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 with no need for periodic checks (see ISO/TR 24119) and
- 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.
**Connections Adam OSSD M12-8**

- **White (1)**
- **Brown (2)**
- **Green (3)**
- **Yellow (4)**
- **Grey (5)**
- **Pink (6)**
- **Blue (7)**
- **Red (8)**

**OSSD out 1**: +24 VDC

**OSSD in 1**: OSSD in 1

**OSSD in 2**: OSSD in 2

**Adam - Info**: Information**

**Adam - Reset**: Reset/Indication

**LED on Adam**

- **Green**: Valid Eva within range (Safety circuit closed)
- **Flashing green**: Valid Eva within range, waiting for reset (Safety circuit open)
- **Flashing red/green**: Valid Eva within range, no valid input (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/green**: Input channel fault (Safety circuit open)

**Technical data – Eden OSSD**

**Level of safety**

- IEC/EN 61508:2010: SIL3 PFD<sub>avg</sub> 4.5 x 10<sup>-8</sup>
- EN 62061:2005: SIL3
- EN ISO 13849-1:2008: PL e/Cat. 4
- EN 14119:2013: Type 4

**Connections Adam OSSD M12-5**

- **Brown (1)**
- **White (2)**
- **Blue (3)**
- **Black (4)**
- **Grey (5)**

**OSSD out 1**: 0 V

**OSSD out 2**: OSSD out 2

**Adam - Info**: Information**

**Adam - Reset**: Reset/Indication

**LED on Adam**

- **Green**: Valid Eva within range (Safety circuit closed)
- **Flash green**: Valid Eva within range, waiting for reset (Safety circuit open)
- **Flash red/green**: Valid Eva within range, no valid input (Safety circuit open)
- **Red**: Valid Eva out of range (Safety circuit open)
- **Fast flash green**: Valid Eva is within 2 mm from the maximum detection distance (Safety circuit closed)
- **Fast flash red**: Fail-safe mode (Safety circuit open)
- **Flash red**: No Eva programmed (Safety circuit open)
- **Flash red/green**: Input channel fault (Safety circuit open)

**Power supply**

- **Rated operating voltage**: 24 VDC +15%/-50%
- **Total current consumption**
  - 30 mA at 24 VDC
  - 35 mA at 18 VDC
  - 45 mA at 12 VDC
- **Information/reset (pin 5)**
- **Information (pin 8)**

**Electrical data**

- **Max. switching frequency**: 1 Hz
- **Transponder frequency**: 4 MHz

**Environmental data**

- **EMC**: EN 60947-5-3:2013
- **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**: <100 ms
- **Switch-on delay Eva in range**: < 30 ms
- **Switch-off delay Eva missing**: < 30 ms
- **Risk time**: < 30 ms

**Mechanical data**

- **Colour**: Yellow and grey text
- **Weight**: Eva: 70 g Adam M12: 80 g
- **Protection class**: IP67 and IP69K
- **Material**
  - Housing: Polybutylene terephthalate (PBT)
  - 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)**
  - 13 mm
- **Recommended distance**
  - 7-10 mm

**Conformity**

- EN ISO 12100:2010
- EN ISO 13849-1:2008
- EN 62061:2005
- EN 60664-1:2007
- EN 61000-6-2:2005
- EN 61000-6-4:2007
- EN ISO 14119:2013

* Colours according to ABB Jokab Safety standard cables
** +24 VDC when OSSD high, 0 V otherwise
Several Adam OSSD-Info connected in series

Note: It is possible to mix different models of Adam OSSD and Eva in the same circuit.
## Models and ordering information

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

## Accessories

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<tbody>
<tr>
<td>DA 1 2TLA020053R0000</td>
<td>Distance plate in clear polycarbonate</td>
</tr>
<tr>
<td>SM4x20 2TLA020053R4200</td>
<td>Safety screw for mounting Adam and Eva</td>
</tr>
<tr>
<td>SBTS 2TLA020053R5000</td>
<td>Safety screwdriver bit</td>
</tr>
<tr>
<td>Smile 12RG Reset button 2TLA030036R2700</td>
<td>Reset button for Eden with 8 pins</td>
</tr>
<tr>
<td>Smile 12RF Reset button 2TLA030036R2600</td>
<td>Reset button for Eden with 5 pins</td>
</tr>
<tr>
<td>M12-3G 2TLA020055R0700</td>
<td>Y-connector for serial connection</td>
</tr>
<tr>
<td>Torque wrench 2TLA020053R0900</td>
<td>For M12 contact</td>
</tr>
</tbody>
</table>

## Spare parts

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<tbody>
<tr>
<td>DA 1B 2TLA020053R0700</td>
<td>Distance plate in yellow PBT. 4 pcs delivered with Adam.</td>
</tr>
<tr>
<td>DA 2B 2TLA020053R0300</td>
<td>Mounting spacer. 4 pcs delivered with Adam and 4 with Eva.</td>
</tr>
</tbody>
</table>

## Cables

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

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