

Coded Non-Contact Safety Sensor Eden OSSD



Approvals:



Application:

- Door and hatches
- Position control
- Sector detection

Features:

- Non-contact detection, 0-15 mm
- OSSD outputs and inputs for serial connection
- High level coded
- Local reset function
- Protection class IP69K

Eden OSSD is a coded non-contact safety sensor used as interlocking device. Eden consists of Adam and Eva.

Highest level of safety with less devices

Eden OSSD makes it possible to reach a PLe: with only one Eden OSSD per guard and no need for periodic checks (see ISO/TR 24119) and also, with up to 30 Eden OSSD connected in series.

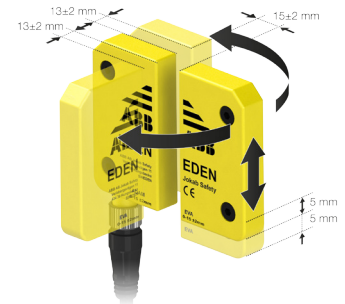
With Eva Unique Code, Eden OSSD is a high level coded sensor to be used when the motivation to defeat the safety sensor has not been totally eliminated (see EN ISO 14119:2013).

Reduced installation time

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

Increased productivity

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



Flexible mounting and long sensing distance.



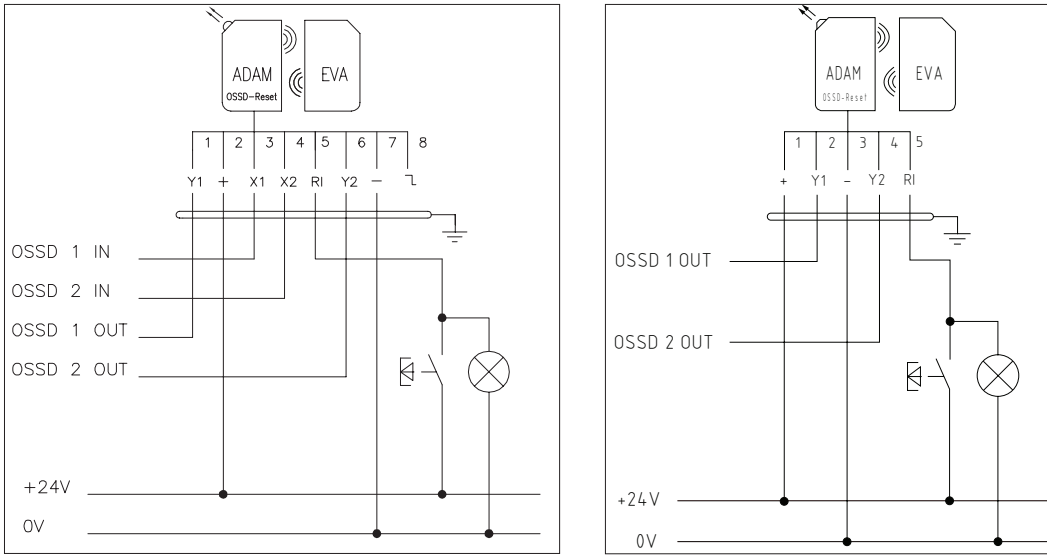
Serial connection of three Adam OSSD-Reset M12-8 through M12-3G/M12-3H and with individual Smile 12RG reset buttons.

Technical data

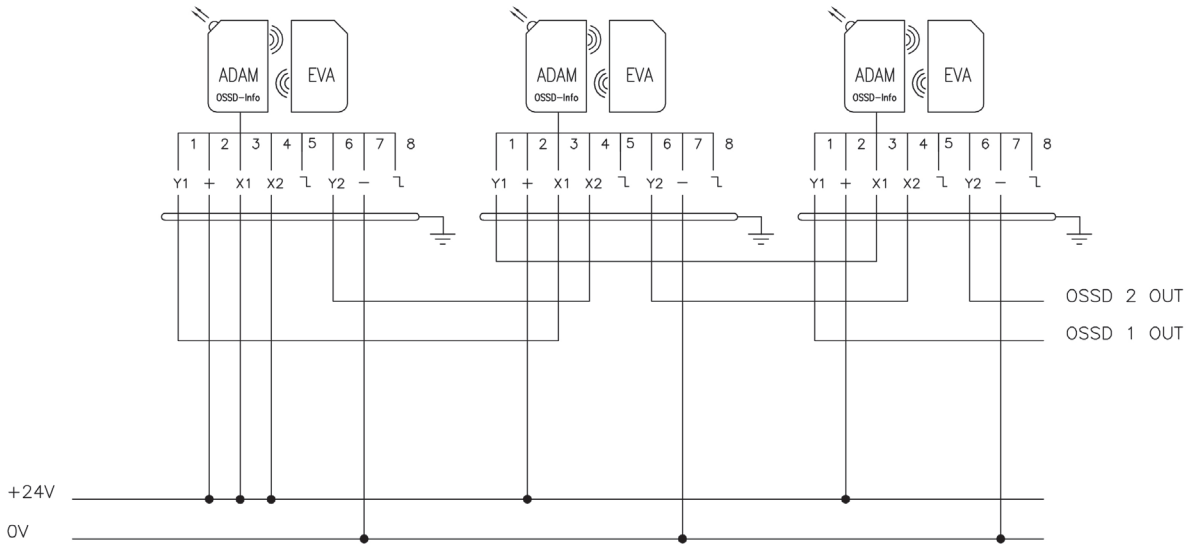
Functional safety data		Connections Adam OSSD M12-8*	
IEC/EN 61508:2010	SIL3 PFH _d 4.5 x 10 ⁻⁹	White (1)	OSSD out 1
EN 62061:2005	SIL3	Brown (2)	+24 VDC
EN ISO 13849-1:2008	PL e/Cat. 4	Green (3)	OSSD in 1
EN 14119:2013	Type 4	Yellow (4)	OSSD in 2
	High level coded with Eva Unique	Grey (5)	Adam - Info: Information**
	Low level coded with Eva general		Adam - Reset: Reset/Indication
Power supply		Pink (6)	OSSD out 2
Rated operating voltage	24 VDC +15% / -40%	Blue (7)	0 V
Total current consumption	30 mA at 24 VDC	Red (8)	Information**
Information/reset (pin 5)	max 30 mA	Connections Adam OSSD M12-5*	
Information (pin 8)	max 15 mA	Brown (1)	+24 VDC
OSSD output (1 and 2)	Max 50 mA per output	White (2)	OSSD out 1
		Blue (3)	0 V
		Black (4)	OSSD out 2
		Grey (5)	Adam - Info: Information**
			Adam - Reset: Reset/Indication
Electrical data		LED on Adam	
Transponder frequency	4 MHz	Green	Valid Eva within range (Safety circuit closed)
Max. switching frequency	1 Hz	Flashing green	Valid Eva within range, waiting for reset (Safety circuit open)
		Flashing red/green	Valid Eva within range, no valid in signal (Safety circuit open)
		Red	Valid Eva out of range (Safety circuit open)
		Fast flashing green	Valid Eva is within 2 mm from the maximum detection distance (Safety circuit closed)
		Fast flashing red	Fail-safe mode (Safety circuit open)
		Flashing red	No Eva programmed (Safety circuit open)
		Flashing red/red/green	Input channel fault (Safety circuit open)
Environmental data		* Colours according to ABB Jokab Safety standard cables	
EMC	EN 60947-5-3:1999+A1:2005	** +24 VDC when contact with Eva, 0 V otherwise	
Ambient temperature	-40°C ... +70°C (Storage)		
	-40°C ... +70°C (Operation)		
Humidity range	35 to 85% (no icing, no condensation)		
Times			
Switch-on delay power on	2 s		
Switch-on delay Eva in range	< 150 ms		
Switch-off delay Eva missing	< 30 ms, For each added unit: < 5ms		
Risk time	< 30 ms, For each added unit: < 5ms		
Mechanical data			
Colour	Yellow and grey text		
Weight	Eva: 70 g Adam M12: 80 g		
Protection class	IP67 and IP69K with a 0,6 Nm torque on M12 contact		
Material - Housing	Polybutylene terephthalate (PBT)		
Material - Moulding	Epoxy		
Connector	M12 5-pole male. M12 8-pole male		
Rated operating distance	0-15 ± 2 mm (Hysteresis 1-2 mm)		
Assured release distance (Sar)	25 mm		
Assured operating distance (Sao)	10 mm		
Recommended distance	7 mm ¹		
Min. distance between two Eden	100 mm		
Conformity		Dimensions	
	EN ISO 12100:2010		
	EN ISO 13849-1:2008/AC:2009		
	EN 62061:2005/A1:2013		
	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		

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

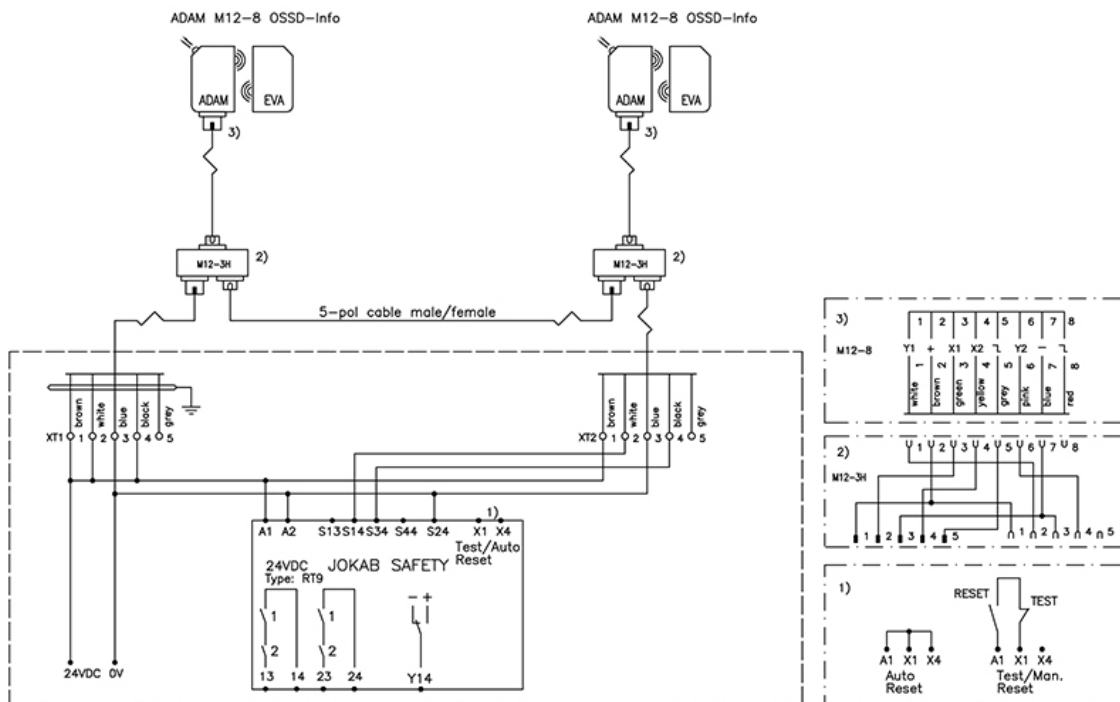
Adam OSSD-Reset with illuminated reset button



Several Adam OSSD-Info connected in series



Serial connection of two Adam OSSD-Info M12-8 through M12-3H



Models and ordering information

Models

Adam OSSD-Info M12-5	2TLA020051R5400	Adam OSSD with M12-5 connector and information signal on pin 5.
Adam OSSD-Info M12-8	2TLA020051R5700	Adam OSSD with M12-8 connector and information signal on pin 5 and pin 8.
Adam OSSD-Reset M12-5	2TLA020051R5600	Adam OSSD with M12-5 connector and possibility to connect a reset button to pin 5.
Adam OSSD-Reset M12-8	2TLA020051R5900	Adam OSSD with M12-8 connector, possibility to connect a reset button to pin 5 and info signal on pin 8.
Eva General code	2TLA020046R0800	All Eva general code have the same code and can easily be replaced with each other.
Eva Unique code	2TLA020046R0900	Each Eva has a unique code. To be used when a high level coded sensor is necessary.

Accessories

DA 3A	2TLA020053R0600	Mounting converting plate from Eden E to Eden OSSD or Eden DYN
SM4x20	2TLA020053R4200	Safety screw for mounting Adam and Eva
SBIT	2TLA020053R5000	Safety screwdriver bit
Smile 12RG Reset button	2TLA030053R2700	Reset button for Adam with 8 pins
Smile 12RF Reset button	2TLA030053R2600	Reset button for Adam with 5 pins
M12-3G	2TLA020055R0700	Y-connector for serial connection of Adam OSSD M12-8 with M12-8 cables
M12-3H	2TLA020055R0800	Y-connector for serial connection of Adam OSSD M12-8 with M12-5 cables
Torque wrench	2TLA020053R0900	For M12 contact

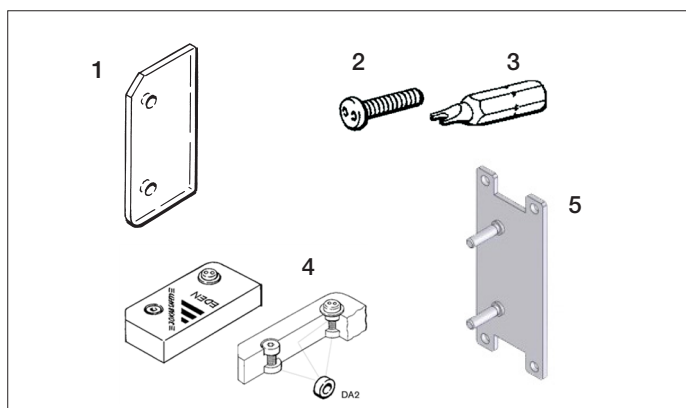
Spare parts

DA 1B	2TLA020053R0700	Distance plate in yellow PBT. 4 pcs delivered with Adam.
DA 2B	2TLA020053R0300	Mounting spacer. 4 pcs delivered with Adam and 4 with Eva.

Cables

M12-C61	2TLA020056R0000	Straight M12-5 female connector with 6 m shielded cable
M12-C101	2TLA020056R1000	Straight M12-5 female connector with 10 m shielded cable
M12-C201	2TLA020056R1400	Straight M12-5 female connector with 20 m shielded cable
M12-C112	2TLA020056R2000	Straight M12-5 female and male connectors with 1 m shielded cable.*
M12-C312	2TLA020056R2100	Straight M12-5 female and male connectors with 3 m shielded cable.*
M12-C612	2TLA020056R2200	Straight M12-5 female and male connectors with 6 m shielded cable.*
M12-C1012	2TLA020056R2300	Straight M12-5 female and male connectors with 10 m shielded cable.*
M12-C2012	2TLA020056R2400	Straight M12-5 female and male connectors with 20 m shielded cable.*
M12-C63	2TLA020056R3000	Straight M12-8 female connector with 6 m shielded cable
M12-C103	2TLA020056R4000	Straight M12-8 female connector with 10 m shielded cable
M12-C203	2TLA020056R4100	Straight M12-8 female connector with 20 m shielded cable
M12-C134	2TLA020056R5000	Straight M12-8 female and male connectors with 1 m shielded cable.
M12-C334	2TLA020056R5100	Straight M12-8 female and male connectors with 3 m shielded cable.

* Shielded cable connected to pin 3 (0 V) on male connector.



Accessories:

- 1 Protection plate DA 1B: 2TLA020053R0700
- 2 Safety screws, SM4 x 20: 2TLA020053R4200
- 3 SBIT: 2TLA020053R5000
- 4 DA 2B, Mounting spacer: 2TLA020053R0300
- 5 DA 3A, Mounting converting plate from Eden E: 2TLA020053R0600
Supplied with two nuts

Contact us

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