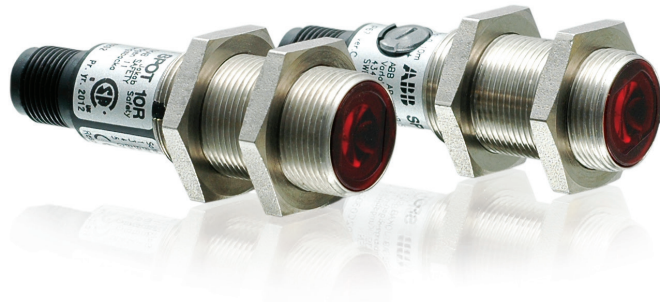


# Safety Light Beam Spot 10



## Approvals:



## Application:

- Photoelectric guarding of an entrance or around a risk area

## Features:

- Type 4 according to EN 61496 with Vital/Pluto
- Versatile mounting
- LED indication
- IP67
- 10 m range

**Spot 10 is a light beam mainly used for body detection. It consists of a transmitter and a receiver and must be connected to Pluto safety PLC or Vital safety controller.**

### Maximum flexibility

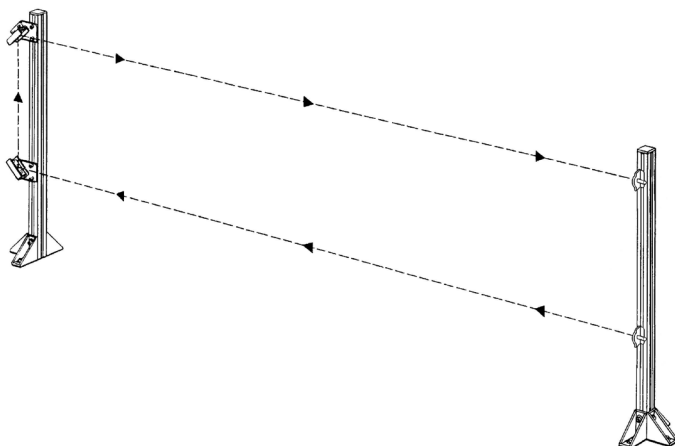
Create your own light grid with minimal cabling and only one safety control module: up to 6 beams can be connected in series to a Vital while maintaining PL e. Spot can also be connected in series with Eden safety sensor and Smile Tina emergency stop buttons, thus reaching PL e with only one Vital safety control module.

### Reduced installation time

Spot 10 is very compact and therefore easy to place. M12 and Y connectors speed up the installation. Brackets, posts and mirrors simplifies mounting and makes it easy to create a suitable light beam setup. Note that each mirror used to deflect the light beam reduces the sensing distance by approx. 20%.

### Reduced troubleshooting

LED indication on the transmitter and receiver shows if the units are in contact and simplifies alignment. The same information is also available from an output of the receiver and can easily be sent to eg. a PLC or a HMI, thus reducing troubleshooting time for the operator.



- 2 beam light grid with
- 1 Spot 10
  - 2 JSM64 brackets
  - 2 JSM7A mirrors + 2 JSM60-L + 2 JSM9
  - 2 JSMA44-L aluminum posts



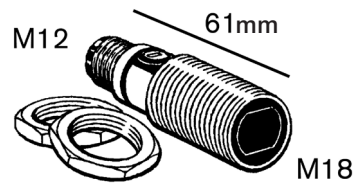
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# Technical data

<b>Functional safety data</b>	
EN/IEC 61496	Type 4 with Vital/Pluto
EN ISO 13849-1	PL e/Cat. 4
PFH <sub>d</sub>	1.14x10 <sup>-8</sup>
<b>Conformity</b>	
	EN ISO 12100:2010, EN ISO 13849-1:2008, EN 62061:2005, EN 61508:2010, EN 60204-1:2006+A1:2009, EN 61496-1:2004+A1:2008, EN 60664-1:2007, EN 61000-6-2:2005, EN 61000-6-4:2007
<b>Certifications</b>	
	TÜV Nord (pending), cCSAus
<b>Power supply</b>	
Rated operating voltage	17 – 27 VDC, ripple ±10% (SELV/PELV)
Current consumption	
Transmitter	< 25 mA
Receiver	< 15 mA
Output currents	
Info. output	10 mA max.
Dynamic signal out	30 mA max.
<b>Optical data</b>	
Light source	Red visible light, 660 nm, <±2,5
Optical power	< 0.1 mW
<b>Mechanical data</b>	
Colour	Steel grey
Weight	2 x 21 g
Protection class	IP67
Range	0 - 10 m
Range adjustment	Trim pot. on transmitter
Installation	2xM18 nuts (provided)
Operating temperature range	-25°C to +65°C
Casing Material	Steel housing with polyacryl lens protection.
Cable connection	M12 fixed connector

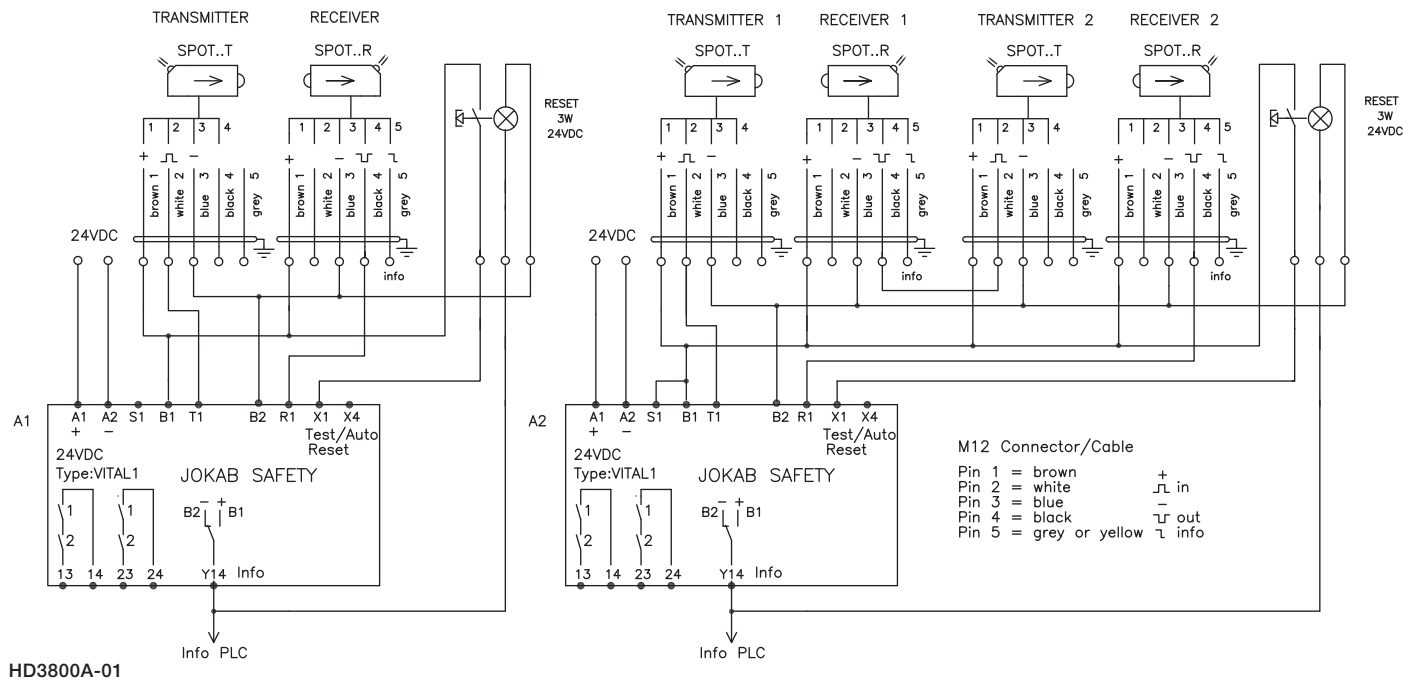
<b>Connections</b>	
Transmitter:	
Brown (1)	+24 VDC
White (2)	Dynamic signal in
Blue (3)	0 V
Receiver:	
Brown (1)	+24 VDC
White (2)	Not used
Blue (3)	0 V
Black (4)	Dynamic signal out
Grey (5)	Info output
	Info output is +24 VDC (tolerance -2 VDC) when alignment is OK.
	Info output is 0 V (tolerance +2 VDC) when misaligned or beam is interrupted.
<b>Led indication</b>	
Green LED on transmitter On	Power supply OK
Green LED on receiver On	Alignment OK, safety circuit closed
Flashing	Alignment OK, safety circuit open before this unit
Off	Misaligned or beam interrupted, safety circuit open
<b>Serial connection</b>	
With Vital	Up to 6 Spot light beams can be connected in series while maintaining PL e.
With Pluto	No serial connection allowed.



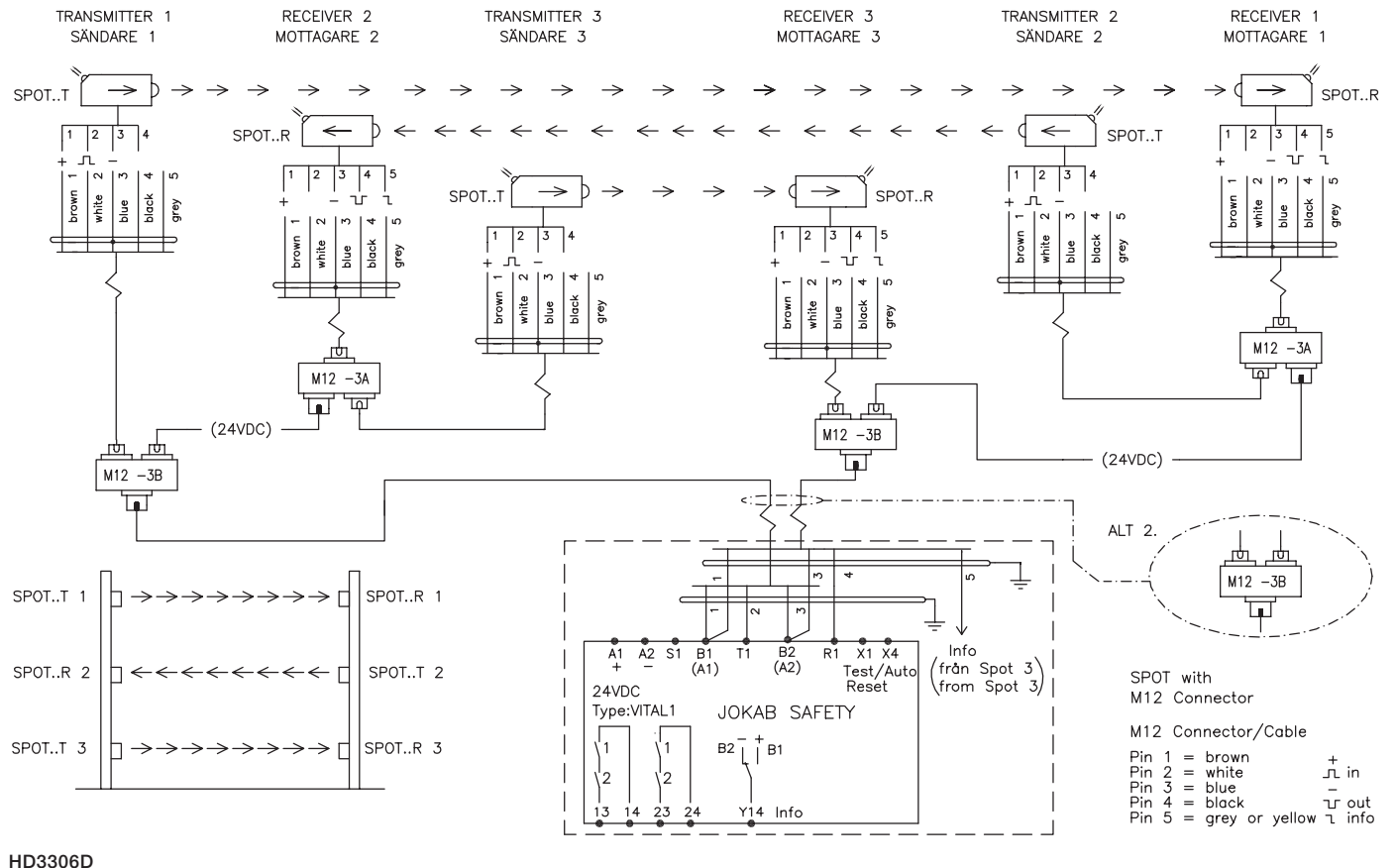
Spot 10 T/R

# Connection examples

## Connection of Spot T/R to Vital 1



## Vital 1 with 3 lightbeams Spot



# Models and ordering information

## Models

Spot 10 T/R	2TLA020009R0600	Spot 10 T/R Safety Light Beam
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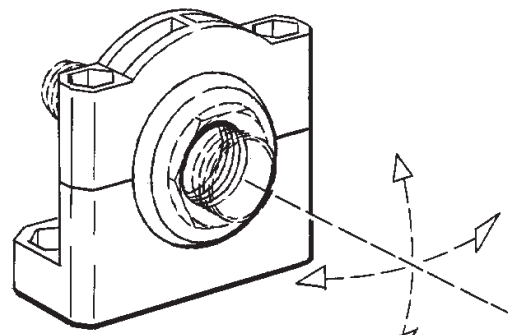
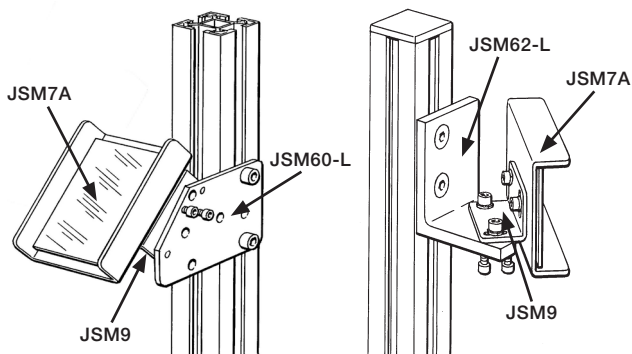
## Accessories

JSM64	2TLA040007R0200	Adjustable mounting bracket with rotational knuckle for 18 mm barrel style sensors.
JSM60-L	2TLA040003R0000	Bracket for JSM9 for vertical angling. Includes screws for profile.
JSM62-L	2TLA040004R0000	Bracket for JSM9 for horizontal angling around a machine. Includes screws for profile.
JSM7A	2TLA040006R0500	Mirror for 0-20 m, adjustable mirror plate. Dimensions: 115 × 80 × 30 mm. Screws for bracket included.
JSM9	2TLA040007R0000	Bracket for mirror.
M12-3A	2TLA020055R0000	M12 Y connector for series connection of dynamic safety devices such as Spot 10
M12-3B	2TLA020055R0100	M12 Y connector for the parallel connection of 2 pcs of dynamic safety devices such as Spot 10
Torque wrench	2TLA020053R0900	For M12 connector
J SMA44-L	2TLA040001R1000	Aluminum post 44x44x1300 mm with 3 feet brackets and end caps.
J SMA44A-L	2TLA040001R1100	Aluminum post 44x44x1100 mm with 3 feet brackets and end caps.

## 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-C61 V	2TLA020056R0100	6 m cable 5 × 0.34 mm <sup>2</sup> + screen with angled M12 female connector.
M12-C101 V	2TLA020056R1100	10 m cable 5 × 0.34 mm <sup>2</sup> + screen with angled M12 female connector.
C5	2TLA020057R0000	Cable 5 × 0.34 mm <sup>2</sup> + screen, specify length.
M12-C01	2TLA020055R1000	Straight M12-5 pole female connector with cable screw connection. Cable diameter range 2.5–6.5 mm.
M12-C02	2TLA020055R1100	Straight M12-5 pole male connector with cable screw connection. Cable diameter range 2.5–6.5 mm.

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



**JSM64**  
Pivot M18 bracket for Spot 10

Mirrors, mounting brackets and profiles are available to facilitate mounting.

**NOTE!** Every mirror reduces the sensing distance of the beam by approx. 20%.

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