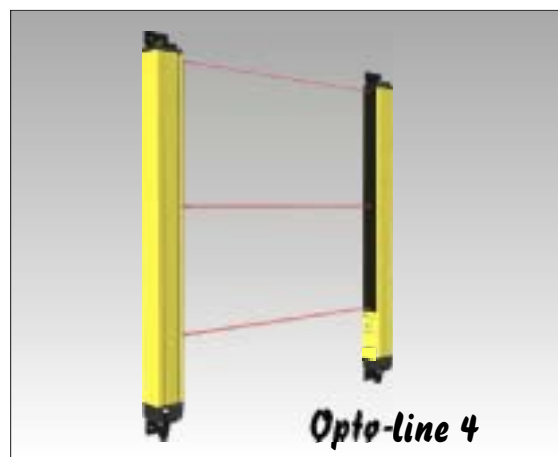




# Safe access of danger zones

## Opto-line 4 multi beams safety light curtain

**Opto-line 4** Safety light curtains have the highest standard of safety (class 4). In compliance with the EC Machine Directive (EN 61496) they have been certified with a class 4 Declaration of Conformity by the INERIS testing body.

- . Small housing cross-section of 39 x 47 mm
- . Intended to detect when an operator penetrates the perimeter of a hazardous area
- . 2 static outputs (short circuit protected) suiting most of safety relays
- . Alignment aid on the device
- . Optical synchronization : no cable link between emitter and receiver.
- . Protection of several different planes by using 1 or 2 corner mirrors.
- . **Differentiation between material and person is done by muting sensor.**



<b>CA4 - 300 - ..</b> <b>Multi beams light curtain</b>	2 to 7 beams with beam spacing of 500, 400, 300 mm	Scanning range up to 12 m	Access control, palettiser ...	According to norm	Body detection	
<b>Class 4</b>						
<b>CP4 - 300 - ..</b> <b>Multi beam light curtain</b>	2 to 7 beams with beam spacing of 500, 400, 300 mm	Scanning range : 10 to 50 m	Perimeter guarding ...	According to norm	Body detection	

### TECHNICAL DATAS

Supply voltage	24 Vdc ± 10%
Power consumption	300 à 400 mA depending on height
ECM compatibility	EC marked
Emitting light source	modulated infrared light
Scanning range	Up to 12 m for CA4- ... 10 to 50 m for CP4- ...
Beams spacing	2 to 7 beams with beam spacing of 500, 400, 300 mm
Protective field height	600 à 1800 mm (see tab)
Safety" output	2 static independent outputs 50 mA short circuit protected
Response time	2 to 3 mS on shutdown and re-establishment and depending on height of the light curtain
Indicating output	provides indications about various states of the device. 50 mA short circuit protected
Test input	by opening the NC contact (simulates intrusion)
Temperature range	0 à 50°C
Housing	Aluminium alloy coated with epoxy painting
Housing rating	IP 65 - Pg7 cable glands
Fixing	Mounting brackets
Connexion	Disconnect plugs
Self checking	Permanent : safety class 4

**Opto-line 4 safety light curtains have been certified with a Class 4 EC Declaration of Conformity n° 0080.510.0027.12.00**



### Accessories

- . Safety relay
- . Muting relay
- . Expander block

(Product description on request)



### Corner mirror

- . Different heights depending on **Opto-line 4** safety light curtains

(Product description on request)



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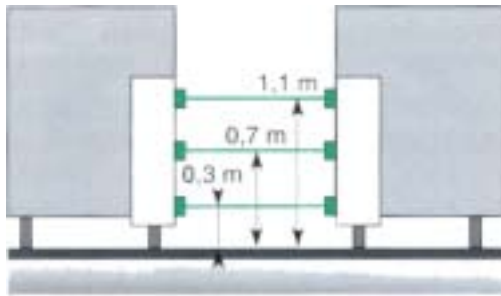
Opto-électronique



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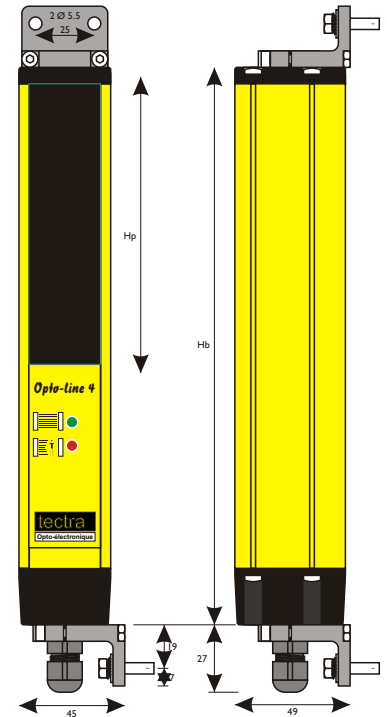
## References and dimensions

Protective field height : Hp	Housing height : Hb	Number of beams :	Beams spacing :	Reference : scanning range 12 M	Reference scanning range 50 M
500	682	2	500 mm	CA4-500-2	CP4-500-2
800	982	3	400 mm	CA4-400-3	CP4-400-3
900	1082	4	300 mm	CA4-300-4	CP4-300-4
1200	1382	5	300 mm	CA4-300-5	CP4-300-5
1500	1682	6	300 mm	CA4-300-6	CP4-300-6
1800	1982	7	300 mm	CA4-300-7	CP4-300-7



### Example of use :

When using a CA4-400-3 or CP4-400-3 and placing the first beam at 300 mm from the floor, you can get a protective field height of 1100 mm.



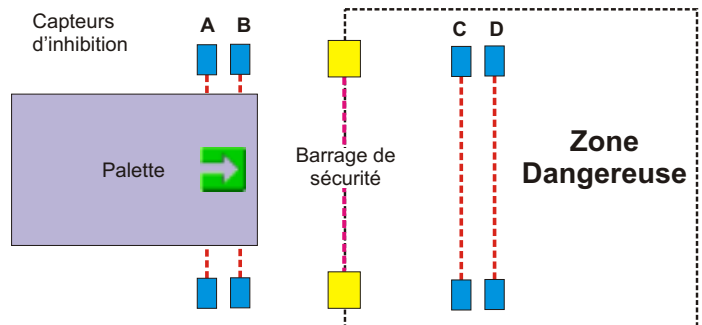
## Protective mode with mutig RSM-BH5902

Safe access of a danger zone with a safety light curtain CA4 ...

### Muting (inhibition)

Muting mode is the temporary disabling of the protective function of a light curtain.

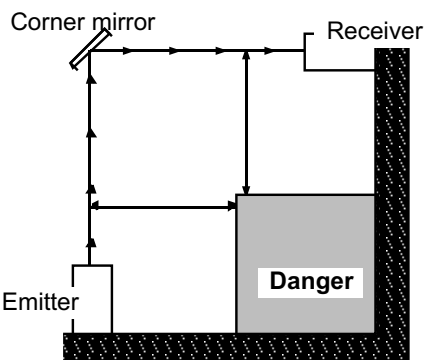
This function is used to transport material through the protective field. The differentiation between material and person is done by muting sensors (MS) : the muting creates a certain switching sequence together with the light curtain when a material passes the light curtain. The muting sensors must be arranged so a person cannot activate them in the same switching sequence as the material and enter the area when the hazardous condition exists. To help accomplish this, the user can select 2 different switching sequences with Bh5902 muting unit. The muting cycle is indicated by a muting lamp that is controlled by the muting unit. The muting time can be set in steps between 10 s and infinite using 10 positions switches.



## Corner mirror

Guarding 2 or 3 sides of a hazardous point of a machine or area by means of corner mirrors associated to one light curtain. It should be noted that the scanning range will be then decreased by 20 % for each corner mirror. The use of more than 2 corner mirrors is not to be recommended due to alignment difficulties that may occur.

Perimeter guarding of a danger zone with a Cp4 light curtain ...



With a **CA4** the sum of the 2 sides to be protected should'nt be over 9,6 m and the sum of the 3 sides to be protected should'nt be over 7,6m

With a **CP4** the sum of the 2 sides to be protected should'nt be over 40 m and the sum of the 3 sides to be protected should'nt be over 32 m.

Light curtain reference:	Light curtain reference:	Corner mirror reference	Corner mirror height
CA4-500-2	CP4-500-2	MR0002	550 mm
CA4-400-3	CP4-400-3	MR0004	1020 mm
CA4-300-4	CP4-300-4	MR0004	1020 mm
CA4-300-5	CP4-300-5	MR0006	1310 mm
CA4-300-6	CP4-300-6	MR0007	1510 mm
CA4-300-7	CP4-300-7	MR0009	1960 mm