LP4PF series
Light Curtains
Type 4

2 YEARS WARRANTY

features

- **Type 4 according IEC 61496-1 and IEC 61496-2**
- **Robust housing (50x60 mm) for applications in presence of heavy shocks and vibrations**
- **Complete passive unit made by pre-mounted and pre-aligned integrated mirrors**
- **Protected height 500, 800 an 900 mm**
- **Resolutions 2, 3, 4 beams for body protection / access control**
- **Integrated functions: MANUAL/AUTOMATIC Restart and EDM**
- **Operating distance up to 6 m**
- **M12 8 polse standard connector**

web contents

- **Application notes**
- **Photos**
- **Catalogue / Manuals**

code description

LP4	**PF**	**/ 0A - 050**

series	**LP4**	Type 4 safety light curtains 50 x 60 mm compact housing
couple	**PF**	M12 connecored active element + passive element couple
beams	**0A**	2 beams resolution; body protection; 500 mm protected height
	0B	3 beams resolution; body protection; 800 mm protected height
	0C	4 beams resolution; body protection; 900 mm protected height
protected height	**050**	500 mm protected height
	080	800 mm protected height
	090	900 mm protected height

available models

0...6 m controlled distance; ≤ 7 msec response time

protected height (mm)	n° of beams	dist. between beams (mm)	model
510	2	500	LP4PF/0A-050
810	3	800	LP4PF/08-080
910	4	900	LP4PF/0C-090

technical specifications

	LP4PF/**-***	
operating voltage	19.2...28.8 Vdc	PELV power supplier according to EN 60204-1 Cap.6.4
power consumption, Receiver	6 W	no load
power consumption, Emitter	3 W	
output type	2 x PNP	OSSD safety outputs
output current	500 mA	higher values are considered overload
equivalent resistive load	48 Ω	lower values are considered short circuit
capacitive load	2 μF	lower values may be considered short circuit
recovery time	15 s	
response time (OSSDs OFF)	30 ms	
effective aperture angle (EAA)	≤ ± 2.5°	IEC 61496-1
artificial light rejection	according to IEC 61496-2	according to the reported standards
ambient light rejection	according to IEC 61496-2	
IP mechanical protection	IP65	without any additional precaution the device can't be used for outdoor applications
operating temperature	0...+55°C	no condensation
storage temperature	-25...+70°C	to be respected also during transportation
humidity (no condensation)	95% (no condensation)	no condensation
vibrations	according to IEC 61496-1	according to the reported standards
shocks	according to IEC 61496-1	
cable length (power supply/outputs)	100 m	cable section 0.34 mm2 (to respect max length)
dimension	50 mm (front) x 60 mm	painted aluminium RAL 1012
connector S0 active unit	1 x M12 8p male	PVC sheath, ø 5.5 mm L 10 m, 0.34 mm2

safety parameters

LP4PF/**-***_	0A-050	0B-080	0C-090
dist. between beams	500	800	900
number of beams	2	3	4
response time (ms)	≤ 7		
type [1]	4		
SIL[2]	3		
SILCL [3]	3		
PL [4]	e		
PFHd	4.83E-09	4.92E-09	5.01E-09
DCavg	98.14%	98.16%	98.19%
MTTFd (years)	100		
CFF	80%		

[1] ref. CEI EN 61496-1; CEI EN 61496-2
[2] ref. CEI EN 61508
[3] ref. CEI EN 62061 + CEI EN 62061/EC2
[4] ref. UNI EN ISO 13849-1

electrical diagrams of the connections

LP4PF series				

M12
(8 poles male active unit)

LP4PF / **-***

pin	color	signal	type	description
1	WH	OSSD1	OUT	first safety static output (PNP)
2	BN	$24V_{CC}$	POWER	supply voltage
3	GN	OSSD2	OUT	second safety static output (PNP)
4	YE	EDM	IN	connection to the external control contacts (EDM) or connected at 0V to exclude EDM
5	GY	Mode_A	IN	selection of the manual or automatic Start/Restart mode
6	PK	Mode_B	IN	selection of the manual or automatic Start/Restart mode
7	BU	0V	POWER	supply voltage reference
8	RD	FE	GND	protection earth

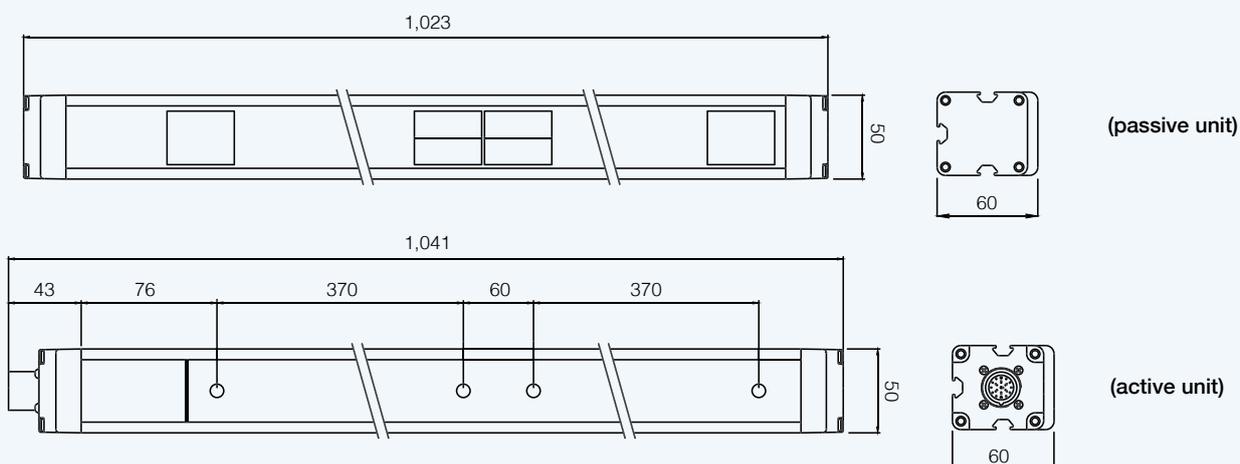| BK	black	OG	orange	WH	white
BN	brown	GN	green	PK	pink
RD	red	BU	blue	VT	violet
YE	yellow	GY	grey		

NOTE: On these models it is possible to choose the operating modes by changing the wiring. By using the EDM function it is possible to extend the safety control to the contactors controlled downstream, that must be the type with guided contacts and approved for safety applications
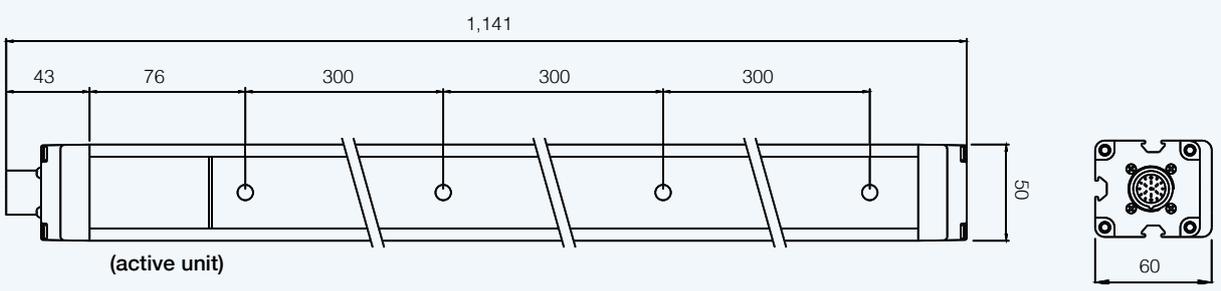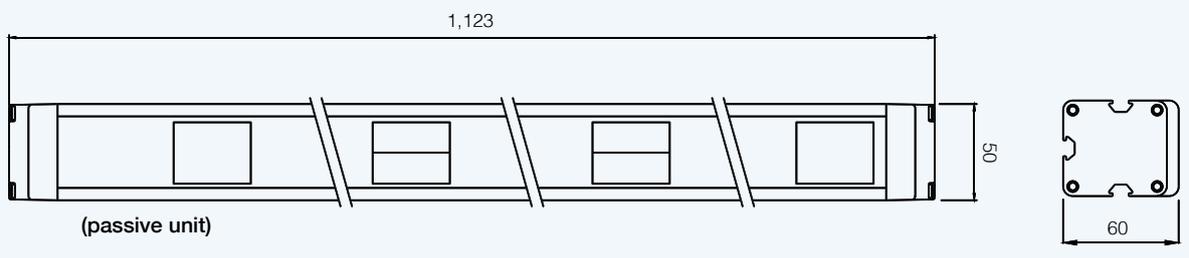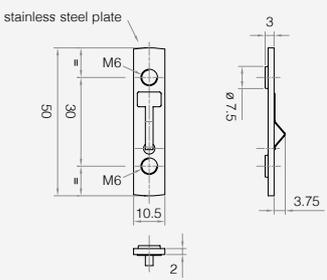
dimensions (mm)

LP4PF/0A-050

723

50

60

(passive unit)

741

43   76   500

50

60

(active unit)

LP4PF/0B-080

1,023

50

60

(passive unit)

1,041

43   76   370   60   370

50

60

(active unit)

LP4PF

! dimensions (mm)

LP4PF/0C-090

1,123

50

60

(passive unit)

1,141

| 43 | 76 | 300 | 300 | 300 |

50

60

(active unit)
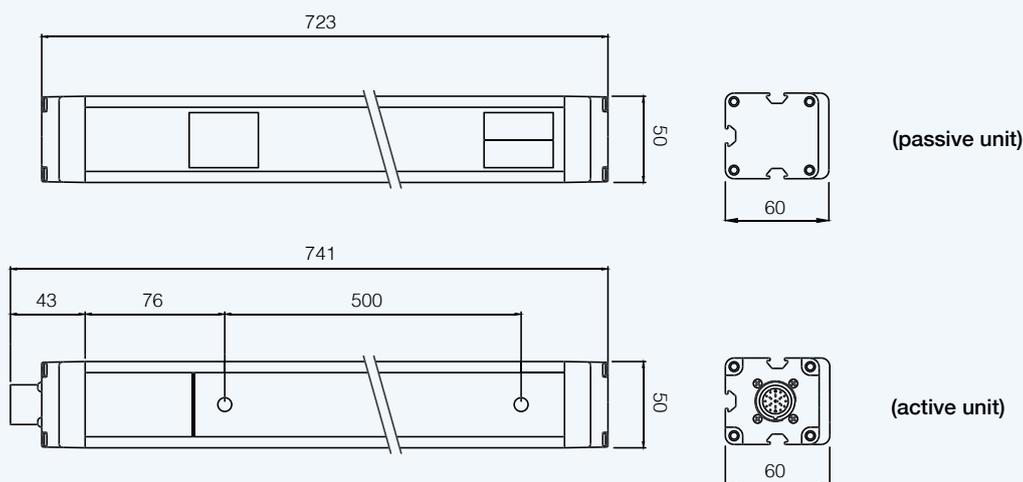
accessories

ST203 / outfit mounting accessories

product	to be used with	dimensions (mm)	description / installation
	LP4 series	stainless steel plate M6 50 30 M6 10.5 2 3 Ø 7.5 3.75	**Fastening insert for 50x60 profile. Part of the standard kit** Two pieces are provided for each bracket ST202.

ST202 / outfit mounting accessories

product	to be used with	dimensions (mm)	description / installation
	LP4 series	10 30 25 30 13.5 50 28.5 28.5 50 13.5 10 42.5 42.5 105	**L Bracket** Long bracket. Part of the standard kit. Two pieces are provided for each couples. Must be applied in the housin part of the body.