Coded Non-Contact Safety Sensor
Eden DYNAMIC

Application:

– Door and hatches
– Position control
– Sector detection

Features:

– Non-contact detection, 0-15 mm
– Up to 30 devices in series with PLe
– High level coded
– Local reset function
– Protection class IP69K

Eden Dynamic is a coded non-contact safety sensor used with a Vital safety module or a Pluto safety PLC. Eden consists of Adam and Eva.

Highest level of safety with less devices

Eden Dynamic makes it possible to reach a PLe:
– with only one Eden Dynamic per guard and with no need for periodic checks (see ISO/TR 24119) and
– with several Eden Dynamic and even other types of safety devices connected in series.
With Eva Unique Code, Eden Dynamic is a high level coded sensor to be used when the motivation to defeat the safety sensor is high (see EN ISO 14119:2013).

Reduced installation time

A local reset light button can be connected directly to Adam DYN-Reset, thus saving cable length and Vital safety modules/ PLC inputs. Adam DYN-Reset monitors the reset function and manages the reset lamp. Eden Dynamic large mounting tolerance, compact dimensions and 360° mounting possibility facilitate its placing. Its M12 connector speeds up installation and exchange.

Increased productivity

Eden Dynamic extensive indication and information output facilitates troubleshooting, thus reducing downtime. The large sensing distance gives a better tolerance to vibrations and minimises the risk of involuntary stops. With an IP69K protection class as standard and a wide operating temperature range, Eden Dynamic can withstand extreme environments.
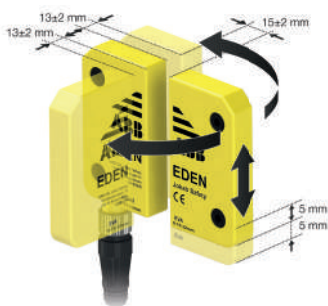
Flexible mounting and long sensing distance

Serial connection with individual reset.

Models and ordering data

Eva General code	2TLA020046R0800
Eva Unique code	2TLA020046R0900
Adam DYN-Info M12-5	2TLA020051R5100
Adam DYN-Reset M12-5	2TLA020051R5300
DA 1B Distance plate in yellow PBT	2TLA020053R0700
DA 2B Mounting spacer	2TLA020053R0300
DA 3A Converting plate for Eden E	2TLA020053R0600
Torque wrench	2TLA020053R0900

Technical data – Eden DYN

Functional Safety Data	
IEC/EN 61508-1...7	SIL3 - PFH_D 4.5 x 10^{-9}
EN 62061	SIL3
EN ISO 13849-1	PL e/Cat. 4
EN 14119	Type 4,
	High level coded with Eva Unique
	Low level coded with Eva general
Colour	Yellow and grey text
Weight	Eva: 70 g
	Adam M12: 80 g
Power supply	24 VDC +15% / -50%
Power consumption	30 mA at 24 VDC
Reset indication output	Max 30 mA
Information output	Max 15 mA
Transponder frequency	4 MHz
Max. switching frequency	1 Hz
EMC	EN 60947-5-3 :1999+A1:2005
Humidity range	35% to 85%
	(no icing, no condensation)
Ambient temperature	-40°C … +70°C (Storage)
	-40°C … +70°C (Operation)
Times	
Switch-on delay power on	2 s
Switch-on delay Eva in range	<100 ms
Switch-off delay Eva missing	< 30 ms
Risk time	< 30 ms
Protection class	IP67K and IP69K*
	* with 0.4 Nm torque on M12 contact
Detection distance	
Detection distance	0-15 ± 2 mm
(Hysteresis 1-2 mm)	
Assured release distance (Sar)	25 mm
Assured operating distance (Sao)	13 mm
Recommended distance between	
Adam and Eva	7-10 mm
Min. distance between 2 Eden	100 mm

The proximity of metal can influence the sensing distance. Use distance plates DA 1B to avoid it.

Material	Housing: Polybutylene terephthalate (PBT)
	Moulding: Epoxy
Connector	M12 5-pole male

Connections Adam DYN M12-5*

Brown (1)	+24 VDC
White (2)	Dynamic in
Blue (3)	0 VDC
Black (4)	Dynamic out
Grey (5)	Adam - Info: Information (24 VDC when LED green) Adam - Reset: Reset/indication

LED on Adam

Green:	Valid Eva within range, dyn. in OK
Flashing green:	Valid Eva within range, waiting for reset
Flashing red/green:	Valid Eva within range, dyn. in missing
Red:	Valid Eva out of range
Fast flashing green:	Valid Eva within 2 mm from max.
Flashing red:	No Eva programmed

Conformity	EN ISO 12100:2010,
	EN ISO 13849-1:2008,
	EN 62061:2005,
	EN 60204-1:2006+A1:2009,
	EN 60664-1:2007,
	EN 61000-6-2:2005,
	EN 61000-6-4:2007,
	EN 60947-5-3:1999+A1:2005,
	EN ISO 14119:2013,
	EN 61508:2010

* Note: Colours according to ABB Jokab Safety standard cables
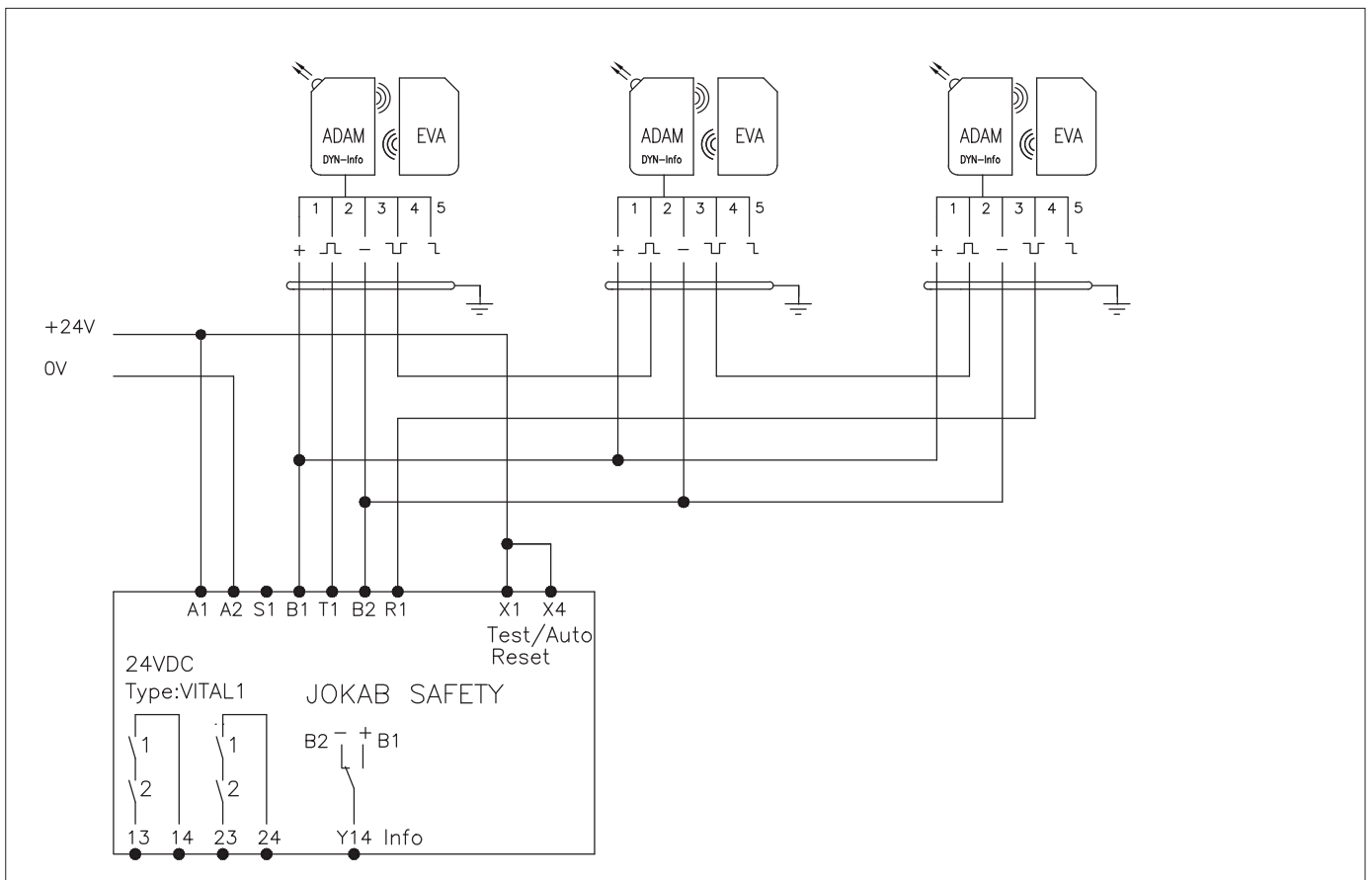
Eden dimensions
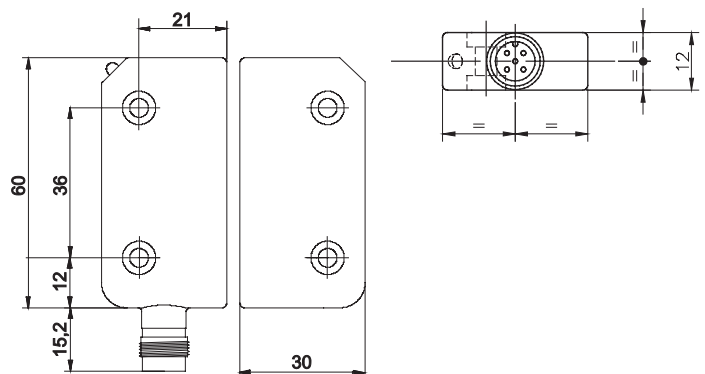
Adam DYN-Reset with illuminated reset button
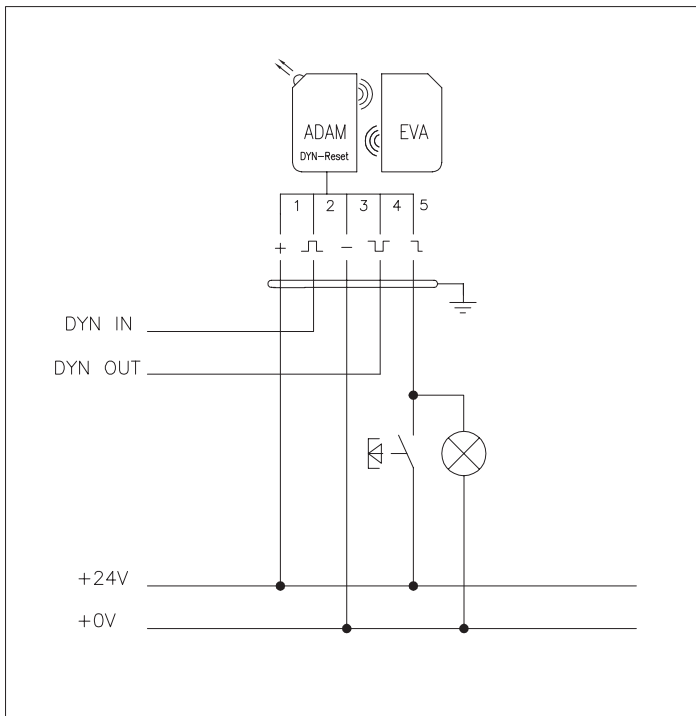
Several Adam DYN-Info connected in series to Vital 1 with automatic start

Contact us

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