

# Safe light grid solution for body detection

## Orion, Sentry and contactors

- **Mimimized cabling**
- **Simple adjustment**
- **Fast connection**



### Application

On machines where frequent entry is required, or easy access for material is needed, an opening with optical protective devices is often a practical solution.

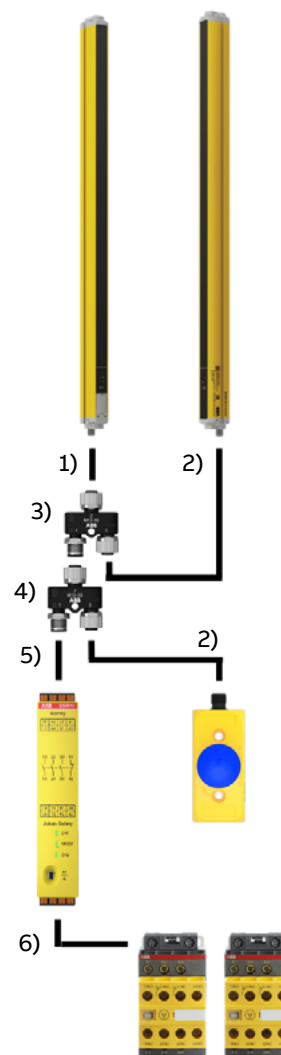
Light curtains with short distances between beams can be used for hand/finger detection or when there is a need to place the light curtain closer to the machine. But in this example we only need body detection, so a light grid is used instead. A local reset button can be connected directly to the light grid and a simple safety relay is sufficient for monitoring the light grid.

Redundant safety contactors are used to cut power to the machine.

### Functional safety level

The solution fulfills the maximum safety level - up to Category 4, PL e according to EN ISO 13849-1 and up to SIL 3 according to EN 62061.

- 1) M12-Cx34 cable
- 2) M12-Cx12 cable
- 3) M12-3D Y-connector
- 4) M12-3R Y-connector
- 5) M12-Cx1 cable
- 6) Includes EDM (external device monitoring) to monitor the state of the contactors





**Orion2-4-K2-080-B**

**Orion2 Base light grid**

Choose the height/number of beams for the light grid. Transmitter and receiver is included on one order code.

Detection	Protected height mm	Type (Transmitter + Receiver)	Order code
Body	500 (2 beams)	Orion2-4-K2-050-B	2TLA022304R0000
	800 (3 beams)	Orion2-4-K2-080-B	2TLA022304R0100
	900 (4 beams)	Orion2-4-K2-090-B	2TLA022304R0200
	1200 (4 beams)	Orion2-4-K2-120-B	2TLA022304R0300

For alternative optical safety devices, please see [Safety Products catalog](#).



**Sentry SSR10P**

**Sentry safety relay**

Choose between standard screw terminals or push-in terminals

Description	Type	Order code
Single function safety relay with screw terminals	Sentry SSR10	2TLA010050R0000
Single function safety relay with push-in terminals	Sentry SSR10P	2TLA010050R0001



**Smile 11RO2**

**Smile reset button**

Description	Type	Order code
Reset button in compact housing with NO contact and M12 connector. Five filters in different colors are included.	Smile 11RO2	2TLA022316R3100



**M12-3D**

**Connection accessories**

Y-connectors for simplifying installation

Description	Type	Order code
Y-connector for easy connection of transmitter and receiver for an Orion light guard	M12-3D	2TLA020055R0300
Y-connector for connection of a Smile reset button to Orion light guards	M12-3R	2TLA022316R0000



**M12-C31**

**Cable with connectors**

Connector	Suitable for	Female/male	Length	Type	Order code
M12-5	M12-3R to Sentry	Female	3 m	M12-C31	2TLA020056R0500
			10 m	M12-C101	2TLA020056R1000
	Orion2 Base transmitter to M12-3D, and Smile to M12-3R	Female + male	1 m	M12-C112	2TLA020056R2000
			3 m	M12-C312	2TLA020056R2100
			10 m	M12-C1012	2TLA020056R2300
M12-8	Orion2 Base receiver to M12-3D	Female + male	1 m	M12-C134	2TLA020056R5000
			3 m	M12-C334	2TLA020056R5100
			10 m	M12-C1034	2TLA020056R7700

Note that alternative cable lengths exist, please see [Safety Products catalog](#).



**AFS09**

**Safety contactors**

The AFS contactors are dedicated for safety applications. See [product sheet](#) for range and selection.

## Links

### Product sheets

[Orion2 Base flyer](#)  
[Sentry flyer](#)  
[AF contactors for safety applications](#)

### Web pages

[Orion2 Base](#)  
[Sentry SSR10](#)  
[Smile 11RO](#)  
[M12-3D](#)  
[M12-3R](#)  
[Contactors for safety applications - Motor protection and control](#)

### Connection diagrams

[Sentry connection diagrams with most safety devices](#)  
[Orion connection diagrams \(see page 9\)](#)

### Manuals

[Orion2 Base](#)  
[Sentry SSR10](#)  
[Orion connection accessories instructions \(M12-3R, Smile 11RO2\)](#)