

Orion safety light guards  
Reduce complexity and save time

# The Orion series -

A complete range of safety light curtains and light grids



## Orion1

The **Orion1 light curtains** are used for finger or hand detection (14 mm and 30 mm), usually quite close to the dangerous machine.

Orion1 Base



## Orion2

The **Orion2 light grids** are used for body detection, usually for access protection.

With a 50 m operating distance, they are appropriate to be used with deviating mirrors.



## Orion3

The **Orion3 light grids** are used for body detection, usually for access protection.

Transmitter and receiver are both in the same active unit. The beams are reflected by the passive unit.

Orion3 reduce the need for cabling: only the active unit has to be connected.



## Base or Extended

All Orion models are available as **Base** and **Extended**.

Base models	Extended models
Detection	Detection
Local reset	Local reset
EDM	EDM
	Muting or Blanking

Orion1 Extended

## Reduce complexity

- No more functions or settings than necessary.
- A local reset button can be connected directly to the light curtain: no need for cable between the reset button and the electrical cabinet or for an extra control module.
- Each light curtain can monitor the actuators without any extra control module (EDM function).
- Muting sensors are connected directly to the Extended models, with no need for a remote muting module.
- No dead zone: the resolution is guaranteed along the whole length of the Orion1 Extended with no need for extra mechanical guard.
- Cascading with Orion1 Extended standard units, no separate slave or master units.

## Speed up installation

- Alignment help with digital strength values and a wider alignment detection angle facilitate alignment.
- Rotation brackets simplify alignment too.
- M12 connectors speed up cabling.

## Reduce downtime

- Since the alignment level is displayed on the unit, the alignment can be improved before an unwanted stop occurs.
- Extensive error indication reduces troubleshooting time.
- Protective tubes and lens shields protect the devices in harsh environments.
- Coding protects Orion1 Extended against mutual interferences.

### Blanking

When an object is allowed to always be in the detection zone during normal operation. A finger or a hand will stop the machine though.

### Coding

When light guards should be placed close to each other without disturbing each other.

### EDM (External device monitoring)

Possibility to connect e.g. contactors to the light guards and still reach the highest level of safety.

### Local reset

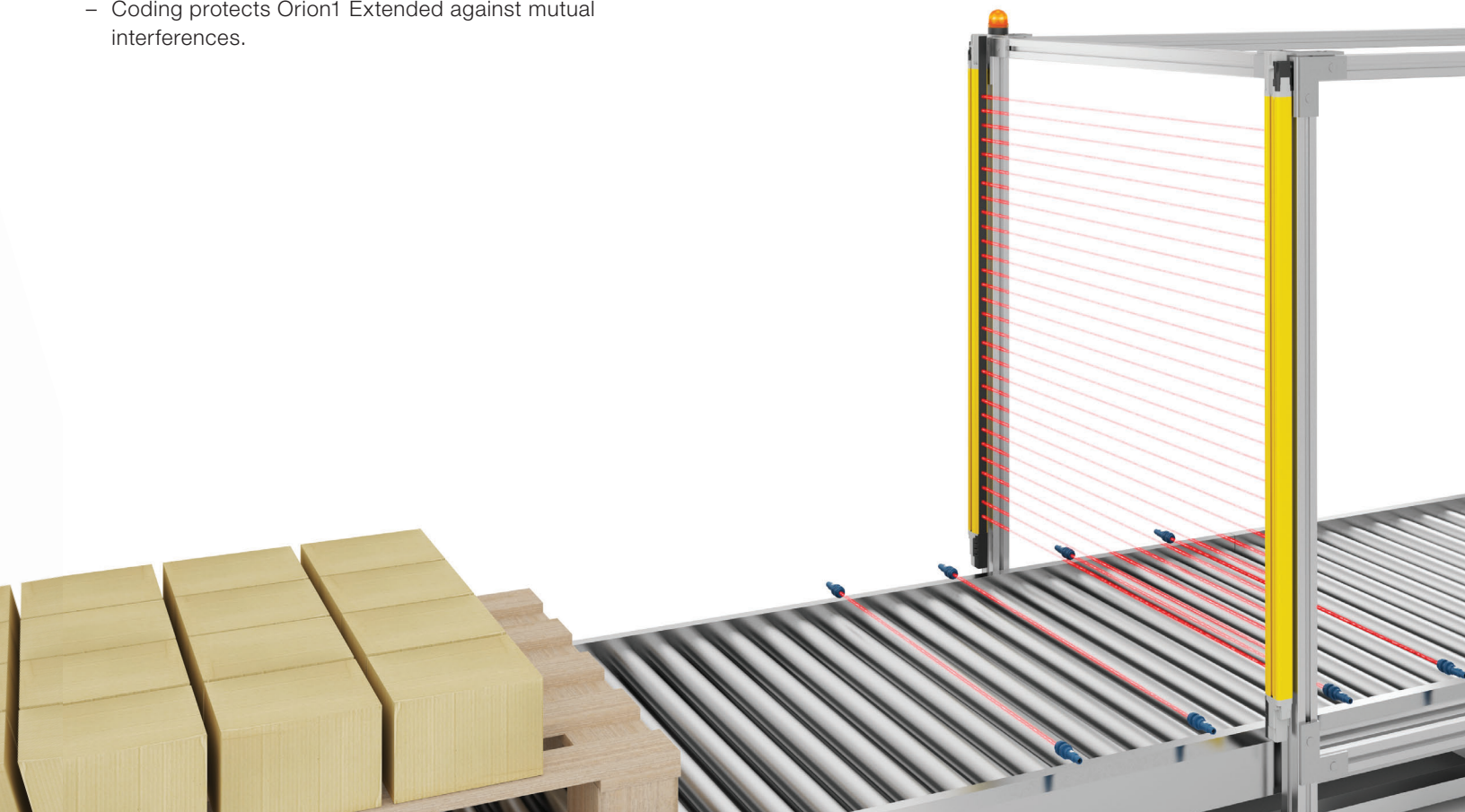
Possibility to connect a reset button to the light guard.

### Muting

When goods may go through the light guard without stopping the machine and a person may not.

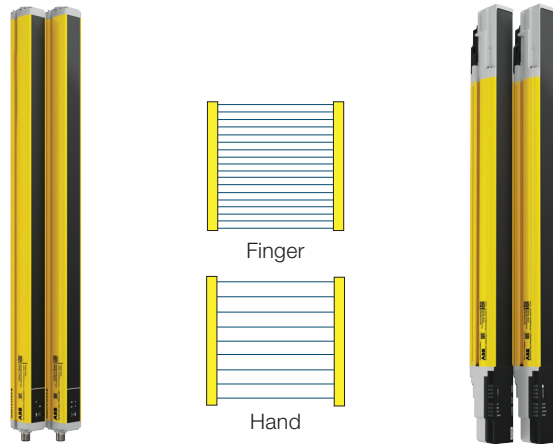
### No dead zone

The detection zone is as long as the device.







# Orion overview

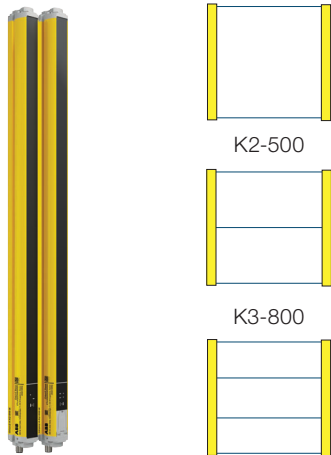
## Orion1 - Light curtains, Transmitter + Receiver - Slim profile



Orion1 Extended requires special cables.

	Orion1 Base		Orion1 Extended	
Type of detection				
Resolution	Finger 14 mm	Hand 30 mm	Finger 14 mm	Hand 30 mm
Type 4	<b>Orion1-4-14-xxx-B</b>	<b>Orion1-4-30-xxx-B</b>	<b>Orion1-4-14-xxx-E</b>	<b>Orion1-4-30-xxx-E</b>
Protected height	150 -1800 mm (150 mm steps) xxx= 015-180 cm (15 cm steps)	150 -1800 mm (150 mm steps) xxx= 015-180 cm (15 cm steps)	300 - 1800 mm (150 mm steps) xxx= 030-180 cm (15 cm steps)	300 - 1800 mm (150 mm steps) xxx= 030-180 cm (15 cm steps)
Function				
Range	6 m	19 m	7 m	20 m
Auto/Manual reset	X	X	X	X
EDM	X	X	X	X
Muting			X	X
Override			X	X
Integrated muting lamp				
Blanking			X	X
No dead zone			X	X
Coding			X	X
Cascading			X	X
Don't forget to order				Cables for Transmitter (M12-C02PT2T) and Receiver (Blanking or no function: M12-C02PT6RB, Muting: M12-C02PT62RM)
Accessories				
Cables (female connector on the cable)	Transmitter: M12-5 poles Receiver: M12-8 poles		Transmitter: M12-5 poles Receiver Blanking: M12-12 poles Receiver Muting: M12-12 + M12-5 poles	
Protective tube	Orion WET xxx		-	
Protective stand	Orion Stand		Orion Stand	
Lens shield	Orion Shield-xxx		-	
Deviating Mirror	Orion1 Mirror + Orion Stand + JSM Orion11		Orion1 Mirror + Orion Stand + JSM Orion11	
Laser pointer	Orion Laser Pointer		Orion Laser Pointer	
Rotation bracket	JSM Orion03		-	

**Orion2 - Light grids, Transmitter + Receiver - Slim profile**

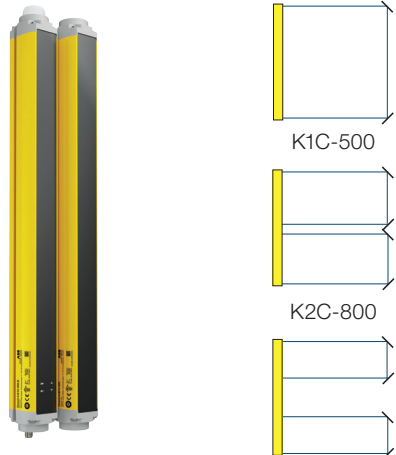


K2-500

K3-800

K4-900/K4-1200

**Orion3 - Light grids, Active + passive units - Sturdy profile**



K1C-500


K2C-800

K2C-900/K2C-1200

The two units are ordered separately.

**Accessories**

Orion Laser Pointer



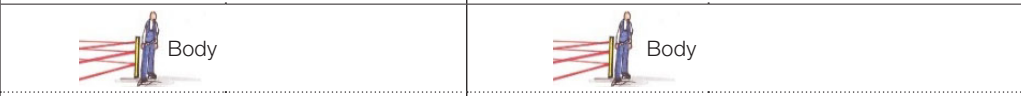
JSM Orion03



JSM Orion04



<b>Orion2 Base</b>	<b>Orion2 Extended</b>	<b>Orion3 Base</b>	<b>Orion3 Extended</b>
--------------------	------------------------	--------------------	------------------------



Orion2-4-Kx-xxx-B	Orion2-4-Kx-xxx-E	Orion3-4-KyC-xxx-B	Orion3-4-KyC-xxx-E
K2-050: 500 mm K3-080: 800 mm K4-090: 900 mm K4-120: 1200 mm	K2-050: 500 mm K3-080: 800 mm K4-090: 900 mm K4-120: 1200 mm	K1C-050: 500 mm K2C-080: 800 mm K2C-090: 900 mm K2C-120: 1200 mm	K1C-050: 500 mm K2C-080: 800 mm K2C-090: 900 mm K2C-120: 1200 mm

JSM Orion05



50 m	50 m	8 m (K2C-090: 6.5m)	8 m (K2C-090: 6.5m)
X	X	X	X
X	X	X	X
	X		X
	X		X
	X		X

Orion Mirror Kxxx



	Passive unit Orion3-4-MyC-xxx
Transmitter: M12-5 poles Receiver: M12-8 poles	Active unit: M12-8 poles
Orion WET Kxxx	-
Orion Stand	Orion Stand
Orion Shield-Kxxx	-
Orion Mirror Kxxx	Orion Mirror Kxxx
Orion Laser Pointer	Orion Laser Pointer
JSM Orion04	JSM Orion05

Orion Stand



# Ordering information

<b>Orion1 Base - Transmitter + Receiver</b>	Article number	Resolution	Height
Orion1-4-14-015-B	2TLA022300R0000	14 mm	150 mm
Orion1-4-14-030-B	2TLA022300R0100	14 mm	300 mm
Orion1-4-14-045-B	2TLA022300R0200	14 mm	450 mm
Orion1-4-14-060-B	2TLA022300R0300	14 mm	600 mm
Orion1-4-14-075-B	2TLA022300R0400	14 mm	750 mm
Orion1-4-14-090-B	2TLA022300R0500	14 mm	900 mm
Orion1-4-14-105-B	2TLA022300R0600	14 mm	1050 mm
Orion1-4-14-120-B	2TLA022300R0700	14 mm	1200 mm
Orion1-4-14-135-B	2TLA022300R0800	14 mm	1350 mm
Orion1-4-14-150-B	2TLA022300R0900	14 mm	1500 mm
Orion1-4-14-165-B	2TLA022300R1000	14 mm	1650 mm
Orion1-4-14-180-B	2TLA022300R1100	14 mm	1800 mm
Orion1-4-30-015-B	2TLA022302R0000	30 mm	150 mm
Orion1-4-30-030-B	2TLA022302R0100	30 mm	300 mm
Orion1-4-30-045-B	2TLA022302R0200	30 mm	450 mm
Orion1-4-30-060-B	2TLA022302R0300	30 mm	600 mm
Orion1-4-30-075-B	2TLA022302R0400	30 mm	750 mm
Orion1-4-30-090-B	2TLA022302R0500	30 mm	900 mm
Orion1-4-30-105-B	2TLA022302R0600	30 mm	1050 mm
Orion1-4-30-120-B	2TLA022302R0700	30 mm	1200 mm
Orion1-4-30-135-B	2TLA022302R0800	30 mm	1350 mm
Orion1-4-30-150-B	2TLA022302R0900	30 mm	1500 mm
Orion1-4-30-165-B	2TLA022302R1000	30 mm	1650 mm
Orion1-4-30-180-B	2TLA022302R1100	30 mm	1800 mm

<b>Orion1 Extended - Transmitter + Receiver</b>	Article number	Resolution	Height
Orion1-4-14-030-E	2TLA022301R0100	14 mm	300 mm
Orion1-4-14-045-E	2TLA022301R0200	14 mm	450 mm
Orion1-4-14-060-E	2TLA022301R0300	14 mm	600 mm
Orion1-4-14-075-E	2TLA022301R0400	14 mm	750 mm
Orion1-4-14-090-E	2TLA022301R0500	14 mm	900 mm
Orion1-4-14-105-E	2TLA022301R0600	14 mm	1050 mm
Orion1-4-14-120-E	2TLA022301R0700	14 mm	1200 mm
Orion1-4-14-135-E	2TLA022301R0800	14 mm	1350 mm
Orion1-4-14-150-E	2TLA022301R0900	14 mm	1500 mm
Orion1-4-14-165-E	2TLA022301R1000	14 mm	1650 mm
Orion1-4-14-180-E	2TLA022301R1100	14 mm	1800 mm
Orion1-4-30-030-E	2TLA022303R0100	30 mm	300 mm
Orion1-4-30-045-E	2TLA022303R0200	30 mm	450 mm
Orion1-4-30-060-E	2TLA022303R0300	30 mm	600 mm
Orion1-4-30-075-E	2TLA022303R0400	30 mm	750 mm
Orion1-4-30-090-E	2TLA022303R0500	30 mm	900 mm
Orion1-4-30-105-E	2TLA022303R0600	30 mm	1050 mm
Orion1-4-30-120-E	2TLA022303R0700	30 mm	1200 mm
Orion1-4-30-135-E	2TLA022303R0800	30 mm	1350 mm
Orion1-4-30-150-E	2TLA022303R0900	30 mm	1500 mm
Orion1-4-30-165-E	2TLA022303R1000	30 mm	1650 mm
Orion1-4-30-180-E	2TLA022303R1100	30 mm	1800 mm

<b>Orion2 Base - Transmitter + Receiver</b>	Article number	No of beams	Height
Orion2-4-K2-050-B	2TLA022304R0000	2	500 mm
Orion2-4-K3-080-B	2TLA022304R0100	3	800 mm
Orion2-4-K4-090-B	2TLA022304R0200	4	900 mm
Orion2-4-K4-120-B	2TLA022304R0300	4	1200 mm

<b>Orion2 Extended - Transmitter + Receiver</b>	Article number	No of beams	Height
Orion2-4-K2-050-E	2TLA022305R0000	2	515 mm
Orion2-4-K3-080-E	2TLA022305R0100	3	815 mm
Orion2-4-K4-090-E	2TLA022305R0200	4	915 mm
Orion2-4-K4-120-E	2TLA022305R0300	4	1215 mm

<b>Orion3 Base - Active unit</b>	Article number	No of beams	Height
Orion3-4-K1C-050-B	2TLA022306R0000	2	500 mm
Orion3-4-K2C-080-B	2TLA022306R0100	3	800 mm
Orion3-4-K2C-090-B	2TLA022306R0200	4	900 mm
Orion3-4-K2C-120-B	2TLA022306R0300	4	1200 mm

<b>Orion3 Extended - Active unit</b>	Article number	No of beams	Height
Orion3-4-K1C-050-E	2TLA022307R0000	2	500 mm
Orion3-4-K2C-080-E	2TLA022307R0100	3	800 mm
Orion3-4-K2C-090-E	2TLA022307R0200	4	900 mm
Orion3-4-K2C-120-E	2TLA022307R0300	4	1200 mm

<b>Orion3 - Passive unit (mirror)</b>	Article number	Height
Orion3-4-M1C-050	2TLA022306R1000	500 mm
Orion3-4-M2C-080	2TLA022306R1100	800 mm
Orion3-4-M2C-090	2TLA022306R1300	900 mm
Orion3-4-M2C-120	2TLA022306R1400	1200 mm



4 Orion safety light guards

## Accessories

			Orion1 Base	Orion1 Extended	Orion2 Base & Extended	Orion3 Base & Extended
Orion TP-14	2TLA022310R5200	Orion Test Piece 14 mm	X	X		
Orion TP-30	2TLA022310R5300	Orion Test Piece 30 mm	X	X		
Orion Laser	2TLA022310R5000	Orion Laser pointer	X	X	X	X
JSM Orion01	2TLA022310R0000	4 standard brackets for Orion1 & Orion2	X	X	X	
JSM Orion02	2TLA022310R1000	4 standard brackets for Orion3				X
JSM Orion03	2TLA022310R0100	4 rotation brackets for Orion1 Base	X			
JSM Orion04	2TLA022310R0200	4 rotation brackets for Orion2			X	
JSM Orion05	2TLA022310R0300	4 rotation brackets for Orion3				X
JSM Orion06	2TLA022310R0400	Kit for mounting of Orion1 & Orion2 in Stand (4 pieces)	X	X	X	
JSM Orion07	2TLA022310R0500	Kit for mounting of Orion1 & Orion2 in Stand (6 pieces)	X	X	X	
JSM Orion08	2TLA022310R0600	Kit for mounting of Orion3 in Stand (4 pieces)				X
JSM Orion09	2TLA022310R0700	Kit for mounting of Orion3 in Stand (6 pieces)				X
JSM Orion11	2TLA022310R0900	Kit for mounting of Orion1 Mirror in Stand	X	X		
Orion WET*		Protective tube	X		X	
Orion Shield*		Lens shield	X		X	
Orion Mirror K*		Deviating mirrors in stand			X	X
Orion1 Mirror*		Deviating mirror to be mounted in Orion Stand with 1 kit JSM Orion11	X	X		
Orion Stand*		Protective stand	X	X	X	X
Orion Stand Plate	2TLA022312R5000	Orion Plate kit for adjustment of protective stand				

\* These accessories are available in different sizes. More information on [www.abb.com/jokabsafety](http://www.abb.com/jokabsafety)

## Cables

			Orion1 Base	Orion1 Extended	Orion2 Base & Extended	Orion3 Base & Extended
M12-C02PT2T	2TLA022315R0100	Transmitter cable for Orion1 Extended		X		
M12-C02PT6RB	2TLA022315R0200	Receiver cable for Orion1 Extended when no muting		X		
M12-C02PT62RM	2TLA022315R0300	Receiver cable for Orion1 Extended when muting		X		
PT-C1PT	2TLA022315R1000	Cascade cable for Orion1 Extended, 1 m		X		
PT-C05PT	2TLA022315R1100	Cascade cable for Orion1 Extended, 0.5 m		X		
PT-C005PT	2TLA022315R1200	Cascade cable for Orion1 Extended, 0.05 m		X		
M12-C61	2TLA020056R0000	Straight M12-5 female connector with 6 m shielded cable	X	X	X	X
M12-C101	2TLA020056R1000	Straight M12-5 female connector with 10 m shielded cable	X	X	X	X
M12-C201	2TLA020056R1400	Straight M12-5 female connector with 20 m shielded cable	X	X	X	X
M12-C63	2TLA020056R3000	Straight M12-8 female connector with 6 m shielded cable	X		X	X
M12-C103	2TLA020056R4000	Straight M12-8 female connector with 10 m shielded cable	X		X	X
M12-C203	2TLA020056R4100	Straight M12-8 female connector with 20 m shielded cable	X		X	X
M12-C65	2TLA020056R7200	Straight M12-12 female connector with 6 m shielded cable		X		
M12-C105	2TLA020056R7300	Straight M12-12 female connector with 10 m shielded cable		X		
M12-C205	2TLA020056R7500	Straight M12-12 female connector with 20 m shielded cable		X		

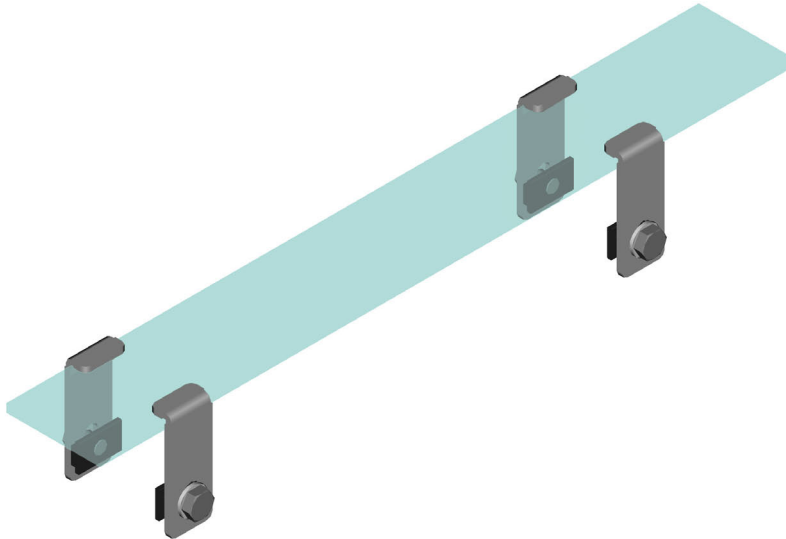
# Lens Shield for Orion1 Base and Orion2 Orion Shield-xxx and Orion ShieldKxxx

## Application:

- Protection against dust, chips and incandescent drops

## Features:

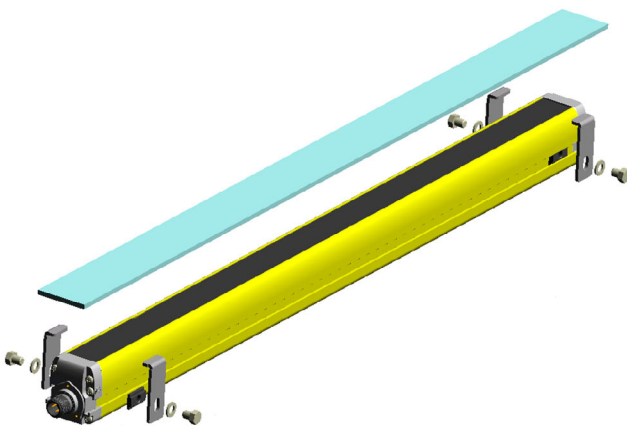
- PMMA Altuglas plate
- 3 mm thick
- Length from 150 to 1800 mm
- 5 protection plates per kit



Orion Shield is a protection against dust, chips and incandescent drops. Orion Shield is an accessory available in different lengths and suits all of the Orion1 Base light curtains and Orion2 light grids.

### Fast and easy installation

Lens Shield is easily mounted on the front glass of the light guard. The supplied fixing brackets is fitted in the side groove of the safety light guard and there is no need for glue or other material that could damage the optics of the light guard. The protecting plate can easily be replaced when damaged.



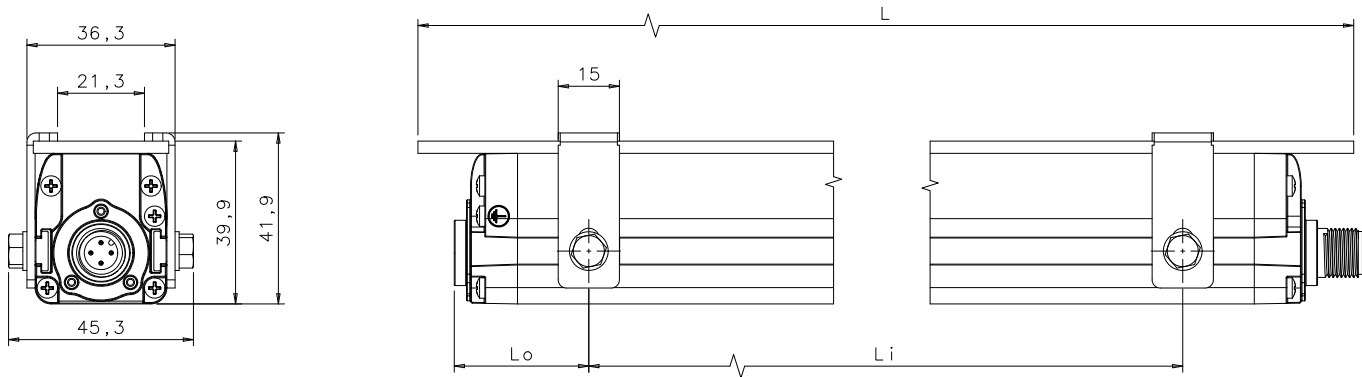
Each package contains 5 plates and all the necessary parts to protect a single unit (transmitter or receiver).

Two pieces should be ordered for a pair.

Fast and easy installation



# Ordering information and dimensions



All dimensions in mm

Article number	Model	Description	L (mm)	Li (mm)	Lo (mm)
2TLA022313R5000	Orion Shield-015	Lens shield for Orion1-4-xx-015-B	245	160	30
2TLA022313R5100	Orion Shield-030	Lens shield for Orion1-4-xx-030-B	392	345	45
2TLA022313R5200	Orion Shield-045	Lens shield for Orion1-4-xx-045-B	540	400	60
2TLA022313R5300	Orion Shield-060	Lens shield for Orion1-4-xx-060-B	686	520	75
2TLA022313R5400	Orion Shield-075	Lens shield for Orion1-4-xx-075-B	832	590	115
2TLA022313R5500	Orion Shield-090	Lens shield for Orion1-4-xx-090-B	980	640	175
2TLA022313R5600	Orion Shield-105	Lens shield for Orion1-4-xx-105-B	1126	740	200
2TLA022313R5700	Orion Shield-120	Lens shield for Orion1-4-xx-120-B	1274	445	200
2TLA022313R5800	Orion Shield-135	Lens shield for Orion1-4-xx-135-B	1422	520	200
2TLA022313R5900	Orion Shield-150	Lens shield for Orion1-4-xx-150-B	1568	595	200
2TLA022313R6000	Orion Shield-165	Lens shield for Orion1-4-xx-165-B	1715	670	200
2TLA022313R6100	Orion Shield-180	Lens shield for Orion1-4-xx-180-B	1860	745	200
2TLA022313R8000	Orion Shield-K050	Lens shield for Orion2-4-K2-050-B	642	490	75
2TLA022313R8100	Orion Shield-K080	Lens shield for Orion2-4-K3-080-B	942	640	175
2TLA022313R8200	Orion Shield-K090	Lens shield for Orion2-4-K4-090-B	1042	660	200
2TLA022313R8300	Orion Shield-K120	Lens shield for Orion2-4-K4-120-B	1342	480	200

Note: Each package contains all the necessary parts to protect a single unit (transmitter or receiver). Two pieces should be ordered for a pair.

# Deviating mirrors in stand for light grids

## Orion Mirror Kxxx



### Application:

- Perimeter protection

### Features:

- For 2, 3 and 4 beams
- Robust extruded aluminum
- Sturdy steel base
- Spirit level for adjustment

Orion Mirror Kxxx are used to reflect the beams of a light grid when transmitter and receiver or active unit and passive unit are not in front of each other, e.g. perimeter protection. The mirrors are housed in an extruded aluminum column with a steel base.

Orion Mirror Kxxx are available in different lengths and can be used with Orion2 and Orion3 light grids.

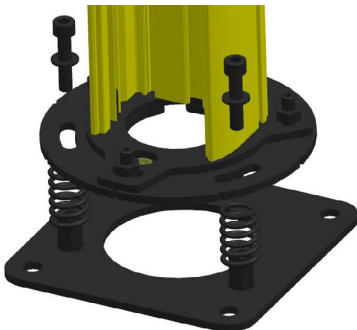
### Easy Installation

Orion Mirror Kxxx are supplied with pre-mounted mirrors. Each mirror can be adjusted independently. The base is made of two plates. Both their inclination and their angular position can be adjusted. A spirit level facilitates the adjustment. Equipped with springs, Orion Stand Plate can be used to absorb vibrations and compensate uneven floor surfaces. Orion Stand Plate is available as an accessory.

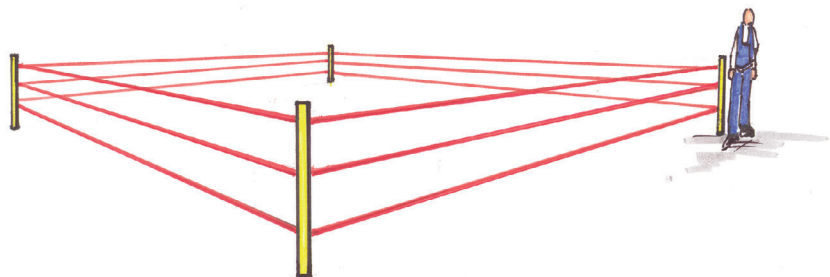
### Deviating mirrors reduce the operating range

No more than three deviating mirrors should be used along the same optical path. Each mirror decreases the operating range. The operating range is decreased to:

- 85% of the nominal range with one mirror,
- 65% with two mirrors and
- 50% with three mirrors.

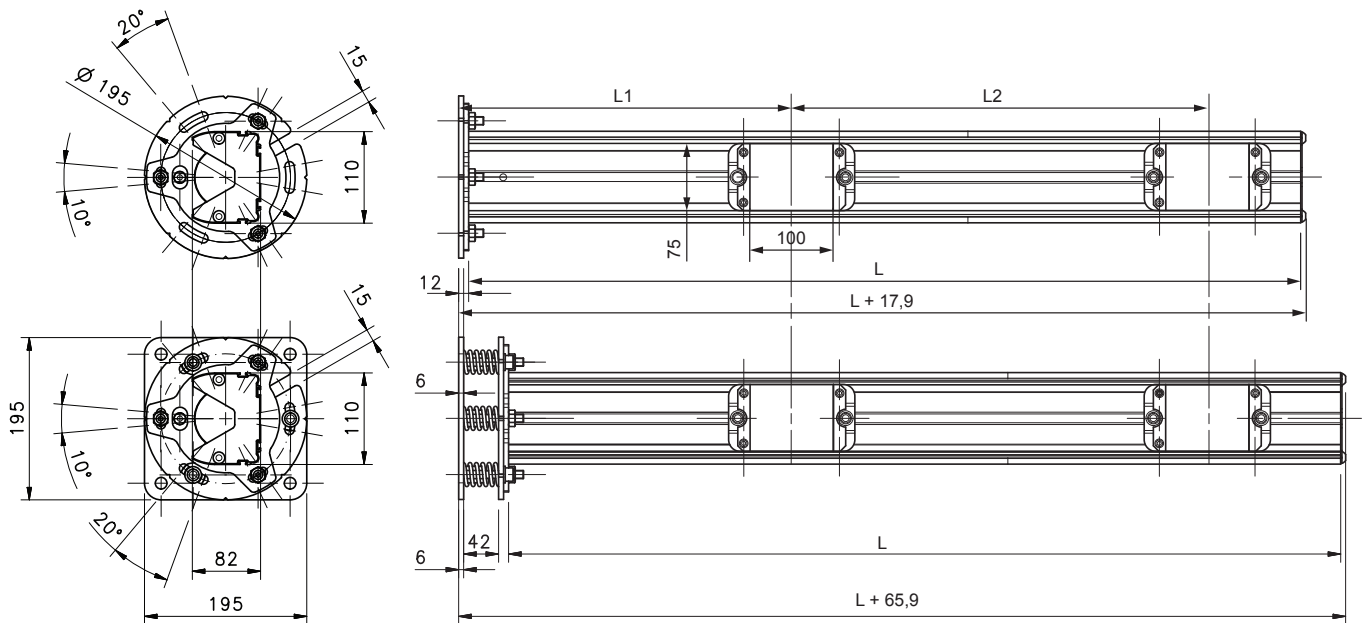


Orion Mirror Kxxx with Orion Stand Plate.



The number of deviations affects the operating distance.

# Ordering information and dimensions



Example above - Orion Mirror K050

Article number	Model	Used with	Number of mirrors	L1* (mm)	L2** (mm)	L (mm)
2TLA022312R1000	Orion Mirror K050	Orion2-4-K2-050-B/E Orion3-4-K1C-050-B/E	2	400	500	1000
2TLA022312R1100	Orion Mirror K080	Orion2-4-K3-080-B/E Orion3-4-K2C-080-B/E	3	300	400	1200
2TLA022312R1200	Orion Mirror K090	Orion2-4-K4-090-B/E Orion3-4-K2C-090-B/E	4	300	300	1650
2TLA022312R1300	Orion Mirror K120	Orion2-4-K4-120-B/E Orion3-4-K2C-120-B/E	4	300	400	1650

\* L1: distance from the base to the center of the lowest mirror

\*\* L2: distance between the center of the mirrors

Article number	Model	Description
2TLA022312R5000	Orion Stand Plate	Kit for adjustment of Stand

# Deviating mirrors for light curtains

## Orion1 Mirror xxx



### Application:

- Perimeter protection

### Features:

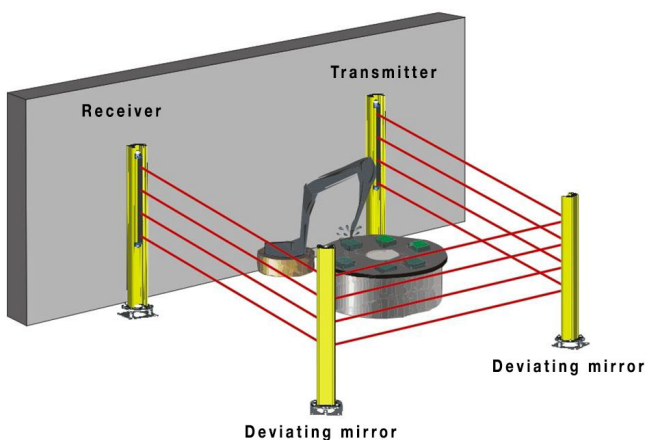
- Length from 600 mm to 1900 mm
- Compatible with Orion Stand

Orion1 deviating mirrors are used to reflect the beams of the transmitter toward the receiver when the two units are not in front of each other, e.g. perimeter protection. Orion1 Mirrors are available in different lengths and can be used with all Orion1 light curtains, both Base and Extended.

Orion1 Mirror can be mounted directly on a wall with JSM Orion10 or inside a protective Orion Stand with JSM Orion11. Orion Stand provides a good protection against shocks.

### Easy Installation

Orion Stand Plate facilitates the adjustment of the Orion Stand and the use of Orion Laser is recommended to simplify the alignment of the system.



### Deviating mirrors reduce the operating range

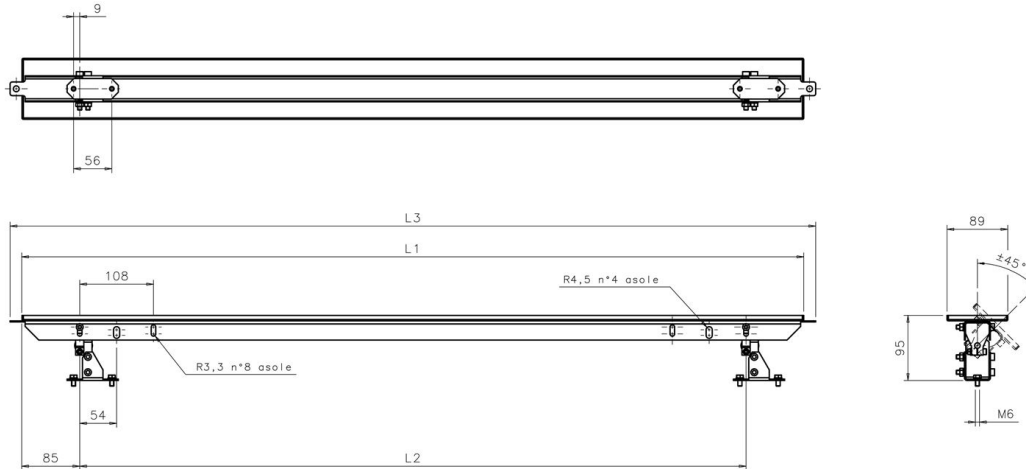
No more than three deviating mirrors should be used along the same optical path.

Each mirror decreases the operating range. The operating range is decreased to:

- 85% of the nominal range with one mirror,
- 65% with two mirrors and
- 50% with three mirrors.

Perimeter protection with two Orion1 Mirrors in Orion Stands.

# Ordering information and dimensions



Article number	Model	Used with*	L1 (mm)	L2 (mm)	L3 (mm)
2TLA022311R0100	Orion1 Mirror 060	Up to Orion1-4-xx-045-x	545	376	580
2TLA022311R0200	Orion1 Mirror 090	Up to Orion1-4-xx-075-x	845	676	880
2TLA022311R0300	Orion1 Mirror 120	Up to Orion1-4-xx-105-x	1145	976	1180
2TLA022311R0400	Orion1 Mirror 165	Up to Orion1-4-xx-150-x	1595	1426	1630
2TLA022311R0500	Orion1 Mirror 190	Up to Orion1-4-xx-180-x	1845	1676	1880

Note: All Orion1 Mirror are exclusive Orion Stand

\* The length of the mirror must be at least 100 mm longer than the protected height of the light curtain.

## Accessories

Article number	Model	Description
2TLA022312R0000	Orion Stand 060	Fits Orion1 Mirror 060 and shorter.
2TLA022312R0100	Orion Stand 100	Fits Orion1 Mirror 090 and shorter.
2TLA022312R0200	Orion Stand 120	Fits Orion1 Mirror 120 and shorter.
2TLA022312R0300	Orion Stand 165	Fits Orion1 Mirror 165 and shorter.
2TLA022312R0400	Orion Stand 190	Fits Orion1 Mirror 190 and shorter.
2TLA022310R0800	JSM Orion10	Kit for mounting Orion1 Mirror on a wall
2TLA022310R0900	JSM Orion11	Kit for mounting Orion1 Mirror in Stand
2TLA022312R5000	Orion Stand Plate	Orion Plate kit for adjustment of protective stand
2TLA022310R5000	Orion Laser	Orion Laser pointer

Note: In order to choose the right Stand, take into account the protected height and the height of the lower beam from the floor.

# Protective tube for Orion1B and Orion2 Orion WET-xxx and Orion WET-Kxxx



## Application:

- Protection against water and dirt
- Protection against condensation

## Features:

- IP67, IP68 and IP69K protection
- Gore-Tex membrane on the caps
- PMMA acrylic tube
- Supplied with rotation bracket
- Available for Orion1 Base and Orion2 light guards

The protective tubes Orion WET-xxx and Orion WET-Kxxx are PMMA acrylic tubes used to protect and seal the light guards of the Orion1 Base and the Orion2 series. Thanks to these protective tubes, the IP sealing of the light guard is increased from IP65 to IP67, IP68 and IP69K. The Gore-Tex membrane on the caps prevents entry of water or dirt and condensation inside the tube. The connection cable of the light guard is protected and kept in place by a cable-gland that prevents the entry of water or dirt.

### Easy Installation

Two stainless steel rotation brackets are provided and guarantee a quick and easy installation. They are mounted on the product caps. The protective tube does not make alignment more difficult and does not change the value of the aperture angle of the light guard either.

Note: Orion WET reduces the nominal operating distance by 10%



Assembly of the Orion WET and the Orion1B.

## Technical data

### Optical data

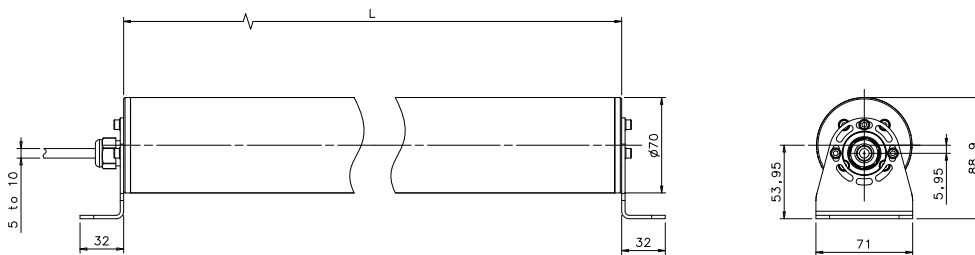
Operative distance / reduction factor	10% for each tube
EAA aberration (Effective Aperture Angle)	None

### Mechanical data

Body material	PMMA POLICRIL
Thickness	4 mm
Protection class	IP67, IP68 and IP69K

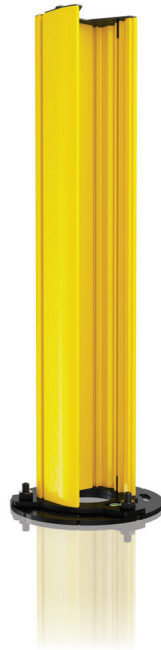
## Ordering information and dimensions

Article number	Model	Description	L (mm)
2TLA022313R0000	Orion WET-015	Protective tube for corresponding Orion1 Base. H = 150 mm	373.5
2TLA022313R0100	Orion WET-030	Protective tube for corresponding Orion1 Base. H = 300 mm	520.7
2TLA022313R0200	Orion WET-045	Protective tube for corresponding Orion1 Base. H = 450 mm	670.8
2TLA022313R0300	Orion WET-060	Protective tube for corresponding Orion1 Base. H = 600 mm	820.7
2TLA022313R0400	Orion WET-075	Protective tube for corresponding Orion1 Base. H = 750 mm	970.8
2TLA022313R0500	Orion WET-090	Protective tube for corresponding Orion1 Base. H = 900 mm	1120.7
2TLA022313R0600	Orion WET-105	Protective tube for corresponding Orion1 Base. H = 1050 mm	1270.7
2TLA022313R0700	Orion WET-120	Protective tube for corresponding Orion1 Base. H = 1200 mm	1420.8
2TLA022313R0800	Orion WET-135	Protective tube for corresponding Orion1 Base. H = 1350 mm	1570.7
2TLA022313R0900	Orion WET-150	Protective tube for corresponding Orion1 Base. H = 1500 mm	1720.8
2TLA022313R1000	Orion WET-165	Protective tube for corresponding Orion1 Base. H = 1650 mm	1870.8
2TLA022313R1100	Orion WET-180	Protective tube for corresponding Orion1 Base. H = 1800 mm	2020.8
2TLA022313R3000	Orion WET-K050	Protective tube for corresponding Orion2. H = 500 mm	808
2TLA022313R3100	Orion WET-K080	Protective tube for corresponding Orion2. H = 800 mm	1108
2TLA022313R3200	Orion WET-K090	Protective tube for corresponding Orion2. H = 900 mm	1208.5
2TLA022313R3300	Orion WET-K120	Protective tube for corresponding Orion2. H = 1200 mm	1508.5



All dimension in mm

# Protective stand for Orion Light Guards Orion Stand



## Application:

- Protection of light curtains, light grids and mirrors against shocks and collisions

## Features:

- For all Orion light guards and Orion1 Mirror
- Robust extruded aluminum column
- Sturdy steel base
- Spirit level for adjustment

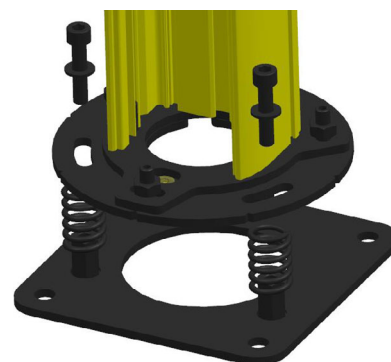
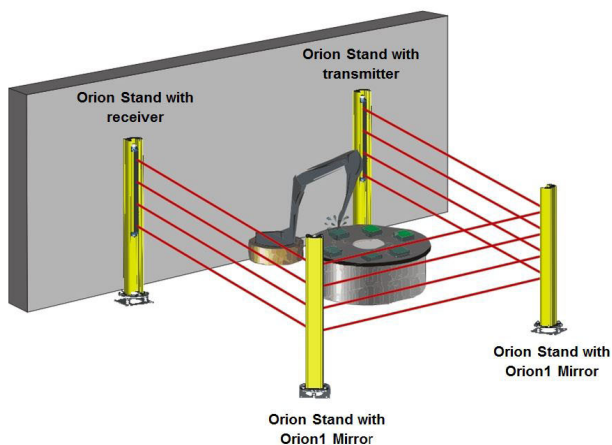
Orion Stand is used to protect any Orion light guard against shock and collision. Orion Stand is made of an extruded aluminum column with a steel base. Orion Stand can also be used with the deviating mirrors Orion1 Mirror.

## Easy adjustment

The base is made of two plates. Both their inclination and their angular position can be adjusted. A spirit level facilitates the adjustment. Equipped with springs, Orion Stand Plate can be used to absorb vibrations and compensate uneven floor surfaces. Orion Stand Plate is available as an accessory.

## How to order

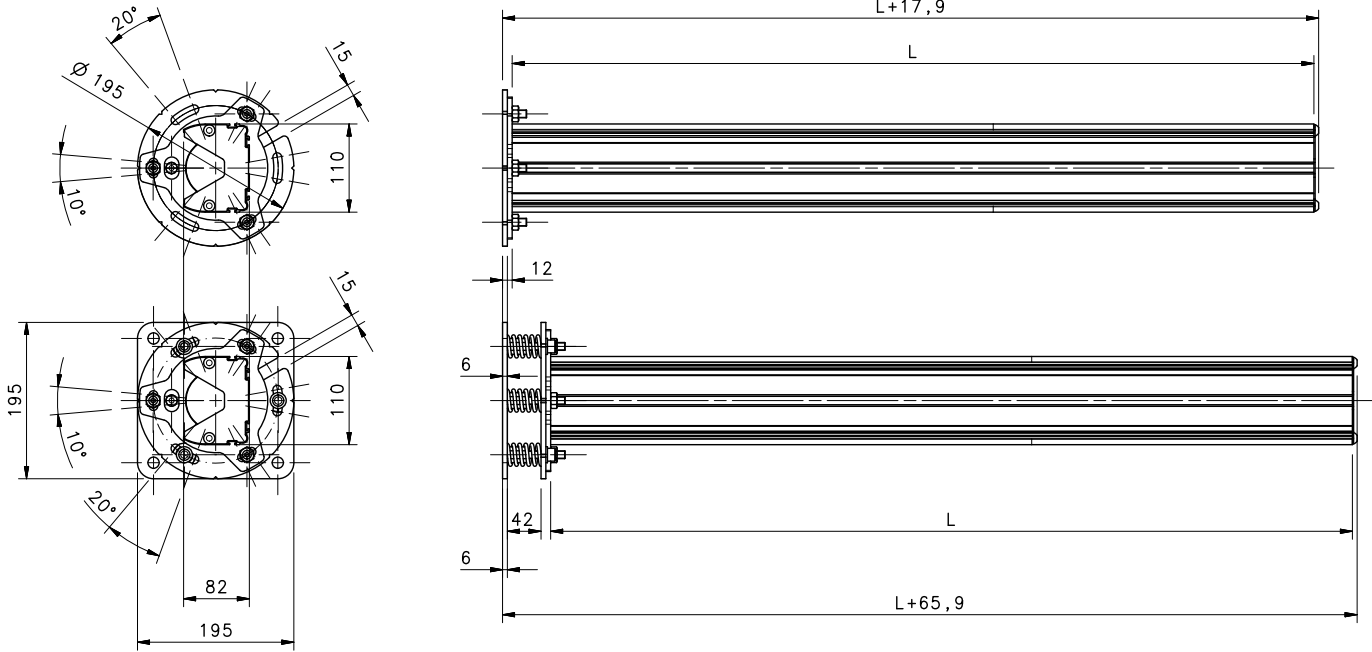
The Orion protective stands are available in different lengths and compatible with all the Orion light guards. A mounting kit is necessary to mount the light guard in the stand. Which kit depends on the model of light guard and its length. See the ordering information in order to choose the right kit.



Orion stand with Orion Stand Plate



# Ordering information and dimensions



All dimensions in mm

Article number	Model	L (mm)
2TLA022312R0000	Orion Stand 060	600
2TLA022312R0100	Orion Stand 100	1000
2TLA022312R0200	Orion Stand 120	1200
2TLA022312R0300	Orion Stand 165	1650
2TLA022312R0400	Orion Stand 190	1900

Article number	Model	Description
2TLAFPOST1500	Extruded Post 1500mm	Extruded post 1500mm including 2 floor brackets
2TLAFPOST1200	Extruded Post 1200mm	Extruded post 1200mm including 2 floor brackets
2TLAFMUTE300	Muting Sensor Holder 2x300mm	Muting Sensor Holder 2x300mm including 2 T-brackets and 2 end caps

## Accessories

Article number	Model	Description
2TLA022310R0400	JSM Orion06	Kit for mounting Orion1 and Orion2 in Orion Stand (4 brackets)
2TLA022310R0500	JSM Orion07	Kit for mounting Orion1 and Orion2 in Orion Stand (6 brackets)
2TLA022310R0600	JSM Orion08	Kit for mounting Orion3 in Orion Stand (4 brackets)
2TLA022310R0700	JSM Orion09	Kit for mounting Orion3 in Orion Stand (6 brackets)
2TLA022310R0900	JSM Orion11	Kit for mounting Orion1 Mirror in Orion stand
2TLA022312R5000	Orion Stand Plate	Kit for adjustment of Orion stand

# Correspondence with Orion Stand

Orion model	Mounting kit	Orion Stand 060	Orion Stand 100	Orion Stand 120	Orion Stand 165	Orion Stand 190
Orion1-4-xx-015-B	JSM Orion06	X	X	X	X	X
Orion1-4-xx-030-B	JSM Orion06	X	X	X	X	X
Orion1-4-xx-030-E	JSM Orion06	X	X	X	X	X
Orion1-4-xx-045-B	JSM Orion06	X	X	X	X	X
Orion1-4-xx-045-E	JSM Orion06	X	X	X	X	X
Orion1-4-xx-060-B	JSM Orion06		X	X	X	X
Orion1-4-xx-060-E	JSM Orion06		X	X	X	X
Orion1-4-xx-075-B	JSM Orion06		X	X	X	X
Orion1-4-xx-075-E	JSM Orion06		X	X	X	X
Orion1-4-xx-090-B	JSM Orion06			X	X	X
Orion1-4-xx-090-E	JSM Orion06			X	X	X
Orion1-4-xx-105-B	JSM Orion06			X	X	X
Orion1-4-xx-105-E	JSM Orion06			X	X	X
Orion1-4-xx-120-B	JSM Orion07				X	X
Orion1-4-xx-120-E	JSM Orion07				X	X
Orion1-4-xx-135-B	JSM Orion07				X	X
Orion1-4-xx-135-E	JSM Orion07				X	X
Orion1-4-xx-150-B	JSM Orion07				X	X
Orion1-4-xx-150-E	JSM Orion07				X	X
Orion1-4-xx-165-B	JSM Orion07					X
Orion1-4-xx-165-E	JSM Orion07					X
Orion1-4-xx-180-B	JSM Orion07					X 1
Orion1-4-xx-180-E	JSM Orion07					X 1
Orion2-4-K2-050-B	JSM Orion06		X	X	X	X
Orion2-4-K3-080-B	JSM Orion06			X	X	X
Orion2-4-K4-090-B	JSM Orion06				X	X
Orion2-4-K4-120-B	JSM Orion07				X	X
Orion3-4-K1C-050-B	JSM Orion08		X	X	X	X
Orion3-4-K2C-080-B	JSM Orion08			X	X	X
Orion3-4-K2C-090-B	JSM Orion08				X	X
Orion3-4-K2C-120-B	JSM Orion09				X	X
Orion3-4-M1C-050	JSM Orion08		X	X	X	X
Orion3-4-M2C-080	JSM Orion08			X	X	X
Orion3-4-M2C-090	JSM Orion08				X	X
Orion3-4-M2C-120	JSM Orion09				X	X
Orion1 Mirror 060	JSM Orion11	X	X	X	X	X
Orion1 Mirror 090	JSM Orion11		X	X	X	X
Orion1 Mirror 120	JSM Orion11			X	X	X
Orion1 Mirror 165	JSM Orion11				X	X
Orion1 Mirror 190	JSM Orion11					X

<sup>1</sup> Fits if Orion Stand Plate is used.

Note: when using an Orion2 or Orion3 in an Orion Stand (body detection), the height of the lowest beam should be 300 mm max and the height of the uppermost beam should 900 mm min.



# Contact us

## **ABB**

### **Electrification Products**

2117, 32e Avenue  
Lachine, QC H8T 3J1  
Tel: 514-420-3100  
Toll free: 1-800-567-0283  
Fax: 514-420-3137

**Website:** [www.abb.ca/lowvoltage](http://www.abb.ca/lowvoltage)

**Technical Support:** [lv.support@ca.abb.com](mailto:lv.support@ca.abb.com)

## Note

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents - in whole or in parts - is forbidden without prior written consent of ABB.

Copyright© 2016 ABB  
All rights reserved  
3KX1234567