

# LS mini detection light barrier digital or analog output

The **LS** mini light barriers have a compact profile.

Controller functionality of the LS is built into the receiver : no external controller required.

Easily accessible settings facilitate the use of the LS for the operator. Sensitivity is adjustable by means of a potentiometer. With a rotactor, he selects the "Light/Dark" function with the digital output and selects the rapid version for detection of ejected parts. He also configures the different modes of detection with the analog output.

Digital version : **LS** are used for checking continuous presence or detection of any materials moving through (small metallic bar, cable, rubber gasket...). PNP output - 200 mA - short-circuit and overload protected.

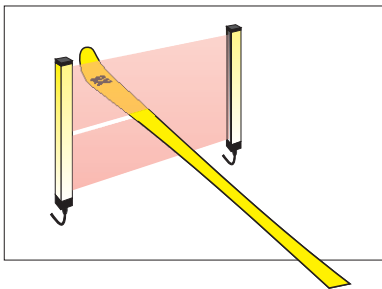
Analog version : **LS** are used for regulating the slack of a running strip by directly controlling a variator with the output ( 4...20 mA or 0...10 V) or for indicating the position of a piece on an axis

**LS** are available with 2 different light sources in order to get the best detection of some pieces (red light to detect pieces for the cosmetics which are permeable to the infrared light).

Housed in a metal case, they can be easily integrated into machines and systems.

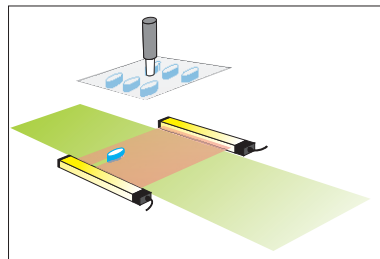


**Digital output : standard application** The **LS** mini light barrier provides the permanent detection of the piece on the carpet



Permanent detection of a product having a variable profile with the shape as well as with the thickness.

Only the continuous detection of the ski provided by the barrier allows to achieve all the processing operations on all the length of the product.

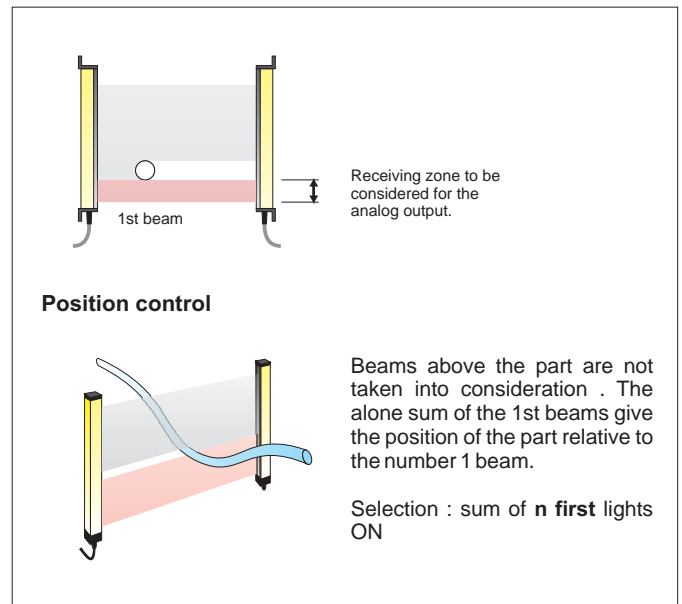
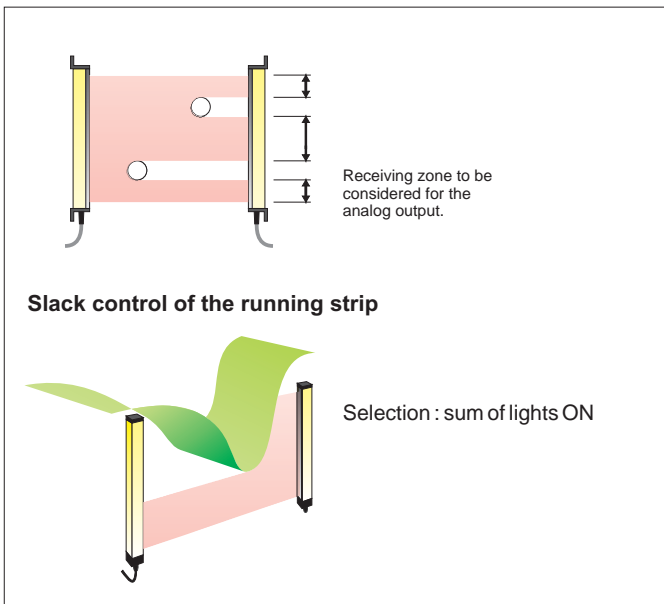


Monitoring of the drop zone :

If a piece was not removed during the previous cycle, the next positioning of a piece by the robot will be forbidden as there will be a collision and maybe extensive damages to the head of the robot.

## Analog output : application

There are 2 ways for using the analog output : the sum of lights ON is taken into consideration or the sum of n first lights ON.



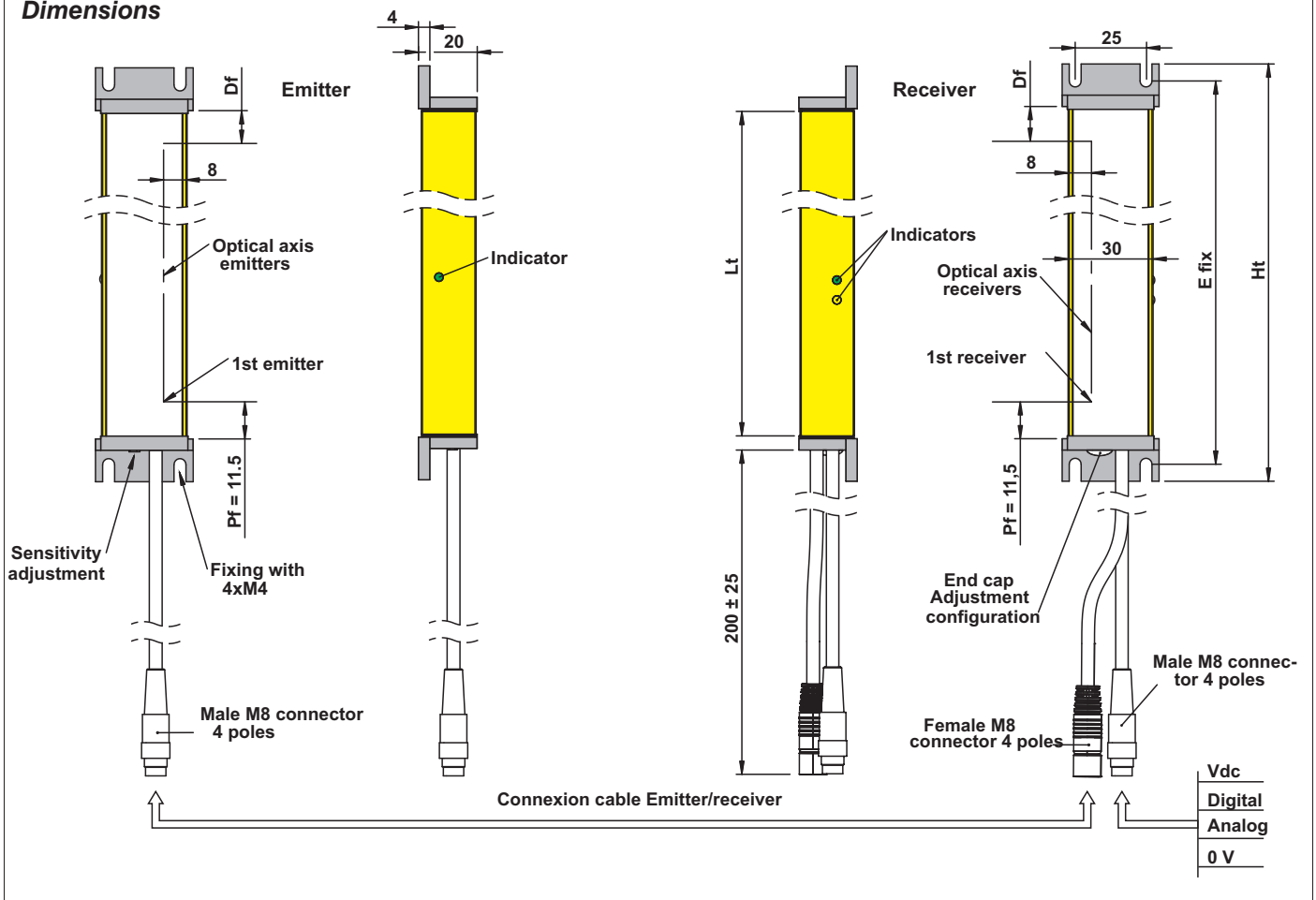
**tectra**

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## Dimensions



## Technical datas

Sensing height	102 ... 1034 mm ( see tab. )
Beam space	4 / 8 mm and 16 mm on demand
Resolution	6 / 10 mm or 22 mm
Operating range	0.1 ... 2 m (0.8 m Version R)
Supply voltage	24V ± 10%
Current consumption	80 mA
Light source	890 nm modulated (650 nm Version R)
Digital output	Static PNP 200 mA ( short-circuit and overload protected )
Analog output	0 ... 10 V or 4 ... 20 mA
Immunity to ambient light :	10000 Lux / 10000 Lamp light
Temperature range	0 ... 50 °C
Section	30 x 19 mm
Construction	Aluminium housing with epoxy painting finish
Window	black PMMA version IR ( red transparent PMMA))
Connexion type	Connectors M8 or cable on demand
Environmental rating	IP64
Protection class	III, according to the low voltage directive
Relative humidity	15 ... 95 %
Vibration	5 g 10-55 Hz
Shock	10 g 16 ms
ECM	Severity 3 according to IEC 61000.4.(2/4/5)

## How to order

LS 04 64 D IR M8

Connexion :  
**C5** : 5 m shielded cable  
**M8** : M8 connectors

Version :  
**IR** : Emitter infrared  
**R** : Emitter red

Version :  
**A** : Analog output 4 / 20 mA  
**V** : Analog output 0 / 10 V  
**D** : Digital output

Number of beams :  
**XX** : See tab.

Beam spacing :  
**04** : 4 mm / mini.detected : 6 mm  
**08** : 8 mm / min.detected : 10 mm

## References

### Minimum object sensitivity : 6 mm / Optical gap : 4 mm

Reference LS04	Sensing height Hd (mm)	Number of beams	Response time* tr (ms)	Housing length Lt (mm)	Spacing fixing E fix (mm)	Overall dimensions Ht (mm)
LS0424*	102	24	7	113	137	145
LS0432*	134	32	9	145	169	177
LS0464*	262	64	17	273	297	305
LS0496*	390	96	25	401	425	433
LS04128*	518	128	32	529	533	561
LS04160*	646	160	40	657	681	689
LS04192*	774	192	48	785	809	817
LS04224*	902	224	55	913	937	945
LS04256*	1030	256	63	1041	1065	1073

### Connexion cable Emitter/ Receiver

RAM8402	Cable 2 m	RAM8406	Cable 6 m
RAM8404	Cable 4 m	RAM8408	Cable 8 m

### Minimum object sensitivity : 10 mm / Optical gap : 8 mm

Reference LS08	Sensing height Hd (mm)	Number of beams	Response time** tr (ms)	Housing length Lt (mm)	Spacing fixing E fix (mm)	Overall dimensions Ht (mm)
LS0816*	138	16	6	145	169	177
LS0824*	202	24	7	209	233	241
LS0832*	266	32	9	273	297	305
LS0848*	394	48	13	401	425	433
LS0856*	458	56	15	465	489	497
LS0864*	522	64	17	529	553	561
LS0880*	650	80	21	657	681	689
LS0888*	714	88	23	721	745	753
LS0896*	778	96	25	785	809	817
LS08112*	906	112	28	913	937	945
LS08120*	970	120	30	977	1001	1009
LS08128*	1034	128	32	1041	1065	1073

\*\* => response time is divided by 2 with ejection of parts configured for the only digital version.