5m cable, 2NC/1NO, 24 VDC
2TLA050078R5150	Sense 10Z HYG, SS 5m cable, 2NC/1NO, 24 VDC
2TLA050080R5100	Sense 12, 5m cable, 2NC/1NO, 24 VDC
2TLA050080R5120	Sense 12Z, SS 5m cable, 2NC/1NO, 24 VDC

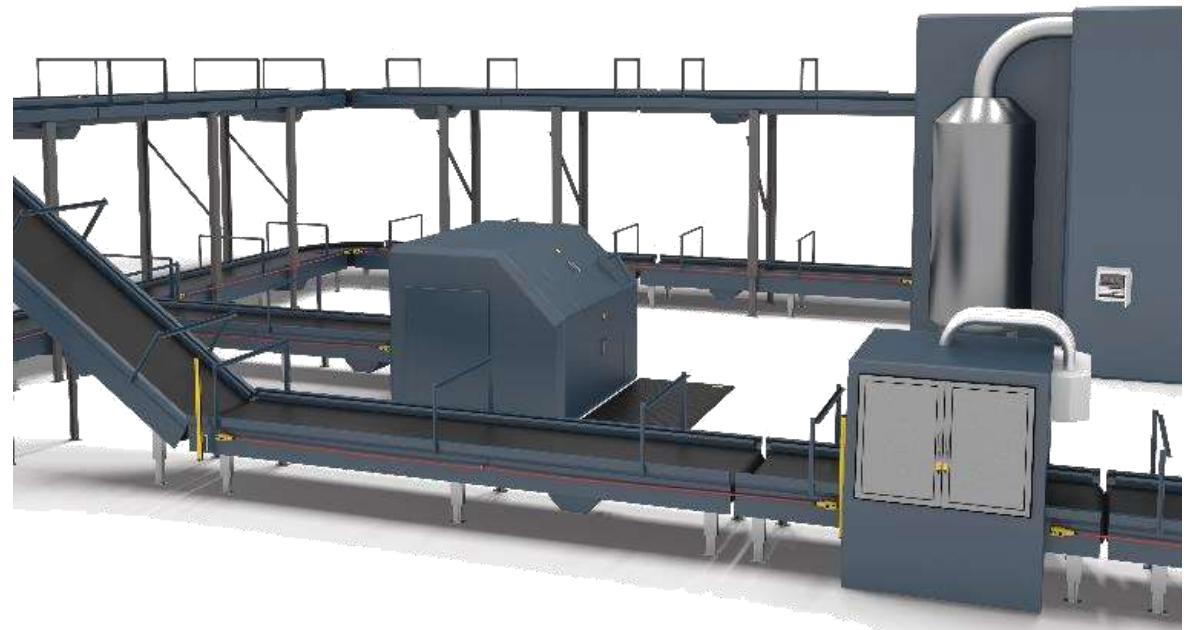
All Sense Magnetic Safety Switches above have 5m cables  
 See main switch catalog for 2 & 10m options  
 "Z" in the part description indicates it is stainless steel

# Line Strong

## Rope Pull Switch

### Main features

- Long range metal robust Emergency Rope Pull Switches
- Available in dual head for “daisy chain” configuration along long conveyors
- Stainless Steel versions for the food industry
- Ex Proof versions for harsh environments
- Available with optional Emergency Stop button or Red/Green Status LED



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# Line Strong

## Rope Pull Switch



**Line Strong 1**  
Protection up to 50 meters



**Line Strong 2**  
W / Optional Estop  
Protection up to 80 meters



**Line Strong 2Z**  
W / Optional Estop  
Protection up to 100 meters

Order Estop separately  
All Models →



**Line Strong 3DZ**  
W / Optional Estop  
Protection up to 250 meters



**Line Strong 3R**  
W / Optional Estop  
Protection up to 125 meters



**Line Strong 3LZX**  
W / Optional Estop  
Protection up to 125 meters

Part Number	Line Strong 1
2TLA050200R1030	LINE STRONG1, 2NC/2NO, NPT
2TLA050200R1232	LINE STRONG1, 2NC/2NO, NPT LED
Part Number	Line Strong 2
2TLA050202R1020	LINE STRONG2Z, 2NC/2NO, NPT, SS
2TLA050202R1030	LINE STRONG2, 2NC/2NO, NPT
2TLA050202R1222	LINE STRONG2Z, 2NC/2NO, NPT LED, SS
2TLA050202R1232	LINE STRONG2, 2NC/2NO, NPT LED
Part Number	Line Strong 3
2TLA050204R1020	LINE STRONG3DZ, 4NC/4NO, NPT, SS
2TLA050204R1030	LINE STRONG3D, 4NC/4NO, NPT
2TLA050204R1222	LINE STRONG3DZ, 4NC/4NO, NPT LED, SS
2TLA050204R1232	LINE STRONG3D, 4NC/4NO, NPT LED
2TLA050206R1020	LINE STRONG3LZ, 4NC/2NO, NPT, SS
2TLA050206R1030	LINE STRONG3L, 4NC/2NO, NPT
2TLA050206R1222	LINE STRONG3LZ, 4NC/2NO, NPT LED, SS
2TLA050206R1232	LINE STRONG3L, 4NC/2NO, NPT LED
2TLA050208R1020	LINE STRONG3RZ, 4NC/2NO, NPT, SS
2TLA050208R1030	LINE STRONG3R, 4NC/2NO, NPT
2TLA050208R1222	LINE STRONG3RZ, 4NC/2NO, NPT LED, SS
2TLA050208R1232	LINE STRONG3R, 4NC/2NO, NPT LED

See catalog for additional information

LED versions on this page are 24VDC. 110VAC and 230VAC are also available

Above models do not include E-stop, order separately

For ATEX Explosion Proof See Catalog

"Z" in the part description indicates it is stainless steel, No "Z" is Die Cast

Some Model are available in "Low Temperature" versions

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# Line Strong

## Rope Pull Switch Accessories



Part Number	Stainless Steel Rope Kits (No Spring)
2TLA050210R0020	5M ROPE KIT SS W/ALLEN KEY
2TLA050210R0120	10M ROPE KIT SS W/ALLEN KEY
2TLA050210R0220	15M ROPE KIT SS W/ALLEN KEY
2TLA050210R0320	20M ROPE KIT SS W/ALLEN KEY
2TLA050210R0420	30M ROPE KIT SS W/ALLEN KEY
<a href="#">2TLA050210R0520</a>	50M ROPE KIT SS W/ALLEN KEY
2TLA050210R0620	80M ROPE KIT SS W/ALLEN KEY
<a href="#">2TLA050210R0720</a>	100M ROPE KIT SS W/ALLEN KEY
2TLA050210R0820	126M ROPE KIT SS W/ALLEN KEY
	Galvanized Steel Rope Kits (No Spring)
2TLA050210R0030	5M ROPE KIT, GALV W/ALLEN KEY
<a href="#">2TLA050210R0130</a>	10M ROPE KIT, GALV W/ALLEN KEY
2TLA050210R0230	15M ROPE KIT, GALV W/ALLEN KEY
<a href="#">2TLA050210R0330</a>	20M ROPE KIT, GALV W/ALLEN KEY
2TLA050210R0430	30M ROPE KIT, GALV W/ALLEN KEY
2TLA050210R0530	50M ROPE KIT, GALV W/ALLEN KEY
<a href="#">2TLA050210R0630</a>	80M ROPE KIT, GALV W/ALLEN KEY
<a href="#">2TLA050210R0730</a>	100M ROPE KIT, GALV W/ALLEN KEY
2TLA050210R0830	126M ROPE KIT, GALV W/ALLEN KEY

(1) Tensioner & (1) Quick link) included with kits 50M or less

(2) Tensioners included with kits greater than 50 M (no Quick Link)

Part Number	Line Strong Accessories
2TLA050211R0005	LINESTRONG ACCES E-STOP BUTTON
<a href="#">2TLA050210R4020</a>	LINESTRONG ACCES ROPE TENSIONER, SS
<a href="#">2TLA050210R4030</a>	LINESTRONG ACCES ROPE TENSIONER, Galv
<a href="#">2TLA050210R6020</a>	LINESTRONG ACCES PULLY, SS
<a href="#">2TLA050210R6030</a>	LINESTRONG ACCES PULLY, GALV
<a href="#">2TLA050211R0004</a>	LINESTRONG ACCES SPRING, 220MM, SS
2TLA858006R1300	FLEX ROLLER EYEBOLT W ADJUSTMENT
<a href="#">2TLA050211R0001</a>	LED RED/GREEN 24 VDC, SPARE PART
2TLA050211R0002	LED RED/GREEN 110 VDC, SPARE PART
2TLA050211R0003	LED RED/GREEN 230 VDC, SPARE PART
2TLA050040R0001	1/2 NPT 316 SS CABLE GLAND
<a href="#">2TLA050211R0005</a>	LINESTRONG ACCES E-STOP BUTTON
	Line Strong Contact Blocks (Accessory)
2TLA050240R0101	LINESTRONG ACCES CON BLOCK 2NC/1NO
2TLA050240R0102	LINESTRONG ACCES CONTACT BLOCK 3NC
2TLA050240R0103	LINESTRONG ACCES CON BLOCK 2NC/2NO
2TLA050240R0104	LINESTRONG ACCES CON BLOCK 3NC/1NO
2TLA050240R0105	LINESTRONG ACCES CONTACT BLOCK 4NC

# Smile & Inca E-Stops

## Emergency, Reset, & Machine Stop Buttons – Dual Channel



Smile Emergency, Reset, & Machine Stop Buttons



Smile Emergency, & Machine Stop Buttons

	Part Number	Description	Smile and INCA Dual Channel
EStops	<a href="#">2TLA030051R0600</a>	Smile 10 EK (Red Button)	Emergency stop in Smile enclosure, 2 × NC, Status LED in button, 1 m 5-pole cable out of bottom
	<a href="#">2TLA030051R0400</a>	Smile 10 EA (Red Button)	Emergency stop in Smile enclosure, 2 × NC, 1 m 4-pole cable out of bottom
	<a href="#">2TLA030051R0000</a>	Smile 11 EA (Red Button)	Emergency stop in Smile enclosure, 2 × NC, Status LED in button, 1 × M12 5-pin male connector
	<a href="#">2TLA030051R0200</a>	Smile 12 EA (Red Button)	Emergency stop in Smile enclosure, 2 × NC, Status LED in button, 1 × M12 5-pin male connector and 1 × M12 5-pin female connector
	<a href="#">2TLA030054R0100</a>	INCA 1 (Red Button)	Emergency stop (Red Button for panel mounting, 22 5 mm holes, 2 × NC, Status LED in button, terminal blocks
	<a href="#">2TLA030054R0400</a>	Yellow Surround for E-Stop	Elevated yellow surround for Inca panel mounted emergency stop button
	<a href="#">2TLA030054R0900</a>	Yellow Surround for E-Stop	Flat Yellow surround for panel mounted emergency stop button, for 22 5 mm hole
Resets	<a href="#">2TLA030053R2600</a>	Smile 12RF (Blue Button)	Reset button in Smile enclosure, adapted for use with Eden DYN-Reset and Eden OSSD-Reset M12 5-pin connector, 1 NO
	<a href="#">2TLA030053R2700</a>	Smile 12RG (Blue Button)	Reset button in Smile enclosure, adapted for use with Eden DYN-Reset and Eden OSSD-Reset M12 8-pin connector, 1 NO
Mach Stops	<a href="#">2TLA030051R0900</a>	Smile 11 SA (Black Button)	Machine stop (Black button) in Smile enclosure, 2 × NC, Status LED in button, 1 × M12 5-pin male connector
	<a href="#">2TLA030054R0300</a>	INCA 1S (Black Button)	Machine stop (Black button) for panel mounting, 22 5 mm holes, 2 × NC, Status LED in button, terminal blocks

# Smile 41

## Smile 41



Part Number	Description	Smile 41
<a href="#">2TLA030057R0000</a>	Smile 41 WWWWP	Push button box according to Smile design with 4 buttons. The box is adapted for connection to Pluto IQ using light button function. Connection via a M12 8-pin male connector. 4 push-buttons and kit of filters
<a href="#">2TLA030057R0100</a>	Smile 41 EWWWP	Push button box according to Smile design with 4 buttons, one of which is an emergency stop. The box is adapted for connection to Pluto IQ using light button function. Connection via a M12 8-pin male connector. 1 emergency stop + 3 push-buttons and kit of filters



**Smile 41 with E-Stop should be used with a Pluto\***

**Smile 41 without E-Stop is not a safety device and should be used with a Pluto\***

\*Pluto has the ability to accept the button input and control the light on the same input

# E-Strong

## Heavy Duty E-Stop



### Main features

- E-Strong Emergency Stop Buttons are designed for the most demanding of environments
- Available with integrated LED or lockable shroud enclosure ideal for the food industry
- Ex Proof rated versions for harsh
- Stainless Steel environments (see main catalog)

Part Number	E-Strong
2TLA050220R1020^	E-STRONGZ E-STOP 2NC/2NO, NPT, SS
2TLA050220R1222^	E-STRONGZ E-STOP 2NC/2NO, LED 24 VDC, NPT, SS
2TLA050220R1223	E-STRONGZ E-STOP 2NC/2NO, LED 110 VAC, NPT, SS
2TLA050220R1224	E-STRONGZ E-STOP 2NC/2NO, LED 230 VAC, NPT, SS
<a href="#">2TLA050211R0001</a>	LAMP - LED RED/GREEN 24 VDC, SPARE PART
2TLA050211R0002	LAMP - LED RED/GREEN 110 VDC, SPARE PART
2TLA050211R0003	LAMP - LED RED/GREEN 230 VDC, SPARE PART

# Safety Mats\*

Integrated and Blunt Trim



## Main features

- Ideal for secondary protection inside a work area or in the front of a machine at the point of operation
- 32 different sizes and styles in stock
- Available with integrated rubber ramp rail or external aluminum trim
- Highest quality, most robust safety mat on the market
- Euro Dot pattern ideal for oily/slippery environments
- Custom mats available upon demand
- Cost effective
- Wires come out long side center
- Safety Mats must be affixed to the floor
- Safe Distance calculations must be made for the application See main catalog for calculation example
- For dual channel applications us a USR10 Safety Relay
- For DYNLink applications (best practice) contact your Jokab support team.

\*IMPORTANT - The US Safety Mats differs from the Safety Mats listed in the European catalogs.



# Safety Mats\*

## Integrated and Blunt Trim

Safety Mat w/o Trim (Blunt)	Safety Mat w Integrated Trim	Protective Dimensions, Inch
2TLA858003R2800	2TLA858003R2900	Safety mat 12" x 12"
2TLA858002R3800	2TLA858002R5600	Safety mat 24" x 24"
2TLA858002R3900	2TLA858002R5700	Safety mat 24" x 30"
2TLA858002R4000	2TLA858002R5800	Safety mat 24" x 36"
2TLA858002R4100	2TLA858002R5900	Safety mat 24" x 42"
2TLA858002R4200	2TLA858002R6000	Safety mat 24" x 48"
2TLA858002R4300	2TLA858002R6100	Safety mat 24" x 60"
2TLA858002R4400	2TLA858002R6200	Safety mat 30" x 30"
2TLA858002R4500	2TLA858002R6300	Safety mat 30" x 36"
2TLA858002R4600	2TLA858002R6400	Safety mat 30" x 42"

Safety Mat w/o Trim (Blunt)	Safety Mat w Integrated Trim	Protective Dimensions, Inch
2TLA858002R4700	2TLA858002R6500	Safety mat 30" x 48"
2TLA858002R4800	2TLA858002R6600	Safety mat 36" x 36"
2TLA858002R4900	2TLA858002R6700	Safety mat 36" x 42"
2TLA858002R5000	2TLA858002R6800	Safety mat 36" x 48"
2TLA858002R5100	2TLA858002R6900	Safety mat 36" x 60"
2TLA858002R5200	2TLA858002R7000	Safety mat 42" x 42"
2TLA858002R5300	2TLA858002R7100	Safety mat 42" x 48"
2TLA858002R5400	2TLA858002R7200	Safety mat 48" x 48"
2TLA858002R5500	2TLA858002R7300	Safety mat 48" x 60"
2TLA858002R7400	Safety mat trim corner connection	
2TLA858002R7500	Safety mat alum Trim (by the inch)(Enter inches into qty )(-1 58 in/conn)	

Wires come out long side center  
 Aluminum Trim is ordered by the inch  
 Consult your ABB Jokab representative to order properly  
 120" is the max length, FedEx can only ship 108"

\*IMPORTANT - The US Safety Mats differs from the Safety Mats listed in the European catalogs.

# SafeBall

## Two Hand Control Actuator



### Main features

- Ergonomic with several grip possibilities
- Tactile and audio feedback
- 3<sup>rd</sup> Party safety approved
- Low but distinct activation force
- Flexible mounting
- 1 NO + 1 NC Button
- Several cable lengths are available
- Up to PL e/Cat 4
- Safe distance calculations must be performed for the application
- Connect to Sentry Safety Relay SSR20, SSR20M, USR10, USR22 or Pluto
- Also can be used in hold to run applications

# SafeBall

## Two Hand Control Actuator



**JSTD1-A/B/C/E**  
Does not include JSM-C5  
Order separately



**JSTD25F**



**JSM-C5 Swivel mount**



**JSTD25K**



**JSTD25P-1**

Part Number	Description	SafeBall
<a href="#">2TLA020007R3000</a>	JSTD1-A	JSTD1-A Safeballs each have 1NO & 1NC independent switches, maximumload of 30 VDC - 2A resistive IP67 protection, plastic body, 2 meters molded cable
<a href="#">2TLA020007R3100</a>	JSTD1-B	JSTD1-B Safeballs each have 1NO & 1NC independent switches, maximumload of 30 VDC - 2A resistive IP67 protection, plastic body, 0 2 m wires × 4 for direct connection into an enclosure
<a href="#">2TLA020007R3200</a>	JSTD1-C	JSTD1-C Safeballs each have 1NO & 1NC independent switches, maximum load of 30 VDC - 2A resistive IP67 protection, plastic body, 10 meters molded cable
<a href="#">2TLA020007R3400</a>	JSTD1-E	JSTD1-E Safeballs each have 2NO independent switches, maximum load of 30 VDC - 2A resistive IP67 protection, plastic body, 0 2 m wires × 4 for direct connection
<a href="#">2TLA020007R0900</a>	JSM-C5	JSM-C5, Angled ball joint for installation of a Safeball on a table or a steel housing
<a href="#">2TLA020007R6000</a>	JSTD25F	JSTD1-B Safeballs are side mounted on a 44x88 extruded aluminum profile designed for two-hand applications Pre-wired to a M12 5-pin connector with protective flanges of the safeballs
<a href="#">2TLA020007R6300</a>	JSTD25H	Same as JSTD25F with JSTD1-B Safeballs pre-wired to a M12 8-pin connector with protective flanges of the safeballs
<a href="#">2TLA020007R6900</a>	JSTD25K	Same as JSTD25H with JSTD1-B Safeballs On top there is a Smile 10 EA mounted All pre-wired to a M12 8-pin connector The Safeballs have protective flanges
<a href="#">2TLA020007R6500</a>	JSTD25P-1	Two-hand control unit, portable Two Safeballs mounted on the ends of an aluminum profile, shielded by over hand guards With built-in Eva sensor for position control Connection via an 8+1 Zylin connector

# JSHD4 Modular\* Enabling Device

## Three Position Enabling Device

### Main features

- Modular design
- Auxiliary buttons
- LED Indication
- Various connection options
- Highest level of safety
- Ergonomic design
- Safety Category 4/PLe
- Cheat-Safe hand recognition with optional Anti-Tamper board

### Applications

- Robotic cells and automated equipment bypassing
- Machine adjustments
- Teach Processes
- Maintenance process

Use JSHD4 Modular US part numbers found in this Easy Reference only to order

JSHD4

JSHD4 \*  
Wiring Only

JSHD4\*  
Old to New



### It's now easy to specify and order ABB Jokab Safety Three Position Enabling Devices

**STEP 1** – Select the desired Handle from among the 5 Standard Handles shown on the next page, each handle has the features clearly listed

**STEP 2** – Select the desired “Base” from the Step 2 Slides Use the Chart to double check which “Base” options are available for the Handle selected

**STEP 3** -- Select the optional “Accessories”

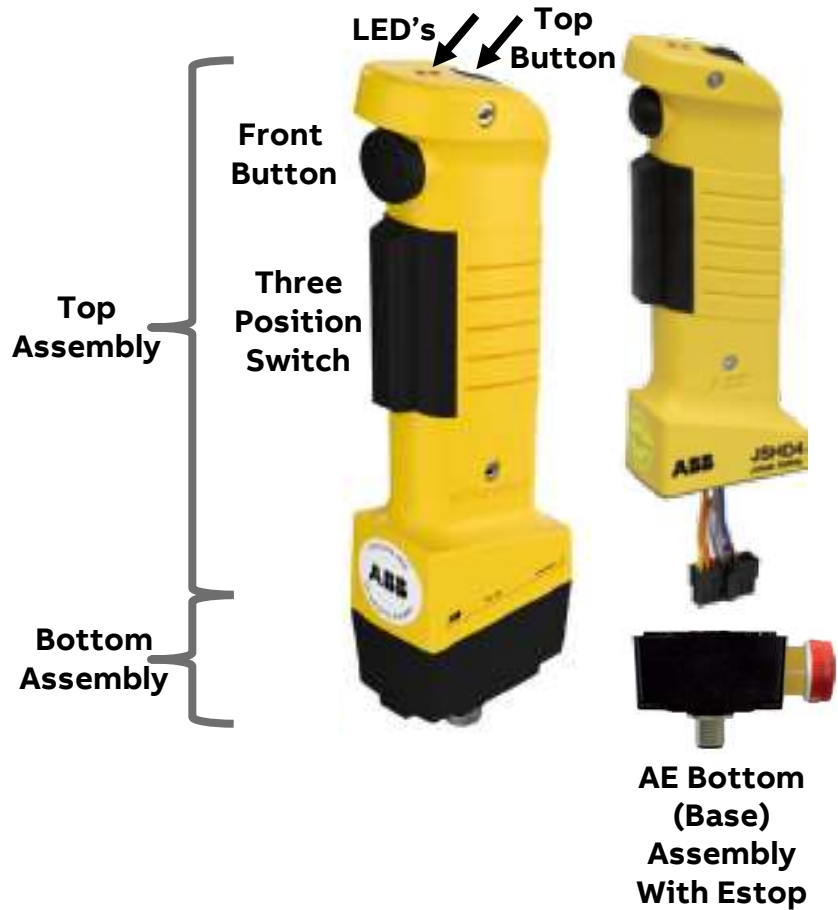
**STEP 4**– Electrically connect the Handle and Base, then install the fastening screws

\* IMPORTANT - The US version differs from the European because the Europeans combine the top and bottom components into one part number. The US lists them as separate part numbers.

[Home Page](#)

# JSHD4 Modular\* Enabling Device

Three Position Enabling Device



1 Choose between 5 different top units



**JSHD4-1**  
2TLA020006R2100  
(Cannot use Anti-Tamper Board)



**JSHD4-2**  
2TLA020006R2200

- LEDs
- Front button
- Top Button



**JSHD4-3**  
2TLA020006R2300

- LEDs



**JSHD4-4**  
2TLA020006R2400

- LEDs
- Front Button



**JSHD4-5**  
2TLA020006R2500

- LEDs
- Top Button

\*IMPORTANT - The US version differs from the European because the Europeans combine the top and bottom components into one part number. The US lists them as separate part numbers.

JSHD4

JSHD4\*  
Wiring Only

JSHD4\*  
Old to New

Home Page



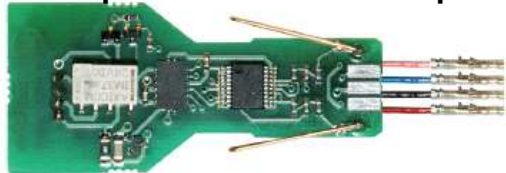
# JSHD4 Modular\* Enabling Device

## Three Position Enabling Device

2. Choose a bottom part suitable for your assembly



3 Choose optional Anti-tamper PCB making your three position device cheat protected



Part Number	Description	Top Assembly
<a href="#">2TLA020006R2100</a>	JSHD4-1	No LED's, No Buttons (Cannot be used with anti tamper board)
<a href="#">2TLA020006R2200</a>	JSHD4-2	LED, 2 buttons, front and top
<a href="#">2TLA020006R2300</a>	JSHD4-3	LED's
<a href="#">2TLA020006R2400</a>	JSHD4-4	LED's, Front Button
<a href="#">2TLA020006R2500</a>	JSHD4-5	LED's, Top Button
Part Number	Description	Bottom Assembly
<a href="#">2TLA020005R1000</a>	AA	with cable gland
<a href="#">2TLA020005R1700</a>	AH	with cable gland and PCB with 10 screw connections
<a href="#">2TLA020005R1800</a>	AJ	with cable gland and PCB with 16 screw connections
<a href="#">2TLA020005R1200</a>	AC	with M12 connection (5 poles)
<a href="#">2TLA020005R1300</a>	AD	with M12 connection (8 poles)
<a href="#">2TLA020005R1400</a>	AE	with M12 connection (8 poles) and emergency stop
<a href="#">2TLA020005R1500</a>	AF	with M12 connection (4 poles) and 2 AS-i nodes (for front and top button)
<a href="#">2TLA020005R1600</a>	AG	with M12 connection (4 poles) and 1 AS-i node (without front and top button)
<a href="#">2TLA020005R1100</a>	AB	with Cannon connection
<a href="#">2TLA020005R1900</a>	AK	Cannon 12 pin male (for older JSHD4 assemblies)
<a href="#">2TLA020005R2000</a>	AL, Bottom assy	Cable gland and 10 screw connections and holder for Eva
Part Number	Description	Optional Anti Tamper Board
<a href="#">2TLA020005R0900</a>		Anti Tamper Board (cannot be used with JSHD4-1)

A capacitive circuit and accelerometers requires a hand to be operating the JSHD4 in addition to holding the 3 position switch, If any one of these drop out, the JSHD4 sends a signal to shut down the machine

\* IMPORTANT - The US version differs from the European because the Europeans combine the top and bottom components into one part number. The US lists them as separate part numbers.

JSHD4

JSHD4  
Wiring Only

JSHD4\*  
Old to New

Home Page

# JSHD4 Modular\* Enabling Device

## Three Position Enabling Device



JSM5B Wall Bracket  
2TLA040005R0500



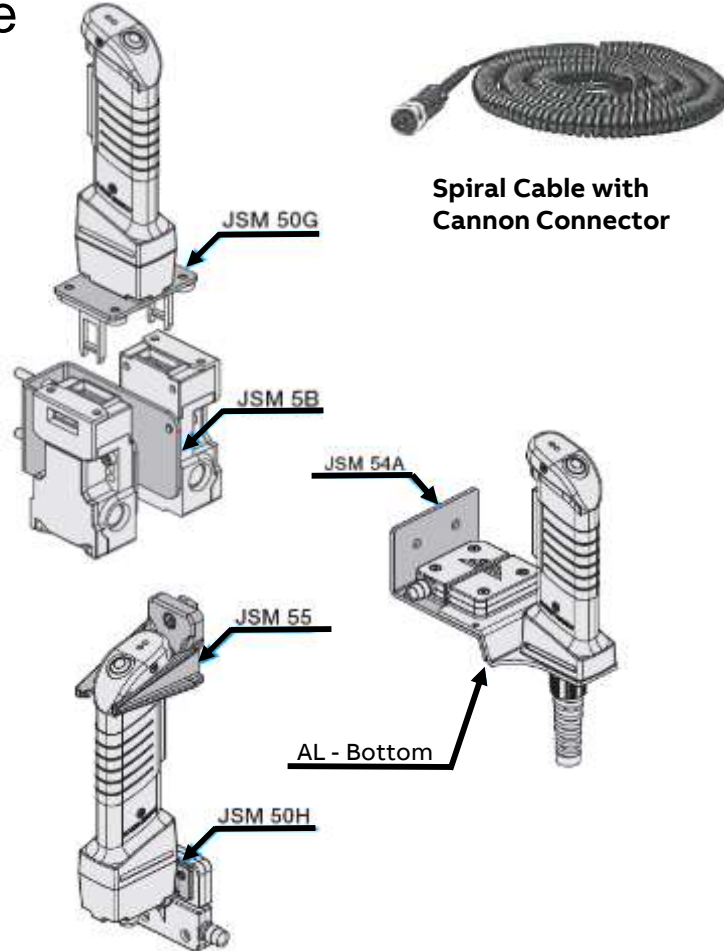
Bottom Plate JSM50G  
2TLA020205R6300  
for MKey6



JSHD4 Protective Coating  
2TLA020200R4600



Bottom Plate JSM50H  
2TLA020205R6400  
for Eden



Part Number	Description	Bracket Description
<a href="#">2TLA040005R0500</a>	JSM55	Wall Bracket
<a href="#">2TLA040005R0700</a>	JSM5B	JSM5B Wall bracket for 2 key switches, for ex MKey5
<a href="#">2TLA020205R2800</a>	JSM54A	Wall bracket for Adam Used with AL bottom part that has a holder for Eva
<a href="#">2TLA020205R6300</a>	JSM50G	Bottom Plate for Mkey 4/5
<a href="#">2TLA020205R6400</a>	JSM50H	Bracket for Eden sensor
<a href="#">2TLA020200R4600</a>	JSHD4	Protective Coating
Part Number	Description	Cable Desc
<a href="#">2TLA020003R4700</a>	HK5	HK5 Cable 5 m and Cannon female connector
<a href="#">2TLA020003R4800</a>	HK10	HK10 Cable 10 m and Cannon female connector
<a href="#">2TLA020003R4900</a>	HK20	HK20 Cable 20 m and Cannon female connector
<a href="#">2TLA020003R5000</a>	HK16S4	HK16S4 spiral cable 1 6 m and Cannon female connector
<a href="#">2TLA020003R5100</a>	HK20S4	HK20S4 spiral cable 2 0 m and Cannon female connector
<a href="#">2TLA020003R5200</a>	HK32S4	HK32S4 spiral cable 3 2 m and Cannon female connector
<a href="#">2TLA020003R3500</a>	HK40S4	HK40S4 spiral cable 4 0 m and Cannon female connector
<a href="#">2TLA020003R3600</a>	HK60S4	HK60S4 spiral cable 6 0 m and Cannon female connector
<a href="#">2TLA020003R5300</a>	HK80S4	HK80S4 spiral cable 8 0 m and Cannon female connector

\* IMPORTANT - The US version differs from the European because the Europeans combine the top and bottom components into one part number. The US lists them as separate part numbers.

JSHD4

JSHD4  
Wiring Only

Home Page

# Magne OSSD

## Magne 3 & 4 Process Safety Lock



### Main features

- Magne 3 and 4 requires ordering the Anchor Plate separately
- All Magne 4 Series has a built in Eden Safety Sensor
- For accessories see the Magne Accessory page in the back of the brochure
- Magne 3 does not have Eden safety sensors built into it

Part Number	Description	Magne 3, With No Safety Switch, 24VDC
<a href="#">2TLA042022R2700</a>	Magne 3X	Magne 3x, No Safety Sensor, M12-5,
Part Number	Description	Magne 4x, Eden OSSD Safety Switch, 24VDC
<a href="#">2TLA042022R4600</a>	Magne 4 OSSD-Info	Magne 4 with Eden OSSD-Info Safety Switch, 8 Pin M12 Connector

# Magne

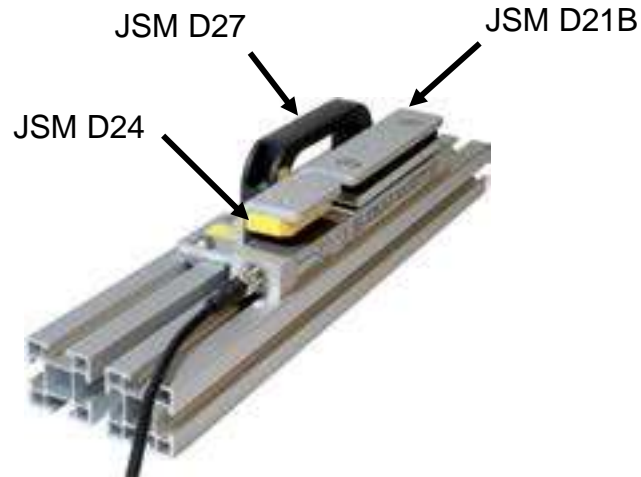
## Magne Accessories



JSM D28  
Door Handle



JSM D23  
Sliding Door



Conventional Swinging Door



Tina 12A

Part Number	Description	Accessories
<a href="#">2TLA042023R0100</a>	JSM D28	Aluminum profile for door handle that completely covers a Magne unit when the door is closed For conventional door (5–15 mm door gap)
<a href="#">2TLA042023R0500</a>	JSM D21B	Mounting kit for Magne For conventional door (5 -15 mm door gap) *
<a href="#">2TLA042023R0200</a>	JSM D23	Mounting kit for Magne For sliding door *
<a href="#">2TLA042023R0300</a>	JSM D24	Mounting kit for Eva For conventional door* JSM D24
<a href="#">2TLA042023R1000</a>	JSM D27	Door handle for JSM D21B
<a href="#">2TLA020055R0000</a>	M12-3A	Y-connector for serial connection of Magne 3
<a href="#">2TLA020054R1800</a>	Tina 12A	Connection block for serial connection of two Magne (M12-8)
<a href="#">2TLA042023R3600</a>	Cellular rubber	Cellular rubber, 10 mm thick Spare part for anchor plate
<a href="#">2TLA042023R1300</a>	Anchor 32A	Std Anchor Plate, No Permanent Magnet
<a href="#">2TLA042023R0400</a>	Anchor 32B	With Permanent Magnet (30N) in Anchor Plate
<a href="#">2TLA020046R0800</a>	Eva General	Eva General Code, All Generals have the same code
<a href="#">2TLA020046R0900</a>	Eva Unique	Eva Unique Code, complies with EN/ISO 14119

# Solutions

## Quick Guard, Machine Safety Services

### Quick Guard Fencing System

- Cost Effective
- Labor Effective
- Strong
- Easily modified in the field
- Easy to Design

### Machine Safety Services

- Machine Safety Evaluation
- Safety System Design
- Safety System Programming (If Required)
- Installation/Commissioning
- Risk Assessment Training
- Machine Safety Training
- Pluto Safety PLC Training



**Machine Safety Services**



**Quick Guard aluminum fencing system**

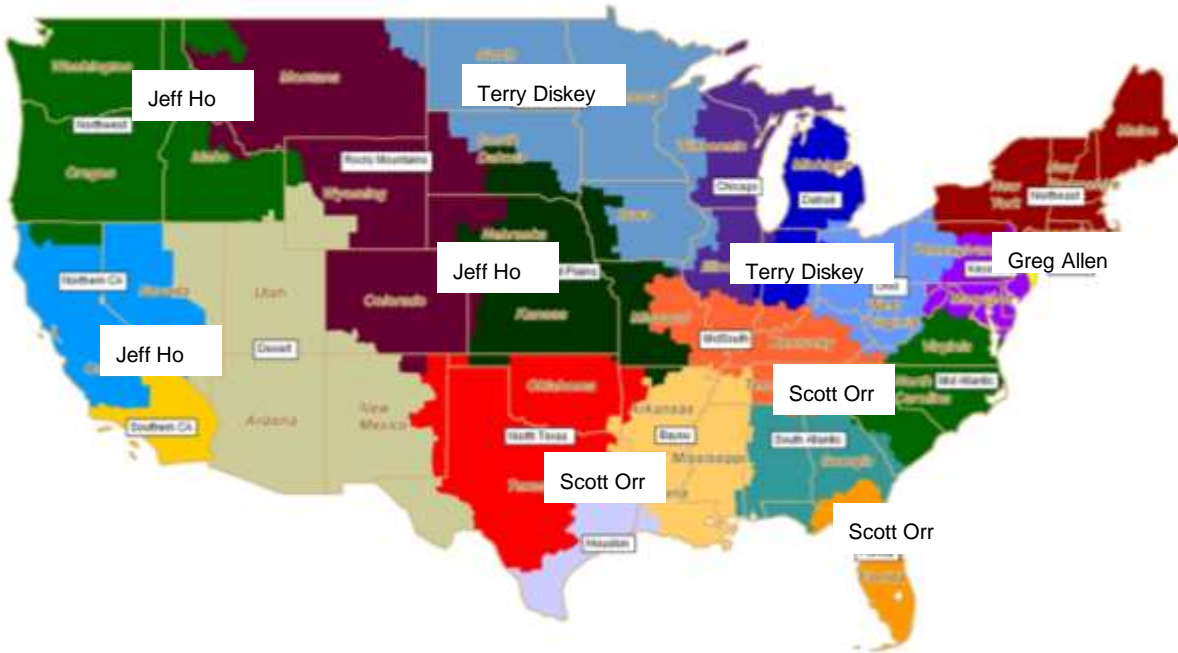


**Machine Safety Training**



# Quick Guard

## Aluminum Fencing System



Quick Guard is supported by a growing network of fencing integrators and distributors across the nation

Use the Contact Forms below to submit projects for RFQ

Quick Guard Fencing can go around your machines to protect both the employee and the machine

For assistance contact your local ABB/JOKAB SAFETY representative

[Fencing Web Page](#)

[Fencing Catalog](#)

[Contact Greg Allen](#)

[Contact Terry Diskey](#)

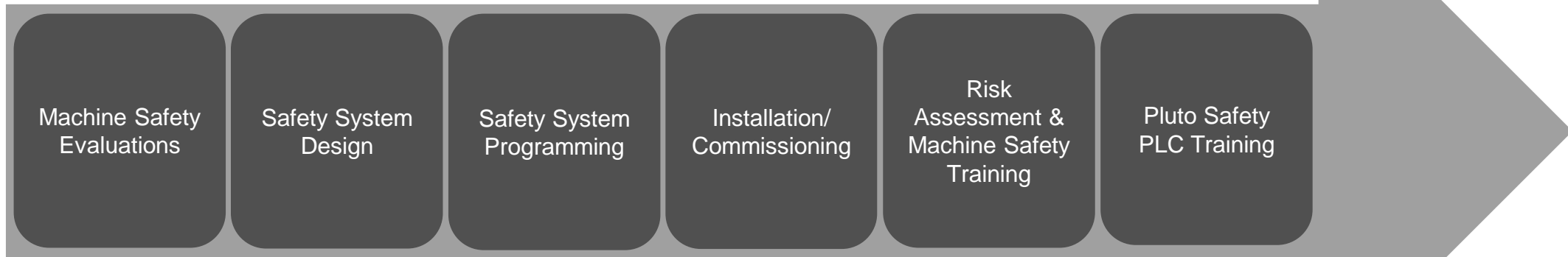
[Contact Scott Orr](#)

[Contact Jeff Ho](#)

[Home Page](#)

# Machine Safety Services

List of Machine Safety Services Available



## Machine Safety Services

- Machine Safety Evaluation – Detailed report on the safety of your machine
- Safety System Design – Use our expertise to design a safety system
- Safety System Programming (If Required) – We can program you ABB/Pluto PLC for you
- Installation/Commissioning – Use our years of experience managing, installing & commissioning safety systems
- Risk Assessment and Machine Safety Training customized to your requirements
- Pluto Safety PLC Training for those wanting to take advantage of advanced Pluto functions

**Fully customizable machine safety services to address your company's needs**  
**For assistance contact your local ABB/JOKAB SAFETY representative**

[Machine Safety  
Web Page](#)

[Training](#)

[Contact  
Form](#)

[Home Page](#)

# Cables

## List of Cables



M12-C112 = M12-C, 1m, 5 pin female, 5 pin male  
 M12-C201 = M12-C, 20m, 5 pin female

Cable Description Decoder – M12-CABC			
M12-C	A – Length	B – Connector	C – Connector
	03=0.3m	1=5 pin female	1=5 pin female
	1=1m	2=5 pin male	2=5 pin male
	3=3m	3=8 pin female	3=8 pin female
	6=6m	4=8 pin male	4=8 pin male
	10=10m	5=12 pin female	5=12 pin female
	20=20m	6=12 pin male	6=12 pin male

	Gender	0.06m	0.3m	1m	3m	6m	10m	20m
M12-5	F					<a href="#">M12-C61</a> <a href="#">2TLA020056R0000</a>	<a href="#">M12-C101</a> <a href="#">2TLA020056R1000</a>	<a href="#">M12-C201</a> <a href="#">2TLA020056R1400</a>
M12-5HE*	F					<a href="#">M12-C61HE</a> <a href="#">2TLA020056R8000</a>	<a href="#">M12-C101HE</a> <a href="#">2TLA020056R8100</a>	
M12-5	M					<a href="#">M12-C62</a> <a href="#">2TLA020056R0200</a>	<a href="#">M12-C102</a> <a href="#">2TLA020056R1200</a>	
M12-5	F/Angled 90 Deg					<a href="#">M12-C61V2</a> <a href="#">2TLA020056R0600</a>	<a href="#">M12-C101V2</a> <a href="#">2TLA020056R1500</a>	
M12-5	F/M		<a href="#">M12-C0312</a> <a href="#">2TLA020056R5800</a>	<a href="#">M12-C112</a> <a href="#">2TLA020056R2000</a>	<a href="#">M12-C312</a> <a href="#">2TLA020056R2100</a>	<a href="#">M12-613</a> <a href="#">2TLA020056R2200</a>	<a href="#">M12-C1012</a> <a href="#">2TLA020056R2300</a>	<a href="#">M12-C2012</a> <a href="#">2TLA020056R2400</a>
M12-8	F					<a href="#">M12-C63</a> <a href="#">2TLA020056R3000</a>	<a href="#">M12-C103</a> <a href="#">2TLA020056R4000</a>	<a href="#">M12-C203</a> <a href="#">2TLA020056R4100</a>
M12-8	F/M	<a href="#">M12-C00634</a> <a href="#">2TLA020056R6400</a>		<a href="#">M12-C134</a> <a href="#">2TLA020056R5000</a>	<a href="#">M12-C334</a> <a href="#">2TLA020056R5100</a>			
M12-8	M						<a href="#">M12-C104</a> <a href="#">2TLA020056R4200</a>	
M12-12	F					<a href="#">M12-C65</a> <a href="#">2TLA020056R7200</a>	<a href="#">M12-C105</a> <a href="#">2TLA020056R7300</a>	<a href="#">M12-C205</a> <a href="#">2TLA020056R7500</a>

Cables with Cannon Connectors are in the Enabling Device section

# Cables

## Cables Reels and Field Wired Connectors



Desc	50M	100M	200M	500M
M12-5 Bulk Reel	<a href="#">2TLA020057R0005</a>	<a href="#">2TLA020057R0010</a>	<a href="#">2TLA020057R0020</a>	<a href="#">2TLA020057R0050</a>
M12-8 Bulk Reel	<a href="#">2TLA020057R1005</a>	<a href="#">2TLA020057R1010</a>	<a href="#">2TLA020057R1020</a>	<a href="#">2TLA020057R1050</a>

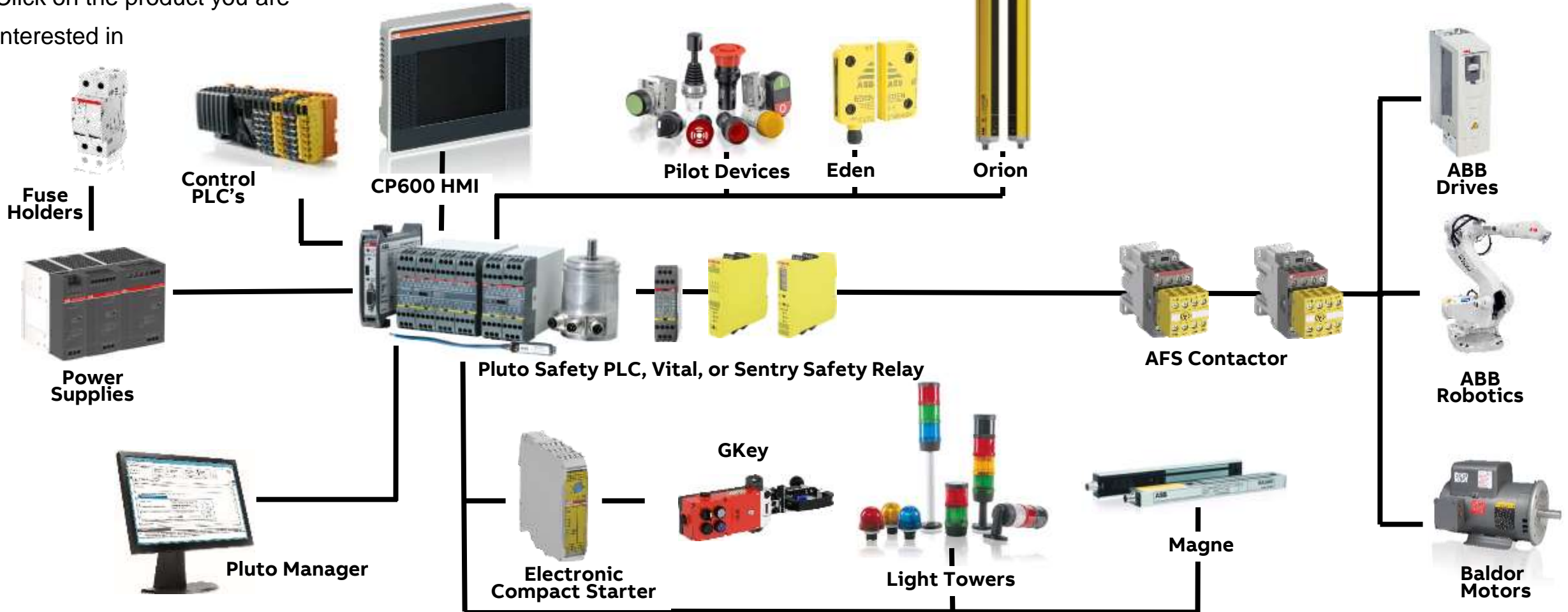
Type	Desc	50M	100M	500M
CAN-Bus cable, yellow, 1 x 2 x 0 75 mm	Bulk Reel	<a href="#">2TLA020070R6805</a>	<a href="#">2TLA020070R6810</a>	<a href="#">2TLA020070R6850</a>

Connector	Description	Part Number
Field Wired F M12-5	M12-C01 M12X5 Female Screw Connector	<a href="#">2TLA020055R1000</a>
Field Wired M M12-5	M12-C02 M12X5 Male Screw Connector	<a href="#">2TLA020055R1100</a>
Field Wired F M12-8	M12-C03 M12X8 Female Screw Connector	<a href="#">2TLA020055R1600</a>
Field Wired M M12-8	M12-C04 M12X8 Male Screw Connector	<a href="#">2TLA020055R1700</a>

# ABB complimentary products

ABB products that complement Jokab Safety

Click on the product you are interested in



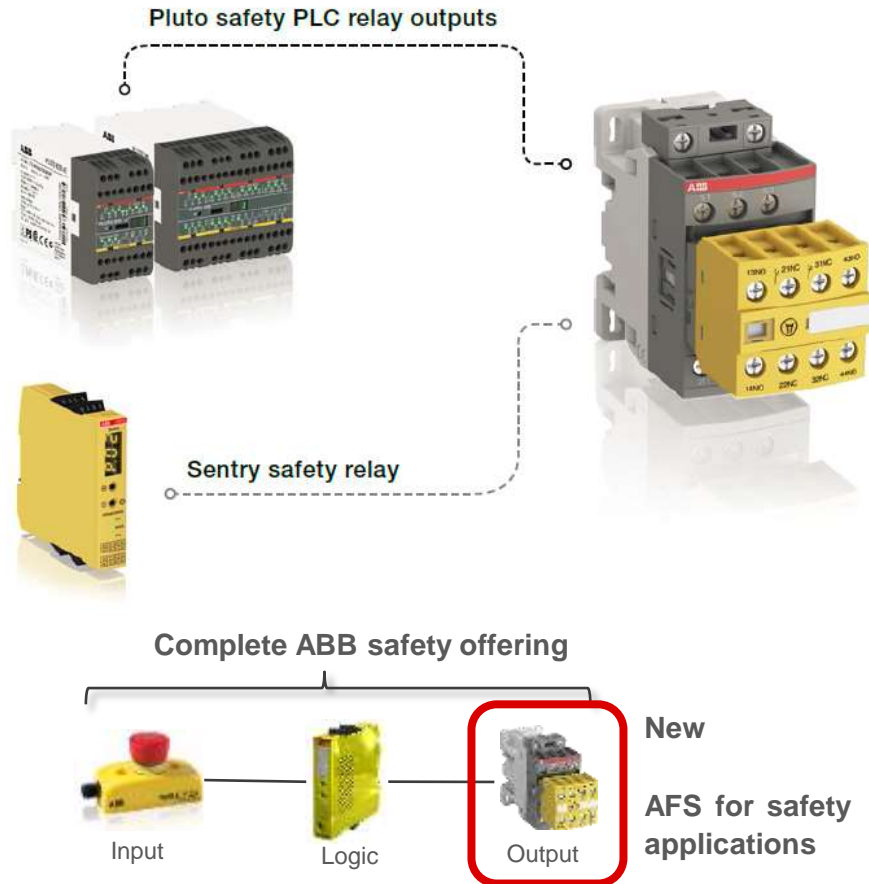
[Complementary Products](#)

[Home Page](#)



# ABB Contactors for Safety Applications

## AFS contactor



## AFS Benefits

- Designed for machine safety applications, AFS contactors come with fixed front auxiliary contact blocks, making them ideal for monitoring and controlling circuits
- Mechanically linked and mirror contacts help make your system safer
- ABB's AFS contactors can be easily integrated in machine manufacturer's systems complying with main standards EN ISO 13849 and EN 62061 - guaranteeing the safe use of your machinery and equipment
- Safety data available in the library of safety software (Sistema, FSĐT)...
- Fast response for optimized distances
- Opening time AFS09...AFS38 <35ms
- Flexible mounting Designed for machine safety applications, AFS contactors come with fixed front auxiliary contact blocks, making them ideal for monitoring and controlling circuits
- See AFS brochure for ordering information

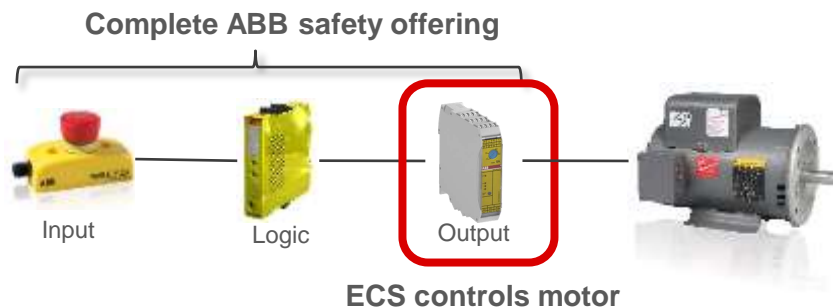
# ABB Electronic compact starters

Direct-on-line / reversing starter with motor protection



## ECS Benefits

- Electronic compact starters: HF range
- Direct-on-line / reversing starter with motor protection Mechanically linked and mirror contacts help make your system safer
- 0.6 A, 2.4 A and 6.5 A, for motors up to 3 kW - 400 V AC
- Up to 9 A for resistive loads
- Rated operational voltage: 500 V AC
- Rated control supply voltage: 24 V DC
- Emergency stop (ATEX, SIL3, PL e) for selected reference
- Automatic, manual or remote reset after thermal trip
- Electrical life: 30 millions operating cycles
- IEC / EN 60947-1, IEC / IEN 60947-4-2
- 22.5 mm Space 90%
- See ECS brochure for ordering information



# ABB Jokab Safety

## ABB Jokab Safety Support List

### North Region

Product Specialist Greg Allen (267) 966-5575  
Product Specialist Terry Diskey (260) 409-6258

### South Region

Product Specialist Scott Orr (734) 718-6647

### West Region

Product Specialist Jeff Ho (480) 612-6050

### Business Development

Product Manager Rich Gibson (248) 514-9643  
Product Marketing Darrell Burkeen (708) 541-2395  
General Sales Inquiries

### Technical Support / Electrical Engineering

Technical Support (888) 385-1221 Opt 1  
Engineering Manager John McHale (313) 520-1779  
Sr. Electrical Eng. Matt Miller (734) 812-5676  
Applications Lead Jeff Leslie (519) 982-0976

Design Requests (888) 282-2123

Fencing Requests (888) 282-2123

### Customer Service

Customer Service Requests

[gregory.allen@us.abb.com](mailto:gregory.allen@us.abb.com)

[terry.e.diskey@us.abb.com](mailto:terry.e.diskey@us.abb.com)

[scott.j.orr@us.abb.com](mailto:scott.j.orr@us.abb.com)

[jeff.ho@us.abb.com](mailto:jeff.ho@us.abb.com)

[richard.a.gibson@us.abb.com](mailto:richard.a.gibson@us.abb.com)

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[jokab.sales@us.abb.com](mailto:jokab.sales@us.abb.com)

[EPPC.Support@us.abb.com](mailto:EPPC.Support@us.abb.com)

[robert.j.mchale@us.abb.com](mailto:robert.j.mchale@us.abb.com)

[matthew.m.miller@us.abb.com](mailto:matthew.m.miller@us.abb.com)

[jeffrey.m.leslie@ca.abb.com](mailto:jeffrey.m.leslie@ca.abb.com)

[jokab.service@us.abb.com](mailto:jokab.service@us.abb.com)

[jokab.rfq@us.abb.com](mailto:jokab.rfq@us.abb.com)

[abbsupport@tnb.com](mailto:abbsupport@tnb.com)



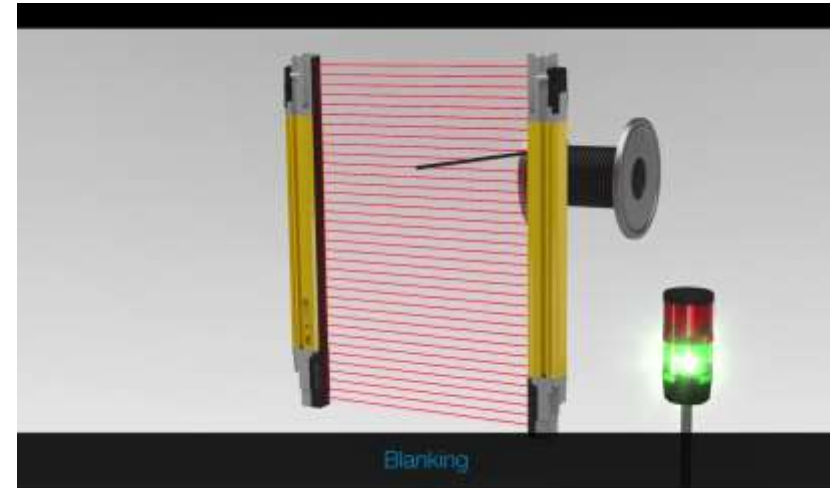
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# ABB Jokab Safety

ABB Jokab Safety video links

## Video Links

- [Sentry Safety Relay and Eden OSSD Safety Sensor](#)
- [How to configure the ABB Sentry safety relays with the display](#)
- [ABB's Orion light guards](#)
- [Hot Swapping the Pluto PLC](#)
- [Pluto D45 Safety PLC combines Process and Functional Safety](#)
- [3D Line Card](#)
- [ABB JOKAB SAFETY - Your best partner for machine safety](#)
- [Machine Safety Systems: An open door to smarter operations](#)



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# ABB Jokab Safety

## ABB Jokab Safety Pluto Training

### 7 Episodes on “Your First Pluto Project”

- [Your first Pluto project: Episode 1 – Intro Hardware](#)
  - [Your first Pluto project : Episode 2 – Adding Pluto units](#)
  - [Your first Pluto project: Episode 3 – IO configuration](#)
  - [Your first Pluto project : Episode 4 – Variable names](#)
  - [Your first Pluto project : Episode 5 – PLC code](#)
  - [Your first Pluto project: Episode 6 – Compiler](#)
  - [Your first Pluto project: Episode 7 – Download and Monitor](#)
- 
- For more advanced training contact the Jokab Safety Support Team



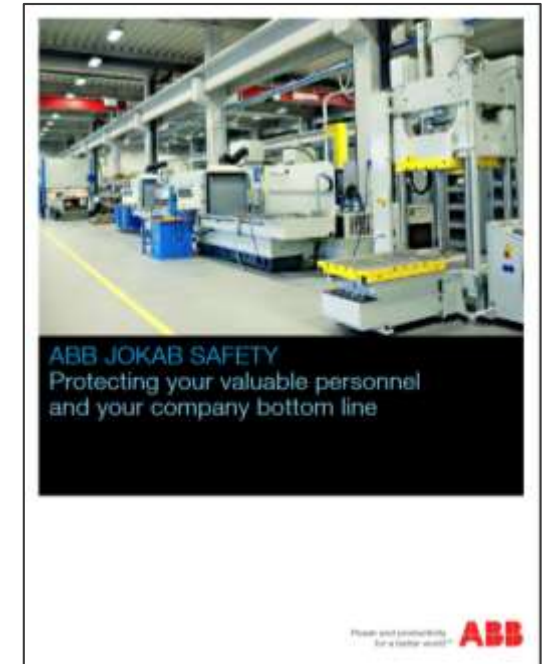


# ABB Jokab Safety

## ABB Jokab Safety Literature

### Catalogs, Brochures and Drawing Files

- [Protecting your valuable personnel and your company bottom line](#)
- [Machine Safety Systems and Components - Product Overview](#)
- [ABB Jokab Panorama US](#)
- [Orion safety light guards Reduce complexity and save time](#)
- [Orion safety light guards - Summary](#)
- [Pluto Safety PLCs - Product Overview](#)
- [Pluto Safety Controller for Harsh Enviroments](#)
- [Sentry Safety Relay Brochure](#)
- [Sentry Safety Relay Leaflet](#)
- [Safety Contact Mats](#)
- [Safety Switch Catalog](#)
- [Statusbus Brochure](#)
- [\(New\) Drawing Files](#)



# ABB Jokab Safety

## ABB Jokab Safety Literature

### Vertical Market Solutions and Products

- [Food and Beverage Industries - Machine Safeguarding Products](#)
- [Food and Beverage - Machine Safeguarding Solutions](#)
- [Packaging Industries - Machine Safeguarding Products](#)
- [Packaging industries - Machine Safeguarding Solutions](#)
- [Material Handling industries - Machine Safeguarding Products](#)
- [Material Handling industries - Machine Safeguarding Solutions](#)

### Application Examples

- [Application example - Total solution for a robotic training cell](#)
- [Application example - Supervision of hatches for composting machine with Eden and Pluto](#)
- [Application example - Supervision of multiple hatches for food and beverage industry with Eden and Pluto](#)
- [Application example - Speed monitoring of radio controlled vehicles with Pluto](#)



**Food and Beverage**  
Stainless steel, IP69k



**Packaging Industry**  
Diagnostics, modularity



**Material Handling**  
Conveyors, robots



**Industrial Manufacturing**  
Presses, robotics, plastics, etc.

# ABB Jokab Safety

## ABB Jokab Safety Literature

### European Catalogs (May differ from US offering)

- [Fencing system Quick-Guard \(European\)](#)

### Articles

- [Articles on Safe Bowling](#)
- [Articles on the Pluto D45](#)
- [Less is more when it comes to machine safety](#)

### Connection Diagrams and Certificates

- [Connection Diagrams and Certificates are available at the bottom of this page](#)

### Additional Information

- [Machine Directives, Sistema, Etc...](#)



Peter Lyzell from Industri-Teknik and Anders Dielar from ABB in front of installation and service vehicles.

## Pluto D45

Now Pluto D45 is here, more versatile than its predecessor B46, sharper than D20 and even monitoring analogue values like temperatures, levels, pressures and speeds in a safe way.

One company that has been waiting for Pluto D45 is Industri-Teknik Bengt Fridh AB in Arlööv outside Malmö, Sweden – a family business with around 25 employees. "You could almost say that we were first in line," says Peter Lyzell, who is electrical engineer at the company. Industri-Teknik manufactures burners and burner control systems for the process industry, and oil and gas boilers. The customer base is heavy industry including the petroleum and chemical industries.

"Actually, we deal with all industries that use heat, as well as the municipal district heating plants", Peter Lyzell continues. Our customers are spread all over the world. We export to countries like India, China and Brazil. "We usually use Pluto when a burner plant needs to be modernised, because of new requirements in the latest regulations for example." "Pluto is ideal to use when there is a need for safety functions. We have been using Pluto for the past seven, eight years."



Peter Lyzell from Industri-Teknik (Bengt Fridh, Andre Ahrensberg from E.ON, Helsingborg plant and Anders Dielar from ABB), in front of an equipment cabinet where Pluto is installed.



**ABB**